

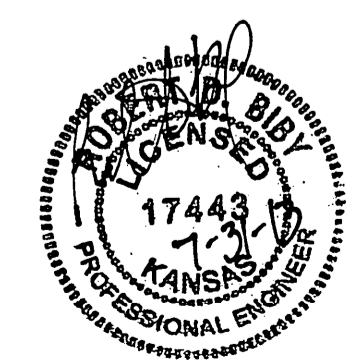

CONTROL PANEL CP										LOCATION: PUMP ROOM			
CIRCUIT NO.	EQUIPMENT SERVED/ MARK	CONNECT				DESCRIPTION/FUNCTION	CONDUCTORS IN CABLE	DISCRETE	ANALOG	DIGITAL	INPUT	OUTPUT	REMARKS
		DEVICE	CTL. PNL	STARTER	VFD								
1	P-1				X	DRIVE START/STOP R.C.	2	X				X	BOOSTER PUMP - SEE DETAIL 1/E1.2
2	P-1				X	DRIVE RUN INDICATION	2	X				X	
3	P-1				X	DRIVE OFF INDICATION	2	X				X	
4	P-1				X	DRIVE REMOTE INDICATION	2	X				X	
5	P-1				X	DRIVE HAND INDICATION	2	X				X	
6	P-1				X	DRIVE FAIL ALARM	2	X				X	
7	P-1				X	MOTOR FAILURE	2	X				X	
8	P-1				X	DRIVE SPEED INDICATION	PAIR		X			X	
9	P-1				X	DRIVE SPEED CONTROL	PAIR		X			X	
10	P-1				X	DRIVE POWER METER	PAIR		X			X	
11						SPARE TERMINAL							
12	P-2				X	DRIVE START/STOP R.C.	2	X				X	BOOSTER PUMP - SEE DETAIL 1/E1.2
13	P-2				X	DRIVE RUN INDICATION	2	X				X	
14	P-2				X	DRIVE OFF INDICATION	2	X				X	
15	P-2				X	DRIVE REMOTE INDICATION	2	X				X	
16	P-2				X	DRIVE HAND INDICATION	2	X				X	
17	P-2				X	DRIVE FAIL ALARM	2	X				X	
18	P-2				X	MOTOR FAILURE	2	X				X	
19	P-2				X	DRIVE SPEED INDICATION	PAIR		X			X	
20	P-2				X	DRIVE SPEED CONTROL	PAIR		X			X	
21	P-2				X	DRIVE POWER METER	PAIR		X			X	
22						SPARE TERMINAL							
23	P-3				X	STARTER START/STOP R.C.	2	X				X	
24	P-3				X	STARTER RUN INDICATION	2	X				X	
25	P-3				X	STARTER OFF INDICATION	2	X				X	
26	P-3				X	STARTER REMOTE INDICATION	2	X				X	
27	P-3				X	STARTER HAND INDICATION	2	X				X	
28	P-3				X	STARTER FAIL INDICATION	2	X				X	
29						SPARE TERMINAL							
30						SPARE TERMINAL							
31						SPARE TERMINAL							
32						SPARE TERMINAL							
33						SPARE TERMINAL							
34	MD-1	X				MAN DOWN ALARM - PUMP ROOM	2	X				X	
35	MD-2	X				MAN DOWN ALARM - CHLORINE ROOM	2	X				X	
36	MD-3	X				MAN DOWN ALARM - AMMONIA ROOM	2	X				X	
37						SPARE TERMINAL							
38	BV-1	X				LIMIT SWITCH OPEN INDICATION	2	X				X	
39	BV-1	X				LIMIT SWITCH CLOSED INDICATION	2	X				X	
40	BV-1	X				FAIL INDICATION	2	X				X	
41	BV-1	X				OPEN CONTROL	2	X				X	
42	BV-1	X				CLOSE CONTROL	2	X				X	
43						SPARE TERMINAL							
44	BV-7	X				LIMIT SWITCH OPEN INDICATION	2	X				X	
45	BV-7	X				LIMIT SWITCH CLOSED INDICATION	2	X				X	
46	BV-7	X				FAIL INDICATION	2	X				X	
47	BV-7	X				OPEN CONTROL	2	X				X	
48	BV-7	X				CLOSE CONTROL	2	X				X	
49						SPARE TERMINAL							
50	LIGHT	X				CHLORINE HIGH LEVEL ALARM LIGHT	2	X				X	VIA 120V CONTROL RELAY
51	LIGHT	X				AMMONIA HIGH LEVEL ALARM LIGHT	2	X				X	VIA 120V CONTROL RELAY
52						SPARE TERMINAL							
53	EF-2	X				RUN INDICATION	2	X				X	SEE DETAIL 5/E1.1
54	EF-2	X				FAIL INDICATION	2	X				X	VIA TELEMETRY
55						SPARE TERMINAL							
56	EF-1	X				CHLORINE ROOM EXHAUST FAN START/STOP R.C.	2	X				X	VIA 120V CONTROL RELAY-SEE DETAIL 4/E1.1
57	EF-5	X				AMMONIA ROOM EXHAUST FAN START/STOP R.C.	2	X				X	VIA 120V CONTROL RELAY-SEE DETAIL 4/E1.1
58						SPARE TERMINAL							
59	EF-3	X				RUN INDICATION	2	X				X	SEE DETAIL 5/E1.1
60	EF-3	X				FAIL INDICATION	2	X				X	VIA TELEMETRY
61						SPARE TERMINAL							
62	CLL-1	X				CHLORINE DETECTOR-CHLORINE LEVEL	PAIR		X			X	
63	AML-1	X				AMMONIA DETECTOR-AMMONIA LEVEL	PAIR		X			X	
64						SPARE TERMINAL							
65	SCALE	X				CHLORINE SCALE LOW LEVEL ALARM	2	X				X	
66	SCALE	X				AMMONIA SCALE LOW LEVEL ALARM	2	X				X	
67						SPARE TERMINAL							
68	SCALE	X				CHLORINE SCALE LEVEL	PAIR		X			X	
69	SCALE	X				AMMONIA SCALE LEVEL	PAIR		X			X	
70						SPARE TERMINAL							
71	AM-1	X				START/STOP AMMONIA FEEDER	2	X				X	
72	AM-1	X				ON-LOCAL INDICATION	2	X				X	
73	AM-1	X				ON-REMOTE INDICATION	2	X				X	
74	AM-1	X				METERING PUMP RUN INDICATION	2	X				X	
75	AM-1	X				ALARM INDICATION	2	X				X	
76	AM-1	X				CALIBRATE	2	X				X	
77	AM-1	X				RATE OF FLOW	PAIR		X			X	
78						SPARE TERMINAL							
79	CLA-1	X				HIGH CHLORINE RESIDUAL ALARM	2	X				X	
80	CLA-1	X				LOW CHLORINE RESIDUAL ALARM	2	X				X	
81	CLA-1	X				CHLORINE RESIDUAL	PAIR		X			X	
82						SPARE TERMINAL							
83	CLF-1	X				LOW PROCESS WATER FLOW	2	X				X	
84	CLF-1	X				LOW CHLORINE SOLUTION ALARM	2	X				X	
85	CLF-1	X				METERING PUMP RUN INDICATION	2	X				X	
86	CLF-1	X				CLF-1 RUN INDICATION	2	X				X	
87	CLF-1	X				CHLORINE SCALE LOW LEVEL ALARM	2	X				X	
88	CLF-1	X				DOSAGE CONTROL (CHLORINE RESIDUAL)	PAIR		X			X	
89	CLF-1	X				CHLORINE SCALE LEVEL	PAIR		X			X	
90						SPARE TERMINAL							
91	PE-1	X				PRESSURE TRANSMITTER (SUCTION)	PAIR		X			X	
92	PE-2	X				PRESSURE TRANSMITTER (DISCHARGE)	PAIR		X			X	
93						SPARE TERMINAL							
94	PE-1	X				LOW PRESSURE SWITCH (SUCTION)	2	X				X	
95						SPARE TERMINAL							
96	FM-1	X				FLOW METER	PAIR		X			X	
97						SPARE TERMINAL							
98	SERVICE	X				POWER SOURCE-UTILITY	2	X				X	
99						SPARE TERMINAL							
100						SPARE TERMINAL							

CONTROL PANEL CP										LOCATION: PUMP ROOM			
CIRCUIT NO.	EQUIPMENT SERVED/ MARK	CONNECT				DESCRIPTION/FUNCTION	CONDUCTORS IN CABLE	DISCRETE	ANALOG	DIGITAL	INPUT	OUTPUT	REMARKS
		DEVICE	CTL. PNL	STARTER	VFD								
101						SPARE TERMINAL							
102						SPARE TERMINAL							
103						SPARE TERMINAL							
104						SPARE TERMINAL							

CONTROL PANEL NOTES:

- CONDUIT FOR ANALOG CABLES SHALL TERMINATE IN EQUIPMENT ENCLOSURE AS CLOSE AS POSSIBLE TO THE TERMINALS. ANALOG CABLES SHALL NOT PASS NEAR TO CABLES OR EQUIPMENT OPERATING OVER 24V.
- INTERNAL AND EXTERNAL I/O SHALL BE LANDED ON TERMINAL STRIPS.
- I/O IDENTIFIED ON CONTROL DIAGRAM SHEETS ARE FOR INPUTS AND OUTPUTS EXTERNAL TO THE EQUIPMENT CONTROL PANEL. I/O NECESSARY FOR THE COMPLETE FUNCTIONALITY OF THE EQUIPMENT (INTERNAL I/O) SHALL BE PROVIDED BY THE EQUIPMENT MANUFACTURER. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT AND WIRING AS REQUIRED FOR COMPLETE FUNCTIONALITY OF EQUIPMENT AS SPECIFIED AND AS IDENTIFIED BY THE MANUFACTURER. COORDINATE FIELD WIRING REQUIREMENTS WITH EQUIPMENT MANUFACTURER.
- THE SYSTEMS INTEGRATOR SHALL INCORPORATE EXISTING SYSTEM I/O AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM.

Save 07-11-2013 10:27:08 AM by ADM
 Plot Scale: 1/8" = 1'-0" 07-31-2013 12:27:53 PM by CUY
 E:\2011\11123\11123-ED_4-Control Schedule

	No.	Revision	By	Date	
	SEDGWICK COUNTY RURAL WATER DISTRICT #1 WATER DISTRIBUTION SYSTEM IMPROVEMENTS CONTROL PANEL SCHEDULE GARY JANZEN, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 448-90565  PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA WICHITA, KS 67202 316-262-2691 www.pec1.com				
Designed by	RDB	Job No.	34-11123	Sheet	E0.4 of 9
Drawn by	ADM	Date	JULY 2013		