

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION							
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA	
											LOW	HIGH				
001	1	TA	T	111	VB	Close Command	DAF Thickener 1 Exhaust Air Damper	LI3.06						DO		A
002	1	TA	T	111	VD	Open Command	DAF Thickener 1 Exhaust Air Damper	LI3.06						DO		A
003	1	TA	T	121	VB	Close Command	DAF Thickener 2 Exhaust Air Damper	LI3.06						DO		A
004	1	TA	T	121	VD	Open Command	DAF Thickener 2 Exhaust Air Damper	LI3.06						DO		A
005	1	FA	F	550	LAHH	Level Alarm High High	Fermenter 1	LI3.02				0		DI		A
006	1	FA	F	550	MM	Running Status	Fermenter 1	LI3.02						DI		A
007	1	FA	F	550	MN	Start Command	Fermenter 1	LI3.02						DO		A
008	1	FA	F	550	OAH	Torque Alarm High	Fermenter 1	LI3.02				0		DI		A
009	1															
010	1	FA	F	550	MF	Fault Status	Fermenter 1	LI3.02				0		DI		A
011	1	FA	F	550	YS	Computer Selected Status	Fermenter 1	LI3.02						DI		A
012	1	FA	F	550	VB	Close Command	Primary Sludge Fermenter 1 Supply Air Vlv	LI3.06						DO		A
013	1	FA	F	550	VD	Open Command	Primary Sludge Fermenter 1 Supply Air Vlv	LI3.06						DO		A
014	1	FA	F	550	ZS	Position Status	Fermenter 1	LI3.02						DI		A
015	1	FA	F	551	FT	Flow Feedback	Fermenter Sludge Pumps Discharge	LI3.04	L/s	0-15				AI		A
016	1	FA	F	551	MN	Start Command	Fermenter Sludge Pump 1	LI3.04						DO		A
017	1	FA	F	551	SS	Stroke Counter	Fermenter Sludge Pump 1	LI3.04						DI		A
018	1	FA	F	551	PAH	Pressure High Alarm	Fermenter Sludge Pump 1	LI3.04				0		DI		A
019	0	FA	F	551	SC	Speed Control	Fermenter Sludge Pump 1	LI3.04	%	0-100				AO		A
020	0	FA	F	551	ST	Speed Feedback	Fermenter Sludge Pump 1	LI3.04	%	0-100				AI		A
021	1	FA	F	551	YS	Computer Selected Status	Fermenter Sludge Pump 1	LI3.04						DI		A
022	1	FA	F	551	VB	Close Command	Fermenter 1 Sludge Control Valve	LI3.04						DO		A
023	1	FA	F	551	VD	Open Command	Fermenter 1 Sludge Control Valve	LI3.04						DO		A
024	1	FA	F	551	ZB	Closed Status	Fermenter 1 Sludge Control Valve	LI3.04						DI		A
025	1	FA	F	551	ZD	Open Status	Fermenter 1 Sludge Control Valve	LI3.04						DI		A
026	1	FA	F	552	MN	Start Command	Fermenter Sludge Pump 2	LI3.04						DO		A
027	1	FA	F	552	SS	Stroke Counter	Fermenter Sludge Pump 2	LI3.04						DI		A
028	1	FA	F	552	PAH	Pressure High Alarm	Fermenter Sludge Pump 2	LI3.04				0		DI		A
029	0	FA	F	552	SC	Speed Control	Fermenter Sludge Pump 2	LI3.04	%	0-100				AO		A
030	0	FA	F	552	ST	Speed Feedback	Fermenter Sludge Pump 2	LI3.04	%	0-100				AI		A
031	1	FA	F	552	YS	Computer Selected Status	Fermenter Sludge Pump 2	LI3.04						DI		A
032	1	FA	F	552	VB	Close Command	Fermenter 2 Sludge Control Valve	LI3.04						DO		A
033	1	FA	F	552	VD	Open Command	Fermenter 2 Sludge Control Valve	LI3.04						DO		A
034	1	FA	F	552	ZB	Closed Status	Fermenter 2 Sludge Control Valve	LI3.04						DI		A
035	1	FA	F	552	ZD	Open Status	Fermenter 2 Sludge Control Valve	LI3.04						DI		A
036	0	FA	F	553	PAL	Pressure Alarm Low	Fermenter Sludge Pumps Compressed Air	LI3.04				0		DI		A
037	1	FA	F	553	YS	Remote Status	Fermenter 1 Spray Water Valve	LI3.02						DI		A
038	1	FA	F	553	VD	Open Command	Fermenter 1 Spray Water Valve	LI3.02						DO		A
039	1	FA	F	555	LAHH	High High Alarm Level	Fermenter Sprnatnt Wet Well	LI3.05				0		DI		A
040	0	FA	F	555	LT	Level Feedback	Fermenter Sprnatnt Wet Well - PIT	LI3.05	m					AI		A
041	0	FA	F	555	PALL	Pressure Alarm Low Low	Fermenter Sprnatnt Wet Well	LI3.05				0		DI		A
042	1	FA	F	555	YS-1	Remote Status	Fermenter Sprnatnt Wet Well SprayValve	LI3.05						DI		A
043	1	FA	F	555	VD-1	Open Command	Fermenter Sprnatnt Wet Well SprayValve	LI3.05						DO		A

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NO.	REV. NO.	TAG NAME				DESCRIPTION			P&ID DRAWING	I/O SPECIFICATION					
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE	ENG. UNITS		SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
044	0	FA	F	556	FT	Flow Feedback	Bioreactor 1 Fermenter Supernatant Feed	LI3.05	L/s	0-21			AI		A
045	1	FA	F	556	MM	Running Status	Fermenter Supernatant Pump 1	LI3.05					DI		A
046	1	FA	F	556	MN	Start Command	Fermenter Supernatant Pump 1	LI3.05					DO		A
047	1	FA	F	556	SC	Speed Control	Fermenter Supernatant Pump 1	LI3.05	%	0-100			AO		A
048	1	FA	F	556	ST	Speed Feedback	Fermenter Supernatant Pump 1	LI3.05	%	0-100			AI		A
049	1	FA	F	556	MF	Fault Status	Fermenter Supernatant Pump 1	LI3.05				0	DI		A
050	1	FA	F	556	YS-1	Computer Selected Status	Fermenter Supernatant Pump 1	LI3.05					DI		A
051	1	FA	F	556	VB	Close Command	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05					DO		A
052	1	FA	F	556	VD	Open Command	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05					DO		A
053	1	FA	F	556	ZB	Closed Status	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05					DI		A
054	1	FA	F	556	ZD	Open Status	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05					DI		A
055	1	FA	F	557	MM	Running Status	Fermenter Supernatant Pump 2	LI3.05					DI		A
056	1	FA	F	557	MN	Start Command	Fermenter Supernatant Pump 2	LI3.05					DO		A
057	1	FA	F	555	PT	Pressure Feedback	Fermenter Supernatant Wetwell	LI3.06	kPa				AI		A
058	0	FA	F	557	SC	Speed Control	Fermenter Supernatant Pump 2	LI3.05	%	0-100			AO		A
059	0	FA	F	557	ST	Speed Feedback	Fermenter Supernatant Pump 2	LI3.05	%	0-100			AI		A
060	1	FA	F	557	MF	Fault Status	Fermenter Supernatant Pump 2	LI3.05				0	DI		A
061	1	FA	F	555	YS-2	Remote Status	Fermenter Sprmatnt Wet Well Flush Wtr Vlv	LI3.05					DI		A
062	0	FA	F	557	YS	Computer Selected Status	Fermenter Supernatant Pump 2	LI3.05					DI		A
063	1	FA	F	555	VD-2	Open Command	Fermenter Sprmatnt Wet Well Flush Wtr Vlv	LI3.05					DO		A
064	0	FA	F	558	FT	Flow Feedback	Bioreactor 2 Fermenter Supernatant Feed	LI3.05	L/s	0-21			AI		A
065	1	FA	F	558	MM	Running Status	Fermenter Supernatant Pump 3	LI3.05					DI		A
066	1	FA	F	558	MN	Start Command	Fermenter Supernatant Pump 3	LI3.05					DO		A
067	0	FA	F	558	SC	Speed Control	Fermenter Supernatant Pump 3	LI3.05	%	0-100			AO		A
068	0	FA	F	558	ST	Speed Feedback	Fermenter Supernatant Pump 3	LI3.05	%	0-100			AI		A
069	1	FA	F	558	MF	Fault Status	Fermenter Supernatant Pump 3	LI3.05				0	DI		A
070	1	FA	F	558	YS-1	Computer Selected Status	Fermenter Supernatant Pump 3	LI3.05					DI		A
071	1	FA	F	558	VB	Close Command	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05					DO		A
072	1	FA	F	558	VD	Open Command	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05					DO		A
073	1	FA	F	558	ZB	Closed Status	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05					DI		A
074	1	FA	F	558	ZD	Open Status	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05					DI		A
075	1	FA	F	560	LAHH	Level Alarm High High	Fermenter 2	LI3.03				0	DI		A
076	1	FA	F	560	MM	Running Status	Fermenter 2	LI3.03					DI		A
077	1	FA	F	560	MN	Start Command	Fermenter 2	LI3.03					DO		A
078	1	FA	F	560	OAH	Torque Alarm High	Fermenter 2	LI3.03				0	DI		A
079	1														
080	1	FA	F	560	MF	Fault Status	Fermenter 2	LI3.03				0	DI		A
081	1	FA	F	560	YS	Computer Selected Status	Fermenter 2	LI3.03					DI		A
082	1	FA	F	560	VB	Close Command	Primary Sludge Fermenter 2 Supply Air Vlv	LI3.06					DO		A
083	1	FA	F	560	VD	Open Command	Primary Sludge Fermenter 2 Supply Air Vlv	LI3.06					DO		A
084	1	FA	F	560	ZS	Position Status	Fermenter 2	LI3.03					DI		A
085	1	FA	F	561	YS	Remote Status	Fermenter 2 Spray Water Valve	LI3.03					DI		A
086	1	FA	F	561	VD	Open Command	Fermenter 2 Spray Water Valve	LI3.03					DO		A

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NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
087	1	FA	F	610	IAL	Current Alarm Low	Primary Sludge Fermenter 1 Supply Air Fan	LI3.06			0		DI		A
088	1	FA	F	610	MM	Running Status	Primary Sludge Fermenter 1 Supply Air Fan	LI3.06					DI		A
089	0	FA	F	610	MN	Start Command	Primary Sludge Fermenter 1 Supply Air Fan	LI3.06					DO		A
090	0	FA	F	610	YS	Computer Selected Status	Primary Sludge Fermenter 1 Supply Air Fan	LI3.06					DI		A
091	1	FA	F	620	IAL	Current Alarm Low	Primary Sludge Fermenter 2 Supply Air Fan	LI3.06			0		DI		A
092	1	FA	F	620	MM	Running Status	Primary Sludge Fermenter 2 Supply Air Fan	LI3.06					DI		A
093	0	FA	F	620	MN	Start Command	Primary Sludge Fermenter 2 Supply Air Fan	LI3.06					DO		A
094	0	FA	F	620	YS	Computer Selected Status	Primary Sludge Fermenter 2 Supply Air Fan	LI3.06					DI		A
095	1	FA	F	650	IT	Current Feedback	Fermenter Odour Control Fan	LI3.06					AI		A
096	1	FA	F	650	MM	Running Status	Fermenter Odour Control Fan	LI3.06					DI		A
097	1	FA	F	650	MN	Start Command	Fermenter Odour Control Fan	LI3.06					DO		A
098	0	FA	F	650	SC	Speed Control	Fermenter Odour Control Fan	LI3.06	%	0-100			AO		A
099	0	FA	F	650	ST	Speed Feedback	Fermenter Odour Control Fan	LI3.06	%	0-100			AI		A
100	1	FA	F	650	MF	Fault Status	Fermenter Odour Control Fan	LI3.06				0	DI		A
101	0	FA	F	650	YS	Computer Selected Status	Fermenter Odour Control Fan	LI3.06					DI		A
102	1	FA	F	651	VB	Close Command	Fermenter Odour Control Fan Inlet Valve	LI3.06					DO		A
103	1	FA	F	651	VD	Open Command	Fermenter Odour Control Fan Inlet Valve	LI3.06					DO		A
104	1														
105	1														
106	1	FA	F	660	IAL	Current Alarm Low	Thermal Oxidizer Odour Control Fan	LI3.06			0		DI		A
107	1	FA	F	660	MM	Running Status	Thermal Oxidizer Odour Control Fan	LI3.06					DI		A
108	1	FA	F	660	MN	Start Command	Thermal Oxidizer Odour Control Fan	LI3.06					DO		A
109	1	FA	F	660	PT	Pressure Feedback	Thermal Oxidizer Fan Suction	LI3.06	kPa				AI		A
110	1														
111	1	FA	F	661	TT	Temperature Feedback	Thermal Oxidizer	LI3.06	Deg C	0-800			AI		A
112	1	FA	F	660	MF	Fault Status	Thermal Oxidizer Odour Control Fan	LI3.06				0	DI		A
113	0	FA	F	660	YS	Computer Selected Status	Thermal Oxidizer Odour Control Fan	LI3.06					DI		A
114	1	FA	F	661	MM	Running Status	Thermal Oxidizer	LI3.06					DI		A
115	1	FA	F	661	MN	Start Command	Thermal Oxidizer	LI3.06					DO		A
116	1	FA	F	661	MO	Stop Command	Thermal Oxidizer	LI3.06					DO		A
117	1	FA	F	661	UA	Fault Status	Thermal Oxidizer	LI3.06				0	DI		A
118	1	FA	F	661	VB	Close Command	Thermal Oxidizer Inlet Damper	LI3.06					DO		A
119	1	FA	F	661	VD	Open Command	Thermal Oxidizer Inlet Damper	LI3.06					DO		A
120	1	FA	F	662	VB	Close Command	Thermal Oxidizer Bypass Damper	LI3.06					DO		A
121	1	FA	F	662	VD	Open Command	Thermal Oxidizer Bypass Damper	LI3.06					DO		A
122	1	HA	H	710	VB	Close Command	Sludge Storage Tanks Exh. Air Damper	LI3.06					DO		A
123	1	HA	H	710	VD	Open Command	Sludge Storage Tanks Exh. Air Damper	LI3.06					DO		A
124	1	HA	H	655	IAL	Current Alarm Low	Tanker Unloading Odour Control Fan	LI3.06			0		DI		A
125	1	HA	H	655	MM	Running Status	Tanker Unloading Odour Control Fan	LI3.06					DI		A
126	1	HA	H	655	MN	Start Command	Tanker Unloading Odour Control Fan	LI3.06					DO		A
127	1	HA	H	655	YS	Computer Selected Status	Tanker Unloading Odour Control Fan	LI3.06					DI		A
128	1	HA	H	710	IAL	Current Alarm Low	Headworks & DAF Odour Control Fan	LI3.06			0		DI		A
129	1	HA	H	710	MN	Start Command	Headworks & DAF Odour Control Fan	LI3.06					DO		A

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NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
130	1	HA	H	710	PAH	Pressure High Alarm	Headworks & DAF Odour Control Fan	LI3.06				0	DI		A
131	1	HA	H	710	MM	Running Status	Headworks & DAF Odour Control Fan	LI3.06					DI		A
132	1	HA	H	710	ZD	Open Status	Sludge Storage Tanks Exh. Air Damper	LI3.06					DI		A
133	1	HA	H	710	MF	Fault Status	Headworks & DAF Odour Control Fan	LI3.06				0	DI		A
134	0	HA	H	710	YS	Computer Selected Status	Headworks & DAF Odour Control Fan	LI3.06					DI		A
135	1	PA	P	110	VB	Close Command	Primary Clarifier 1 Discharge Valve	LI1.01					DO		A
136	1	PA	P	110	VD	Open Command	Primary Clarifier 1 Discharge Valve	LI1.01					DO		A
137	1	PA	P	110	ZB	Closed Status	Primary Clarifier 1 Discharge Valve	LI1.01					DI		A
138	1	PA	P	110	ZD	Open Status	Primary Clarifier 1 Discharge Valve	LI1.01					DI		A
139	1	PA	P	120	VB	Close Command	Primary Clarifier 2 Discharge Valve	LI1.01					DO		A
140	1	PA	P	120	VD	Open Command	Primary Clarifier 2 Discharge Valve	LI1.01					DO		A
141	1	PA	P	120	ZB	Closed Status	Primary Clarifier 2 Discharge Valve	LI1.01					DI		A
142	1	PA	P	120	ZD	Open Status	Primary Clarifier 2 Discharge Valve	LI1.01					DI		A
143	0	FA	P	235	FT	Flow Feedback	Fermenters Primary Sludge Feed	LI3.01	L/s	0-20			AI		A
144	0	FA	P	236	FT	Flow Feedback	Fermenter 2 Primary Sludge	LI3.03	L/s	0-20			AI		A
145	0	FA	P	236	ZC	Position Control	Fermenter 2 Primary Sludge Control Valve	LI3.03	%	0-100			AO		A
146	1	FA	P	236	ZB	Closed Status	Fermenter 2 Primary Sludge Control Valve	LI3.03					DI		A
147	1	FA	P	236	ZD	Open Status	Fermenter 2 Primary Sludge Control Valve	LI3.03					DI		A
148	0	FA	P	236	ZT	Position Feedback	Fermenter 2 Primary Sludge Control Valve	LI3.03	%	0-100			AI		A
149	1	PA	P	250	MM	Running Status	Primary Sludge Pump 1	LI1.01					DI		A
150	1	PA	P	250	MN	Start Command	Primary Sludge Pump 1	LI1.01					DO		A
151	1	PA	P	250	SC	Speed Control	Primary Sludge Pump 1	LI1.01	%	0-100			AO		A
152	1	PA	P	250	ST	Speed Feedback	Primary Sludge Pump 1	LI1.01	%	0-100			AI		A
153	1	PA	P	250	MF	Fault Status	Primary Sludge Pump 1	LI1.01				0	DI		A
154	1	PA	P	250	YS	Computer Selected Status	Primary Sludge Pump 1	LI1.01					DI		A
155	1	PA	P	260	MM	Running Status	Primary Sludge Pump 2	LI1.01					DI		A
156	1	PA	P	260	MN	Start Command	Primary Sludge Pump 2	LI1.01					DO		A
157	1	PA	P	260	SC	Speed Control	Primary Sludge Pump 2	LI1.01	%	0-100			AO		A
158	1	PA	P	260	ST	Speed Feedback	Primary Sludge Pump 2	LI1.01	%	0-100			AI		A
159	1	PA	P	260	MF	Fault Status	Primary Sludge Pump 2	LI1.01				0	DI		A
160	1	PA	P	260	YS	Computer Selected Status	Primary Sludge Pump 2	LI1.01					DI		A
161	1														
162	1														
163	1														
164	1														
165	1	SA	S	111	FT	Flow Feedback	Bioreactor 1 Anoxic Zones	LI2.01	L/s				AI		B
166	1	SA	S	111	ZC	Position Control	Bioreactor 1 Anoxic Zone 2 Control Valve	LI2.01	%	0-100			AO		B
167	1	SA	S	111	ZB	Closed Status	Bioreactor 1 Anoxic Zone 2 Control Valve	LI2.01					DI		B
168	1	SA	S	111	ZD	Open Status	Bioreactor 1 Anoxic Zone 2 Control Valve	LI2.01					DI		B
169	1	SA	S	111	ZT	Position Feedback	Bioreactor 1 Anoxic Zone 2 Control Valve	LI2.01	%	0-100			AI		B
170	1	SA	S	112	FT	Flow Feedback	Bioreactor 1 Anaerobic Zone	LI2.01	L/s				AI		B
171	1	SA	S	112	ZC	Position Control	Bioreactor 1 Anoxic Zone 1 Control Valve	LI2.01	%	0-100			AO		B
172	1	SA	S	112	ZB	Closed Status	Bioreactor 1 Anoxic Zone 1 Control Valve	LI2.01					DI		B

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NO.	REV. NO.	TAG NAME				DESCRIPTION			P&ID DRAWING	I/O SPECIFICATION					PCU AREA
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE	ENG. UNITS		SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	
											LOW	HIGH			
173	1	SA	S	112	ZD	Open Status	Bioreactor 1 Anoxic Zone 1 Control Valve	LI2.01					DI		B
174	1	SA	S	112	ZT	Position Feedback	Bioreactor 1 Anoxic Zone 1 Control Valve	LI2.01	%	0-100			AI		B
175	1	SA	S	113	ZC	Position Control	Bioreactor 1 Anaerobic Zone Control Valve	LI2.01	%	0-100			AO		B
176	1	SA	S	113	ZB	Closed Status	Bioreactor 1 Anaerobic Zone Control Valve	LI2.01					DI		B
177	1	SA	S	113	ZD	Open Status	Bioreactor 1 Anaerobic Zone Control Valve	LI2.01					DI		B
178	1	SA	S	113	ZT	Position Feedback	Bioreactor 1 Anaerobic Zone Control Valve	LI2.01	%	0-100			AI		B
179	1	SA	S	114	ZC	Position Control	Bioreactor 1 Pre Anoxic Zone Inlet Valve	LI2.01	%	0-100			AO		B
180	1	SA	S	114	ZB	Closed Status	Bioreactor 1 Pre Anoxic Zone Inlet Valve	LI2.01					DI		B
181	1	SA	S	114	ZD	Open Status	Bioreactor 1 Pre Anoxic Zone Inlet Valve	LI2.01					DI		B
182	1	SA	S	114	ZT	Position Feedback	Bioreactor 1 Pre Anoxic Zone Inlet Valve	LI2.01	%	0-100			AI		B
183	1														
184	1														
185	1														
186	1														
187	1	SA	S	121	FT	Flow Feedback	Bioreactor 2 Anoxic Zones	LI2.03	L/s				AI		B
188	1	SA	S	121	ZC	Position Control	Bioreactor 2 Anoxic Zone 2 Control Valve	LI2.03	%	0-100			AO		B
189	1	SA	S	121	ZB	Closed Status	Bioreactor 2 Anoxic Zone 2 Control Valve	LI2.03					DI		B
190	1	SA	S	121	ZD	Open Status	Bioreactor 2 Anoxic Zone 2 Control Valve	LI2.03					DI		B
191	1	SA	S	121	ZT	Position Feedback	Bioreactor 2 Anoxic Zone 2 Control Valve	LI2.03	%	0-100			AI		B
192	1	SA	S	122	FT	Flow Feedback	Bioreactor 2 Anaerobic Zone	LI2.03	L/s				AI		B
193	1	SA	S	122	ZC	Position Control	Bioreactor 2 Anoxic Zone 1 Control Valve	LI2.03	%	0-100			AO		B
194	1	SA	S	122	ZB	Closed Status	Bioreactor 2 Anoxic Zone 1 Control Valve	LI2.03					DI		B
195	1	SA	S	122	ZD	Open Status	Bioreactor 2 Anoxic Zone 1 Control Valve	LI2.03					DI		B
196	1	SA	S	122	ZT	Position Feedback	Bioreactor 2 Anoxic Zone 1 Control Valve	LI2.03	%	0-100			AI		B
197	1	SA	S	123	ZC	Position Control	Bioreactor 2 Anaerobic Zone Ctl Valve	LI2.03	%	0-100			AO		B
198	1	SA	S	123	ZB	Closed Status	Bioreactor 2 Anaerobic Zone Ctl Valve	LI2.03					DI		B
199	1	SA	S	123	ZD	Open Status	Bioreactor 2 Anaerobic Zone Ctl Valve	LI2.03					DI		B
200	1	SA	S	123	ZT	Position Feedback	Bioreactor 2 Anaerobic Zone Ctl Valve	LI2.03	%	0-100			AI		B
201	1	SA	S	124	ZC	Position Control	Bioreactor 2 Pre Anoxic Zone Inlet Valve	LI2.03	%	0-100			AO		B
202	1	SA	S	124	ZB	Closed Status	Bioreactor 2 Pre Anoxic Zone Inlet Valve	LI2.03					DI		B
203	1	SA	S	124	ZD	Open Status	Bioreactor 2 Pre Anoxic Zone Inlet Valve	LI2.03					DI		B
204	1	SA	S	124	ZT	Position Feedback	Bioreactor 2 Pre Anoxic Zone Inlet Valve	LI2.03	%	0-100			AI		B
205	1	FA	S	125	FT	Flow Feedback	Fermenters Primary Sludge Dilution Water	LI3.01	L/s				AI		A
206	1	FA	S	125	ZC	Position Control	Fermenter Prim. Sludge Dilution Wtr Valve	LI3.01	%	0-100			AO		A
207	1	FA	S	125	ZB	Closed Status	Fermenter Prim. Sludge Dilution Wtr Valve	LI3.01					DI		A
208	1	FA	S	125	ZD	Open Status	Fermenter Prim. Sludge Dilution Wtr Valve	LI3.01					DI		A
209	1	FA	S	125	ZT	Position Feedback	Fermenter Prim. Sludge Dilution Wtr Valve	LI3.01	%	0-100			AI		A
210	0	SB	S	230	IT	Current Feedback	Flushing Water Pump		Amps				AI/TCP		B
211	0	SB	S	230	MF	Not Faulted Status	Flushing Water Pump						DI		B
212	1	SB	S	230	MM	Running Status (Existing I/O)	Flushing Water Pump	WEP-93					DI		B
213	1	SB	S	230	MN	Start Command (Existing I/O)	Flushing Water Pump & Discharge Valve	WEP-93					DO		B
214	0	SB	S	230	SC	Speed Control	Flushing Water Pump		%	0-100			AO		B
215	0	SB	S	230	ST	Speed Feedback	Flushing Water Pump		%	0-100			AI		B

I/O POINT TYPES: AI = Analog Input, AO = Analog Output, DI = Discrete Input, DO = Discrete Output, MB/TCP = Modbus TCP/IP

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						PCU AREA	
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.		
											LOW	HIGH				
216	1	SB	S	230	YS	Computer Selected Status (Existing I/O)	Flushing Water Pump	WEP-93						DI		B
217	1	SA	S	451	AT	Dissolved Oxygen Analyzer Feedback	Bioreactor 1 Aerobic Zone 1	LI2.02	ppm	0-100				AI		B
218	1	SA	S	451	ZC	Position Control	Bioreactor 1 Aerobic Zone 1 Air Ctl Valve	LI2.02	%	0-100				AO		B
219	1	SA	S	451	ZB	Closed Status	Bioreactor 1 Aerobic Zone 1 Air Ctl Valve	LI2.02						DI		B
220	1	SA	S	451	ZD	Open Status	Bioreactor 1 Aerobic Zone 1 Air Ctl Valve	LI2.02						DI		B
221	1	SA	S	451	ZT	Position Feedback	Bioreactor 1 Aerobic Zone 1 Air Ctl Valve	LI2.02	%	0-100				AI		B
222	1	SA	S	452	AT	Dissolved Oxygen Analyzer Feedback	Bioreactor 1 Aerobic Zone 2	LI2.02	ppm	0-100				AI		B
223	1	SA	S	452	ZC	Position Control	Bioreactor 1 Aerobic Zone 2 Air Ctl Valve	LI2.02	%	0-100				AO		B
224	1	SA	S	452	ZB	Closed Status	Bioreactor 1 Aerobic Zone 2 Air Ctl Valve	LI2.02						DI		B
225	1	SA	S	452	ZD	Open Status	Bioreactor 1 Aerobic Zone 2 Air Ctl Valve	LI2.02						DI		B
226	1	SA	S	452	ZT	Position Feedback	Bioreactor 1 Aerobic Zone 2 Air Ctl Valve	LI2.02	%	0-100				AI		B
227	1	SA	S	454	AT	Dissolved Oxygen Analyzer Feedback	Bioreactor 1 Aerobic Zone 3	LI2.02	ppm	0-100				AI		B
228	1	SA	S	453	ZC	Position Control	Bioreactor 1 Aerobic Zone 2 Air Ctl Valve	LI2.02	%	0-100				AO		B
229	1	SA	S	453	ZB	Closed Status	Bioreactor 1 Aerobic Zone 2 Air Ctl Valve	LI2.02						DI		B
230	1	SA	S	453	ZD	Open Status	Bioreactor 1 Aerobic Zone 2 Air Ctl Valve	LI2.02						DI		B
231	1	SA	S	453	ZT	Position Feedback	Bioreactor 1 Aerobic Zone 2 Air Ctl Valve	LI2.02	%	0-100				AI		B
232	1	SA	S	456	AT	Dissolved Oxygen Analyzer Feedback	Bioreactor 1 Aerobic Zone 4	LI2.02	ppm	0-100				AI		B
233	1	SA	S	454	ZC	Position Control	Bioreactor 1 Aerobic Zone 3 Air Ctl Valve	LI2.02	%	0-100				AO		B
234	1	SA	S	454	ZB	Closed Status	Bioreactor 1 Aerobic Zone 3 Air Ctl Valve	LI2.02						DI		B
235	1	SA	S	454	ZD	Open Status	Bioreactor 1 Aerobic Zone 3 Air Ctl Valve	LI2.02						DI		B
236	1	SA	S	454	ZT	Position Feedback	Bioreactor 1 Aerobic Zone 3 Air Ctl Valve	LI2.02	%	0-100				AI		B
237	1	SA	S	455	ZC	Position Control	Bioreactor 1 Aerobic Zone 3 Air Ctl Valve	LI2.02	%	0-100				AO		B
238	1	SA	S	455	ZB	Closed Status	Bioreactor 1 Aerobic Zone 3 Air Ctl Valve	LI2.02						DI		B
239	1	SA	S	455	ZD	Open Status	Bioreactor 1 Aerobic Zone 3 Air Ctl Valve	LI2.02						DI		B
240	1	SA	S	455	ZT	Position Feedback	Bioreactor 1 Aerobic Zone 3 Air Ctl Valve	LI2.02	%	0-100				AI		B
241	1	SA	S	456	ZC	Position Control	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02	%	0-100				AO		B
242	1	SA	S	456	ZB	Closed Status	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02						DI		B
243	1	SA	S	456	ZD	Open Status	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02						DI		B
244	1	SA	S	456	ZT	Position Feedback	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02	%	0-100				AI		B
245	1	SA	S	457	ZC	Position Control	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02	%	0-100				AO		B
246	1	SA	S	457	ZB	Closed Status	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02						DI		B
247	1	SA	S	457	ZD	Open Status	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02						DI		B
248	1	SA	S	457	ZT	Position Feedback	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02	%	0-100				AI		B
249	1	SA	S	458	PAH	Pressure High Alarm	Bioreactor 1 Process Air	LI2.02				0		DI		B
250	1	SA	S	458	VB	Close Command	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02						DO		B
251	1	SA	S	458	VD	Open Command	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02						DO		B
252	1	SA	S	458	ZB	Closed Status	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02						DI		B
253	1	SA	S	458	ZD	Open Status	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02						DI		B
254	1	SA	S	461	AT	Dissolved Oxygen Analyzer Feedback	Bioreactor 2 Aerobic Zone 1	LI2.04	ppm	0-100				AI		B
255	1	SA	S	461	ZC	Position Control	Bioreactor 2 Aerobic Zone 1 Air Ctl Valve	LI2.04	%	0-100				AO		B
256	1	SA	S	461	ZB	Closed Status	Bioreactor 2 Aerobic Zone 1 Air Ctl Valve	LI2.04						DI		B
257	1	SA	S	461	ZD	Open Status	Bioreactor 2 Aerobic Zone 1 Air Ctl Valve	LI2.04						DI		B
258	1	SA	S	461	ZT	Position Feedback	Bioreactor 2 Aerobic Zone 1 Air Ctl Valve	LI2.04	%	0-100				AI		B

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						PCU AREA
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	
											LOW	HIGH			
259	1	SA	S	462	AT	Dissolved Oxygen Analyzer Feedback	Bioreactor 2 Aerobic Zone 2	LI2.04	ppm	0-100			AI		B
260	1	SA	S	462	ZC	Position Control	Bioreactor 2 Aerobic Zone 2 Air Ctl Valve	LI2.04	%	0-100			AO		B
261	1	SA	S	462	ZB	Closed Status	Bioreactor 2 Aerobic Zone 2 Air Ctl Valve	LI2.04					DI		B
262	1	SA	S	462	ZD	Open Status	Bioreactor 2 Aerobic Zone 2 Air Ctl Valve	LI2.04					DI		B
263	1	SA	S	462	ZT	Position Feedback	Bioreactor 2 Aerobic Zone 2 Air Ctl Valve	LI2.04	%	0-100			AI		B
264	1	SA	S	464	AT	Dissolved Oxygen Analyzer Feedback	Bioreactor 2 Aerobic Zone 3	LI2.04	ppm	0-100			AI		B
265	1	SA	S	463	ZC	Position Control	Bioreactor 2 Aerobic Zone 2 Air Ctl Valve	LI2.04	%	0-100			AO		B
266	1	SA	S	463	ZB	Closed Status	Bioreactor 2 Aerobic Zone 2 Air Ctl Valve	LI2.04					DI		B
267	1	SA	S	463	ZD	Open Status	Bioreactor 2 Aerobic Zone 2 Air Ctl Valve	LI2.04					DI		B
268	1	SA	S	463	ZT	Position Feedback	Bioreactor 2 Aerobic Zone 2 Air Ctl Valve	LI2.04	%	0-100			AI		B
269	1	SA	S	466	AT	Dissolved Oxygen Analyzer Feedback	Bioreactor 2 Aerobic Zone 4	LI2.04	ppm	0-100			AI		B
270	1	SA	S	464	ZC	Position Control	Bioreactor 2 Aerobic Zone 3 Air Ctl Valve	LI2.04	%	0-100			AO		B
271	1	SA	S	464	ZB	Closed Status	Bioreactor 2 Aerobic Zone 3 Air Ctl Valve	LI2.04					DI		B
272	1	SA	S	464	ZD	Open Status	Bioreactor 2 Aerobic Zone 3 Air Ctl Valve	LI2.04					DI		B
273	1	SA	S	464	ZT	Position Feedback	Bioreactor 2 Aerobic Zone 3 Air Ctl Valve	LI2.04	%	0-100			AI		B
274	1	SA	S	465	ZC	Position Control	Bioreactor 2 Aerobic Zone 3 Air Ctl Valve	LI2.04	%	0-100			AO		B
275	1	SA	S	465	ZB	Closed Status	Bioreactor 2 Aerobic Zone 3 Air Ctl Valve	LI2.04					DI		B
276	1	SA	S	465	ZD	Open Status	Bioreactor 2 Aerobic Zone 3 Air Ctl Valve	LI2.04					DI		B
277	1	SA	S	465	ZT	Position Feedback	Bioreactor 2 Aerobic Zone 3 Air Ctl Valve	LI2.04	%	0-100			AI		B
278	1	SA	S	466	ZC	Position Control	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04	%	0-100			AO		B
279	1	SA	S	466	ZB	Closed Status	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04					DI		B
280	1	SA	S	466	ZD	Open Status	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04					DI		B
281	1	SA	S	466	ZT	Position Feedback	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04	%	0-100			AI		B
282	1	SA	S	467	ZC	Position Control	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04	%	0-100			AO		B
283	1	SA	S	467	ZB	Closed Status	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04					DI		B
284	1	SA	S	467	ZD	Open Status	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04					DI		B
285	1	SA	S	467	ZT	Position Feedback	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04	%	0-100			AI		B
286	1	SA	S	468	VB	Close Command	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04					DO		B
287	1	SA	S	468	VD	Open Command	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04					DO		B
288	1	SA	S	468	ZB	Closed Status	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04					DI		B
289	1	SA	S	468	ZD	Open Status	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04					DI		B
290	1	SA	S	510	MM	Running Status	Secondary Clarifier 1	LI2.08					DI		B
291	1	SA	S	510	MN	Start Command	Secondary Clarifier 1	LI2.08					DO		B
292	0	SA	S	510	OAH	Torque Alarm High	Secondary Clarifier 1	LI2.08				1	DI		B
293	1														
294	1	SA	S	510	MF	Fault Status	Secondary Clarifier 1	LI2.08				0	DI		B
295	1	SA	S	510	YS	Computer Selected Status	Secondary Clarifier 1	LI2.08					DI		B
296	1	SA	S	510	ZS	Position Status	Secondary Clarifier 1	LI2.08					DI		B
297	1	SA	S	520	MM	Running Status	Secondary Clarifier 2	LI2.08					DI		B
298	1	SA	S	520	MN	Start Command	Secondary Clarifier 2	LI2.08					DO		B
299	0	SA	S	520	OAH	Torque Alarm High	Secondary Clarifier 2	LI2.08				1	DI		B
300	1														
301	1	SA	S	520	MF	Fault Status	Secondary Clarifier 2	LI2.08				0	DI		B

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION							
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA	
											LOW	HIGH				
302	1	SA	S	520	YS	Computer Selected Status	Secondary Clarifier 2	LI2.08						DI		B
303	1	SA	S	520	ZS	Position Status	Secondary Clarifier 2	LI2.08						DI		B
304	1	SA	S	530	FT	Flow Feedback	Secondary Clarifier 3 Mixed Liquor Feed	LI2.06	L/s					AI		B
305	1	SA	S	530	MM	Running Status	Secondary Clarifier 3	LI2.06						DI		B
306	1	SA	S	530	MN	Start Command	Secondary Clarifier 3	LI2.06						DO		B
307	0	SA	S	530	OAH	Torque Alarm High	Secondary Clarifier 3	LI2.06				0		DI		B
308	1															
309	1	SA	S	530	MF	Fault Status	Secondary Clarifier 3	LI2.06				0		DI		B
310	1	SA	S	530	YS	Computer Selected Status	Secondary Clarifier 3	LI2.06						DI		B
311	1	SA	S	530	ZC	Position Control	Sec. Clarifier 3 Mixed Liquor Inlet Valve	LI2.06	%	0-100				AO		B
312	1	SA	S	530	ZS	Position Status	Secondary Clarifier 3	LI2.06						DI		B
313	1	SA	S	530	ZB	Closed Status	Sec. Clarifier 3 Mixed Liquor Inlet Valve	LI2.06						DI		B
314	1	SA	S	530	ZD	Open Status	Sec. Clarifier 3 Mixed Liquor Inlet Valve	LI2.06						DI		B
315	1	SA	S	530	ZT	Position Feedback	Sec. Clarifier 3 Mixed Liquor Inlet Valve	LI2.06	%	0-100				AI		B
316	1	SA	S	710	FT	Flow Feedback	R.A.S. Pump 1 Discharge	LI2.07	L/s					AI		B
317	1	SA	S	710	MM	Running Status	R.A.S. Pump 1	LI2.08						DI		B
318	1	SA	S	710	MN	Start Command	R.A.S. Pump 1	LI2.08						DO		B
319	0	SA	S	710	SC	Speed Control	R.A.S. Pump 1	LI2.08	%	0-100				AO		B
320	0	SA	S	710	ST	Speed Feedback	R.A.S. Pump 1	LI2.08	%	0-100				AI		B
321	1	SA	S	710	MF	Fault Status	R.A.S. Pump 1	LI2.08				0		DI		B
322	1	SA	S	710	YS	Computer Selected Status	R.A.S. Pump 1	LI2.08						DI		B
323	1	SA	S	720	FT	Flow Feedback	R.A.S. Pump 2 Discharge	LI2.07	L/s					AI		B
324	1	SA	S	720	MM	Running Status	R.A.S. Pump 2	LI2.08						DI		B
325	1	SA	S	720	MN	Start Command	R.A.S. Pump 2	LI2.08						DO		B
326	0	SA	S	720	SC	Speed Control	R.A.S. Pump 2	LI2.08	%	0-100				AO		B
327	0	SA	S	720	ST	Speed Feedback	R.A.S. Pump 2	LI2.08	%	0-100				AI		B
328	1	SA	S	720	MF	Fault Status	R.A.S. Pump 2	LI2.08				0		DI		B
329	1	SA	S	720	YS	Computer Selected Status	R.A.S. Pump 2	LI2.08						DI		B
330	1	SA	S	730	MM	Running Status	R.A.S. Pump 3	LI2.08						DI		B
331	1	SA	S	730	MN	Start Command	R.A.S. Pump 3	LI2.08						DO		B
332	0	SA	S	730	SC	Speed Control	R.A.S. Pump 3	LI2.08	%	0-100				AO		B
333	0	SA	S	730	ST	Speed Feedback	R.A.S. Pump 3	LI2.08	%	0-100				AI		B
334	1	SA	S	730	MF	Fault Status	R.A.S. Pump 3	LI2.08				0		DI		B
335	1	SA	S	730	YS	Computer Selected Status	R.A.S. Pump 3	LI2.08						DI		B
336	1	SA	S	740	MM	Running Status	R.A.S. Pump 4	LI2.07						DI		B
337	1	SA	S	740	MN	Start Command	R.A.S. Pump 4	LI2.07						DO		B
338	0	SA	S	740	SC	Speed Control	R.A.S. Pump 4	LI2.07	%	0-100				AO		B
339	0	SA	S	740	ST	Speed Feedback	R.A.S. Pump 4	LI2.07	%	0-100				AI		B
340	1	SA	S	740	MF	Fault Status	R.A.S. Pump 4	LI2.07				0		DI		B
341	1	SA	S	740	YS	Computer Selected Status	R.A.S. Pump 4	LI2.07						DI		B
342	1	SA	S	740	ZC	Position Control	R.A.S. to Bioreactor 1 Flow Control Valve	LI2.01	%	0-100				AO		B
343	1	SA	S	740	ZB	Closed Status	R.A.S. to Bioreactor 1 Flow Control Valve	LI2.01						DI		B
344	1	SA	S	740	ZD	Open Status	R.A.S. to Bioreactor 1 Flow Control Valve	LI2.01						DI		B

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION			P&ID DRAWING	I/O SPECIFICATION					
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE	ENG. UNITS		SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
345	1	SA	S	740	ZT	Position Feedback	R.A.S. to Bioreactor 1 Flow Control Valve	LI2.01	%	0-100			AI		B
346	0	SA	S	740	AT-1	Online Analyzer NH3 Feedback	Final Effluent to Discharge	LI2.08	mg/l				AI		B
347	0	SA	S	740	AT-2	Online Analyzer NO3 Feedback	Final Effluent to Discharge	LI2.08	mg/l				AI		B
348	0	SA	S	740	AT-3	Online Analyzer PO4 Feedback	Final Effluent to Discharge	LI2.08	mg/l				AI		B
349	1	SA	S	741	ZC	Position Control	R.A.S. to Bioreactor 2 Flow Control Valve	LI2.03	%	0-100			AO		B
350	1	SA	S	741	ZB	Closed Status	R.A.S. to Bioreactor 2 Flow Control Valve	LI2.03					DI		B
351	1	SA	S	741	ZD	Open Status	R.A.S. to Bioreactor 2 Flow Control Valve	LI2.03					DI		B
352	1	SA	S	741	ZT	Position Feedback	R.A.S. to Bioreactor 2 Flow Control Valve	LI2.03	%	0-100			AI		B
353	1	SA	S	750	FT	Flow Feedback	R.A.S. Pumps 4 & 5 Discharge	LI2.07	L/s	0-460			AI		B
354	1	SA	S	750	MM	Running Status	R.A.S. Pump 5	LI2.07					DI		B
355	1	SA	S	750	MN	Start Command	R.A.S. Pump 5	LI2.07					DO		B
356	0	SA	S	750	SC	Speed Control	R.A.S. Pump 5	LI2.07	%	0-100			AO		B
357	0	SA	S	750	ST	Speed Feedback	R.A.S. Pump 5	LI2.07	%	0-100			AI		B
358	1	SA	S	750	MF	Fault Status	R.A.S. Pump 5	LI2.07				0	DI		B
359	1	SA	S	750	YS	Computer Selected Status	R.A.S. Pump 5	LI2.07					DI		B
360	1	SA	S	760	MM	Running Status	Bioreactor 1 Pre Anoxic Zone Mixer	LI2.01					DI		B
361	1	SA	S	760	MN	Start Command	Bioreactor 1 Pre Anoxic Zone Mixer	LI2.01					DO		B
362	1	SA	S	760	MF	Fault Status	Bioreactor 1 Pre Anoxic Zone Mixer	LI2.01				0	DI		B
363	1	SA	S	760	YS	Computer Selected Status	Bioreactor 1 Pre Anoxic Zone Mixer	LI2.01					DI		B
364	1	SA	S	761	MM	Running Status	Bioreactor 1 Anaerobic Zone Mixer	LI2.01					DI		B
365	1	SA	S	761	MN	Start Command	Bioreactor 1 Anaerobic Zone Mixer	LI2.01					DO		B
366	1	SA	S	761	MF	Fault Status	Bioreactor 1 Anaerobic Zone Mixer	LI2.01				0	DI		B
367	1	SA	S	761	YS	Computer Selected Status	Bioreactor 1 Anaerobic Zone Mixer	LI2.01					DI		B
368	1	SA	S	762	MM	Running Status	Bioreactor 1 Anoxic Zone 1 Mixer	LI2.01					DI		B
369	0	SA	S	762	MN	Start Command	Bioreactor 1 Anoxic Zone 1 Mixer	LI2.01					DO		B
370	1	SA	S	762	MF	Fault Status	Bioreactor 1 Anoxic Zone 1 Mixer	LI2.01				0	DI		B
371	1	SA	S	762	YS	Computer Selected Status	Bioreactor 1 Anoxic Zone 1 Mixer	LI2.01					DI		B
372	1	SA	S	763	MM	Running Status	Bioreactor 1 Anoxic Zone 2 Mixer	LI2.01					DI		B
373	1	SA	S	763	MN	Start Command	Bioreactor 1 Anoxic Zone 2 Mixer	LI2.01					DO		B
374	1	SA	S	763	MF	Fault Status	Bioreactor 1 Anoxic Zone 2 Mixer	LI2.01				0	DI		B
375	1	SA	S	763	YS	Computer Selected Status	Bioreactor 1 Anoxic Zone 2 Mixer	LI2.01					DI		B
376	1	SA	S	765	MM	Running Status	Bioreactor 2 Pre Anoxic Zone Mixer	LI2.03					DI		B
377	1	SA	S	765	MN	Start Command	Bioreactor 2 Pre Anoxic Zone Mixer	LI2.03					DO		B
378	1	SA	S	765	MF	Fault Status	Bioreactor 2 Pre Anoxic Zone Mixer	LI2.03				0	DI		B
379	1	SA	S	765	YS	Computer Selected Status	Bioreactor 2 Pre Anoxic Zone Mixer	LI2.03					DI		B
380	1	SA	S	766	MM	Running Status	Bioreactor 2 Anaerobic Zone Mixer	LI2.03					DI		B
381	1	SA	S	766	MN	Start Command	Bioreactor 2 Anaerobic Zone Mixer	LI2.03					DO		B
382	1	SA	S	766	MF	Fault Status	Bioreactor 2 Anaerobic Zone Mixer	LI2.03				0	DI		B
383	1	SA	S	766	YS	Computer Selected Status	Bioreactor 2 Anaerobic Zone Mixer	LI2.03					DI		B
384	1	SA	S	767	MM	Running Status	Bioreactor 2 Anoxic Zone 1 Mixer	LI2.03					DI		B
385	1	SA	S	767	MN	Start Command	Bioreactor 2 Anoxic Zone 1 Mixer	LI2.03					DO		B
386	1	SA	S	767	MF	Fault Status	Bioreactor 2 Anoxic Zone 1 Mixer	LI2.03				0	DI		B
387	1	SA	S	767	YS	Computer Selected Status	Bioreactor 2 Anoxic Zone 1 Mixer	LI2.03					DI		B

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
388	1	SA	S	768	MM	Running Status	Bioreactor 2 Anoxic Zone 2 Mixer	LI2.03					DI		B
389	1	SA	S	768	MN	Start Command	Bioreactor 2 Anoxic Zone 2 Mixer	LI2.03					DO		B
390	1	SA	S	768	MF	Fault Status	Bioreactor 2 Anoxic Zone 2 Mixer	LI2.03				0	DI		B
391	1	SA	S	768	YS	Computer Selected Status	Bioreactor 2 Anoxic Zone 2 Mixer	LI2.03					DI		B
392	1	SA	S	770	MM	Running Status	Bioreactor 1 Recycle Pump	LI2.02					DI		B
393	1	SA	S	770	MN	Start Command	Bioreactor 1 Recycle Pump	LI2.02					DO		B
394	0	SA	S	770	SC	Speed Control	Bioreactor 1 Recycle Pump	LI2.02	%	0-100			AO		B
395	0	SA	S	770	ST	Speed Feedback	Bioreactor 1 Recycle Pump	LI2.02	%	0-100			AI		B
396	1	SA	S	770	MF	Fault Status	Bioreactor 1 Recycle Pump	LI2.02				0	DI		B
397	1	SA	S	770	YS	Computer Selected Status	Bioreactor 1 Recycle Pump	LI2.02					DI		B
398	1	SA	S	771	MM	Running Status	Bioreactor 2 Recycle Pump	LI2.04					DI		B
399	1	SA	S	771	MN	Start Command	Bioreactor 2 Recycle Pump	LI2.04					DO		B
400	0	SA	S	771	SC	Speed Control	Bioreactor 2 Recycle Pump	LI2.04	%	0-100			AO		B
401	0	SA	S	771	ST	Speed Feedback	Bioreactor 2 Recycle Pump	LI2.04	%	0-100			AI		B
402	1	SA	S	771	MF	Fault Status	Bioreactor 2 Recycle Pump	LI2.04				0	DI		B
403	1	SA	S	771	YS	Computer Selected Status	Bioreactor 2 Recycle Pump	LI2.04					DI		B
404	1	SA	S	810	MM	Running Status	W.A.S. Pump 1	LI2.05					DI		B
405	1	SA	S	810	MN	Start Command	W.A.S. Pump 1	LI2.05					DO		B
406	0	SA	S	810	SC	Speed Control	W.A.S. Pump 1	LI2.05	%	0-100			AO		B
407	0	SA	S	810	ST	Speed Feedback	W.A.S. Pump 1	LI2.05	%	0-100			AI		B
408	1	SA	S	810	MF	Fault Status	W.A.S. Pump 1	LI2.05				0	DI		B
409	1	SA	S	810	YS	Computer Selected Status	W.A.S. Pump 1	LI2.05					DI		B
410	1	SA	S	810	VB	Close Command	W.A.S. Pump 1 Suction Valve	LI2.05					DO		B
411	1	SA	S	810	VD	Open Command	W.A.S. Pump 1 Suction Valve	LI2.05					DO		B
412	1	SA	S	810	ZB	Closed Status	W.A.S. Pump 1 Suction Valve	LI2.05					DI		B
413	1	SA	S	810	ZD	Open Status	W.A.S. Pump 1 Suction Valve	LI2.05					DI		B
414	1	SA	S	820	FT	Flow Feedback	W.A.S. Pumps Discharge to DAF	LI2.05	L/s	0-15			AI		B
415	1	SA	S	820	MM	Running Status	W.A.S. Pump 2	LI2.05					DI		B
416	1	SA	S	820	MN	Start Command	W.A.S. Pump 2	LI2.05					DO		B
417	0	SA	S	820	SC	Speed Control	W.A.S. Pump 2	LI2.05	%	0-100			AO		B
418	0	SA	S	820	ST	Speed Feedback	W.A.S. Pump 2	LI2.05	%	0-100			AI		B
419	1	SA	S	820	MF	Fault Status	W.A.S. Pump 2	LI2.05				0	DI		B
420	1	SA	S	820	YS	Computer Selected Status	W.A.S. Pump 2	LI2.05					DI		B
421	1	SA	S	820	VB	Close Command	W.A.S. Pump 2 Suction Valve	LI2.05					DO		B
422	1	SA	S	820	VD	Open Command	W.A.S. Pump 2 Suction Valve	LI2.05					DO		B
423	1	SA	S	820	ZB	Closed Status	W.A.S. Pump 2 Suction Valve	LI2.05					DI		B
424	1	SA	S	820	ZD	Open Status	W.A.S. Pump 2 Suction Valve	LI2.05					DI		B
425	0	TA	S	821	FT	Flow Feedback	DAF Thickener 2 W.A.S. Feed	LI4.03	L/s	0-15			AI		A
426	0	TA	S	822	ZC	Position Control	DAF Thickener 2 W.A.S. Control Valve	LI4.03	%	0-100			AO		A
427	1	TA	S	822	ZB	Closed Status	DAF Thickener 2 W.A.S. Control Valve	LI4.03					DI		A
428	1	TA	S	822	ZD	Open Status	DAF Thickener 2 W.A.S. Control Valve	LI4.03					DI		A
429	0	TA	S	822	ZT	Position Feedback	DAF Thickener 2 W.A.S. Control Valve	LI4.03	%	0-100			AI		A
430	1	TA	T	110	LAH	Level Alarm High	DAF 1 Float Hopper	LI4.02				0	DI		A

I/O POINT TYPES: AI = Analog Input, AO = Analog Output, DI = Discrete Input, DO = Discrete Output, MB/TCP = Modbus TCP/IP

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION							
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA	
											LOW	HIGH				
431	0	TA	T	110	YS	Remote Status	DAF Sludge Dilution Water Valve	LI4.02						DI		A
432	1	TA	T	110	VD	Open Command	DAF Sludge Dilution Water Valve	LI4.02						DO		A
433	0	TA	T	111	LT	Level Feedback	DAF 1 Subnatant Wet Well	LI4.02	m					AI		A
434	1	TA	T	111	MM	Running Status	DAF 1 Skimmer Drive	LI4.02						DI		A
435	1	TA	T	111	MN	Start Command	DAF 1 Skimmer Drive	LI4.02						DO		A
436	1	TA	T	111	OAH	Torque Alarm High	DAF 1 Skimmer Drive	LI4.02				0		DI		A
437	1	TA	T	111	OAL	Torque Alarm Low	DAF 1 Skimmer Drive	LI4.02				0		DI		A
438	1	TA	T	111	MF	Fault Status	DAF 1 Skimmer Drive	LI4.02				0		DI		A
439	1	TA	T	111	YS-1	Computer Selected Status	DAF 1 Skimmer Drive	LI4.02						DI		A
440	1	TA	T	111	VB	Close Command	DAF 1 Sludge Discharge Valve	LI4.02						DO		A
441	1	TA	T	111	VD	Open Command	DAF 1 Sludge Discharge Valve	LI4.02						DO		A
442	0	TA	T	111	ZB	Position Closed	DAF 1 Sludge Discharge Valve	LI4.02						DI		A
443	0	TA	T	111	ZD	Position Opened	DAF 1 Sludge Discharge Valve	LI4.02						DI		A
444	0	TA	T	112	FT	Flow Feedback	DAF 1 Saturator Discharge	LI4.02	L/s	0-120				AI		A
445	0	TA	T	112	LAH	Level Alarm High	DAF 1 Saturator	LI4.02				0		DI		A
446	0	TA	T	112	LAL	Level Alarm Low	DAF 1 Saturator	LI4.02			0			DI		A
447	1	TA	T	112	MM	Running Status	DAF 1 Air Compressor	LI4.02						DI		A
448	0	TA	T	112	MN	Start Command	DAF 1 Air Compressor	LI4.02						DO		A
449	1															
450	1	TA	T	112	PAL	Pressure Alarm Low	DAF 1 Saturator Inlet Air	LI4.02			0			DI		A
451	1	TA	T	112	MF	Fault Status	DAF 1 Air Compressor	LI4.02				0		DI		A
452	1	TA	T	112	YS-2	Remote Status	DAF 1 Saturator Air Control Valve	LI4.02						DI		A
453	0	TA	T	112	YS-1	Computer Selected Status	DAF 1 Air Compressor	LI4.02						DI		A
454	1	TA	T	112	VD	Open Command	DAF 1 Saturator Air Control Valve	LI4.02						DO		A
455	1	TA	T	113	MM	Running Status	DAF 1 Recycle Pump	LI4.02						DI		A
456	0	TA	T	113	MN	Start Command	DAF 1 Recycle Pump	LI4.02						DO		A
457	1	TA	T	113	MF	Fault Status	DAF 1 Recycle Pump	LI4.02				0		DI		A
458	0	TA	T	113	YS	Computer Selected Status	DAF 1 Recycle Pump	LI4.02						DI		A
459	1	TA	T	120	LAH	Level Alarm High	DAF 2 Float Hopper	LI4.03				0		DI		A
460	0	TA	T	120	YS	Remote Status	DAF 2 Sludge Dilution Water Valve	LI4.03						DI		A
461	1	TA	T	120	VD	Open Command	DAF 2 Sludge Dilution Water Valve	LI4.03						DO		A
462	0	TA	T	121	LT	Level Feedback	DAF 2 Subnatant Wet Well	LI4.03	m					AI		A
463	1	TA	T	121	MM	Running Status	DAF 2 Skimmer Drive	LI4.03						DI		A
464	1	TA	T	121	MN	Start Command	DAF 2 Skimmer Drive	LI4.03						DO		A
465	0	TA	T	121	OAH	Torque Alarm High	DAF 2 Skimmer Drive	LI4.03				1		AI		A
466	0	TA	T	121	OAL	Torque Alarm Low	DAF 2 Skimmer Drive	LI4.03				1		AI		A
467	1	TA	T	121	MF	Fault Status	DAF 2 Skimmer Drive	LI4.03				0		DI		A
468	1	TA	T	121	YS-1	Computer Selected Status	DAF 2 Skimmer Drive	LI4.03						DI		A
469	1	TA	T	121	VB	Close Command	DAF 2 Sludge Discharge Valve	LI4.03						DO		A
470	1	TA	T	121	VD	Open Command	DAF 2 Sludge Discharge Valve	LI4.03						DO		A
471	0	TA	T	121	ZB	Closed Status	DAF 2 Sludge Discharge Valve	LI4.03						DI		A
472	0	TA	T	121	ZD	Open Status	DAF 2 Sludge Discharge Valve	LI4.03						DI		A
473	0	TA	T	122	FT	Flow Feedback	DAF 2 Saturator Discharge	LI4.03	L/s	0-120				AI		A

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION							
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA	
											LOW	HIGH				
474	1	TA	T	122	LAH	Level Alarm High	DAF 2 Saturator	LI4.03				0		DI		A
475	1	TA	T	122	LAL	Level Alarm Low	DAF 2 Saturator	LI4.03				0		DI		A
476	1	TA	T	122	MM	Running Status	DAF 2 Air Compressor	LI4.03						DI		A
477	0	TA	T	122	MN	Start Command	DAF 2 Air Compressor	LI4.03						DO		A
478	1															
479	1	TA	T	122	PAL	Pressure Alarm Low	DAF 2 Saturator Inlet Air	LI4.03				0		DI		A
480	1	TA	T	122	MF	Fault Status	DAF 2 Air Compressor	LI4.03					0	DI		A
481	1	TA	T	122	YS-2	Remote Status	DAF 2 Saturator Air Control Valve	LI4.03						DI		A
482	1	TA	T	122	YS-1	Computer Selected Status	DAF 2 Air Compressor	LI4.03						DI		A
483	1	TA	T	122	VD	Open Command	DAF 2 Saturator Air Control Valve	LI4.03						DO		A
484	1	TA	T	123	MM	Running Status	DAF 2 Recycle Pump	LI4.03						DI		A
485	0	TA	T	123	MN	Start Command	DAF 2 Recycle Pump	LI4.03						DO		A
486	1	TA	T	123	MF	Fault Status	DAF 2 Recycle Pump	LI4.03					0	DI		A
487	0	TA	T	123	YS	Computer Selected Status	DAF 2 Recycle Pump	LI4.03						DI		A
488	1	TA	T	125	MM	Running Status	Subnatant Pump 1	LI4.04						DI		A
489	1	TA	T	125	MN	Start Command	Subnatant Pump 1	LI4.04						DO		A
490	0	TA	T	125	SC	Speed Control	Subnatant Pump 1	LI4.04	%	0-100				AO		A
491	0	TA	T	125	ST	Speed Feedback	Subnatant Pump 1	LI4.04	%	0-100				AI		A
492	1	TA	T	125	MF	Fault Status	Subnatant Pump 1	LI4.04					0	DI		A
493	0	TA	T	125	YS	Computer Selected Status	Subnatant Pump 1	LI4.04						DI		A
494	1	TA	T	126	MM	Running Status	Subnatant Pump 2	LI4.04						DI		A
495	1	TA	T	126	MN	Start Command	Subnatant Pump 2	LI4.04						DO		A
496	0	TA	T	126	SC	Speed Control	Subnatant Pump 2	LI4.04	%	0-100				AO		A
497	0	TA	T	126	ST	Speed Feedback	Subnatant Pump 2	LI4.04	%	0-100				AI		A
498	1	TA	T	126	MF	Fault Status	Subnatant Pump 2	LI4.04					0	DI		A
499	0	TA	T	126	YS	Computer Selected Status	Subnatant Pump 2	LI4.04						DI		A
500	0	TA	T	127	FT	Flow Feedback	DAF Subnatant to Clarifiers	LI4.04	L/s	0-36				AI		A
501	1	TA	T	130	LAH	Level Alarm High	DAF Polymer Mix Tank	LI4.01					0	DI		A
502	1	TA	T	130	LAL	Level Alarm Low	DAF Polymer Mix Tank	LI4.01					0	DI		A
503	1	TA	T	130	LALL	Level Alarm Low Low	DAF Polymer Mix Tank	LI4.01					0	DI		A
504	1	TA	T	130	MM	Running Status	DAF Polymer Blower	LI4.01						DI		A
505	0	TA	T	130	MN	Start Command	DAF Polymer Blower	LI4.01						DO		A
506	1	TA	T	130	PAL	Pressure Alarm Low	DAF Polymer Mix Tank Water Supply	LI4.01					0	DI		A
507	1	TA	T	130	MF	Fault Status	DAF Polymer Blower	LI4.01					0	DI		A
508	1	TA	T	130	YS-1	Computer Selected Status	DAF Polymer Blower	LI4.01						DI		A
509	1	TA	T	130	YS-2	Remote Status	DAF Polymer Mix Tank Water Control Vlv	LI4.01						DI		A
510	1	TA	T	130	VD	Open Command	DAF Polymer Mix Tank Water Control Vlv	LI4.01						DO		A
511	1	TA	T	131	FT	Flow Feedback	DAF Tank 1 Polymer Feed	LI4.01	L/s	0-120				AI		A
512	0	TA	T	131	LAL	Level Alarm Low	DAF Polymer Run Tank	LI4.01					0	DI		A
513	0	TA	T	131	LALL	Level Alarm Low Low	DAF Polymer Run Tank	LI4.01					0	DI		A
514	1	TA	T	131	MM	Running Status	DAF Polymer Metering Pump 1	LI4.01						DI		A
515	1	TA	T	131	MN	Start Command	DAF Polymer Metering Pump 1	LI4.01						DO		A
516	0	TA	T	131	PAH	Pressure High Alarm	DAF Polymer Metering Pump 1 Discharge	LI4.01					1	DI		A

I/O POINT TYPES: AI = Analog Input, AO = Analog Output, DI = Discrete Input, DO = Discrete Output, MB/TCP = Modbus TCP/IP

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						PCU AREA	
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.		
											LOW	HIGH				
517	0	TA	T	131	SC	Speed Control	DAF Polymer Metering Pump 1	LI4.01	%	0-100				AO		A
518	0	TA	T	131	ST	Speed Feedback	DAF Polymer Metering Pump 1	LI4.01	%	0-100				AI		A
519	1	TA	T	131	MF	Fault Status	DAF Polymer Metering Pump 1	LI4.01				0		DI		A
520	1	TA	T	131	YS-1	Computer Selected Status	DAF Polymer Metering Pump 1	LI4.01						DI		A
521	1	TA	T	131	YS-2	Remote Selected Status	DAF Tank 1 Polymer Flushing Water Vlv	LI4.01						DI		A
522	1	TA	T	131	VD	Open Command	DAF Tank 1 Polymer Flushing Water Vlv	LI4.01						DO		A
523	1	TA	T	132	FT	Flow Feedback	DAF Tank 2 Polymer Feed	LI4.01	L/s	0-120				AI		A
524	1	TA	T	132	MM	Running Status	DAF Polymer Metering Pump 2	LI4.01						DI		A
525	1	TA	T	132	MN	Start Command	DAF Polymer Metering Pump 2	LI4.01						DO		A
526	0	TA	T	132	PAH	Pressure High Alarm	DAF Polymer Metering Pump 2 Discharge	LI4.01				1		DI		A
527	0	TA	T	132	SC	Speed Control	DAF Polymer Metering Pump 2	LI4.01	%	0-100				AO		A
528	0	TA	T	132	ST	Speed Feedback	DAF Polymer Metering Pump 2	LI4.01	%	0-100				AI		A
529	1	TA	T	132	MF	Fault Status	DAF Polymer Metering Pump 2	LI4.01				0		DI		A
530	1	TA	T	132	YS-1	Computer Selected Status	DAF Polymer Metering Pump 2	LI4.01						DI		A
531	1	TA	T	132	YS-2	Remote Selected Status	DAF Tank 2 Polymer Flushing Water Vlv	LI4.01						DI		A
532	1	TA	T	132	VD	Open Command	DAF Tank 2 Polymer Flushing Water Vlv	LI4.01						DO		A
533	1	TA	T	133	LAL	Level Alarm Low	DAF Polymer Hopper	LI4.01			0			DI		A
534	1	TA	T	133	MM	Running Status	DAF Polymer Hopper Screw Conveyer	LI4.01						DI		A
535	1	TA	T	133	MN	Start Command	DAF Polymer Hopper Screw Conveyer	LI4.01						DO		A
536	1	TA	T	133	MF	Fault Status	DAF Polymer Hopper Screw Conveyer	LI4.01				0		DI		A
537	1	TA	T	133	YS-1	Computer Selected Status	DAF Polymer Hopper Screw Conveyer	LI4.01						DI		A
538	1	TA	T	134	MM	Running Status	DAF Polymer Mixer	LI4.01						DI		A
539	0	TA	T	134	MN	Start Command	DAF Polymer Mixer	LI4.01						DO		A
540	1	TA	T	134	MF	Fault Status	DAF Polymer Mixer	LI4.01				0		DI		A
541	0	TA	T	134	YS	Computer Selected Status	DAF Polymer Mixer	LI4.01						DI		A
542	1	TA	T	133	YS-2	Remote Status	DAF Polymer Mix Tank Discharge Valve	LI4.01						DI		A
543	1	TA	T	133	VD	Open Command	DAF Polymer Mix Tank Discharge Valve	LI4.01						DO		A
544	1	TA	T	135	LAH	Level Alarm High	Clarifier Polymer Mix Tank	LI4.07				0		DI		A
545	1	TA	T	135	LAL	Level Alarm Low	Clarifier Polymer Mix Tank	LI4.07			0			DI		A
546	1	TA	T	135	LALL	Level Alarm Low Low	Clarifier Polymer Mix Tank	LI4.07			0			DI		A
547	1	TA	T	135	MM	Running Status	Clarifier Polymer Blower	LI4.07						DI		A
548	0	TA	T	135	MN	Start Command	Clarifier Polymer Blower	LI4.07						DO		A
549	1	TA	T	135	PAL	Pressure Alarm Low	Clarifier Polymer Mix Tank Water Supply	LI4.07			0			DI		A
550	1	TA	T	135	MF	Fault Status	Clarifier Polymer Blower	LI4.07				0		DI		A
551	1	TA	T	135	YS-1	Computer Selected Status	Clarifier Polymer Blower	LI4.07						DI		A
552	1	TA	T	135	YS-2	Remote Status	Clarifier Polymer Flushing Water Valve	LI4.07						DI		A
553	1	TA	T	135	VD	Open Command	Clarifier Polymer Flushing Water Valve	LI4.07						DO		A
554	0	TA	T	136	FT	Flow Feedback	Primary Clarifier Polymer Feed	LI4.07	L/s	0-240				AI		A
555	1	TA	T	136	LAL	Level Alarm Low	Clarifier Polymer Run Tank	LI4.07			0			DI		A
556	1															
557	1	TA	T	136	LALL	Level Alarm Low Low	Clarifier Polymer Run Tank	LI4.07			0			DI		A
558	1	TA	T	136	MM	Running Status	Clarifier Polymer Metering Pump 1	LI4.07						DI		A
559	1	TA	T	136	MN	Start Command	Clarifier Polymer Metering Pump 1	LI4.07						DO		A

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
560	1	TA	T	136	PAH	Pressure High Alarm	Clarifier Polymer Metering Pump 1 Disch.	LI4.07				0	DI		A
561	0	TA	T	136	SC	Speed Control	Clarifier Polymer Metering Pump 1	LI4.07	%	0-100			AO		A
562	0	TA	T	136	ST	Speed Feedback	Clarifier Polymer Metering Pump 1	LI4.07	%	0-100			AI		A
563	1	TA	T	136	MF	Fault Status	Clarifier Polymer Metering Pump 1	LI4.07				0	DI		A
564	1	TA	T	136	YS-1	Computer Selected Status	Clarifier Polymer Metering Pump 1	LI4.07					DI		A
565	1	TA	T	136	YS-2	Remote Status	Clarifier Polymer Flushing Water Valve	LI4.07					DI		A
566	1	TA	T	136	VD	Open Command	Clarifier Polymer Flushing Water Valve	LI4.07					DO		A
567	1	TA	T	137	MM	Running Status	Clarifier Polymer Metering Pump 2	LI4.07					DI		A
568	1	TA	T	137	MN	Start Command	Clarifier Polymer Metering Pump 2	LI4.07					DO		A
569	1	TA	T	137	PAH	Pressure High Alarm	Clarifier Polymer Metering Pump 2 Disch.	LI4.07				0	DI		A
570	0	TA	T	137	SC	Speed Control	Clarifier Polymer Metering Pump 2	LI4.07	%	0-100			AO		A
571	0	TA	T	137	ST	Speed Feedback	Clarifier Polymer Metering Pump 2	LI4.07	%	0-100			AI		A
572	1	TA	T	137	MF	Fault Status	Clarifier Polymer Metering Pump 2	LI4.07				0	DI		A
573	0	TA	T	137	YS	Computer Selected Status	Clarifier Polymer Metering Pump 2	LI4.07					DI		A
574	1	TA	T	138	LAL	Level Alarm Low	Clarifier Dry Polymer Hopper	LI4.07			0		DI		A
575	1	TA	T	138	MM	Running Status	Clarifier Polymer Hopper Screw Conveyer	LI4.07					DI		A
576	0	TA	T	138	MN	Start Command	Clarifier Polymer Hopper Screw Conveyer	LI4.07					DO		A
577	1	TA	T	138	MF	Fault Status	Clarifier Polymer Hopper Screw Conveyer	LI4.07				0	DI		A
578	1	TA	T	138	YS-1	Computer Selected Status	Clarifier Polymer Hopper Screw Conveyer	LI4.07					DI		A
579	1	TA	T	139	MM	Running Status	Clarifier Polymer Mixer	LI4.07					DI		A
580	0	TA	T	139	MN	Start Command	Clarifier Polymer Mixer	LI4.07					DO		A
581	1	TA	T	139	MF	Fault Status	Clarifier Polymer Mixer	LI4.07				0	DI		A
582	0	TA	T	139	YS	Computer Selected Status	Clarifier Polymer Mixer	LI4.07					DI		A
583	1	TA	T	138	YS-2	Remote Status	Clarifier Polymer Mix Tank Discharge Valve	LI4.07					DI		A
584	1	TA	T	138	VD	Open Command	Clarifier Polymer Mix Tank Discharge Valve	LI4.07					DO		A
585	1	TA	T	140	LAH	Level Alarm High	Ferric Chloride Tank	LI4.05				0	DI		A
586	1	TA	T	140	LAL	Level Alarm Low	Ferric Chloride Tank	LI4.05			0		DI		A
587	0	TA	T	140	LT	Level Feedback	Ferric Chloride Tank	LI4.05	m				AI		A
588	1	TA	T	141	FAL	Flow Alarm Low	Ferric Chloride Dosing Pump 1	LI4.06			0		DI		A
589	1	TA	T	141	MM	Running Status	Ferric Chloride Dosing Pump 1	LI4.06					DI		A
590	1	TA	T	141	MN	Start Command	Ferric Chloride Dosing Pump 1	LI4.06					DO		A
591	0	TA	T	141	SC	Speed Control	Ferric Chloride Dosing Pump 1	LI4.06	%	0-100			AO		A
592	0	TA	T	141	ST	Speed Feedback	Ferric Chloride Dosing Pump 1	LI4.06	%	0-100			AI		A
593	1	TA	T	141	MF	Fault Status	Ferric Chloride Dosing Pump 1	LI4.06				0	DI		A
594	0	TA	T	141	YS	Computer Selected Status	Ferric Chloride Dosing Pump 1	LI4.06					DI		A
595	1	TA	T	142	FAL	Flow Alarm Low	Ferric Chloride Dosing Pump 2	LI4.06			0		DI		A
596	1	TA	T	142	MM	Running Status	Ferric Chloride Dosing Pump 2	LI4.06					DI		A
597	1	TA	T	142	MN	Start Command	Ferric Chloride Dosing Pump 2	LI4.06					DO		A
598	0	TA	T	142	SC	Speed Control	Ferric Chloride Dosing Pump 2	LI4.06	%	0-100			AO		A
599	0	TA	T	142	ST	Speed Feedback	Ferric Chloride Dosing Pump 2	LI4.06	%	0-100			AI		A
600	1	TA	T	142	MF	Fault Status	Ferric Chloride Dosing Pump 2	LI4.06				0	DI		A
601	0	TA	T	142	YS	Computer Selected Status	Ferric Chloride Dosing Pump 2	LI4.06					DI		A
602	0	TA	T	143	FAL	Flow Alarm Low	Ferric Chloride Dosing Pump 3	LI4.06			0		DI		A

I/O POINT TYPES: AI = Analog Input, AO = Analog Output, DI = Discrete Input, DO = Discrete Output, MB/TCP = Modbus TCP/IP

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION							
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA	
											LOW	HIGH				
603	1	TA	T	143	MM	Running Status	Ferric Chloride Dosing Pump 3	LI4.06						DI		A
604	1	TA	T	143	MN	Start Command	Ferric Chloride Dosing Pump 3	LI4.06						DO		A
605	0	TA	T	143	SC	Speed Control	Ferric Chloride Dosing Pump 3	LI4.06	%	0-100				AO		A
606	0	TA	T	143	ST	Speed Feedback	Ferric Chloride Dosing Pump 3	LI4.06	%	0-100				AI		A
607	1	TA	T	143	MF	Fault Status	Ferric Chloride Dosing Pump 3	LI4.06				0		DI		A
608	0	TA	T	143	YS	Computer Selected Status	Ferric Chloride Dosing Pump 3	LI4.06						DI		A
609	1	TA	T	144	FAL	Flow Alarm Low	Ferric Chloride Dosing Pump 4	LI4.06				0		DI		A
610	1	TA	T	144	MM	Running Status	Ferric Chloride Dosing Pump 4	LI4.06						DI		A
611	1	TA	T	144	MN	Start Command	Ferric Chloride Dosing Pump 4	LI4.06						DO		A
612	0	TA	T	144	SC	Speed Control	Ferric Chloride Dosing Pump 4	LI4.06	%	0-100				AO		A
613	0	TA	T	144	ST	Speed Feedback	Ferric Chloride Dosing Pump 4	LI4.06	%	0-100				AI		A
614	1	TA	T	144	MF	Fault Status	Ferric Chloride Dosing Pump 4	LI4.06				0		DI		A
615	0	TA	T	144	YS	Computer Selected Status	Ferric Chloride Dosing Pump 4	LI4.06						DI		A
616	1	TA	T	145	LAH	Level Alarm High	Ferric Chloride Containment Sump	LI4.06				0		DI		A
617	1	TA	T	910	ZS	Security Motion Detector	Intruder Security System	-				0		DI		A
618	1	TA	T	911	ZS	Security Door Switch	Intruder Security System	-				0		DI		A
619	1	TA	T	912	ZS	Security Motion Detector	Intruder Security System	-				0		DI		A
620	1	TA	T	913	ZS	Security Door Switch	Intruder Security System	-				0		DI		A
621	1	TA	T	914	ZS	Security Motion Detector	Intruder Security System	-				0		DI		A
622	1	TA	T	915	ZS	Security Door Switch	Intruder Security System	-				0		DI		A
623	1	FA	F	550	ZD	Open Status	Primary Sludge Fermenter 1 Supply Air Vlv	LI3.06						DI		A
624	1	FA	F	551	MM	Running Status	Fermenter Sludge Pump 1	LI3.04						DI		A
625	1	FA	F	551	MM	Running Status	Fermenter Sludge Pump 2	LI3.04						DI		A
626	1	FA	F	551	YS	Remote Status	Fermenter 1 Sludge Control Valve	LI3.04						DI		A
627	1	FA	F	552	YS	Remote Status	Fermenter 2 Sludge Control Valve	LI3.04						DI		A
628	1	FA	F	556	YS-2	Remote Status	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05						DI		A
629	1	FA	F	558	YS-2	Remote Status	Fermenter Supernatnt Pump 2 Disch. Vlv	LI3.05						DI		A
630	1	FA	F	560	ZD	Open Status	Primary Sludge Fermenter 2 Supply Air Vlv	LI3.06						DI		A
631	1	FA	F	600	MF	Fault Status	Fermenter Make-up Air Unit Supply Fan	LM4.01				0		DI	(TAF600QF1)	A
632	1	FA	F	600	MM	Running Status	Fermenter Make-up Air Unit Supply Fan	LM4.01						DI	(TAF600MM1)	A
633	1	FA	F	600	MN	Start Command	Fermenter Make-up Air Unit Supply Fan	LM4.01						DO	(TAF600MN1)	A
634	1	FA	F	600	PDT-1	Differential Pressure Feedback	Fermenter MUA Heat Exchanger	LM4.01	kPa					AI	(TAF600PDT1)	A
635	1	FA	F	600	PDT-2	Differential Pressure Feedback	Fermenter MUA Winter Filter	LM4.01	kPa					AI	(TAF600PDT3)	A
636	1	FA	F	600	SC	Speed Control	Fermenter Make-up Air Unit Supply Fan	LM4.01	%	0-100				AO	(TAF600SC1)	A
637	1	FA	F	600	ST	Speed Feedback	Fermenter Make-up Air Unit Supply Fan	LM4.01	%	0-100				AI	(TAF600ST1)	A
638	1	FA	F	600	TT	Temperature Feedback	Fermenter Make-up Air Unit Pre-Heater Air	LM4.01	Deg C	0-40				AI	(TAF600TT2)	A
639	1	FA	F	600	YS	Computer Selected Status	Fermenter Make-up Air Unit Supply Fan	LM4.01						DI	(TAF600YS1)	A
640	1	FA	F	601	ZC	Position Control	Fermenter MUA Glycol Control Valve	LM4.01	%	0-100				AO	(TAF602ZC)	A
641	1	FA	F	602	MF	Fault Status	Fermenter Make-up Air Unit Exhaust Fan	LM4.01				0		DI	(TAF600QF2)	A
642	1	FA	F	602	MM	Running Status	Fermenter Make-up Air Unit Exhaust Fan	LM4.01						DI	(TAF600MM2)	A
643	1	FA	F	602	MN	Start Command	Fermenter Make-up Air Unit Exhaust Fan	LM4.01						DO	(TAF600MN2)	A
644	1	FA	F	602	SC	Speed Control	Fermenter Make-up Air Unit Exhaust Fan	LM4.01	%	0-100				AO	(TAF600SC2)	A
645	1	FA	F	602	ST	Speed Feedback	Fermenter Make-up Air Unit Exhaust Fan	LM4.01	%	0-100				AI	(TAF600ST2)	A

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DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
646	1	FA	F	602	TT	Temperature Feedback	Fermenter Make-up Air Unit Exhaust Air	LM4.01	Deg C	0-40			AI	(TAF600TT3)	A
647	1	FA	F	602	VB	Close Command	Fermenter MUA Exhaust Air Damper	LM4.01					DO	(TAF602VB)	A
648	1	FA	F	602	VD	Open Command	Fermenter MUA Exhaust Air Damper	LM4.01					DO	(TAF602VD)	A
649	1	FA	F	602	YS	Computer Selected Status	Fermenter Make-up Air Unit Exhaust Fan	LM4.01					DI	(TAF600YS2)	A
650	1	FA	F	604	TT	Temperature Feedback	Fermenter Make-up Air Unit Return Air	LM4.01	Deg C	0-40			AI	(TAF600TT1)	A
651	1	FA	F	606	PDT	Differential Pressure Feedback	Fermenter MUA Outside Air Filter	LM4.01	kPa				AI	(TAF600PDT2)	A
652	1	FA	F	606	TT	Temperature Feedback	Fermenter Make-up Air Unit Outside Air	LM4.01	Deg C	-40+40			AI	(TAF602TT)	A
653	1	FA	F	606	VB	Close Command	Fermenter MUA Outside Air Damper	LM4.01					DO	(TAF600VB1)	A
654	1	FA	F	606	VD	Open Command	Fermenter MUA Outside Air Damper	LM4.01					DO	(TAF600VD1)	A
655	1	FA	F	608	TT	Temperature Feedback	Fermenter Area	LM4.01	Deg C	0-40			AI	(TAF604TT)	A
656	1	FA	F	610	MF	Fault Status	Primary Sludge Fermenter 1 Supply Air Fan	LI3.06				0	DI		A
657	1	FA	F	620	MF	Fault Status	Primary Sludge Fermenter 2 Supply Air Fan	LI3.06				0	DI		A
658	1	FA	F	651	ZD	Open Status	Fermenter Odour Control Fan Inlet Valve	LI3.06					DI		A
659	1	FA	F	661	ZD	Open Status	Thermal Oxidizer Inlet Damper	LI3.06					DI		A
660	1	FA	F	662	ZD	Open Status	Thermal Oxidizer Bypass Damper	LI3.06					DI		A
661	1	HA	H	640	MF	Fault Status	Control Room AHU Supply Fan	LM4.08				0	DI		A
662	1	HA	H	640	MM-1	Running Status	Control Room AHU Supply Fan	LM4.08					DI		A
663	1	HA	H	640	MM-2	Running Status	Control Room AHU Condenser	LM4.08					DI		A
664	1	HA	H	640	MN-1	Start Command	Control Room AHU Supply Fan	LM4.08					DO		A
665	1	HA	H	640	MS	Enable Command	Control Room AHU Condenser	LM4.08					DO		A
666	1	HA	H	640	PAH-1	Pressure High Alarm	Control Room AHU Pre-Filter	LM4.08	kPa			0	DI		A
667	1	HA	H	640	PAH-2	Pressure High Alarm	Control Room AHU Stage 1 Filter	LM4.08	kPa			0	DI		A
668	1	HA	H	640	PAH-3	Pressure High Alarm	Control Room AHU Stage 2 Filter	LM4.08	kPa			0	DI		A
669	1	HA	H	640	TAL	Temperature Low Alarm	Control Room AHU Freeze Stat	LM4.08	Deg C			0	DI		A
670	1	HA	H	640	TC	Temperature Control	Control Room AHU	LM4.08					AO		A
671	1	HA	H	640	YS	Computer Selected Status	Control Room AHU Supply Fan	LM4.08					DI		A
672	1	HA	H	642	TT	Temperature Feedback	Control Room AHU Outside Air	LM4.08	Deg C	-40+40			AI		A
673	1	HA	H	642	ZC	Position Control	Control Room AHU Outside Air Damper	LM4.08					AO		A
674	1	HA	H	644	TT	Temperature Feedback	Control Room AHU Return Air	LM4.08	Deg C	0-40			AI		A
675	1	HA	H	644	ZC	Position Control	Control Room AHU Return Air Damper	LM4.08					AO		A
676	1	HA	H	648	TT	Temperature Feedback	Control Room	LM4.08	Deg C	0-40			AI		A
677	1	HA	H	655	MF	Fault Status	Tanker Unloading Odour Control Fan	LI3.06				0	DI		A
678	1	PA	P	110	YS	Remote Status	Primary Clarifier 1 Discharge Valve	LI1.01					DI		A
679	1	PA	P	120	YS	Remote Status	Primary Clarifier 2 Discharge Valve	LI1.01					DI		A
680	1	SA	S	458	YS	Remote Status	Bioreactor 1 Aerobic Zone 4 Air Ctl Valve	LI2.02					DI		B
681	1	SA	S	468	PAH	Pressure High Alarm	Bioreactor 2 Process Air	LI2.04				0	DI		B
682	1	SA	S	468	YS	Remote Status	Bioreactor 2 Aerobic Zone 4 Air Ctl Valve	LI2.04					DI		B
683	1	SA	S	622	MF	Fault Status	Sec. Clar. Make-up Air Unit Supply Fan	LM4.02				0	DI	(TAS750QF1)	B
684	1	SA	S	622	MM	Running Status	Sec. Clar. Make-up Air Unit Supply Fan	LM4.02					DI	(TAS750MM1)	B
685	1	SA	S	622	MN	Start Command	Sec. Clar. Make-up Air Unit Supply Fan	LM4.02					DO	(TAS750MN1)	B
686	1	SA	S	622	PDT-1	Differential Pressure Feedback	Sec. Clar. MUA Heat Exchanger	LM4.02	kPa				AI	(TAS750PDT1)	B
687	1	SA	S	622	PDT-2	Differential Pressure Feedback	Sec. Clar. MUA Winter Filter	LM4.02	kPa				AI	(TAS750PDT3)	B
688	1	SA	S	622	SC	Speed Control	Sec. Clar. Make-up Air Unit Supply Fan	LM4.02	%	0-100			AO	(TAS750SC1)	B

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DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
689	1	SA	S	622	ST	Speed Feedback	Sec. Clar. Make-up Air Unit Supply Fan	LM4.02	%	0-100			AI	(TAS750ST1)	B
690	1	SA	S	622	TT	Temperature Feedback	Sec. Clar. Make-up Air Unit Pre-Heater Air	LM4.02	Deg C	0-40			AI	(TAS750TT2)	B
691	1	SA	S	622	YS	Computer Selected Status	Sec. Clar. Make-up Air Unit Supply Fan	LM4.02					DI	(TAS750YS1)	B
692	1	SA	S	623	ZC	Position Control	Sec. Clar. MUA Glycol Control Valve	LM4.02	%	0-100			AO	(TAS752ZC)	B
693	1	SA	S	624	MF	Fault Status	Sec. Clar. Make-up Air Unit Exhaust Fan	LM4.02				0	DI	(TAS750QF2)	B
694	1	SA	S	624	MM	Running Status	Sec. Clar. Make-up Air Unit Exhaust Fan	LM4.02					DI	(TAS750MM2)	B
695	1	SA	S	624	MN	Start Command	Sec. Clar. Make-up Air Unit Exhaust Fan	LM4.02					DO	(TAS750MN2)	B
696	1	SA	S	624	SC	Speed Control	Sec. Clar. Make-up Air Unit Exhaust Fan	LM4.02	%	0-100			AO	(TAS750SC2)	B
697	1	SA	S	624	ST	Speed Feedback	Sec. Clar. Make-up Air Unit Exhaust Fan	LM4.02	%	0-100			AI	(TAS750ST2)	B
698	1	SA	S	624	TT	Temperature Feedback	Sec. Clar. Make-up Air Unit Exhaust Air	LM4.02	Deg C	0-40			AI	(TAS750TT3)	B
699	1	SA	S	624	VB	Close Command	Sec. Clar. MUA Exhaust Air Damper	LM4.02					DO	(TAS752VB)	B
700	1	SA	S	624	VD	Open Command	Sec. Clar. MUA Exhaust Air Damper	LM4.02					DO	(TAS752VD)	B
701	1	SA	S	624	YS	Computer Selected Status	Sec. Clar. Make-up Air Unit Exhaust Fan	LM4.02					DI	(TAS750YS2)	B
702	1	SA	S	625	VB	Close Command	Sec. Clar. MUA Outdoor Exh. Air Damper	LM4.02					DO	(TAS753VB)	B
703	1	SA	S	625	VD	Open Command	Sec. Clar. MUA Outdoor Exh. Air Damper	LM4.02					DO	(TAS753VD)	B
704	1	SA	S	626	TT	Temperature Feedback	Sec. Clar. Make-up Air Unit Return Air	LM4.02	Deg C	0-40			AI	(TAS750TT1)	B
705	1	SA	S	627	VB	Close Command	Sec. Clar. MUA Stack Exhaust Air Damper	LM4.02					DO	(TAS752VB)	B
706	1	SA	S	627	VD	Open Command	Sec. Clar. MUA Stack Exhaust Air Damper	LM4.02					DO	(TAS752VD)	B
707	1	SA	S	628	PDT	Differential Pressure Feedback	Sec. Clar. MUA Outside Air Filter	LM4.02	kPa				AI	(TAS750PDT2)	B
708	1	SA	S	628	TT	Temperature Feedback	Sec. Clar. Make-up Air Unit Outside Air	LM4.02	Deg C	-40-+40			AI	(TAS752TT)	B
709	1	SA	S	628	VB	Close Command	Sec. Clar. MUA Outside Air Damper	LM4.02					DO	(TAS750VB1)	B
710	1	SA	S	628	VD	Open Command	Sec. Clar. MUA Outside Air Damper	LM4.02					DO	(TAS750VD1)	B
711	1	SA	S	630	TT	Temperature Feedback	Sec. Clar. Area	LM4.02	Deg C	0-40			AI	(TAS754TT)	B
712	1	SA	S	660	BM	Burner On Status	Secondary Clarifier Boiler S660	LM4.03					DI	(CAS760BM)	B
713	1	SA	S	660	BS	Enable Command	Secondary Clarifier Boiler S660	LM4.03					DO	(CAS760BS)	B
714	1	SA	S	665	BM	Burner On Status	Secondary Clarifier Boiler S665	LM4.03					DI	(CAS765BM)	B
715	1	SA	S	665	BS	Enable Command	Secondary Clarifier Boiler S665	LM4.03					DO	(CAS765BS)	B
716	1	SA	S	665	TT	Temperature Feedback	Secondary Clarifier Boiler S665	LM4.03	Deg C				AI	(CAS765TT)	B
717	1	SA	S	668	TT	Temperature Feedback	Secondary Clarifier Boilers	LM4.03	Deg C				AI	(CAS770TT)	B
718	1	SA	S	670	MM	Running Status	Secondary Clarifier Primary Heat Pump	LM4.03					DI	(CAS775MM)	B
719	1	SA	S	671	MM	Running Status	Secondary Clarifier Standby Heat Pump	LM4.03					DI	(CAS770MM)	B
720	1	SA	S	682	MF	Fault Status	Electrical Room AHU Supply Fan	LM4.07				0	DI	(TAS780QF)	B
721	1	SA	S	682	MM-1	Running Status	Electrical Room AHU Supply Fan	LM4.07					DI	(TAS780MM)	B
722	1	SA	S	682	MM-2	Running Status	Electrical Room AHU Condenser	LM4.07					DI	(TAS790MM)	B
723	1	SA	S	682	MN-1	Start Command	Electrical Room AHU Supply Fan	LM4.07					DO	(TAS780MN)	B
724	1	SA	S	682	MS	Enable Command	Electrical Room AHU Condenser	LM4.07					DO	(TAS790MX)	B
725	1	SA	S	682	PAH-1	Pressure High Alarm	Electrical Room AHU Pre-Filter	LM4.07	kPa			0	DI	(TAS780PAH)	B
726	1	SA	S	682	PAH-2	Pressure High Alarm	Electrical Room AHU Stage 1 Filter	LM4.07	kPa			0	DI	(TAS780PAH)	B
727	1	SA	S	682	PAH-3	Pressure High Alarm	Electrical Room AHU Stage 2 Filter	LM4.07	kPa			0	DI	(TAS780PAH)	B
728	1	SA	S	682	TAL	Temperature Low Alarm	Electrical Room AHU Freeze Stat	LM4.07	Deg C			0	DI	(TAS781TL)	B
729	1	SA	S	682	TC	Temperature Control	Electrical Room AHU	LM4.07					AO	(TAS780ZC)	B
730	1	SA	S	682	YS	Computer Selected Status	Electrical Room AHU Supply Fan	LM4.07					DI	(TAS780YS)	B
731	1	SA	S	684	TT	Temperature Feedback	Electrical Room AHU Outside Air	LM4.07	Deg C	-40-+40			AI	(TAS778TT)	B

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION							
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA	
											LOW	HIGH				
732	1	SA	S	684	ZC	Position Control	Electrical Room AHU Outside Air Damper	LM4.07						AO	(TAS778ZC)	B
733	1	SA	S	686	TT	Temperature Feedback	Electrical Room AHU Return Air	LM4.07	Deg C	0-40				AI	(TAS779TT)	B
734	1	SA	S	686	ZC	Position Control	Electrical Room AHU Return Air Damper	LM4.07						AO	(TAS779ZC)	B
735	1	SA	S	688	TT	Temperature Feedback	Electrical Room	LM4.07	Deg C	0-40				AI	(TAS780TT)	B
736	1	SA	S	690	FAL	Flow Alarm Low	Mechanical Room Supply Fan	LM4.07			0			DI		B
737	1	SA	S	690	MN	Start Command	Mechanical Room Supply Fan	LM4.07						DO		B
738	1	SA	S	690	ZC	Position Control	Mechanical Room Outside Air Damper	LM4.07						AO		B
739	1	SA	S	740	IT	Current Feedback	R.A.S. Pump 4	LI2.07	Amps					MB/TCP		B
740	1	SA	S	750	IT	Current Feedback	R.A.S. Pump 5	LI2.07	Amps					MB/TCP		B
741	1	SA	S	810	YS	Remote Status	W.A.S. Pump 2 Suction Valve	LI2.05						DI		B
742	1	SA	S	820	YS	Remote Status	W.A.S. Pump 2 Suction Valve	LI2.05						DI		B
743	1	TA	T	111	LF	Level Transmitter Fault	DAF 1 Subnatant Wet Well	LI4.02				0		DI		A
744	1	TA	T	111	YS-2	Remote Status	DAF 1 Sludge Discharge Valve	LI4.02						DI		A
745	1	TA	T	111	ZD	Open Status	DAF Thickener 1 Exhaust Air Damper	LI3.06						DI		A
746	1	TA	T	121	LF	Level Transmitter Fault	DAF 2 Subnatant Wet Well	LI4.03						DI		A
747	1	TA	T	121	YS-2	Remote Status	DAF 2 Sludge Discharge Valve	LI4.03						DI		A
748	1	TA	T	121	ZD	Open Status	DAF Thickener 2 Exhaust Air Damper	LI3.06						DI		A
749	1	TA	T	140	LF	Level Transmitter Fault	Ferric Chloride Tank	LI4.05				0		DI		A
750	1	TA	T	140	LY	Level High Output	Ferric Chloride Tank	LI4.05						DO		A
751	1	TA	T	150	MF	Fault Status	Polymer Water Supply Pump 1	LM4.09				0		DI	(TAT680QF)	A
752	1	TA	T	150	MM	Running Status	Polymer Water Supply Pump 1	LM4.09						DI	(TAT680MM)	A
753	1	TA	T	150	MN	Start Command	Polymer Water Supply Pump 1	LM4.09						DO	(TAT680MN)	A
754	1	TA	T	150	YS	Computer Selected Status	Polymer Water Supply Pump 1	LM4.09						DI	(TAT680YS)	A
755	1	TA	T	152	MF	Fault Status	Polymer Water Supply Pump 2	LM4.09				0		DI	(TAT685QF)	A
756	1	TA	T	152	MM	Running Status	Polymer Water Supply Pump 2	LM4.09						DI	(TAT685MM)	A
757	1	TA	T	152	MN	Start Command	Polymer Water Supply Pump 2	LM4.09						DO	(TAT685MN)	A
758	1	TA	T	152	YS	Computer Selected Status	Polymer Water Supply Pump 2	LM4.09						DI	(TAT685YS)	A
759	1	TA	T	154	PT	Pressure Feedback	Polymer Water Supply Pumps	LM4.09	kPa					AI	(TAT690PT)	A
760	1	TA	T	600	MF	Fault Status	DAF Make-up Air Unit T600 Supply Fan	LM4.04				0		DI	(TAT600QF1)	A
761	1	TA	T	600	MM	Running Status	DAF Make-up Air Unit T600 Supply Fan	LM4.04						DI	(TAT600MM1)	A
762	1	TA	T	600	MN	Start Command	DAF Make-up Air Unit T600 Supply Fan	LM4.04						DO	(TAT600MN1)	A
763	1	TA	T	600	PDT-1	Differential Pressure Feedback	DAF MUA T600 Heat Exchanger	LM4.04	kPa					AI		A
764	1	TA	T	600	PDT-2	Differential Pressure Feedback	DAF MUA T600 Winter Filter	LM4.04	kPa					AI	(TAT600PDT3)	A
765	1	TA	T	600	SC	Speed Control	DAF Make-up Air Unit T600 Supply Fan	LM4.04	%	0-100				AO	(TAT600SC1)	A
766	1	TA	T	600	ST	Speed Feedback	DAF Make-up Air Unit T600 Supply Fan	LM4.04	%	0-100				AI	(TAT600ST1)	A
767	1	TA	T	600	TT	Temperature Feedback	DAF Make-up Air Unit T600 Pre-Heater Air	LM4.04	Deg C	0-40				AI	(TAT600TT2)	A
768	1	TA	T	600	YS	Computer Selected Status	DAF Make-up Air Unit T600 Supply Fan	LM4.04						DI	(TAT600YS1)	A
769	1	TA	T	601	ZC	Position Control	DAF MUA T600 Glycol Control Valve	LM4.04	%	0-100				AO	(TAT602ZC)	A
770	1	TA	T	602	MF	Fault Status	DAF Make-up Air Unit T600 Exhaust Fan	LM4.04				0		DI	(TAT600QF2)	A
771	1	TA	T	602	MM	Running Status	DAF Make-up Air Unit T600 Exhaust Fan	LM4.04						DI	(TAT600MM2)	A
772	1	TA	T	602	MN	Start Command	DAF Make-up Air Unit T600 Exhaust Fan	LM4.04						DO	(TAT600MN2)	A
773	1	TA	T	602	SC	Speed Control	DAF Make-up Air Unit T600 Exhaust Fan	LM4.04	%	0-100				AO	(TAT600SC2)	A
774	1	TA	T	602	ST	Speed Feedback	DAF Make-up Air Unit T600 Exhaust Fan	LM4.04	%	0-100				AI	(TAT600ST2)	A

I/O POINT TYPES: AI = Analog Input, AO = Analog Output, DI = Discrete Input, DO = Discrete Output, MB/TCP = Modbus TCP/IP

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION		P&ID DRAWING	I/O SPECIFICATION						
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE		ENG. UNITS	SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
775	1	TA	T	602	TT	Temperature Feedback	DAF Make-up Air Unit T600 Exhaust Air	LM4.04	Deg C	0-40			AI	(TAT600TT3)	A
776	1	TA	T	602	VB	Close Command	DAF MUA T600 Exhaust Air Damper	LM4.04					DO	(TAT602VB2)	A
777	1	TA	T	602	VD	Open Command	DAF MUA T600 Exhaust Air Damper	LM4.04					DO	(TAT602VD2)	A
778	1	TA	T	602	YS	Computer Selected Status	DAF Make-up Air Unit T600 Exhaust Fan	LM4.04					DI	(TAT600YS2)	A
779	1	TA	T	603	VB	Close Command	DAF MUA T600 Outdoor Exh. Air Damper	LM4.04					DO		A
780	1	TA	T	603	VD	Open Command	DAF MUA T600 Outdoor Exh. Air Damper	LM4.04					DO		A
781	1	TA	T	604	TT	Temperature Feedback	DAF Make-up Air Unit T600 Return Air	LM4.04	Deg C	0-40			AI	(TAT600TT1)	A
782	1	TA	T	605	VB	Close Command	DAF MUA T600 Stack Exhaust Air Damper	LM4.04					DO	(TAT602VB)	A
783	1	TA	T	605	VD	Open Command	DAF MUA T600 Stack Exhaust Air Damper	LM4.04					DO	(TAT602VD)	A
784	1	TA	T	606	PDT	Differential Pressure Feedback	DAF MUA T600 Outside Air Filter	LM4.04	kPa				AI	(TAT600PDT2)	A
785	1	TA	T	606	TT	Temperature Feedback	DAF Make-up Air Unit T600 Outside Air	LM4.04	Deg C	-40+40			AI	(TAT602TT)	A
786	1	TA	T	606	VB	Close Command	DAF MUA T600 Outside Air Damper	LM4.04					DO	(TAT600VB1)	A
787	1	TA	T	606	VD	Open Command	DAF MUA T600 Outside Air Damper	LM4.04					DO	(TAT600VD1)	A
788	1	TA	T	608	TT	Temperature Feedback	DAF MUA T600 Area	LM4.04	Deg C	0-40			AI	(TAT604TT)	A
789	1	TA	T	610	MF	Fault Status	DAF Make-up Air Unit T610 Supply Fan	LM4.05				0	DI	(TAT605QF1)	A
790	1	TA	T	610	MM	Running Status	DAF Make-up Air Unit T610 Supply Fan	LM4.05					DI	(TAT605MM1)	A
791	1	TA	T	610	MN	Start Command	DAF Make-up Air Unit T610 Supply Fan	LM4.05					DO	(TAT605MN1)	A
792	1	TA	T	610	PDT-1	Differential Pressure Feedback	DAF MUA T610 Heat Exchanger	LM4.05	kPa				AI	(TAT605PDT1)	A
793	1	TA	T	610	PDT-2	Differential Pressure Feedback	DAF MUA T610 Winter Filter	LM4.05	kPa				AI	(TAT605PDT3)	A
794	1	TA	T	610	SC	Speed Control	DAF Make-up Air Unit T610 Supply Fan	LM4.05	%	0-100			AO	(TAT605SC1)	A
795	1	TA	T	610	ST	Speed Feedback	DAF Make-up Air Unit T610 Supply Fan	LM4.05	%	0-100			AI	(TAT605ST1)	A
796	1	TA	T	610	TT	Temperature Feedback	DAF Make-up Air Unit T610 Pre-Heater Air	LM4.05	Deg C	0-40			AI	(TAT605TT2)	A
797	1	TA	T	610	YS	Computer Selected Status	DAF Make-up Air Unit T610 Supply Fan	LM4.05					DI	(TAT605YS1)	A
798	1	TA	T	611	ZC	Position Control	DAF MUA T610 Glycol Control Valve	LM4.05	%	0-100			AO	(TAT607ZC)	A
799	1	TA	T	612	MF	Fault Status	DAF Make-up Air Unit T610 Exhaust Fan	LM4.05				0	DI	(TAT605QF2)	A
800	1	TA	T	612	MM	Running Status	DAF Make-up Air Unit T610 Exhaust Fan	LM4.05					DI	(TAT605MM2)	A
801	1	TA	T	612	MN	Start Command	DAF Make-up Air Unit T610 Exhaust Fan	LM4.05					DO	(TAT605MN2)	A
802	1	TA	T	612	SC	Speed Control	DAF Make-up Air Unit T610 Exhaust Fan	LM4.05	%	0-100			AO	(TAT605SC2)	A
803	1	TA	T	612	ST	Speed Feedback	DAF Make-up Air Unit T610 Exhaust Fan	LM4.05	%	0-100			AI	(TAT605ST2)	A
804	1	TA	T	612	TT	Temperature Feedback	DAF Make-up Air Unit T610 Exhaust Air	LM4.05	Deg C	0-40			AI	(TAT605TT3)	A
805	1	TA	T	612	VB	Close Command	DAF MUA T610 Exhaust Air Damper	LM4.05					DO	(TAT607VB2)	A
806	1	TA	T	612	VD	Open Command	DAF MUA T610 Exhaust Air Damper	LM4.05					DO	(TAT607VD2)	A
807	1	TA	T	612	YS	Computer Selected Status	DAF Make-up Air Unit T610 Exhaust Fan	LM4.05					DI	(TAT605YS2)	A
808	1	TA	T	614	TT	Temperature Feedback	DAF Make-up Air Unit T610 Return Air	LM4.05	Deg C	0-40			AI	(TAT605TT1)	A
809	1	TA	T	616	PDT	Differential Pressure Feedback	DAF MUA T610 Outside Air Filter	LM4.05	kPa				AI	(TAT605PDT2)	A
810	1	TA	T	616	TT	Temperature Feedback	DAF Make-up Air Unit T610 Outside Air	LM4.05	Deg C	-40+40			AI	(TAT607TT)	A
811	1	TA	T	616	VB	Close Command	DAF MUA T610 Outside Air Damper	LM4.05					DO	(TAT605VB1)	A
812	1	TA	T	616	VD	Open Command	DAF MUA T610 Outside Air Damper	LM4.05					DO	(TAT605VD1)	A
813	1	TA	T	618	TT	Temperature Feedback	DAF MUA T610 Area	LM4.05	Deg C	0-40			AI	(TAT604TT)	A
814	1	TA	T	620	MF	Fault Status	Electrical Room AHU Supply Fan	LM4.08				0	DI	(TAT610QF)	A
815	1	TA	T	620	MM-1	Running Status	Electrical Room AHU Supply Fan	LM4.08					DI	(TAT610MM)	A
816	1	TA	T	620	MM-2	Running Status	Electrical Room AHU Condenser	LM4.08					DI	(TAT630MM)	A
817	1	TA	T	620	MN-1	Start Command	Electrical Room AHU Supply Fan	LM4.08					DO	(TAT610MN)	A

DCS INPUT/OUTPUT LIST

NO.	REV. NO.	TAG NAME				DESCRIPTION			P&ID DRAWING	I/O SPECIFICATION					
		PCU	AREA	LOOP	DEVICE ID	FUNCTION	SERVICE	ENG. UNITS		SCALE LOW-HIGH	ALARMS		I/O POINT TYPE	I/O POINT NO.	PCU AREA
											LOW	HIGH			
818	1	TA	T	620	MS	Enable Command	Electrical Room AHU Condenser	LM4.08					DO	(TAT630MX)	A
819	1	TA	T	620	PAH-1	Pressure High Alarm	Electrical Room AHU Pre-Filter	LM4.08	kPa			0	DI	(TAT610PAH)	A
820	1	TA	T	620	PAH-2	Pressure High Alarm	Electrical Room AHU Stage 1 Filter	LM4.08	kPa			0	DI	(TAT610PAH)	A
821	1	TA	T	620	PAH-3	Pressure High Alarm	Electrical Room AHU Stage 2 Filter	LM4.08	kPa			0	DI	(TAT610PAH)	A
822	1	TA	T	620	TAL	Temperature Low Alarm	Electrical Room AHU Freeze Stat	LM4.08	Deg C			0	DI	(TAT611TL)	A
823	1	TA	T	620	TC	Temperature Control	Electrical Room AHU	LM4.08					AO	(TAT610ZC)	A
824	1	TA	T	620	YS	Computer Selected Status	Electrical Room AHU Supply Fan	LM4.08					DI	(TAT610YS)	A
825	1	TA	T	622	TT	Temperature Feedback	Electrical Room AHU Outside Air	LM4.08	Deg C	-40+40			AI	(TAT608TT)	A
826	1	TA	T	622	ZC	Position Control	Electrical Room AHU Outside Air Damper	LM4.08					AO	(TAT608ZC)	A
827	1	TA	T	624	TT	Temperature Feedback	Electrical Room AHU Return Air	LM4.08	Deg C	0-40			AI	(TAT609TT)	A
828	1	TA	T	624	ZC	Position Control	Electrical Room AHU Return Air Damper	LM4.08					AO	(TAT609ZC)	A
829	1	TA	T	628	TT	Temperature Feedback	Electrical Room	LM4.08	Deg C	0-40			AI	(TAT610TT)	A
830	1	TA	T	650	BM	Burner On Status	DAF Thickeners Boiler S650	LM4.06					DI	(CAT650BM)	A
831	1	TA	T	650	BS	Enable Command	DAF Thickeners Boiler S650	LM4.06					DO	(CAT650BS)	A
832	1	TA	T	650	TT	Temperature Feedback	DAF Thickeners Boiler S650	LM4.06	Deg C				AI	(CAT650TT)	A
833	1	TA	T	655	BM	Burner On Status	DAF Thickeners Boiler S655	LM4.06					DI	(CAT655BM)	A
834	1	TA	T	655	BS	Enable Command	DAF Thickeners Boiler S655	LM4.06					DO	(CAT655BS)	A
835	1	TA	T	658	TT	Temperature Feedback	DAF Thickeners Boilers	LM4.06	Deg C				AI	(CAT665TT)	A
836	1	TA	T	665	MM	Running Status	DAF Thickeners Standby Heat Pump	LM4.06					DI	(CAT665MM)	A
837	1	TA	T	670	MM	Running Status	DAF Thickeners Primary Heat Pump	LM4.06					DI	(CAT670MM)	A