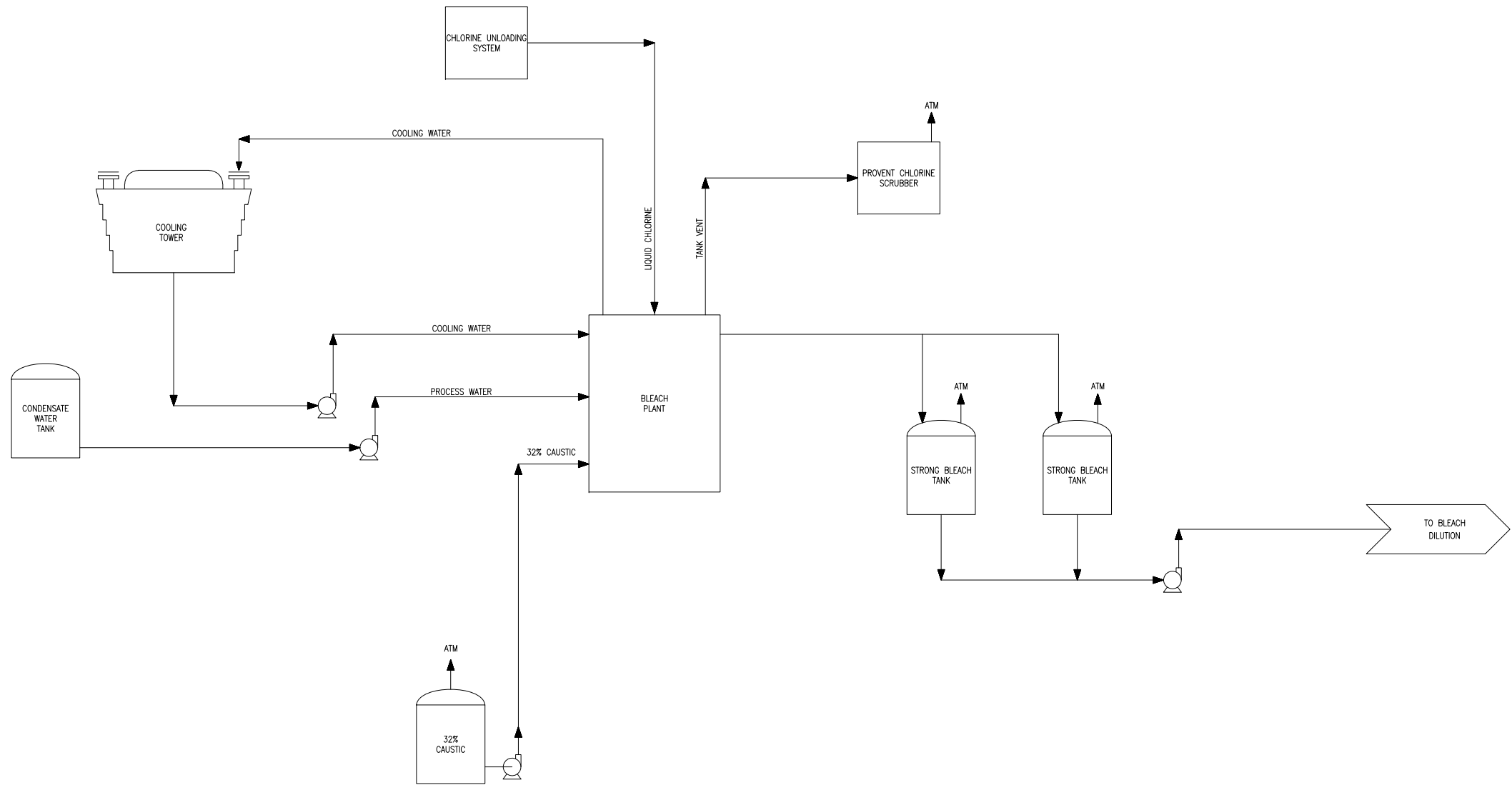


REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
0	5/23/2012	cbenner	kmcjilton	APPROVED FOR CONSTRUCTION
1	10/17/2012	cbenner	kmcjilton	AS BUILT



NOTE:  
BLEACH PLANT BY POWELL  
ALL OTHER BY PURCHASER

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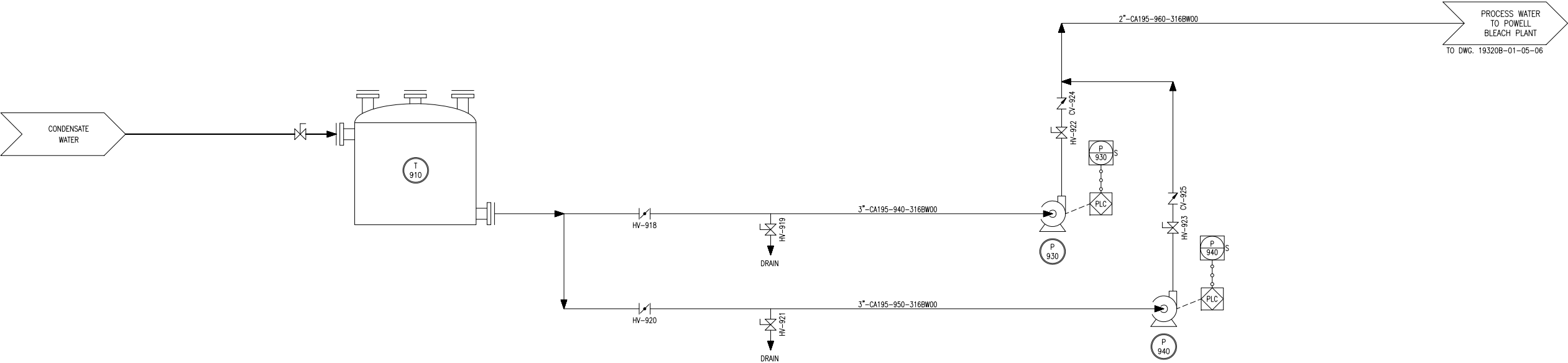
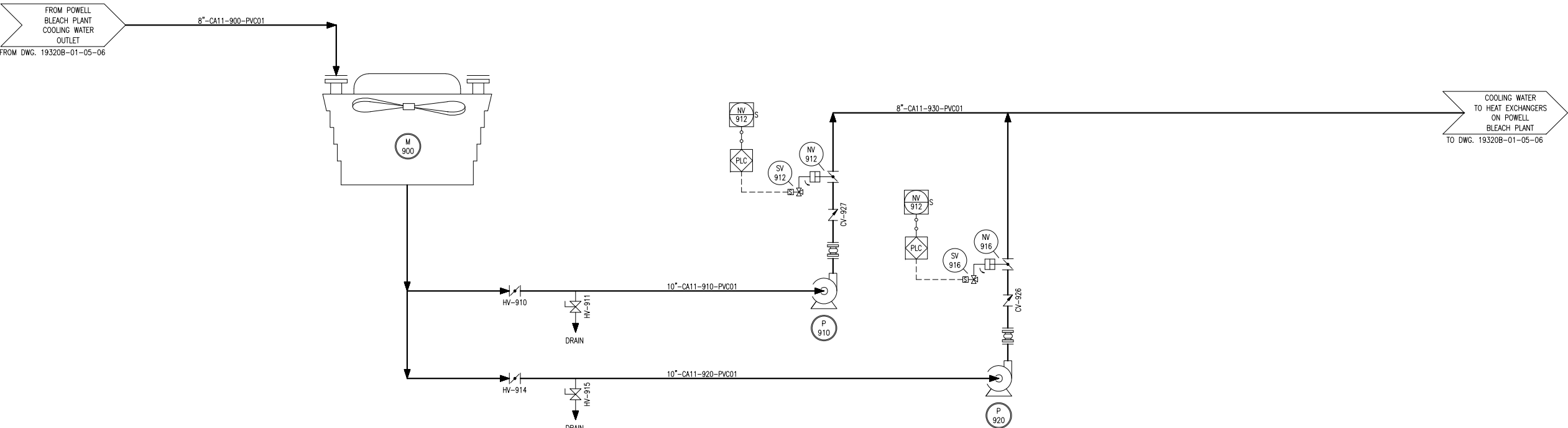


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e-mail info@powellfab.com www.powellfab.com

SYS JOB: 22116			BOM: NEED		
DRWN	cbenner	##	APPD	kmcjilton	5/23/2012
CHKD	----	5/15/2012	APPD	kmcjilton	5/23/2012
FILE: 19320B-01-01-06					
NCP CHLORCHEM PTY. LTD					
CHLOORKOP					S.A.
BLEACH PROCESS FLOW DIAGRAM					
DOCUMENT NUMBER			SHEET		REV
19320B-01			1 OF 6		1

Approved For Construction

REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
0	5/23/2012	cbenner	kmcjilton	APPROVED FOR CONSTRUCTION
1	10/17/2012	cbenner	kmcjilton	AS BUILT



M-900  
COOLING TOWER  
BY PURCHASER

T-910  
CONDENSATE WATER  
TANK

P-910  
COOLING WATER  
SUPPLY PUMP #1  
155 m3/h (680 GPM)  
ΔP=69kPa (ΔP=10PSI) + LINE LOSSES  
BY PURCHASER  
P-910M  
PROCESS WATER  
SUPPLY PUMP MOTOR #1

P-920  
COOLING WATER  
SUPPLY PUMP #2  
155 m3/h (680 GPM)  
ΔP=69kPa (ΔP=10PSI) + LINE LOSSES  
BY PURCHASER  
P-920M  
PROCESS WATER  
SUPPLY PUMP MOTOR #2

P-930  
CONDENSATE WATER  
SUPPLY PUMP #1  
6.5 m3/h (28.6 GPM)  
@586kPa (85 PSI)  
BY PURCHASER  
P-930M  
PROCESS WATER  
SUPPLY PUMP MOTOR #1

P-940  
CONDENSATE WATER  
SUPPLY PUMP #2  
6.5 m3/h (28.6 GPM)  
@586kPa (85 PSI)  
BY PURCHASER  
P-940M  
PROCESS WATER  
SUPPLY PUMP MOTOR #2

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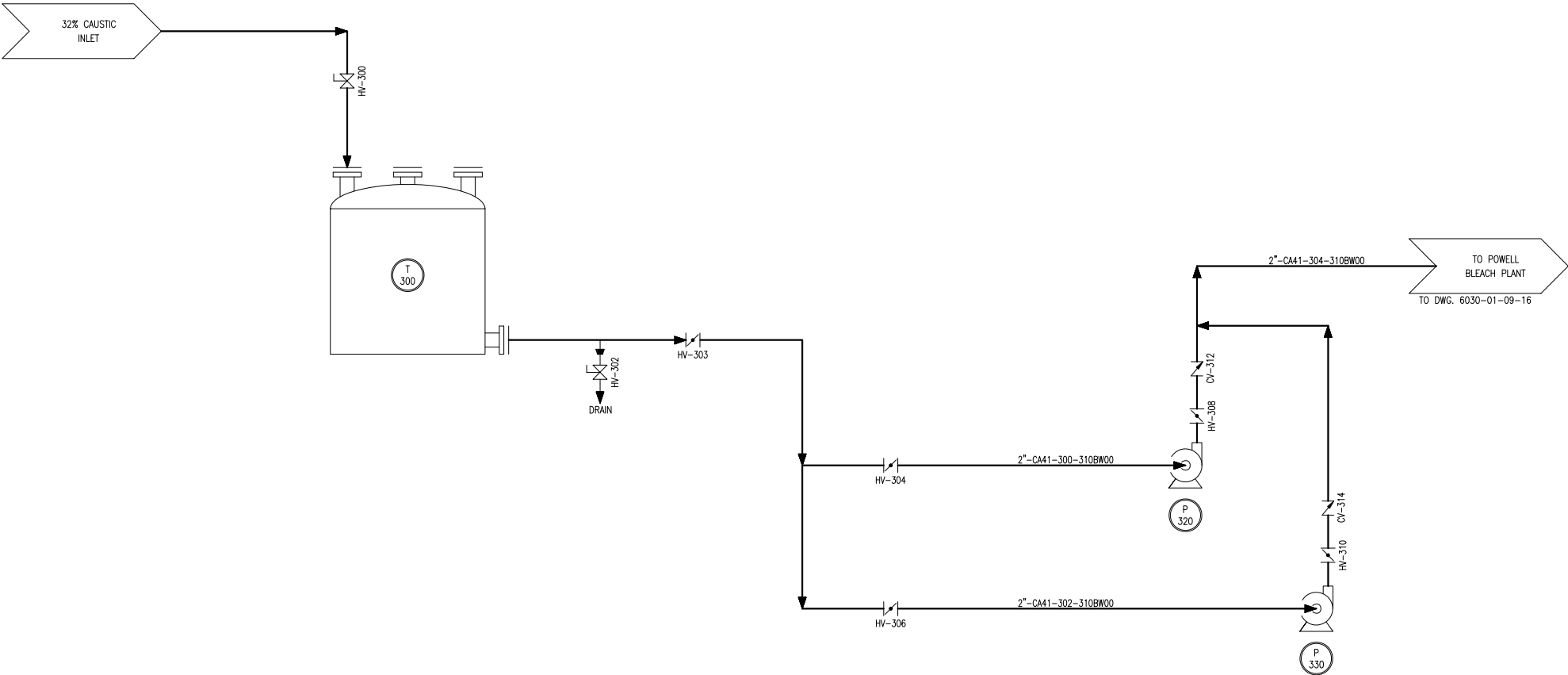
SYS JOB: 22116	BOM: NEED
DRWN cbenner	APPD kmcjilton 5/23/2012
CHKD #####	APPD kmcjilton 5/23/2012
FILE: 19320B-01-02-06	

NCP CHLORCHEM PTY. LTD  
CHLOORKOP S.A.  
WATER DISTRIBUTION P&ID

DOCUMENT NUMBER	SHEET	REV
19320B-01	2 OF 6	1

Approved For Construction

REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
0	5/23/2012	cbenner	kmcjilton	APPROVED FOR CONSTRUCTION
1	10/17/2012	cbenner	kmcjilton	AS BUILT



T-300  
32% CAUSTIC  
TANK  
BY PURCHASER

P-320  
32% CAUSTIC  
PUMP #1  
9.63 m3/h (42.4 GPM)  
Ø586kPa (85 PSI)  
BY PURCHASER  
P-320M  
32% CAUSTIC  
PUMP MOTOR #1

P-330  
32% CAUSTIC  
PUMP #2  
9.63 m3/h (42.4 GPM)  
Ø586kPa (85 PSI)  
BY PURCHASER  
P-330M  
32% CAUSTIC  
PUMP MOTOR #2


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SYS JOB: 22116	BOM:	NEED
DRWN   cbenner	84	APPD   kmcjilton   5/23/2012
CHKD   cbenner		APPD   kmcjilton   5/23/2012
FILE:	19320B-01-03-06	

NCP CHLORCHEM PTY. LTD

CHLOORKOPS.A.

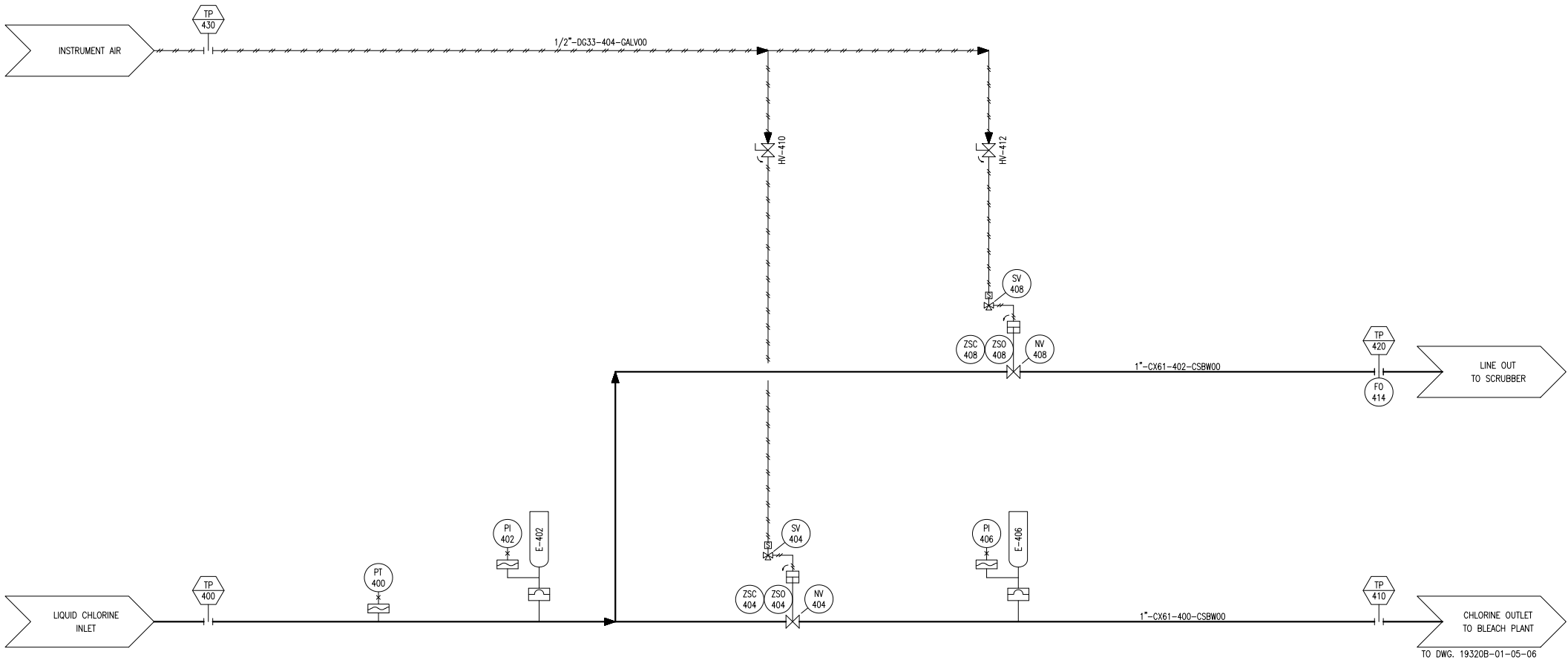
CAUSTIC DISTRIBUTION P&ID

DOCUMENT NUMBER	SHEET	REV
19320B-01	3 OF 6	1

Approved For Construction

TP	SIZE	STYLE	STANDARD	PROCESS
400	1"-150#	FLANGED	ANSI	LIQUID CHLORINE INLET
410	1"-150#	FLANGED	ANSI	OUTLET TO BLEACH PLANT
420	1"-150#	FLANGED	ANSI	OUTLET TO SCRUBBER
430	1/2"	THREADED	NPT	INSTRUMENT AIR INLET

REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
0	5/23/2012	cbenner	kmcjilton	APPROVED FOR CONSTRUCTION
1	10/17/2012	cbenner	kmcjilton	AS BUILT



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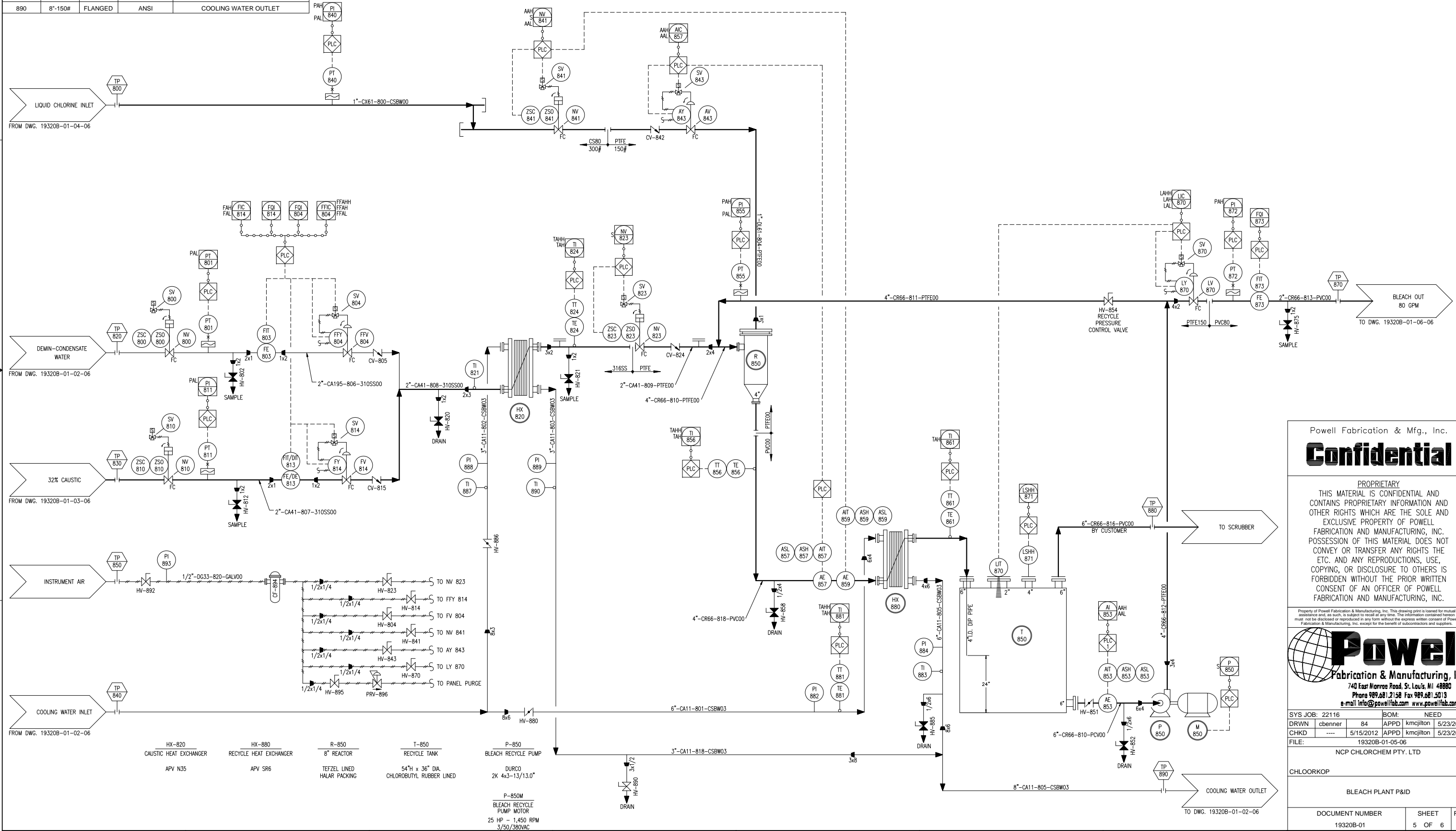
**Powell**  
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e-mail info@powellfab.com www.powellfab.com

SYS JOB: 22116		BOM: NEED	
DRWN	cbenner	84	APPD kmcjilton 5/23/2012
CHKD	####	5/15/2012	APPD kmcjilton 5/23/2012
FILE: 19320B-01-04-06			
NCP CHLORCHEM PTY. LTD			
CHLOOKOP		S.A.	
CHLORINE UNLOADING SYSTEM P&ID			
DOCUMENT NUMBER		SHEET	REV
19320B-01		4 OF 6	1

Approved For Construction

TP	SIZE	STYLE	STANDARD	PROCESS
800	1"-300#	FLANGED	ANSI	LIQUID CHLORINE INLET
820	2"-150#	FLANGED	ANSI	PROCESS WATER INLET
830	2"-150#	FLANGED	ANSI	30% CAUSTIC INLET
840	8"-150#	FLANGED	ANSI	COOLING WATER INLET
850	1/2"-150#	FLANGED	ANSI	INSTRUMENT AIR INLET
870	2"-150#	FLANGED	ANSI	BLEACH OUTLET
880	6"-150#	FLANGED	ANSI	RECYCLE TANK VENT
890	8"-150#	FLANGED	ANSI	COOLING WATER OUTLET

REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
0	5/23/2012	cbenner	kmcjilton	APPROVED FOR CONSTRUCTION
1	10/17/2012	cbenner	kmcjilton	AS BUILT



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SYS JOB: 22116	BOM: NEED
DRWN cbenner	84 APPD kmcjilton 5/23/2012
CHKD ----	5/15/2012 APPD kmcjilton 5/23/2012
FILE: 19320B-01-05-06	

NCP CHLORCHEM PTY. LTD

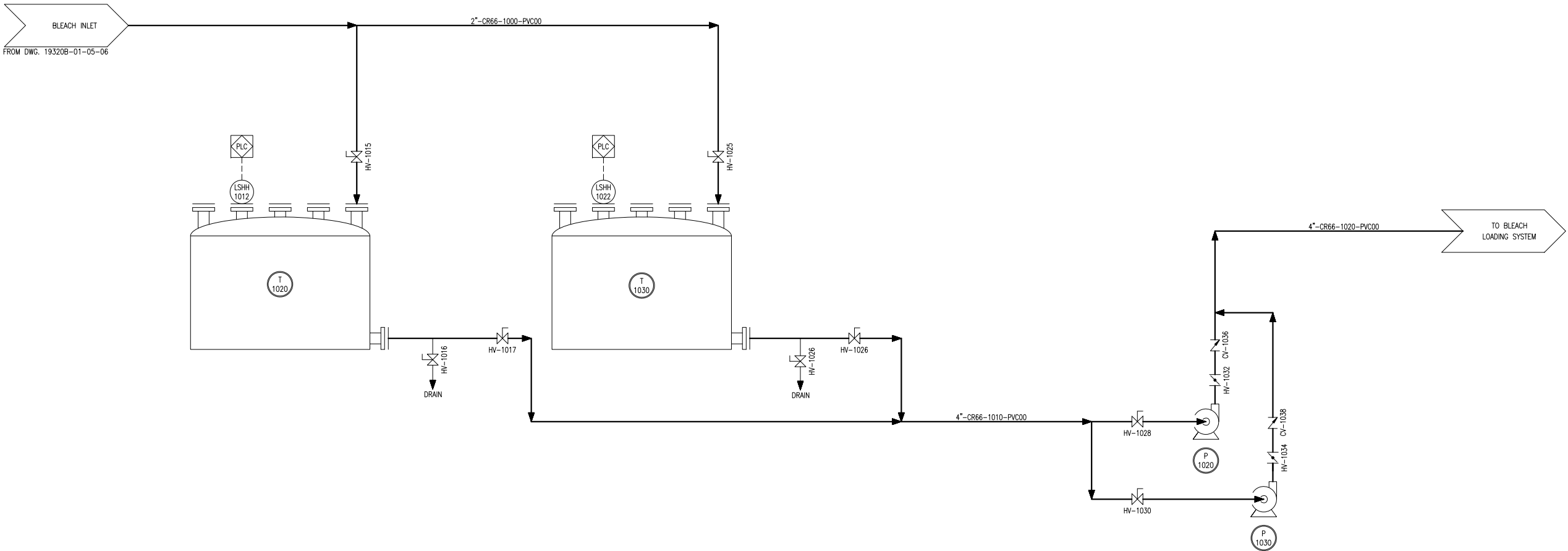
CHLOORKOP S.A.

BLEACH PLANT P&ID

DOCUMENT NUMBER	SHEET	REV
19320B-01	5 OF 6	1

Approved For Construction

REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
0	5/23/2012	cbenner	kmcjilton	APPROVED FOR CONSTRUCTION
1	10/17/2012	cbenner	kmcjilton	AS BUILT



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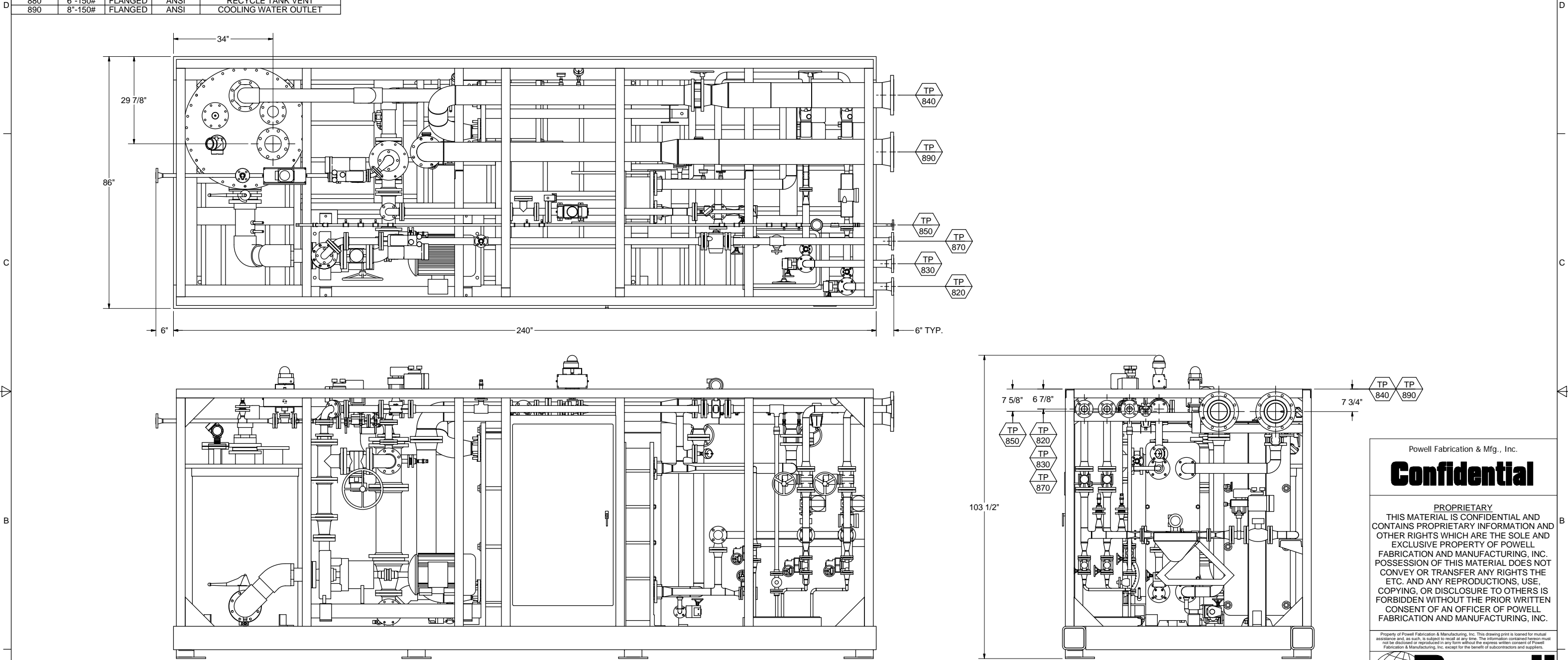
SYS JOB: 22116	BOM: NEED
DRWN cbenner 84	APPD kmcjilton 5/23/2012
CHKD cbenner 5/15/2012	APPD kmcjilton 5/23/2012
FILE: 19320B-01-06-06	

NCP CHLORCHEM PTY. LTD		
CHLOORKOP	S.A.	
Bleach Storage P&ID		
DOCUMENT NUMBER	SHEET	REV
19320B-01	6 OF 6	1

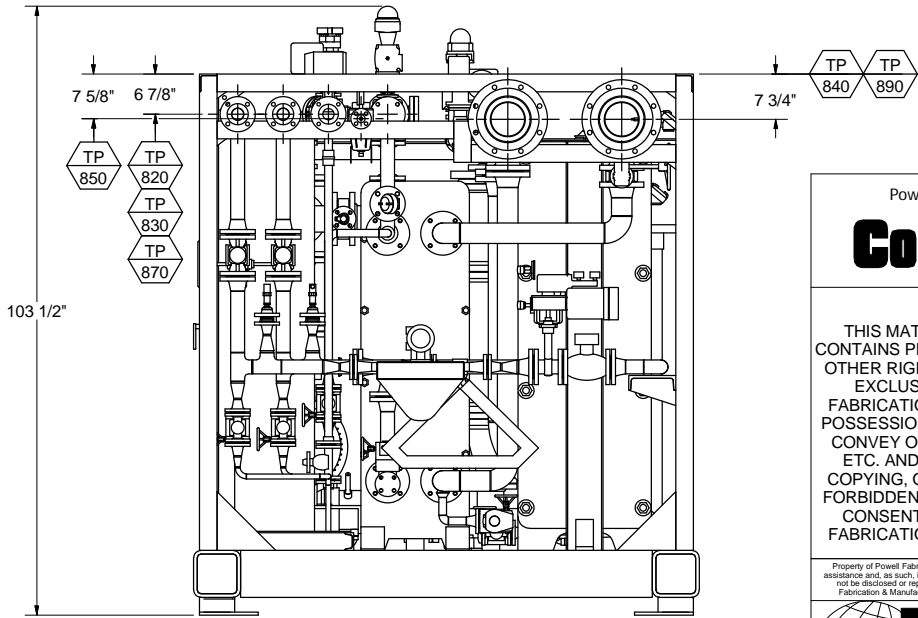
Approved For Construction

TIE POINTS					PROCESS
TP	SIZE	STYLE	STANDARD		
800	1"-300#	FLANGED	ANSI		LIQUID CHLORINE INLET
820	2"-150#	FLANGED	ANSI		PROCESS WATER INLET
830	2"-150#	FLANGED	ANSI		30% CAUSTIC INLET
840	8"-150#	FLANGED	ANSI		COOLING WATER INLET
850	1/2"-150#	FLANGED	ANSI		INSTRUMENT AIR INLET
870	2"-150#	FLANGED	ANSI		BLEACH OUTLET
880	6"-150#	FLANGED	ANSI		RECYCLE TANK VENT
890	8"-150#	FLANGED	ANSI		COOLING WATER OUTLET

REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
-				
0	8/3/2012	cbenner	kmcjilton	APPROVED FOR CONSTRUCTION
1	9/6/2012	cbenner	kmcjilton	ADJUSTED SPOOL LENGTHS
2	10/17/2012	cbenner	kmcjilton	AS BUILT



BOM # 900-10794-001				
ITEM	QTY	PART NUMBER	DESCRIPTION	P&ID
1	1	905-10796-001	19320B-02 Cooling Inlet	6"-CA11-801-CSBW03
2	1	905-10797-001	19320B-02 Cooling Outlet	6"-CA11-805-CSBW03
3	1	905-10798-008	19320B-02 Pump Suction	6"-CR66-810-PCV00
4	1	905-10799-001	19320B-02 Pump Discharge	4"-CR66-812-PTFE00
5	1	905-10800-001	19320B-02 Reactor to HX	4"-CR66-818-CPVC00
6	1	905-10801-001	19320B-02 HX - Recycle	
7	1	905-10802-001	19320B-02 Product Outlet	2"-CR66-813-PVC00
8	1	905-10803-001	19320B-02 Chlorine Inlet	1"-CX61-800-CSBW00
9	1	905-10804-001	19320B-02 Process Water	2"-CA195-806-310SS00
10	1	905-10805-001	19320B-02 30% Caustic	2"-CA41-807-310SS00
11	1	905-10806-001	19320B-02 Dilute Caustic to HX	2"-CA41-808-310SS00
12	1	905-10807-001	19320B-02 Dilute Caustic HX-Recycle	2"-CA41-809-PTFE00
13	1	905-10809-001	19320B-02 Instrument Air	1/2"-DG33-820-GALV00
14	1	N/A	19320B-03 Equipment Assembly	




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SYS JOB: 22116 BOM: 900-10794-001

DRWN cbenner 5/24/2012 APPD kmcjilton 8/3/2012

CHKD cbenner 8/3/2012 APPD kmcjilton 8/3/2012

FILE: 19320B-02 Full Assembly.idw

NCP CHLORCHEM PTY. LTD

CHLOOKOP S.A.

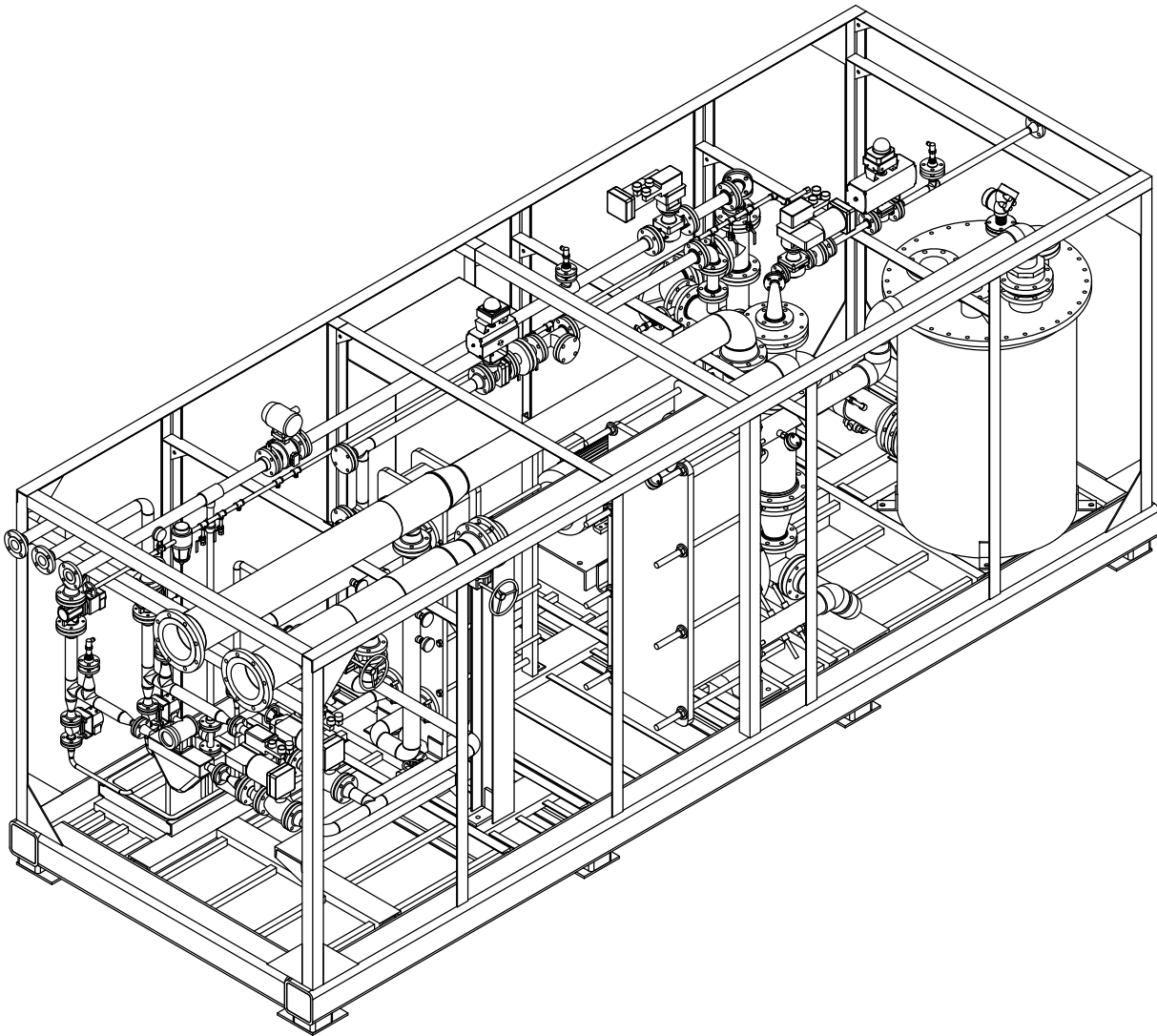
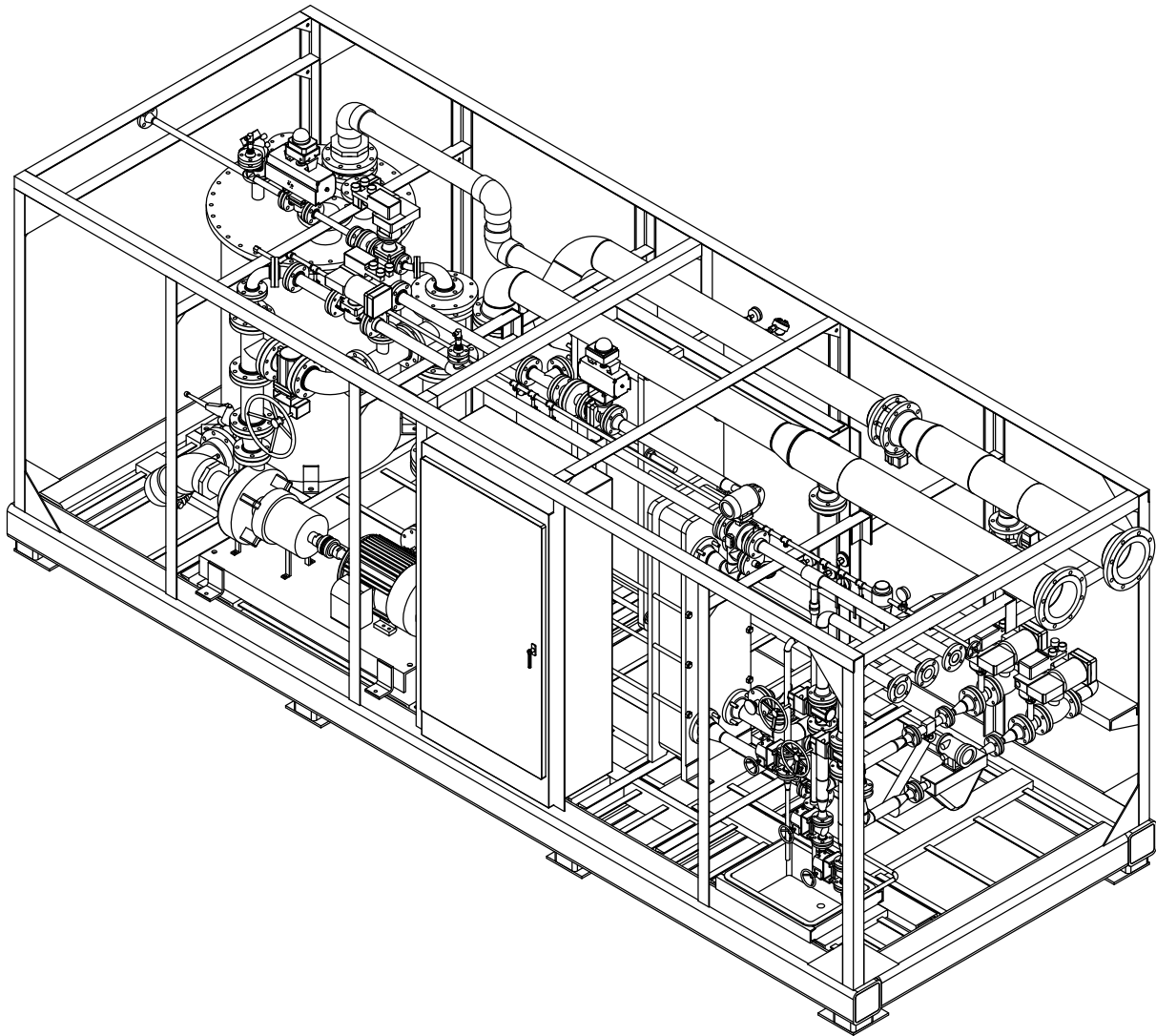
19320B-02 Full Assembly

19320B-02 SHEET 1 OF 15 REV 2

Approved For Construction

8		7		TIE POINTS	
TP	SIZE	STYLE	STANDARD	PROCESS	
800	1"-300#	FLANGED	ANSI	LIQUID CHLORINE INLET	
820	2"-150#	FLANGED	ANSI	PROCESS WATER INLET	
830	2"-150#	FLANGED	ANSI	30% CAUSTIC INLET	
840	8"-150#	FLANGED	ANSI	COOLING WATER INLET	
850	1/2"-150#	FLANGED	ANSI	INSTRUMENT AIR INLET	
870	2"-150#	FLANGED	ANSI	BLEACH OUTLET	
880	6"-150#	FLANGED	ANSI	RECYCLE TANK VENT	
890	8"-150#	FLANGED	ANSI	COOLING WATER OUTLET	

REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
0	8/3/2012	cbenner	kmcjilton	APPROVED FOR CONSTRUCTION
1	9/6/2012	cbenner	kmcjilton	ADJUSTED SPOOL LENGTHS
-				
2	10/17/2012	cbenner	kmcjilton	AS BUILT




BOM # 900-10794-001				
ITEM	QTY	PART NUMBER	DESCRIPTION	P&ID
1	1	905-10796-001	19320B-02 Cooling Inlet	6"-CA11-801-CSBW03
2	1	905-10797-001	19320B-02 Cooling Outlet	6"-CA11-805-CSBW03
3	1	905-10798-008	19320B-02 Pump Suction	6"-CR66-810-PCV00
4	1	905-10799-001	19320B-02 Pump Discharge	4"-CR66-812-PTFE00
5	1	905-10800-001	19320B-02 Reactor to HX	4"-CR66-818-CPVC00
6	1	905-10801-001	19320B-02 HX - Recycle	
7	1	905-10802-001	19320B-02 Product Outlet	2"-CR66-813-PVC00
8	1	905-10803-001	19320B-02 Chlorine Inlet	1"-CX61-800-CSBW00
9	1	905-10804-001	19320B-02 Process Water	2"-CA195-806-310SS00
10	1	905-10805-001	19320B-02 30% Caustic	2"-CA41-807-310SS00
11	1	905-10806-001	19320B-02 Dilute Caustic to HX	2"-CA41-808-310SS00
12	1	905-10807-001	19320B-02 Dilute Caustic HX-Recycle	2"-CA41-809-PTFE00
13	1	905-10809-001	19320B-02 Instrument Air	1/2"-DG33-820-GALV00
14	1	N/A	19320B-03 Equipment Assembly	

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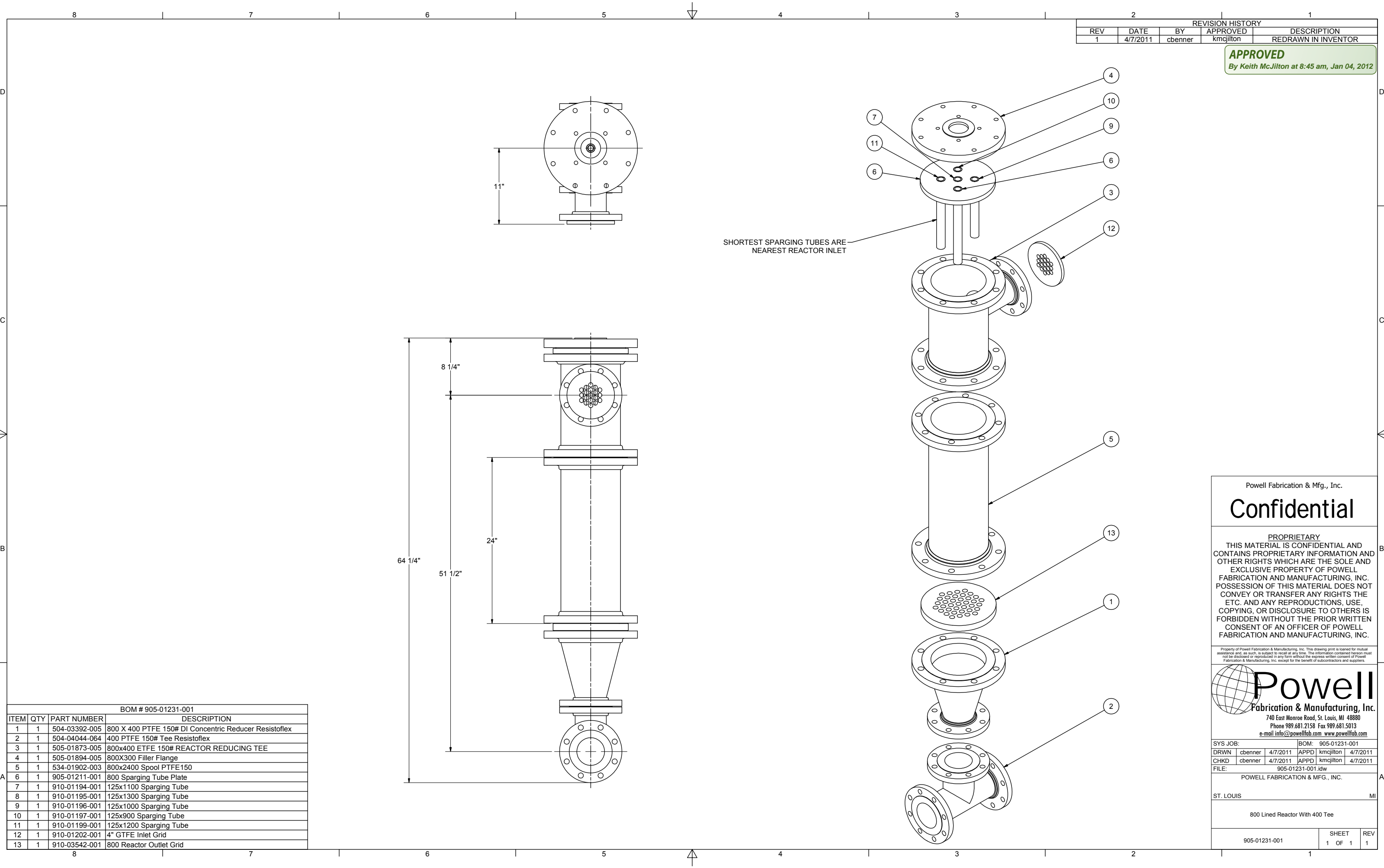
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SYS JOB: 22116 | BOM: 900-10794-001  
DRWN cbenner | 5/24/2012 | APPD kmcjilton | 8/3/2012  
CHKD cbenner | 8/3/2012 | APPD kmcjilton | 8/3/2012  
FILE: 19320B-02 Full Assembly.idw  
NCP CHLORCHEM PTY. LTD  
CHLOORKOP S.A.  
19320B-02 Full Assembly  
19320B-02 SHEET 2 OF 15 REV 2

Approved For Construction





REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
1	4/7/2011	cbenner	kmcjilton	REDRAWN IN INVENTOR

**APPROVED**  
By Keith McJilton at 8:45 am, Jan 04, 2012

BOM # 905-01231-001				
ITEM	QTY	PART NUMBER	DESCRIPTION	
1	1	504-03392-005	800 X 400 PTFE 150# DI Concentric Reducer Resistoflex	
2	1	504-04044-064	400 PTFE 150# Tee Resistoflex	
3	1	505-01873-005	800x400 ETFE 150# REACTOR REDUCING TEE	
4	1	505-01894-005	800X300 Filler Flange	
5	1	534-01902-003	800x2400 Spool PTFE150	
6	1	905-01211-001	800 Sparging Tube Plate	
7	1	910-01194-001	125x1100 Sparging Tube	
8	1	910-01195-001	125x1300 Sparging Tube	
9	1	910-01196-001	125x1000 Sparging Tube	
10	1	910-01197-001	125x900 Sparging Tube	
11	1	910-01199-001	125x1200 Sparging Tube	
12	1	910-01202-001	4" GTFE Inlet Grid	
13	1	910-03542-001	800 Reactor Outlet Grid	


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740 East Monroe Road, St. Louis, MI 48860

Phone 989.681.2158 Fax 989.681.5013

e-mail info@powellfab.com www.powellfab.com

SYS JOB:

BOM: 905-01231-001

DRWN cbenner 4/7/2011

APPD kmcjilton 4/7/2011

CHKD cbenner 4/7/2011

APPD kmcjilton 4/7/2011

FILE: 905-01231-001.idw

POWELL FABRICATION & MFG., INC.

ST. LOUIS MI

800 Lined Reactor With 400 Tee

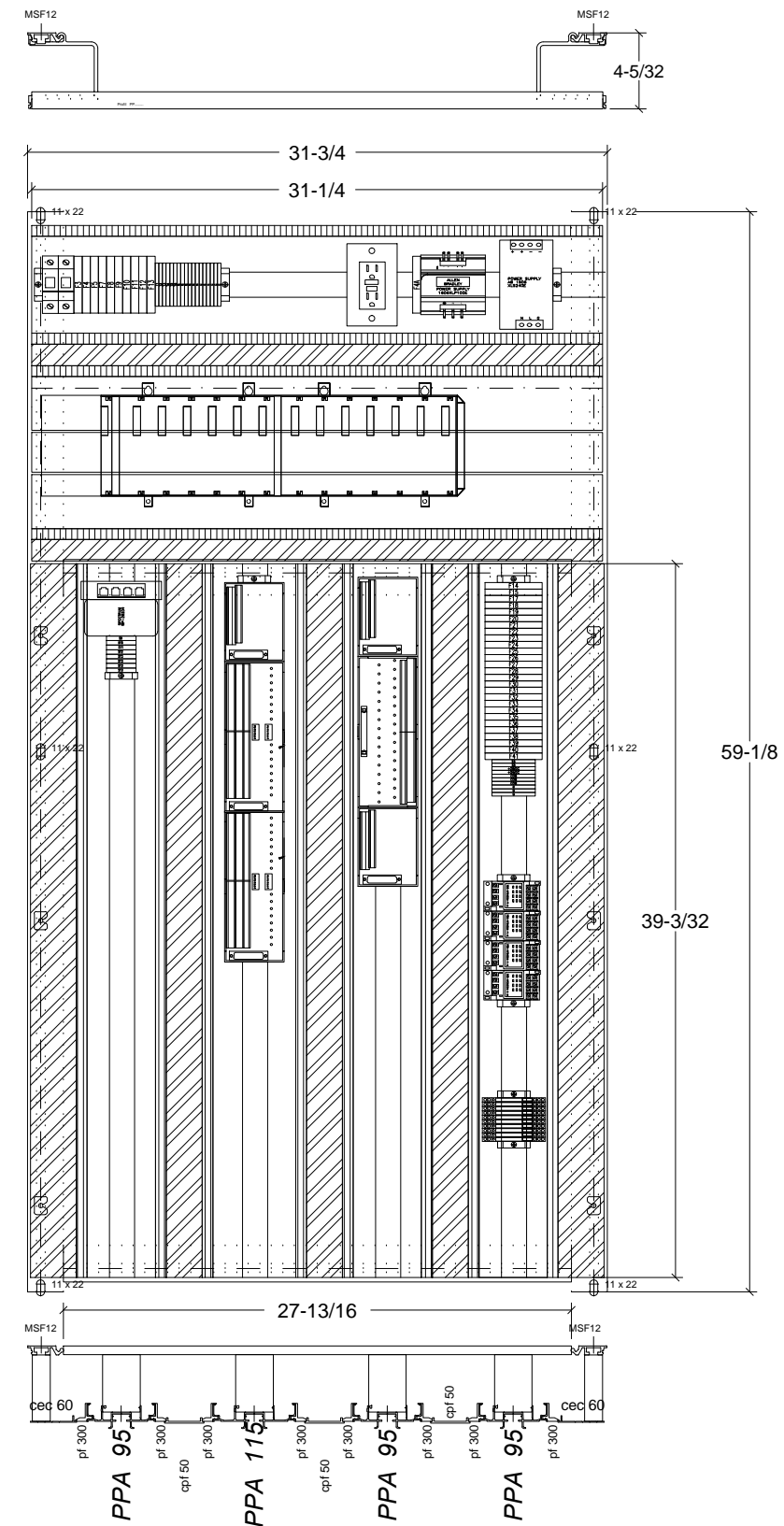
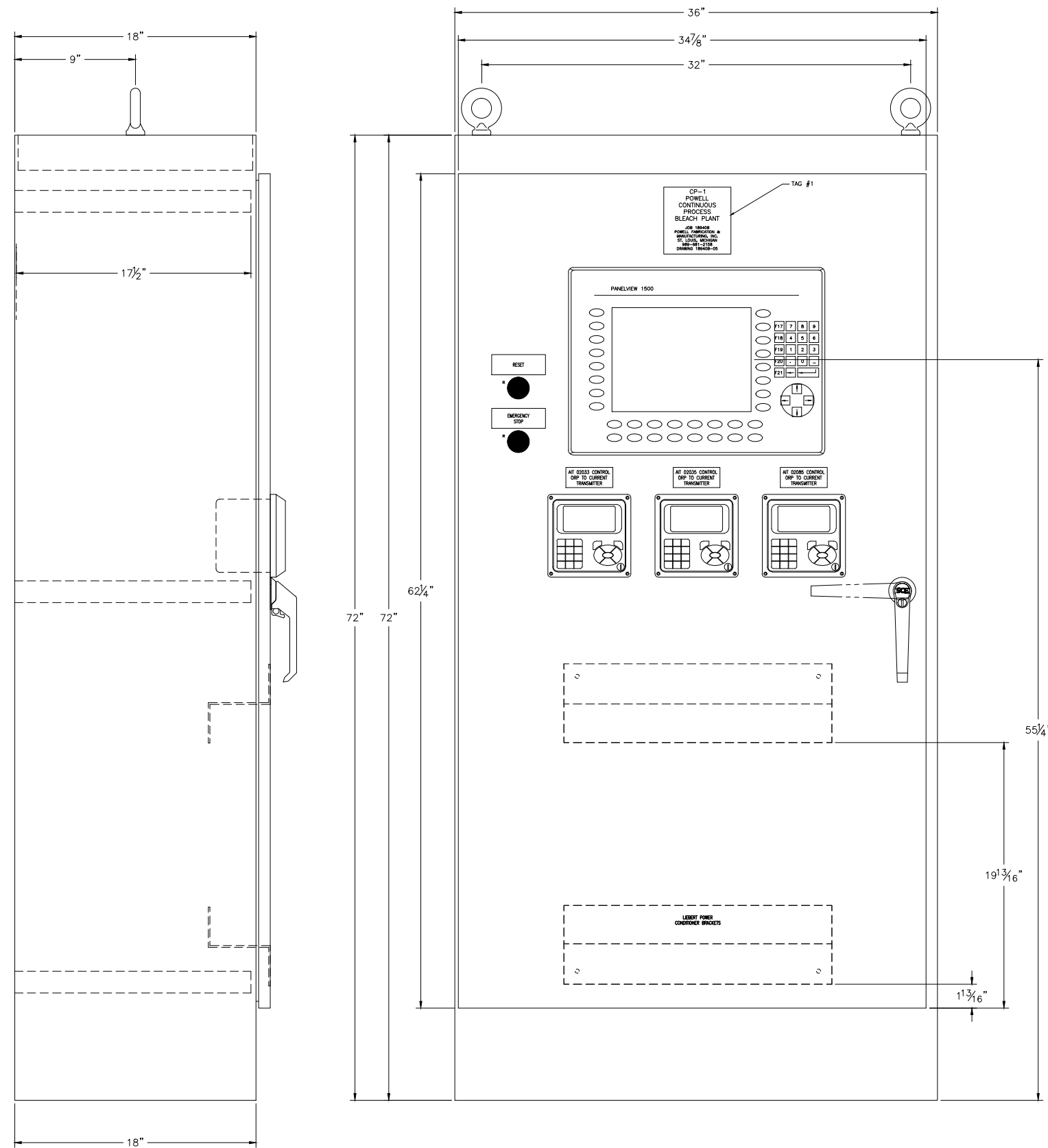
905-01231-001

SHEET 1 OF 1

REV 1

B.O.M. # 905-10811-001

REV	DATE	BY	APPROVED	DESCRIPTION
0	6/19/2012	rfoster	kmcjilton	APPROVED FOR CONSTRUCTION
1	11/1/2012	rfoster	kmcjilton	AS BUILT



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e-mail [info@powellfab.com](mailto:info@powellfab.com) [www.powellfab.com](http://www.powellfab.com)

SYS JOB: 22116			BOM: 905-10811-001		
DRWN	rmfoster	11/6/2012	APPD	kmcjilton	6/19/2012
CHKD	rmfoster	6/4/2012	APPD	kmcjilton	6/19/2012
FILE:		19320B-05-01-09			

NCP CHLORCHEM PTY. LTD

CHLOORKOP S.A.

BLEACH PLANT  
PANEL LAYOUT

DOCUMENT NUMBER	SHEET	REV
19320B-05	1 OF 9	0

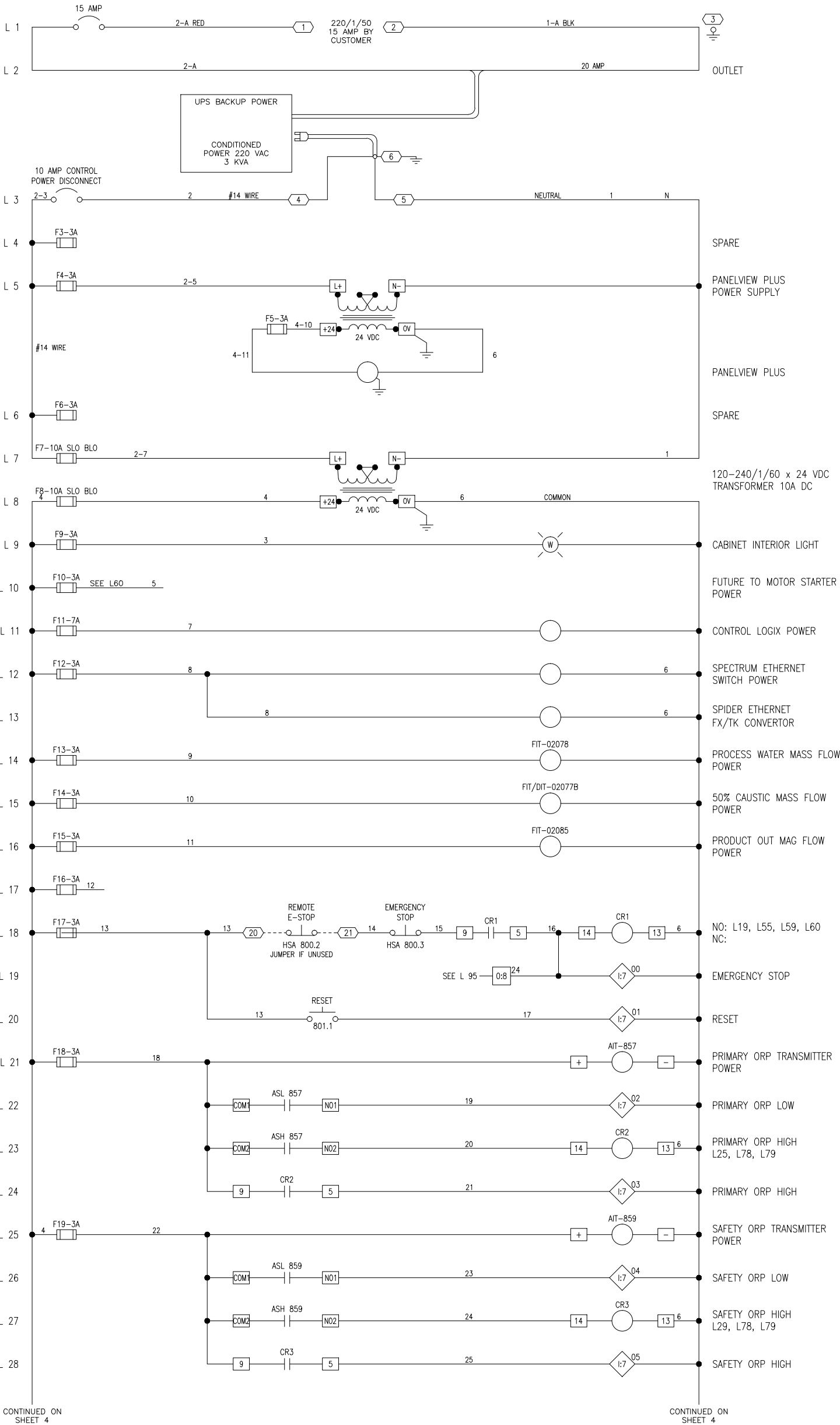
PANEL SCE-723618FS

BACKPANEL



WIRE COLOR			
WIRE NO.			
1-A	BLACK		12 MTW
2-A	BLACK		12 MTW
N	WHITE		16 MTW
1	BLACK		
2	RED		
3	ORANGE		
4	BLUE		
5	PURPLE		
6	GREY		
7	YELLOW		
8	BROWN		
9	BLACK	ON	WHITE
10	BLACK	ON	RED
11	BLACK	ON	ORANGE
12	BLACK	ON	BLUE
13	BLACK	ON	PURPLE
14	BLACK	ON	GREY
15	BLACK	ON	YELLOW
16	BLACK	ON	BROWN
17	WHITE	ON	BLACK
18	WHITE	ON	RED
19	WHITE	ON	ORANGE
20	WHITE	ON	BLUE
21	WHITE	ON	PURPLE
22	WHITE	ON	GREY
23	WHITE	ON	YELLOW
24	WHITE	ON	BROWN
25	RED	ON	WHITE
26	RED	ON	BLACK
27	RED	ON	ORANGE
28	RED	ON	BLUE
29	RED	ON	PURPLE
30	RED	ON	GREY
31	RED	ON	YELLOW
32	RED	ON	BROWN
33	ORANGE	ON	WHITE
34	ORANGE	ON	BLACK
35	ORANGE	ON	RED
36	ORANGE	ON	BLUE
37	ORANGE	ON	PURPLE
38	ORANGE	ON	GREY
39	ORANGE	ON	YELLOW
40	ORANGE	ON	BROWN
41	BLUE	ON	WHITE
42	BLUE	ON	BLACK
43	BLUE	ON	RED
44	BLUE	ON	ORANGE
45	BLUE	ON	PURPLE
46	BLUE	ON	GREY
47	BLUE	ON	YELLOW
48	BLUE	ON	BROWN
49	PURPLE	ON	WHITE
50	PURPLE	ON	BLACK
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53	PURPLE	ON	BLUE
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70	YELLOW	ON	PURPLE
71	YELLOW	ON	GREY
72	YELLOW	ON	BROWN
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94	BLK/RED	ON	BROWN
95	BLK/OR	ON	WHITE
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97	BLK/OR	ON	BLUE
98	BLK/OR	ON	PURPLE
99	BLK/OR	ON	GREY
100	BLK/OR	ON	YELLOW

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
0	6/19/2012	roster	APPROVED FOR CONSTRUCTION
1	11/1/2012	roster	AS BUILT



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Fabrication & Manufacturing, Inc.

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Email info@powellfab.com www.powellfab.com

SYS JOB: 22116 BOM: 905-10811-001  
DRWN: chenier 11/7/2012 APPD: kmjcjion 6/19/2012  
CHKD: mbsier 6/4/2012 APPD: kmjcjion 6/19/2012  
FILE: 19320B-05-03-09

NCP CHLORCHEM PTY. LTD

CHLORCOP

BLEACH PLANT UPGRADE  
ELECTRICAL

DOCUMENT NUMBER 19320B-05 SHEET 3 OF 9 REV 1

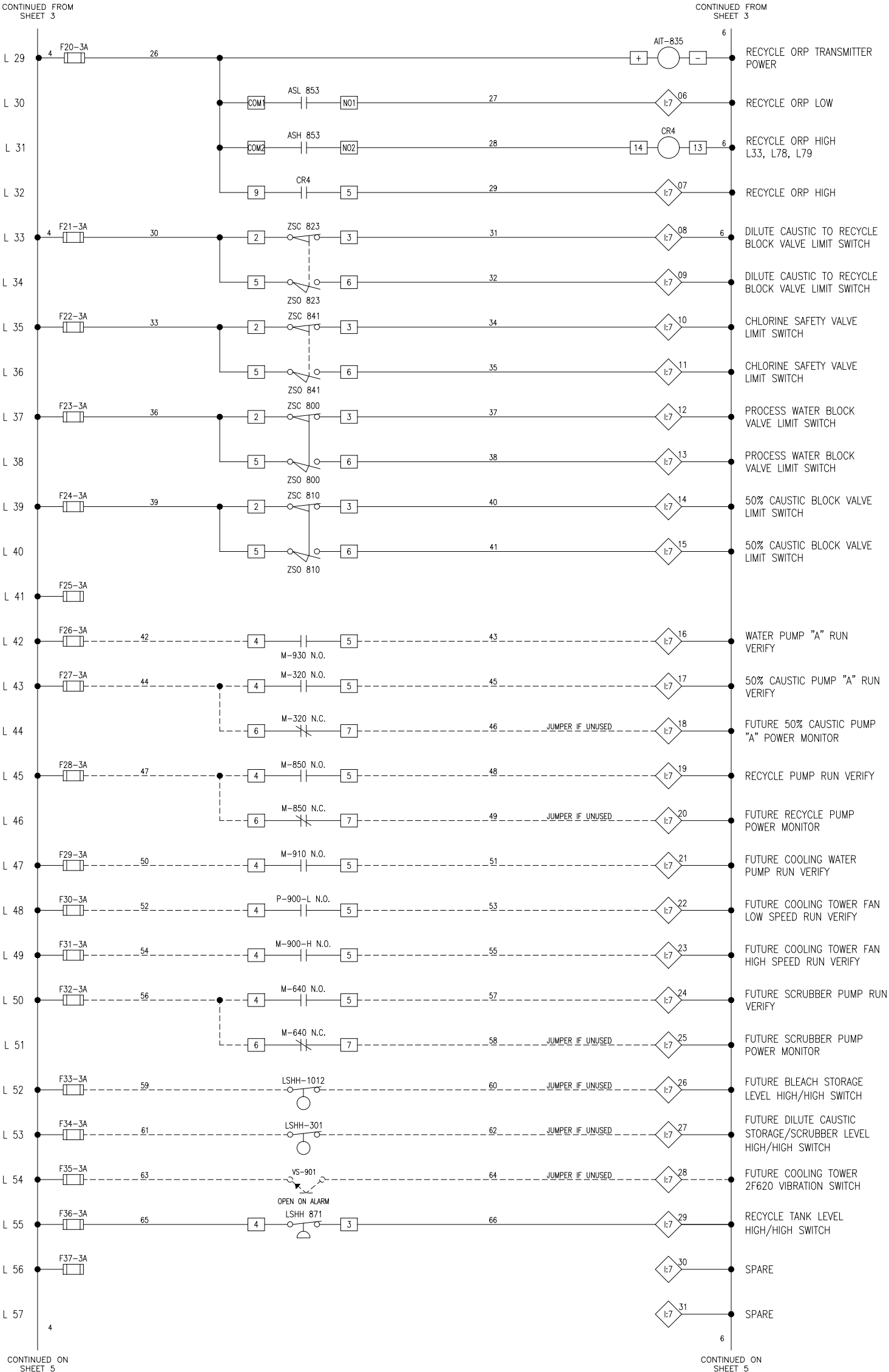
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WIRE NO.	WIRE COLOR		
1-A	BLACK	10 MTW	
2-A	BLACK	14 MTW	
N	WHITE	16 MTW	
1	BLACK		
2	RED		
3	ORANGE		
4	BLUE		
5	PURPLE		
6	GREY		
7	YELLOW		
8	BROWN		
9	BLACK	ON	WHITE
10	BLACK	ON	RED
11	BLACK	ON	ORANGE
12	BLACK	ON	BLUE
13	BLACK	ON	PURPLE
14	BLACK	ON	GREY
15	BLACK	ON	YELLOW
16	BLACK	ON	BROWN
17	WHITE	ON	BLACK
18	WHITE	ON	RED
19	WHITE	ON	ORANGE
20	WHITE	ON	BLUE
21	WHITE	ON	PURPLE
22	WHITE	ON	GREY
23	WHITE	ON	YELLOW
24	WHITE	ON	BROWN
25	RED	ON	WHITE
26	RED	ON	BLACK
27	RED	ON	ORANGE
28	RED	ON	BLUE
29	RED	ON	PURPLE
30	RED	ON	GREY
31	RED	ON	YELLOW
32	RED	ON	BROWN
33	ORANGE	ON	WHITE
34	ORANGE	ON	BLACK
35	ORANGE	ON	RED
36	ORANGE	ON	BLUE
37	ORANGE	ON	PURPLE
38	ORANGE	ON	GREY
39	ORANGE	ON	YELLOW
40	ORANGE	ON	BROWN
41	BLUE	ON	WHITE
42	BLUE	ON	BLACK
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52	PURPLE	ON	ORANGE
53	PURPLE	ON	BLUE
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59	GREY	ON	RED
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94	BLK/RED	ON	BROWN
95	BLK/OR	ON	WHITE
96	BLK/OR	ON	RED
97	BLK/OR	ON	BLUE
98	BLK/OR	ON	PURPLE
99	BLK/OR	ON	GREY
100	BLK/OR	ON	YELLOW



REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
0	6/19/2012	rtoster	APPROVED FOR CONSTRUCTION
1	11/1/2012	rtoster	AS BUILT

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PROPRIETARY

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Email info@powellmfg.com www.powellmfg.com

SYS JOB: 22116 BOM: 905-10811-001

DRWN mbsister 11/7/2012 APPD kmjclition 6/19/2012

CHKD mbsister 6/4/2012 APPD kmjclition 6/19/2012

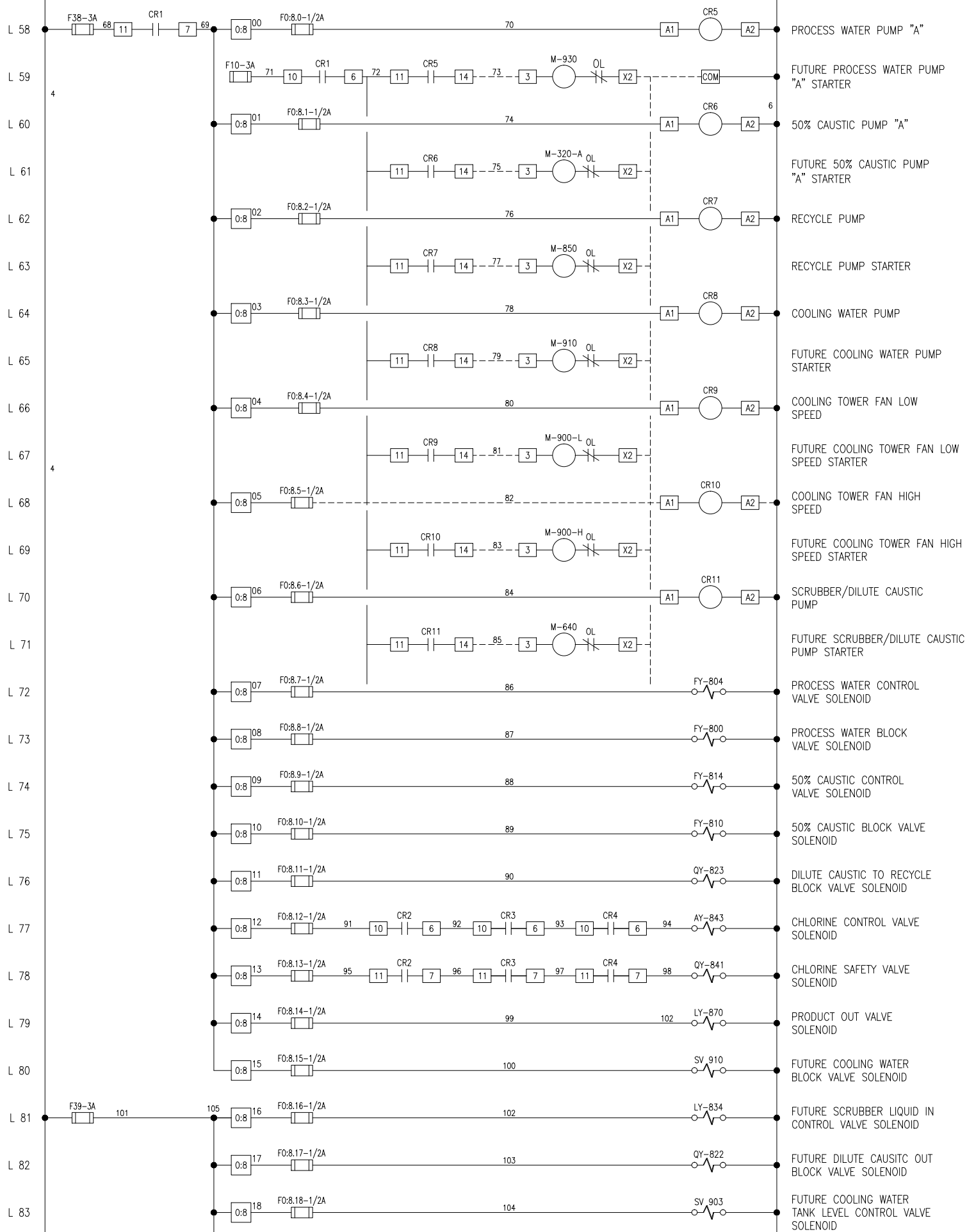
FILE: 19320B-06-04-09

NCP CHLORCHEM PTV, LTD

CHLORCOP

BLEACH PLANT ELECTRICAL

DOCUMENT NUMBER 19320B-06 SHEET 4 OF 9 REV 1



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2-A	BLACK		14 MTW
N	WHITE		16 MTW
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2	RED		
3	ORANGE		
4	BLUE		
5	PURPLE		
6	GREY		
7	YELLOW		
8	BROWN		
9	BLACK	ON	WHITE
10	BLACK	ON	RED
11	BLACK	ON	ORANGE
12	BLACK	ON	BLUE
13	BLACK	ON	PURPLE
14	BLACK	ON	GREY
15	BLACK	ON	YELLOW
16	BLACK	ON	BROWN
17	WHITE	ON	BLACK
18	WHITE	ON	RED
19	WHITE	ON	ORANGE
20	WHITE	ON	BLUE
21	WHITE	ON	PURPLE
22	WHITE	ON	GREY
23	WHITE	ON	YELLOW
24	WHITE	ON	BROWN
25	RED	ON	WHITE
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28	RED	ON	BLUE
29	RED	ON	PURPLE
30	RED	ON	GREY
31	RED	ON	YELLOW
32	RED	ON	BROWN
33	ORANGE	ON	WHITE
34	ORANGE	ON	BLACK
35	ORANGE	ON	RED
36	ORANGE	ON	BLUE
37	ORANGE	ON	PURPLE
38	ORANGE	ON	GREY
39	ORANGE	ON	YELLOW
40	ORANGE	ON	BROWN
41	BLUE	ON	WHITE
42	BLUE	ON	BLACK
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53	PURPLE	ON	BLUE
54	PURPLE	ON	GREY
55	PURPLE	ON	YELLOW
56	PURPLE	ON	BROWN
57	GREY	ON	WHITE
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60	GREY	ON	ORANGE
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100	BLK/OR	ON	YELLOW

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
0	6/19/2012	rfoster	APPROVED FOR CONSTRUCTION
1	11/1/2012	rfoster	AS BUILT

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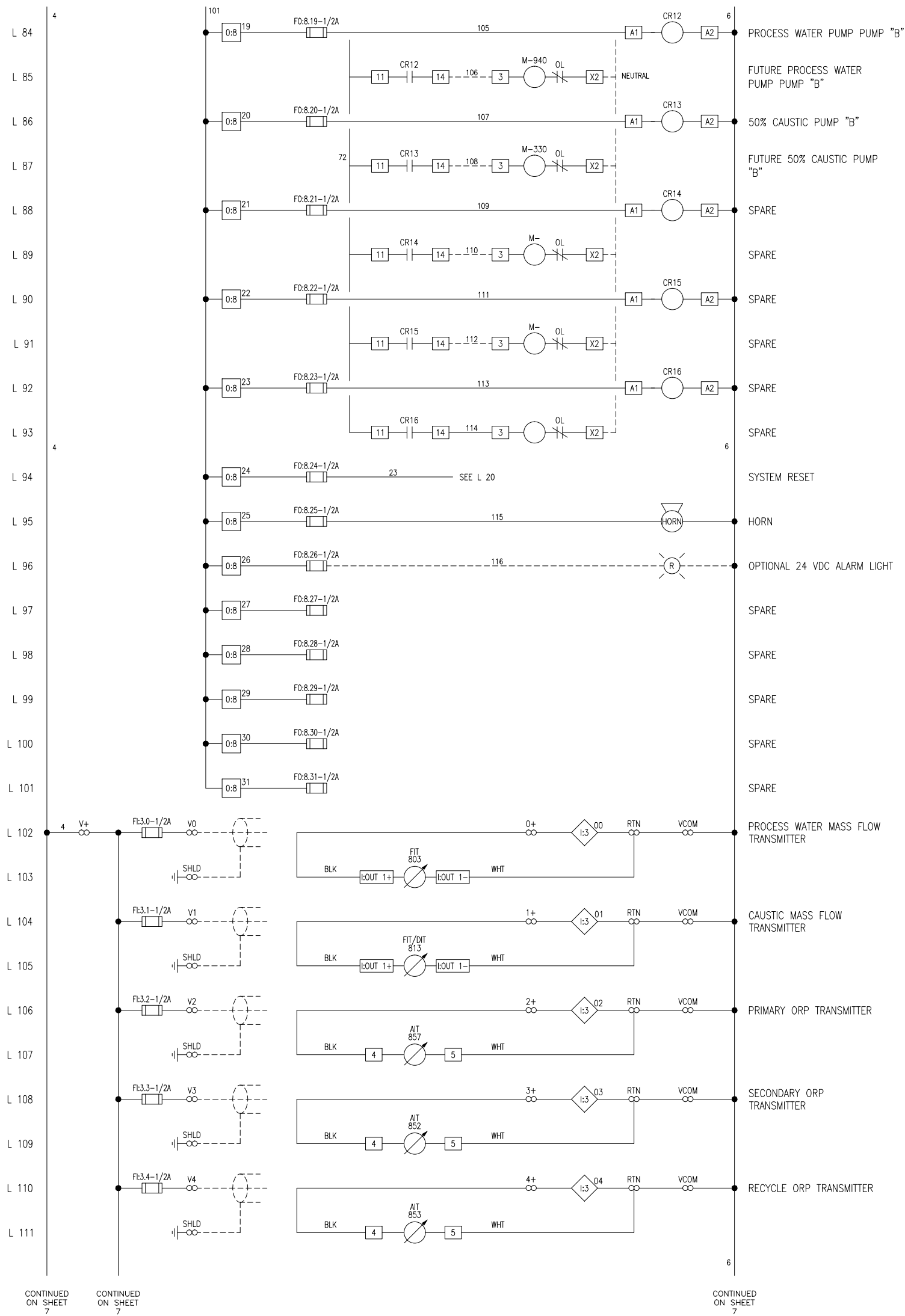


S/S JOB: 22116	BOM: 905-10611-001
DRWN mmsier 1/17/2012	APPD kmcjcion 6/19/2012
CHND mmsier 6/4/2012	APPD kmcjcion 6/19/2012
FILE: 193208-05-05-09 e-mail info@jowelltda.com www.jowelltda.com	

**CHLOORKOP S.A.**

## BLEACH PLANT ELECTRICAL

DOCUMENT NUMBER	SHEET	REV
19320B-05	5 OF 9	1



WIRE NO.	WIRE COLOR		
1-A	BLACK		10 MTW
2-A	BLACK		14 MTW
N	WHITE		16 MTW
1	BLACK		
2	RED		
3	ORANGE		
4	BLUE		
5	PURPLE		
6	GREY		
7	YELLOW		
8	BROWN		
9	BLACK	ON	WHITE
10	BLACK	ON	RED
11	BLACK	ON	ORANGE
12	BLACK	ON	BLUE
13	BLACK	ON	PURPLE
14	BLACK	ON	GREY
15	BLACK	ON	YELLOW
16	BLACK	ON	BROWN
17	WHITE	ON	BLACK
18	WHITE	ON	RED
19	WHITE	ON	ORANGE
20	WHITE	ON	BLUE
21	WHITE	ON	PURPLE
22	WHITE	ON	GREY
23	WHITE	ON	YELLOW
24	WHITE	ON	BROWN
25	RED	ON	WHITE
26	RED	ON	BLACK
27	RED	ON	ORANGE
28	RED	ON	BLUE
29	RED	ON	PURPLE
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31	RED	ON	YELLOW
32	RED	ON	BROWN
33	ORANGE	ON	WHITE
34	ORANGE	ON	BLACK
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38	ORANGE	ON	GREY
39	ORANGE	ON	YELLOW
40	ORANGE	ON	BROWN
41	BLUE	ON	WHITE
42	BLUE	ON	BLACK
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92	BLK/RED	ON	GREY
93	BLK/RED	ON	YELLOW
94	BLK/RED	ON	BROWN
95	BLK/OR	ON	WHITE
96	BLK/OR	ON	RED
97	BLK/OR	ON	BLUE
98	BLK/OR	ON	PURPLE
99	BLK/OR	ON	GREY
100	BLK/OR	ON	YELLOW

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
0	6/19/2012	rfoster	APPROVED FOR CONSTRUCTION
1	11/1/2012	rfoster	AS BUILT

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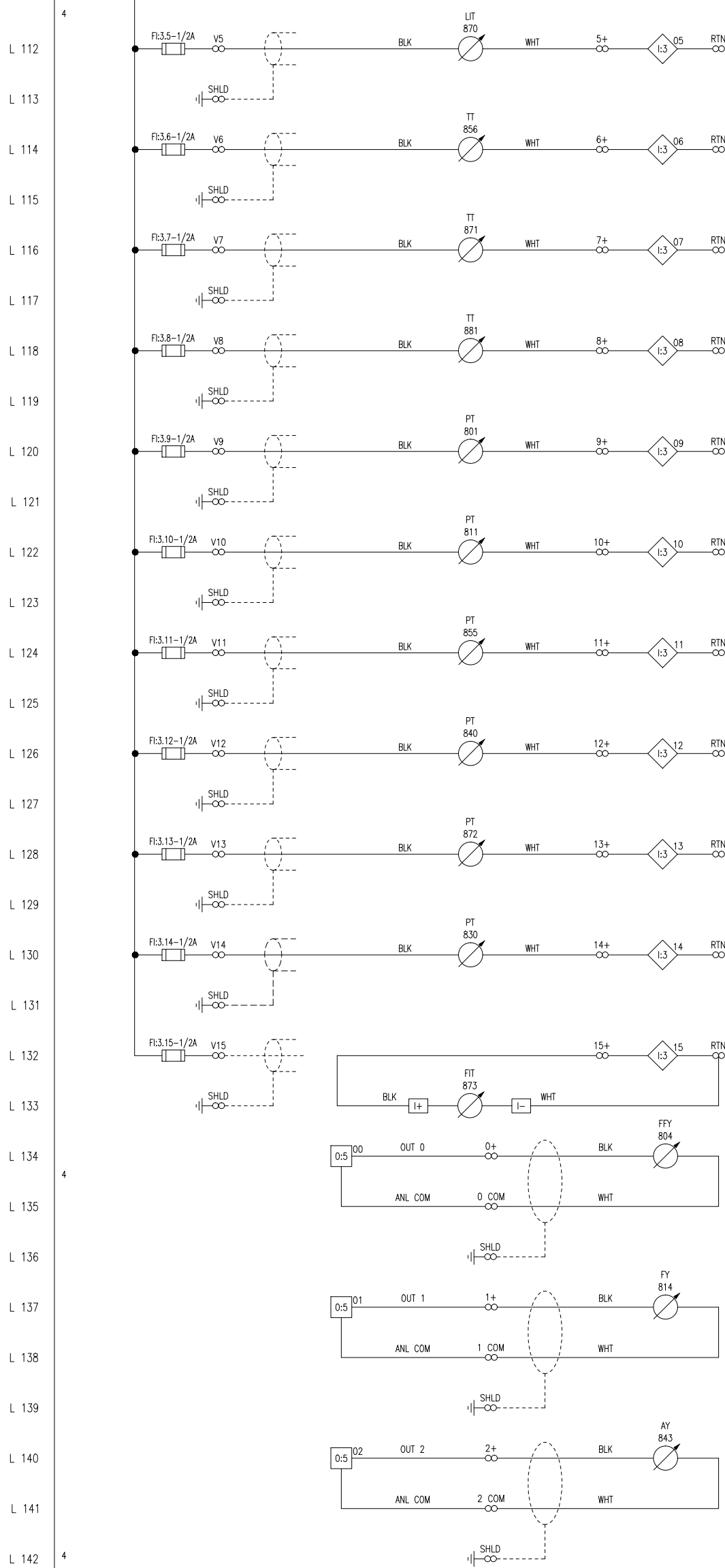
**Powell**  
Fabrication & Manufacturing, Inc.

Phone 989.681.2158 Fax 989.681.5013	
e-mail info@powerlibb.com www.powerlibb.com	
SYS JOB: 22116	BOM: 905-10811-001
DRN mboater	11/6/2012 APD knclon
CHND mboater	6/4/2012 APD knclon
FILE:	19320B-05-06-09

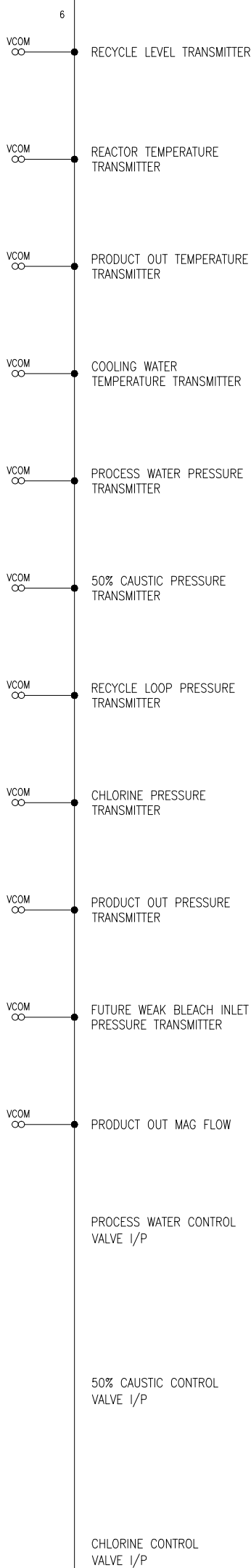
**CHLOORKOP S.A.**

## BLEACH PLANT ELECTRICAL

DOCUMENT NUMBER	SHEET	REV
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


CONTINUED ON  
SHEET 8



WIRE NO.	WIRE COLOR		
1-A	BLACK		10 MTW
2-A	BLACK		14 MTW
N	WHITE		16 MTW
1	BLACK		
2	RED		
3	ORANGE		
4	BLUE		
5	PURPLE		
6	GREY		
7	YELLOW		
8	BROWN		
9	BLACK	ON	WHITE
10	BLACK	ON	RED
11	BLACK	ON	ORANGE
12	BLACK	ON	BLUE
13	BLACK	ON	PURPLE
14	BLACK	ON	GREY
15	BLACK	ON	YELLOW
16	BLACK	ON	BROWN
17	WHITE	ON	BLACK
18	WHITE	ON	RED
19	WHITE	ON	ORANGE
20	WHITE	ON	BLUE
21	WHITE	ON	PURPLE
22	WHITE	ON	GREY
23	WHITE	ON	YELLOW
24	WHITE	ON	BROWN
25	RED	ON	WHITE
26	RED	ON	BLACK
27	RED	ON	ORANGE
28	RED	ON	BLUE
29	RED	ON	PURPLE
30	RED	ON	GREY
31	RED	ON	YELLOW
32	RED	ON	BROWN
33	ORANGE	ON	WHITE
34	ORANGE	ON	BLACK
35	ORANGE	ON	RED
36	ORANGE	ON	BLUE
37	ORANGE	ON	PURPLE
38	ORANGE	ON	GREY
39	ORANGE	ON	YELLOW
40	ORANGE	ON	BROWN
41	BLUE	ON	WHITE
42	BLUE	ON	BLACK
43	BLUE	ON	RED
44	BLUE	ON	ORANGE
45	BLUE	ON	PURPLE
46	BLUE	ON	GREY
47	BLUE	ON	YELLOW
48	BLUE	ON	BROWN
49	PURPLE	ON	WHITE
50	PURPLE	ON	BLACK
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55	PURPLE	ON	YELLOW
56	PURPLE	ON	BROWN
57	GREY	ON	WHITE
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59	GREY	ON	RED
60	GREY	ON	ORANGE
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62	GREY	ON	PURPLE
63	GREY	ON	YELLOW
64	GREY	ON	BROWN
65	YELLOW	ON	WHITE
66	YELLOW	ON	BLACK
67	YELLOW	ON	RED
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79	BROWN	ON	GREY
80	BROWN	ON	YELLOW
81	BLK/WH	ON	RED
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83	BLK/WH	ON	BLUE
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93	BLK/RED	ON	YELLOW
94	BLK/RED	ON	BROWN
95	BLK/OR	ON	WHITE
96	BLK/OR	ON	RED
97	BLK/OR	ON	BLUE
98	BLK/OR	ON	PURPLE
99	BLK/OR	ON	GREY
100	BLK/OR	ON	YELLOW

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
0	6/19/2012	rfoster	APPROVED FOR CONSTRUCTION
1	11/1/2012	rfoster	AS BUILT



# Powerlube

**Lubrication & Manufacturing, Inc.**

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 Phone 899.681.2158 Fax 899.681.5013  
 e-mail [info@powerlube.com](mailto:info@powerlube.com) [www.powerlube.com](http://www.powerlube.com)

S/V'S JOB: 22116	B.O.M.: 905-1081-1-001		
DRIVEN	mtester	11/7/2012	APPD. kensell
CHKD	mtester	6/4/2012	APPD. kensell
FILE:	193200540-079		

NCP CHLORCHEM PVT. LTD

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**CHLOORKOP** **S.A.**

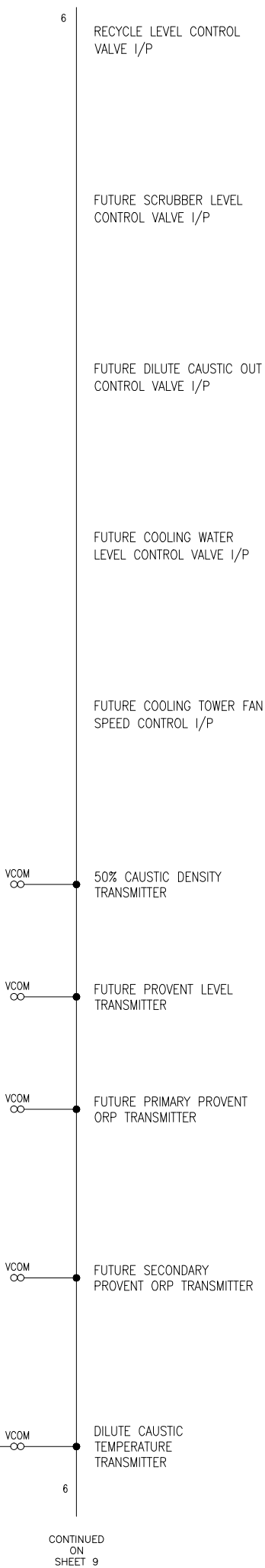
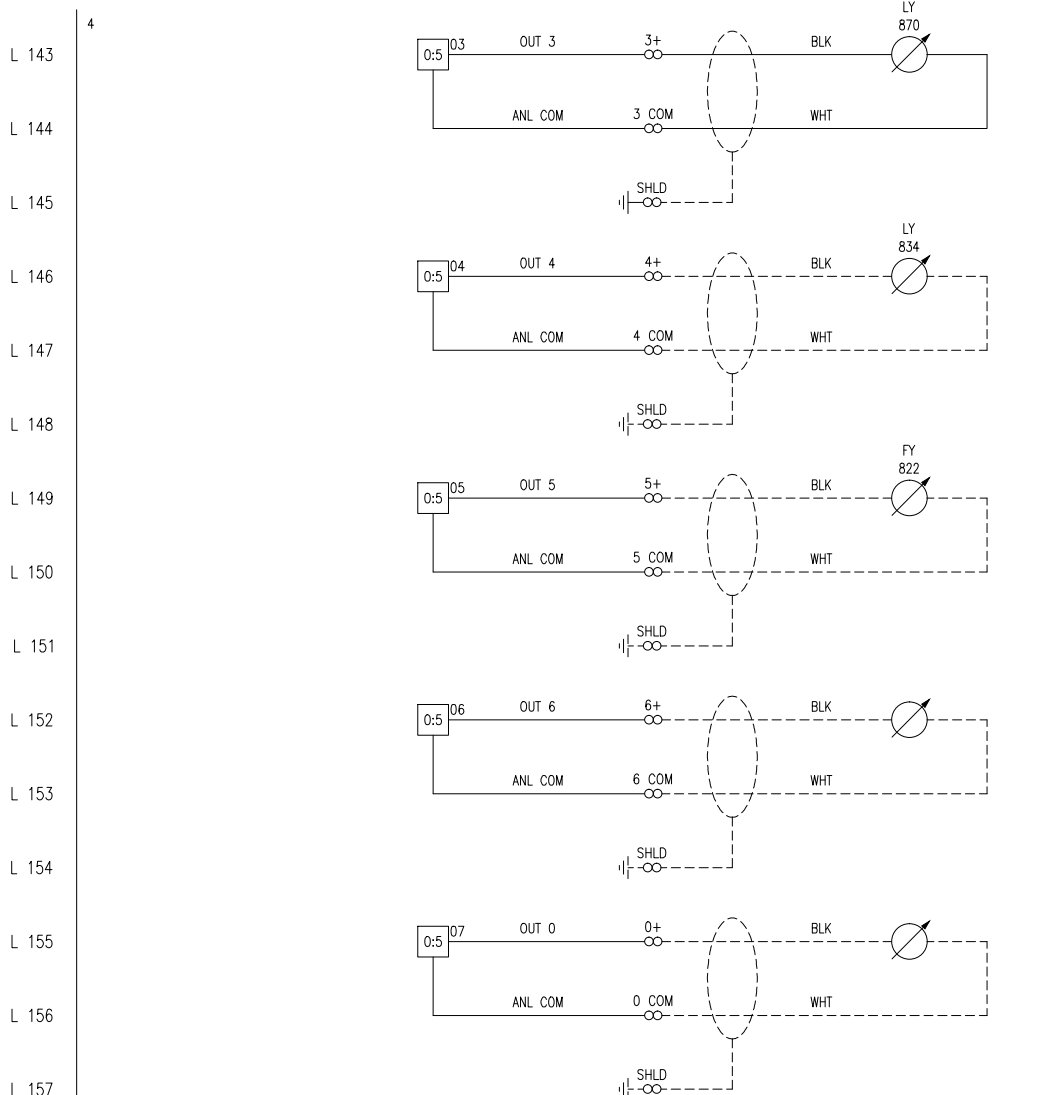
BLEACH PLANT  
ELECTRICAL

DOCUMENT NUMBER	SHEET	REV
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CHKD mboster	6/4/2012	APPD kmncjillon 6/9/2012
FILE: 19320B-05-07-09		

**e-mail info@powellfab.com www.powellfab.com**





WIRE NO.	WIRE COLOR		
1-A	BLACK		10 MTW
2-A	BLACK		14 MTW
N	WHITE		16 MTW
1	BLACK		
2	RED		
3	ORANGE		
4	BLUE		
5	PURPLE		
6	GREY		
7	YELLOW		
8	BROWN		
9	BLACK	ON	WHITE
10	BLACK	ON	RED
11	BLACK	ON	ORANGE
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15	BLACK	ON	YELLOW
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22	WHITE	ON	GREY
23	WHITE	ON	YELLOW
24	WHITE	ON	BROWN
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31	RED	ON	YELLOW
32	RED	ON	BROWN
33	ORANGE	ON	WHITE
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36	ORANGE	ON	BLUE
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38	ORANGE	ON	GREY
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	BLUE	ON	WHITE
	BLUE	ON	BLACK
	BLUE	ON	RED
	BLUE	ON	ORANGE
	BLUE	ON	PURPLE
	BLUE	ON	GREY
	BLUE	ON	YELLOW
	BLUE	ON	BROWN
	PURPLE	ON	WHITE
	PURPLE	ON	BLACK
	PURPLE	ON	RED
	PURPLE	ON	ORANGE
	PURPLE	ON	BLUE
	PURPLE	ON	GREY
	PURPLE	ON	YELLOW
	PURPLE	ON	BROWN
	GREY	ON	WHITE
	GREY	ON	BLACK
	GREY	ON	RED
	GREY	ON	ORANGE
	GREY	ON	BLUE
	GREY	ON	PURPLE
	GREY	ON	YELLOW
	GREY	ON	BROWN
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	BROWN	ON	GREY
	BROWN	ON	YELLOW
	BLK/WH	ON	RED
	BLK/WH	ON	ORANGE
	BLK/WH	ON	BLUE
	BLK/WH	ON	PURPLE
	BLK/WH	ON	GREY
	BLK/WH	ON	YELLOW
	BLK/WH	ON	BROWN
	BLK/RED	ON	WHITE
	BLK/RED	ON	ORANGE
	BLK/RED	ON	BLUE
	BLK/RED	ON	PURPLE
	BLK/RED	ON	GREY
	BLK/RED	ON	YELLOW
	BLK/RED	ON	BROWN
	BLK/OR	ON	WHITE
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	BLK/OR	ON	BLUE
	BLK/OR	ON	PURPLE
	BLK/OR	ON	GREY
	BLK/OR	ON	YELLOW

REVISION HISTORY			
REV	DATE	BY	DESCRIPTION
0	6/19/2012	rfooster	APPROVED FOR CONSTRUCTION
1	11/1/2012	rfooster	AS BUILT

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SYS JOB: 22116	BOM:	905-10811-001
DRVN	mtoster	11/7/2012 APPD kmccjllion 6/9/2012 APPD kmccjllion
CHKD	mtoster	6/4/2012 APPD kmccjllion 6/9/2012 APPD kmccjllion
FILE:	19320B-05-08-09	

CHLOORKOP	S.A.
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**BLEACH PLANT  
ELECTRICAL**

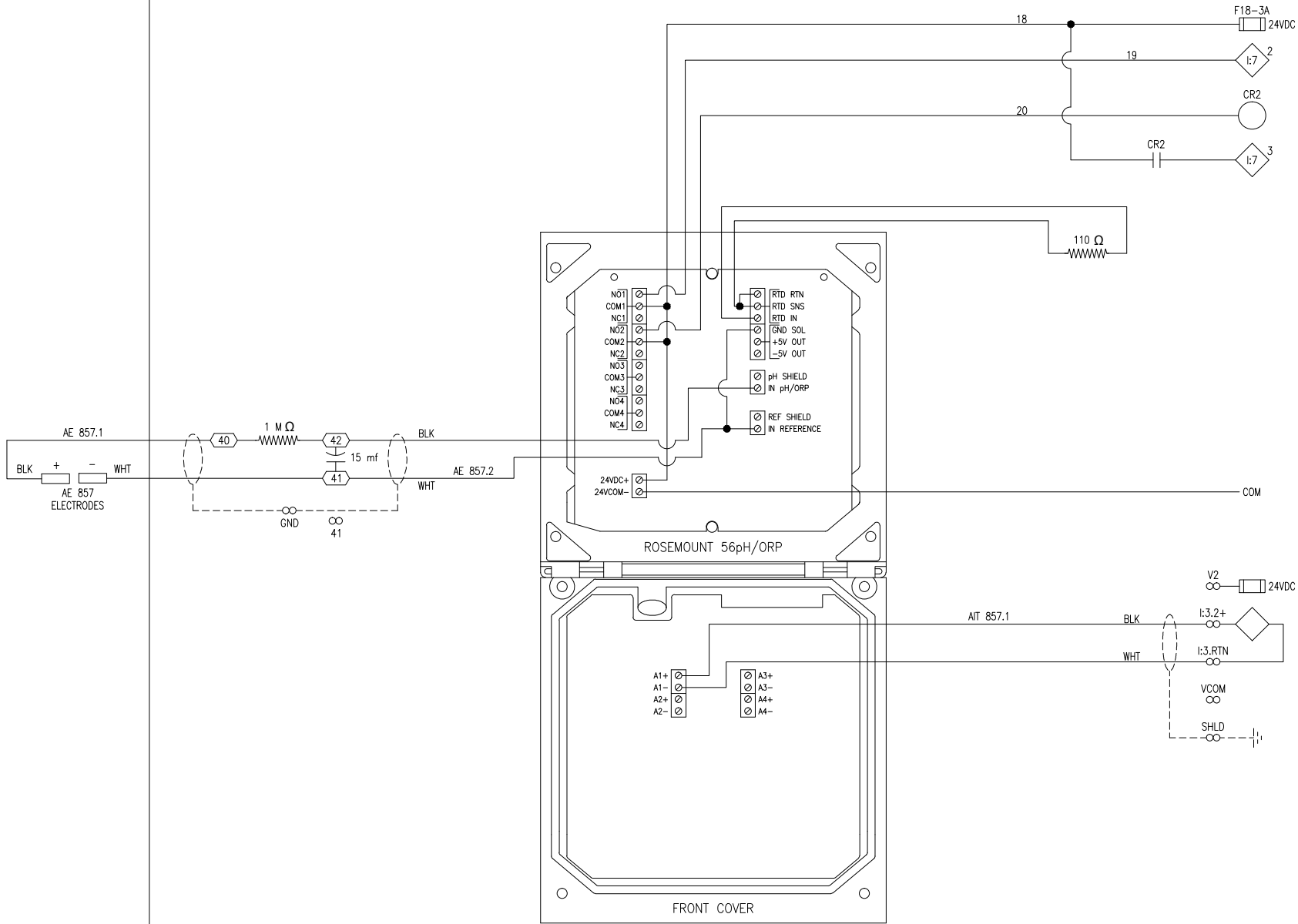
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FIELD, BACK OF PANEL

CONTROL CABINET

REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
0	6/19/2012	rfoster	kmcjilton	APPROVED FOR CONSTRUCTION
1	11/1/2012	rfoster	kmcjilton	AS BUILT




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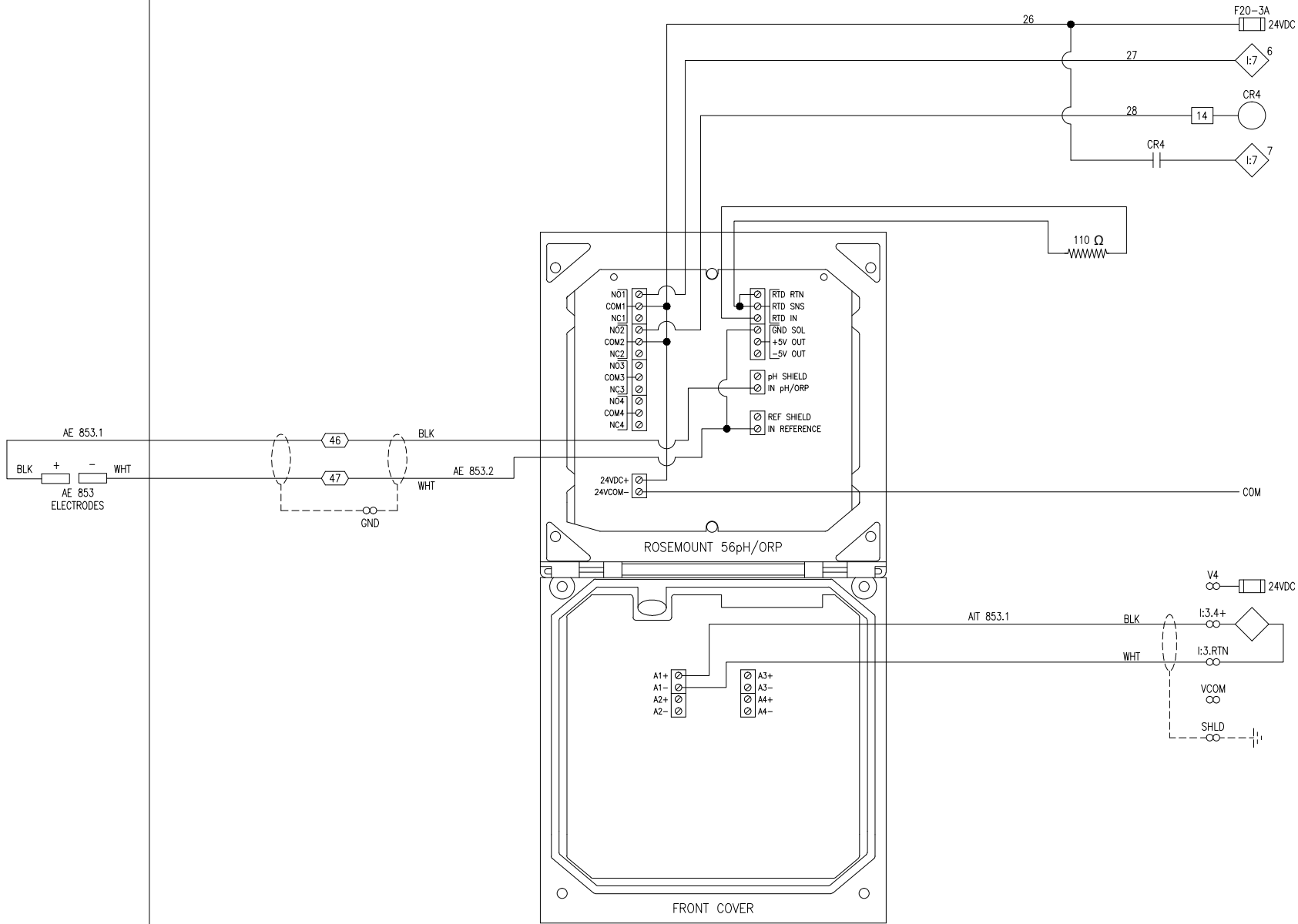
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CHKD: rmfoster	6/4/2012	APPD: kmcjilton	6/19/2012
FILE:	19320B-06-01-04		
NCP CHLORCHEM PTY. LTD			
CHLOORKOP		S.A.	
PRIMARY ORP TRANSMITTER WIRING AIT 857			
DOCUMENT NUMBER	SHEET	REV	
19320B-06	1 OF 4	1	



FIELD, BACK OF PANEL

CONTROL CABINET

REVISION HISTORY				
REV	DATE	BY	APPROVED	DESCRIPTION
0	6/19/2012	rfoster	kmcjilton	APPROVED FOR CONSTRUCTION
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e-mail info@powellfab.com www.powellfab.com

SYS JOB: 22116	BOM: 905-10811-001		
DRWN: rmfoster	11/7/2012	APPD: kmcjilton	6/19/2012
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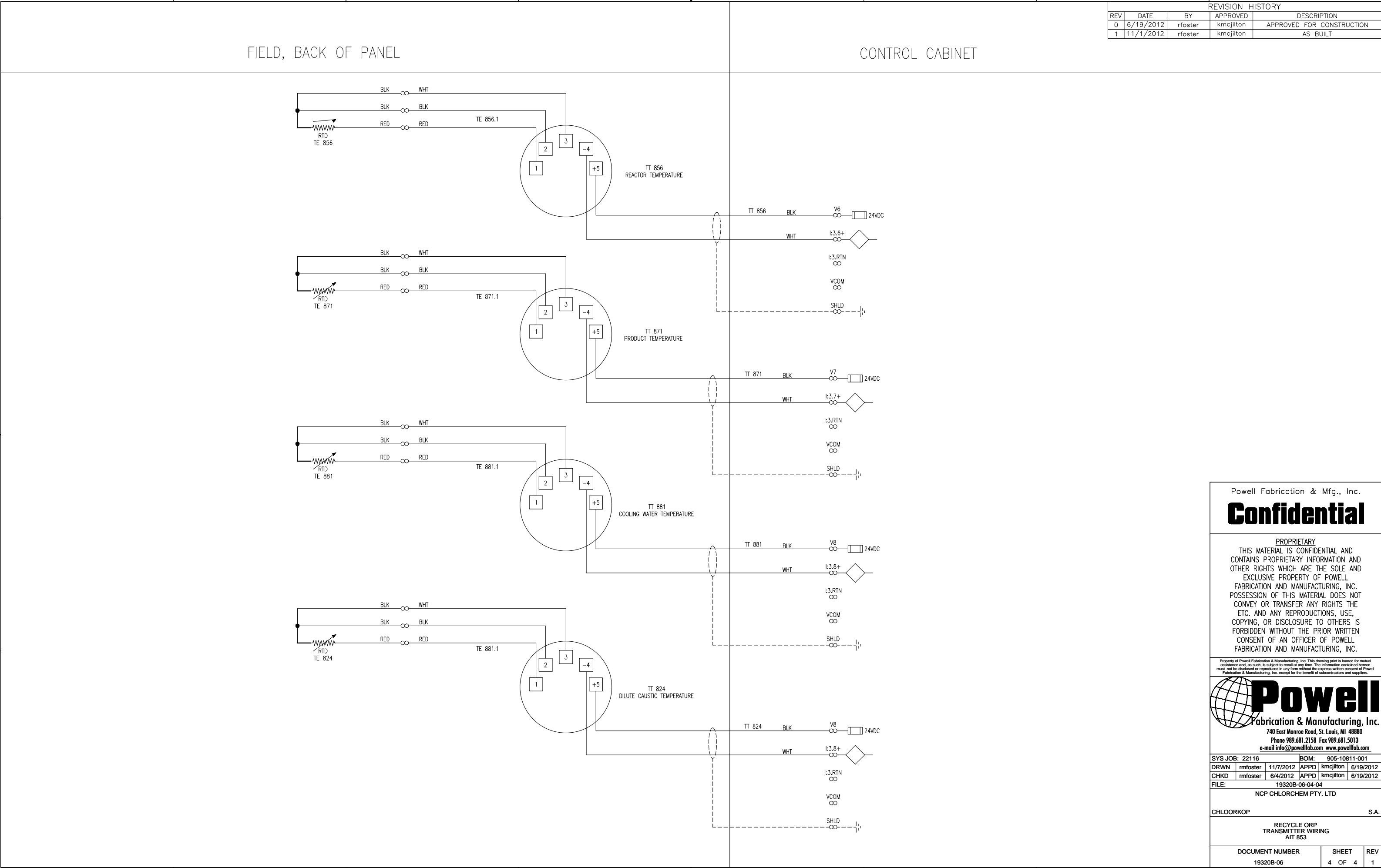
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NCP CHLORCHEM PTY. LTD

CHLOORKOP S.A.

RECYCLE ORP  
TRANSMITTER WIRING  
AIT 853

DOCUMENT NUMBER	SHEET	REV
19320B-06	3 OF 4	1




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SYS JOB: 22116		BOM: 905-10811-001	
DRWN	rmfoster	11/7/2012	APPD kmcjilton 6/19/2012
CHKD	rmfoster	6/4/2012	APPD kmcjilton 6/19/2012
FILE: 19320B-06-04-04			
NCP CHLORCHEM PTY. LTD			
CHLOORKOP		S.A.	
RECYCLE ORP TRANSMITTER WIRING AIT 853			
DOCUMENT NUMBER		SHEET	REV
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