

Produced/Oil Water Pump Cabinet 600V / 100A Feed, CCT #_														
Item	Device	Tag	Description	Starter Type	Back-Up Power	Location	P&ID Sheet	Manufacturer	Status	Type	HP	Voltage	Amps (FLA)	Phase
1	Motor	M-1601	PW LP Recirc Pump Motor	Soft Start	No	P-1601	1-06	PSI Prowler	Received	Disconnect	20	600	23.5	3
2	Motor	M-1602	PW HP Feed Pump Motor	Soft Start	No	P-1602	1-06	Wanner Engineering	Received		5	600	5.9	3
3	Motor	M-1603	POW LP Recirc Pump Motor	Soft Start	No	P-1603	1-06	PSI Prowler	existing		20	600	23.5	3
4	Motor	M-1604	POW HP Feed Pump Motor	Soft Start	No	P-1604	1-06	Wanner Engineering	Received		5	600	5.9	3
													59 A	

MCC #1 Heaters 600V / 200A - Feed From 05-220-4003 (No backup generator on this feed)													
Item	Device	Tag	Description	Location	P&ID Sheet	Manufacturer	KW	Voltage	Amps 600v	Type	Phase	Inside / Outside	SSR Amps
1	CO2 Gas Heater	H-1102	CO2 Compressor Outlet Heater	C-1101	1-01	Wattco/H&G Control	25	600	24.1	Fused Disconnect	3	Cab. Inside	Vendor Supplied
2	Vapourizer	PB-1101A	CO2 Bulk Tank Vapourizer	C-1101	1-01	Wattco/Tomco	28	600	53.9	Fused Disconnect	3	Cab. Outside	Vendor Supplied
3		PB-1101B	CO2 Bulk Tank Vapourizer	C-1101	1-01		28	600					
4	Inline Heater	H-2603	Quench Injection	FCV-2603	2-06		12	600	11.6	Fused Disconnect with contactor and SSR & High Limit CTRL	3	Inside	25
5	Inline Heater	H-2602	Scrubber Injection	FCV-2602	2-06		24	600	23.1	Fused Disconnect with contactor and SSR & High Limit CTRL	3	Inside	50
6	Inline Heater	H-2601	Reactor Injection	FCV-2601	2-06		40	600	38.5	Fused Disconnect with contactor and SSR & High Limit CTRL	3	Inside	75
7	Heater	H-3201	Scrubber Vessel	V-3201	3-02		8	600	7.7	Fused Disconnect with contactor and SSR & High Limit CTRL	3	Inside	25
8	Inline Heater	H-4301	Reactor Water Wall	FT-4301	4-03		3	600	2.9	Fused Disconnect with contactor and SSR & High Limit CTRL	3	Inside	25
							168 KW		162 A				

MCC #2 [Backed up by Outside Generator] 600V / 200A Feed from PP-4C														
Item	Device	Tag	Description	Starter Type	Back-Up Power	Location	P&ID Sheet	Manufacturer	Status	Type	HP	Voltage	Amps (FLA)	Phase
1	Motor	M-1101	CO2 Compressor Motor	FVNR (2)	No	C-1101	1-01	Rix Industries	Received	Fused Disconnect	40.75	600	47.9	3
2	Motor	M-1201	O2 Compressor Motor	FVNR (2)	No	C-1201	1-02	Rix Industries	Received	Fused Disconnect	15.75	600	18.5	3
3	Motor	M-1301	N2 Compressor Motor	FVNR (2)	No	C-1301	1-03	Rix Industries	Received	Fused Disconnect	40.75	600	47.9	3
4	Motor	M-1401	NG Compressor Motor	Soft Start	No	C-1401	1-04	CNG Canada	Awarded	Fused Disconnect	50	600	58.7	3
													173 A	

VSD Cabinet, (Backed up by Outside Generator) 600V / 100A Feed from PP-4C, CCT #															
Item	Device	Tag	Description	Starter Type	Back-Up Power	Location	P&ID Sheet	Manufacturer	Status		HP	Voltage	Amps (FLA)	Phase	Fuse
1	Motor	M-2601	HP Municipal Water Pump Motor	VFD	Yes	P-2601	2-06	Waiting on Tender	Motor with pump		20	600	23.5	3	J 35
2	Motor	M-2602	HP Process Water Recycle Pump Motor	VFD	No	P-2602	2-06	Waiting on Tender	Motor with pump		10	600	11.7	3	CC 25
3	Motor	M-2301	HP Slurry Feed Pump	VFD	No	P-2301	2-03	Baldor	Motor with pump		10	600	11.7	3	CC 25
4	Motor	M-2402	Liquid Fuel Pump	VFD	No	P-2402	2-04	Not being insalled	Make provision for in electrical design		5	600	5.9	3	CC 20
5	Motor	M-2603	Buffer Solution Feed Pump	FVNR	No	P-2603	2-06	Not being installed	Make provision for in electrical design		1	600	1.2	3	CC 5
6	Motor	M-4301	Water Wall Recirculation Pump Motor	VFD	Yes	P-4301	4-04	Baldor	Motor with pump		20	600	23.5	3	J 35
7	Motor	M-4401	Cooling Water Recycle Pump Motor	FVNR	Yes	P-4401	4-04	Flowserve	Motor with pump		5	600	5.9	3	CC 15
8	Motor	M-4501	Glycol Recirculation Pump Motor	FVNR	Yes	P-4501	4-05	Bell & Gossett	existing (repurposed)		1	600	1.2	3	CC 5
9	Motor	M-4503	Glycol Air Cooler Fan Motor 1	FVNR	Yes	HX-4501	4-05	RefPlus	existing (repurposed)		1.5	600	1.8	3	CC 12
10	Motor	M-4504	Glycol Air Cooler Fan Motor 2	FVNR	Yes	HX-4501	4-05	RefPlus			1.5	600	1.8	3	
													88 A		

120 VAC Panel															
Item	Device	Tag	Description	Starter Type	Back-Up Power	Location	P&ID Sheet	Manufacturer	Status		HP	Voltage	Amps (FLA)	Phase	
1	Motor	M-1605	PW Tank Mixer Motor	120v Contactor	No	T-1601	1-06	Hayward Gordon	Part of Tank Assembly		2.26	120	23.0	1	
2	Motor	M-1606	POW Tank Mixer Motor	120v Contactor	No	T-1602	1-06	Hayward Gordon	Part of Tank Assembly		2.26	120	23.0	1	
3	Motor	M-4502	Glycol Fill Pump Motor	120V Switch	No	P-4502	4-05		existing (repurposed)		0.5	120	5.1	1	
													51 A		

Heaters and Heat Tacing Cabinet (Back-Up Power from PP-4C)																	
120/208V, 200A Feed from 10-200-4007 2nd floor (4 Wire 3 Phase)																	
Item	Device	Tag	Description	Location	P&ID Sheet	Manufacturer	KW	Voltage	Amps 208v	Amps 120v	Phase	Pipe /Tube Size	Pipe /Tube Lth	Maint Temp	Insul. Thicknes	Inside / Outside	Min Amb Temp
1	Heat Tracing	HT-1101	CO2 Compressor Outlet	C-1101	1-01		2.6	208	12.7		1	1 in	90 m	50 C	1 in	Outside	-25 C
2	Blanket Heater	H-1102B	CO2 Compressor Outlet	C-1101	1-01	Wattco	2	208	9.6		3						
3	Heat Tracing	HT-1601A	Produced Water Return	T-1601	1-06		4.7	208	22.7		1	2 in	70 m	5 C	2 in	Outside	-25 C
4	Heat Tracing	HT-1601B	Produced Water Supply	T-1601	1-06		4.7	208	22.7		1	2 in	70 m	5 C	2 in	Outside	-25 C
5	Heat Tracing	HT-1602A	Produced Oily Water Return	T-1602	1-06		4.7	208	22.7		1	2 in	70 m	5 C	2 in	Outside	-25 C
6	Heat Tracing	HT-1602B	Produced Oily Water Supply	T-1602	1-06		4.7	208	22.7		1	2 in	70 m	5 C	2 in	Outside	-25 C
7	Oil Heater	H-2401	Liquid Fuel Supply Tank	T-2401	2-04	NRCan - Heater Cabinet	1	208	4.8		1						
8	Heat Tracing	HT-3204	Scrubber Gas Outlet	YV-3208	3-02	Themon MIQ	0.728	208	3.5		1	1	3.66 m	305 C	1 in	Inside	16 C
9	Heat Tracing	HT-3217	Scrubber Gas Outlet	YV-3208	3-02	Themon MIQ	0.728	208	3.5		1	1	3.66 m	305 C	1 in	Inside	16 C
10	Heat Tracing	HT-5102	Reactor Sample Gas	YV-5101	5-01	Brisk	0.8	120		6.7	1			350 C	in	Inside	16 C
11	Heated Line	HT-5104	Reactor Sample Gas	FT-5101	5-01	Ametek	0.4	208	1.9		1			180 C	in	Inside	16 C
12	Heat Tracing	HT-5105	Reactor Sample Gas	PRV-5103	5-01	Brisk	0.6	120		5.0	1			180 C	in	Inside	16 C
13	Heat Tracing	HT-5108	QS Sample Gas	YV-5103	5-01	Brisk	0.8	120		6.7	1			350 C	in	Inside	16 C
14	Heated Line	HT-5110	QS Sample Gas	FT-5103	5-01	Ametek	0.4	208	1.9		1			180 C	in	Inside	16 C
15	Heat Tracing	HT-5111	QS Sample Gas	PRV-5106	5-01	Brisk	0.6	120		5.0	1			180 C	in	Inside	16 C
16	Heat Tracing	HT-5114	Reactor Sample Gas	YV-5105	5-01	Brisk	0.8	120		6.7	1			350 C	in	Inside	16 C
17	Heated Line	HT-5116	Reactor Sample Gas	FT-5105	5-01	Ametek	0.4	208	1.9		1			180 C	in	Inside	16 C
18	Heat Tracing	HT-5117	Scrubber Sample Gas	PRV-5108	5-01	Brisk	0.7	120		5.8	1			180 C	in	Inside	16 C
							31 KW			131 A							36 A