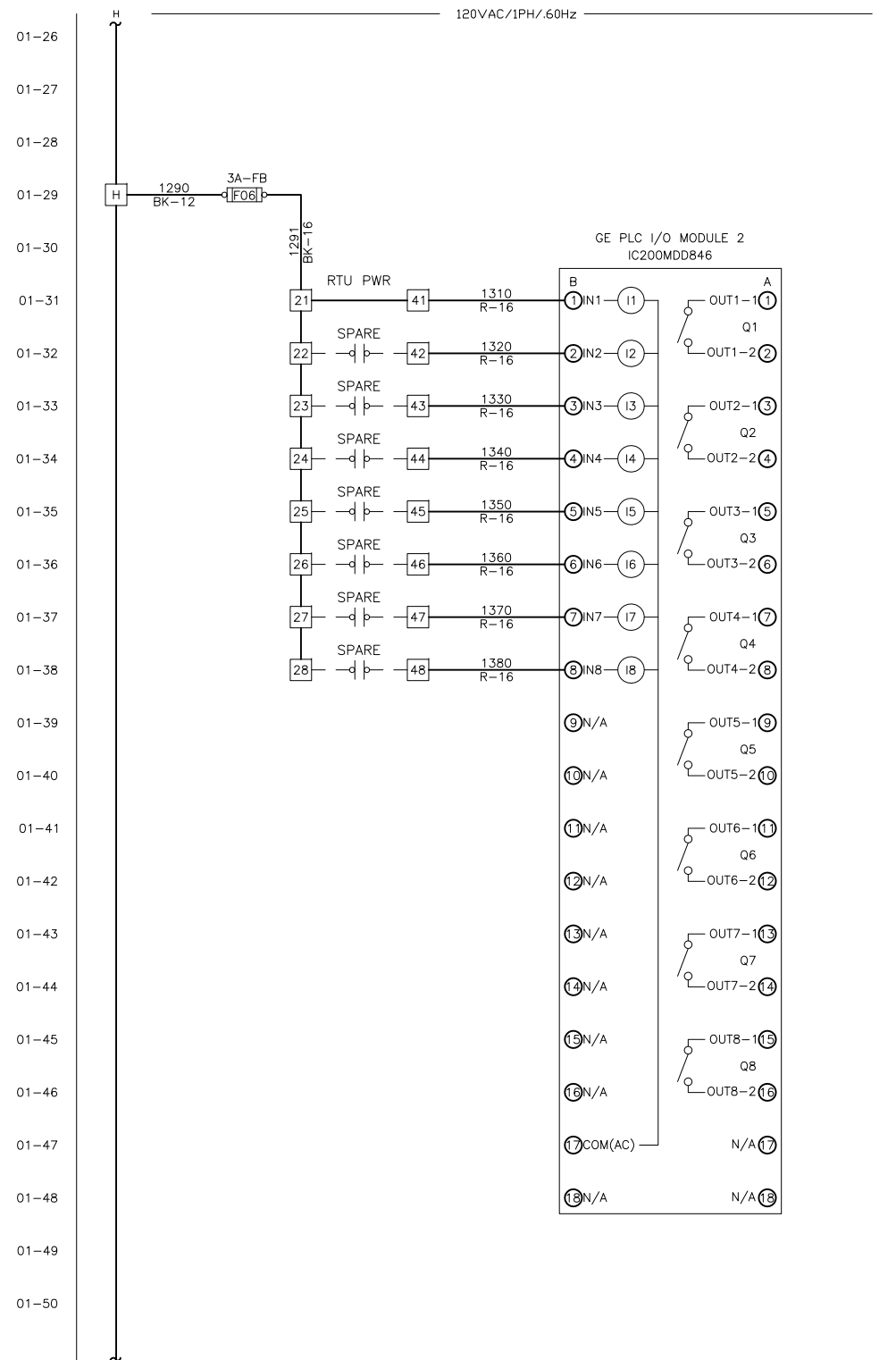
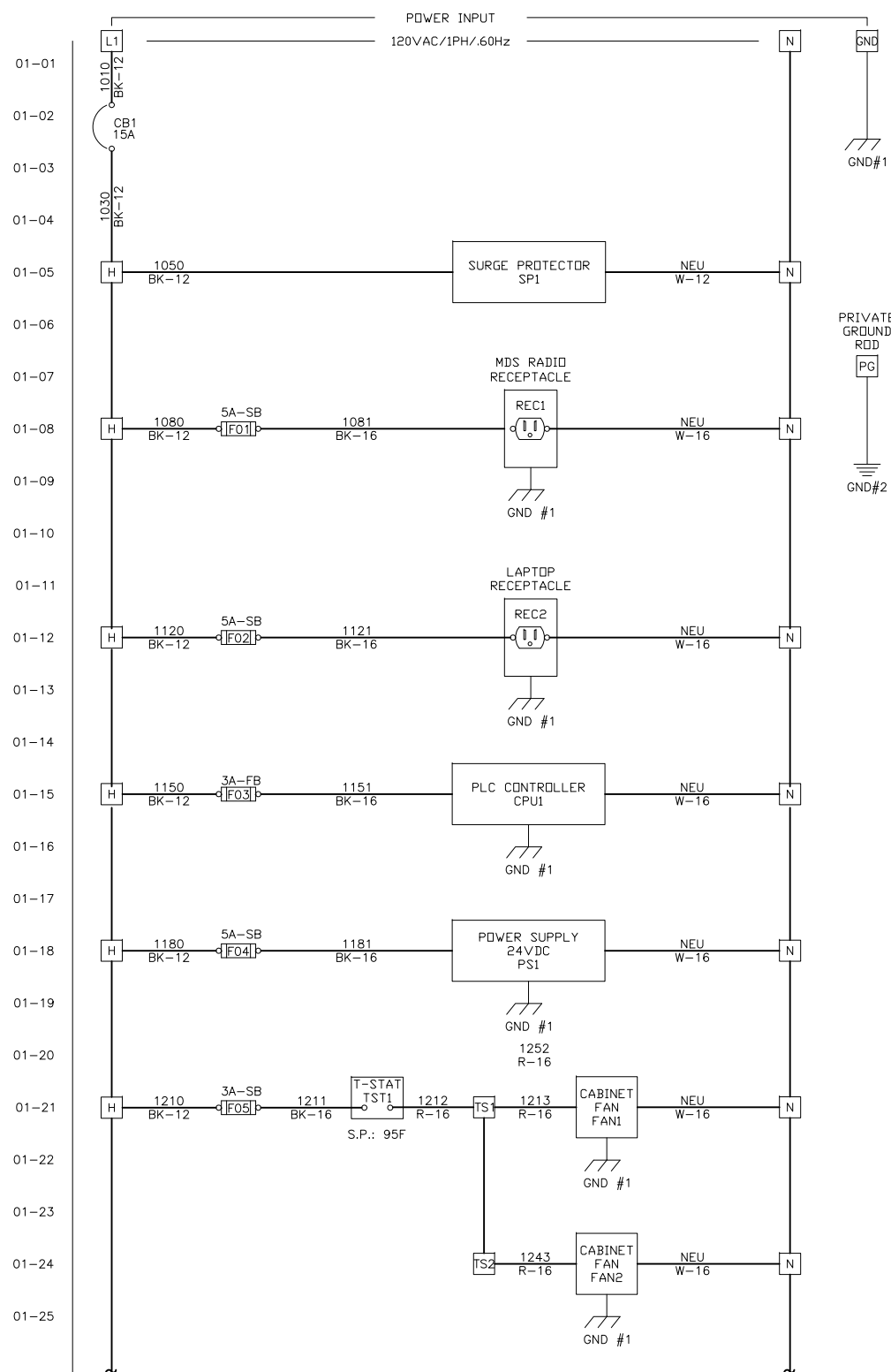


Appendix F
Product Information
SWMU B-3 Instrument Controls

**RTU 903-1: GAC SHACK, CS-MW16-LGR, CS-MW16-CC, AND
WEATHER STATION**



COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
OR	ORANGE
Y	YELLOW
G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION



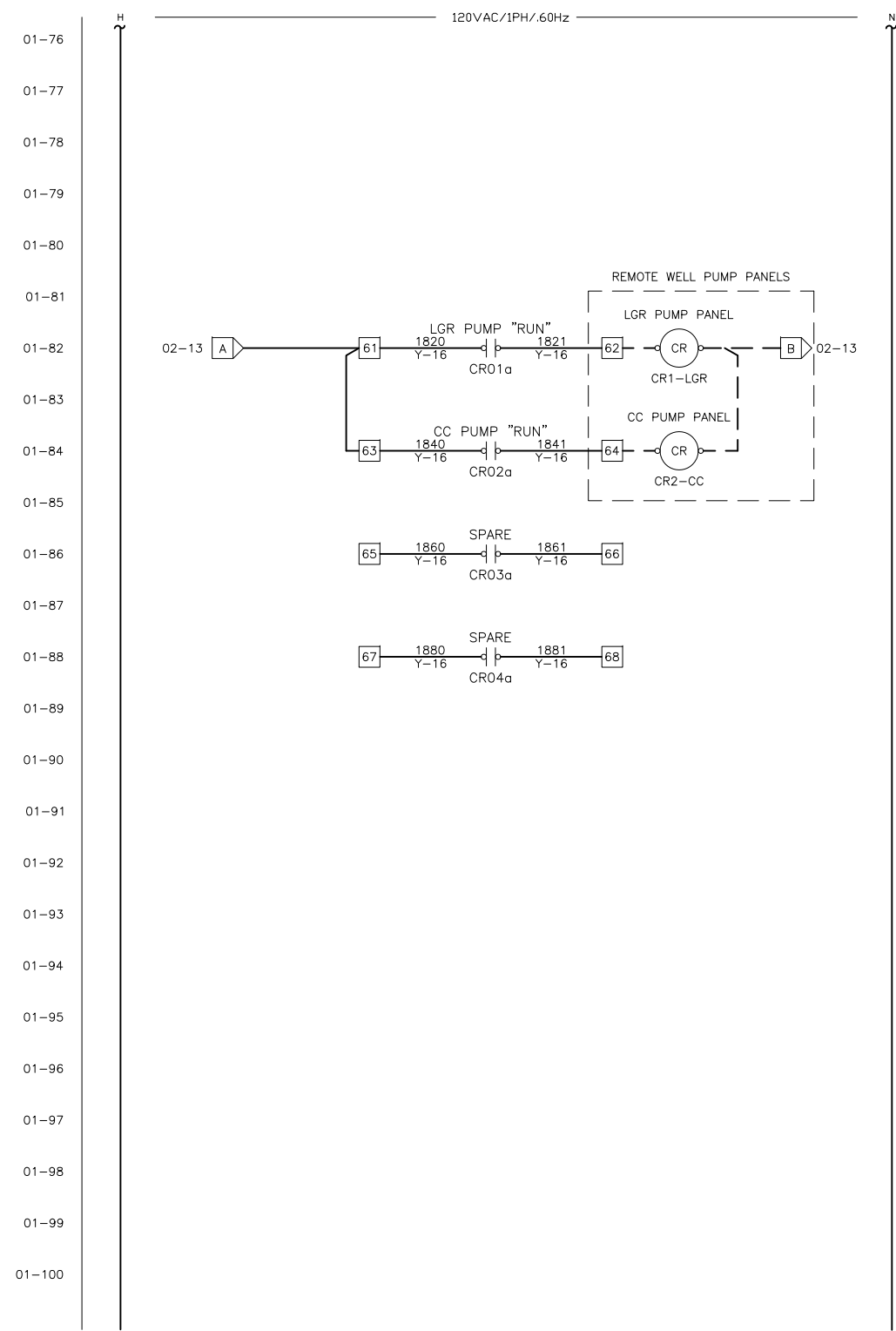
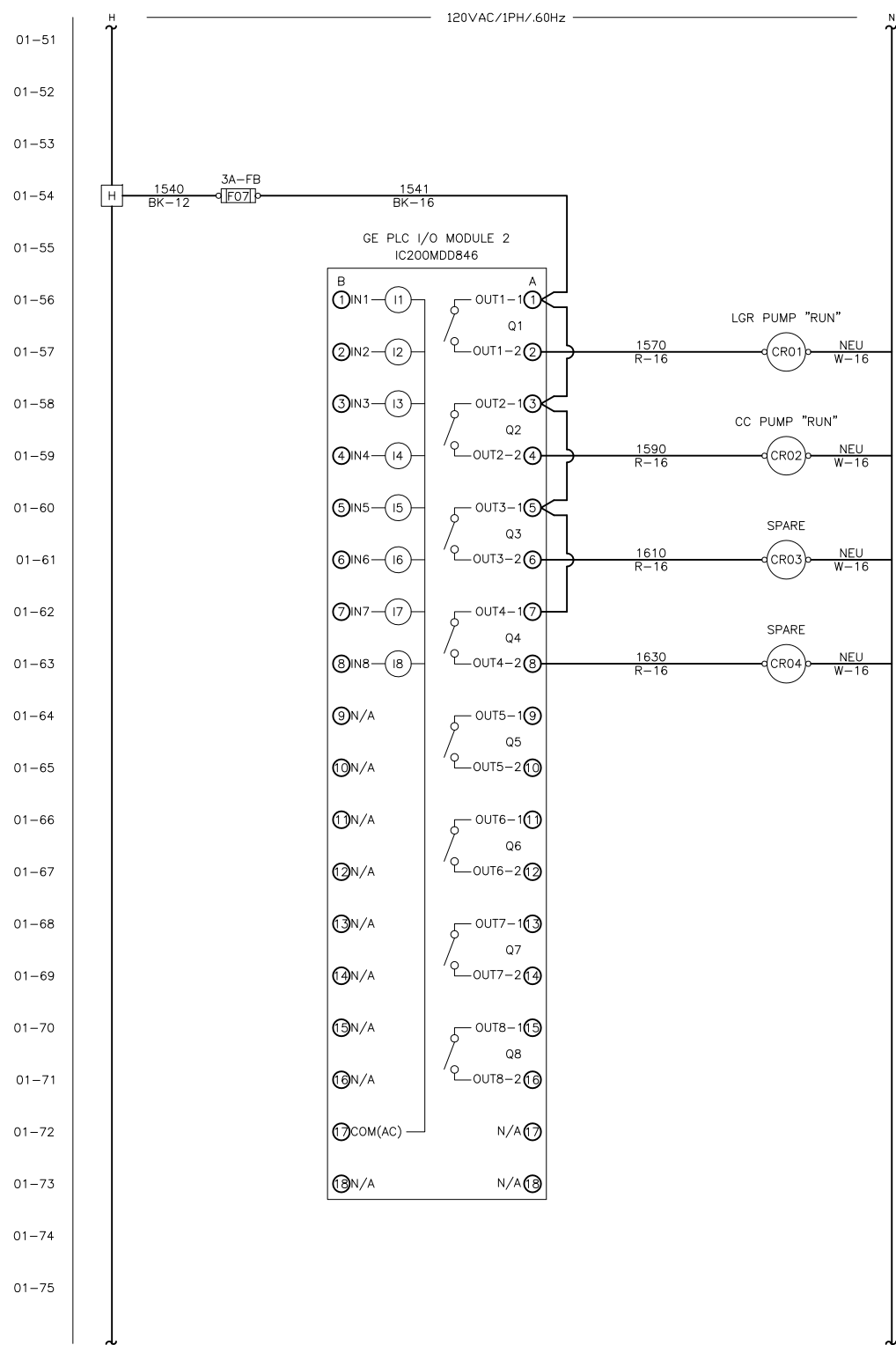
11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
**CAMP STANLEY
BIOREACTOR**

SHEET TITLE
**RTU 903-1
LINE-TO-LINE
WIRING DIAGRAM**

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-1
DWG. NO.	3079
SH	OF
1	12



COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
OR	ORANGE
Y	YELLOW
G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION

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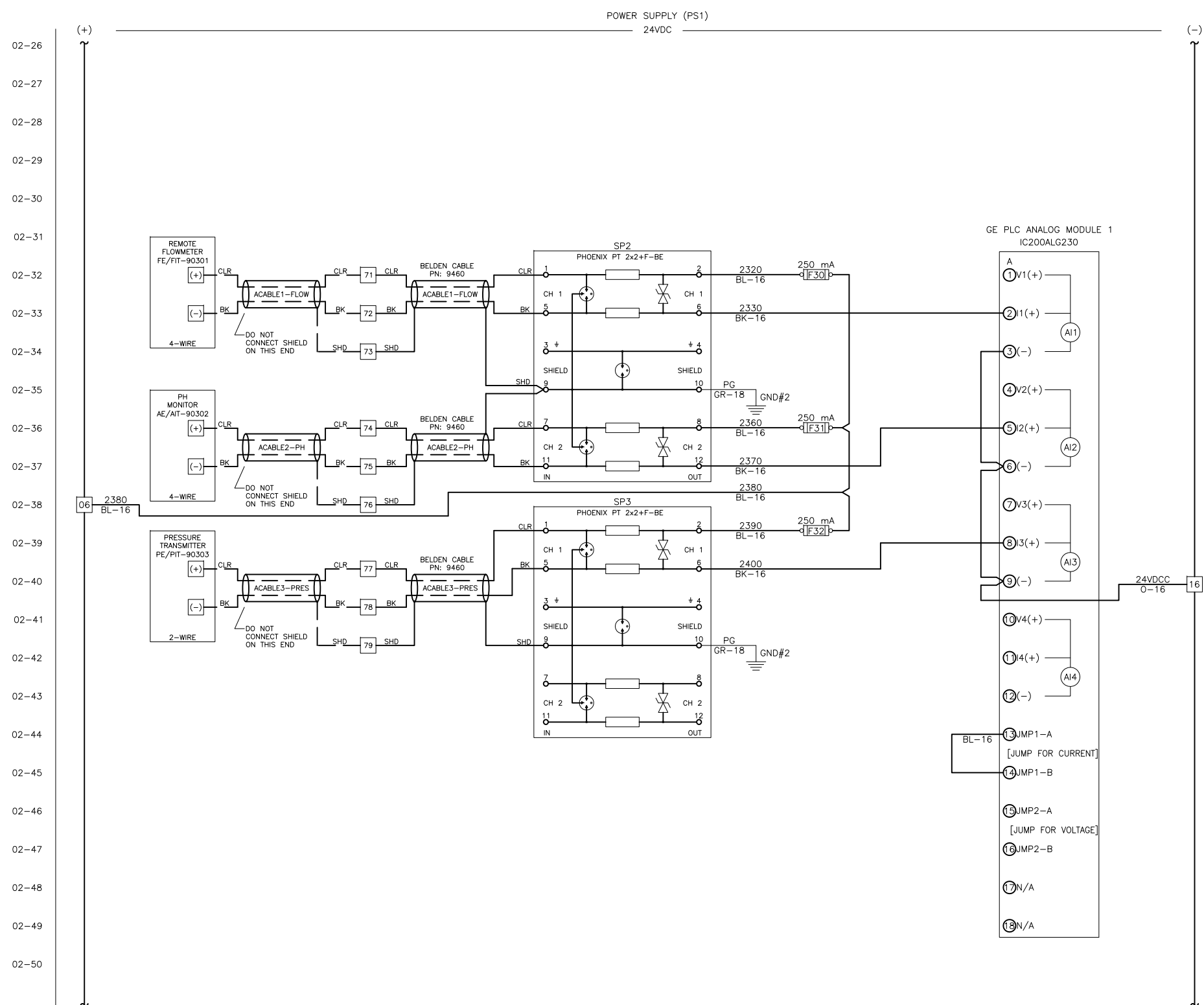
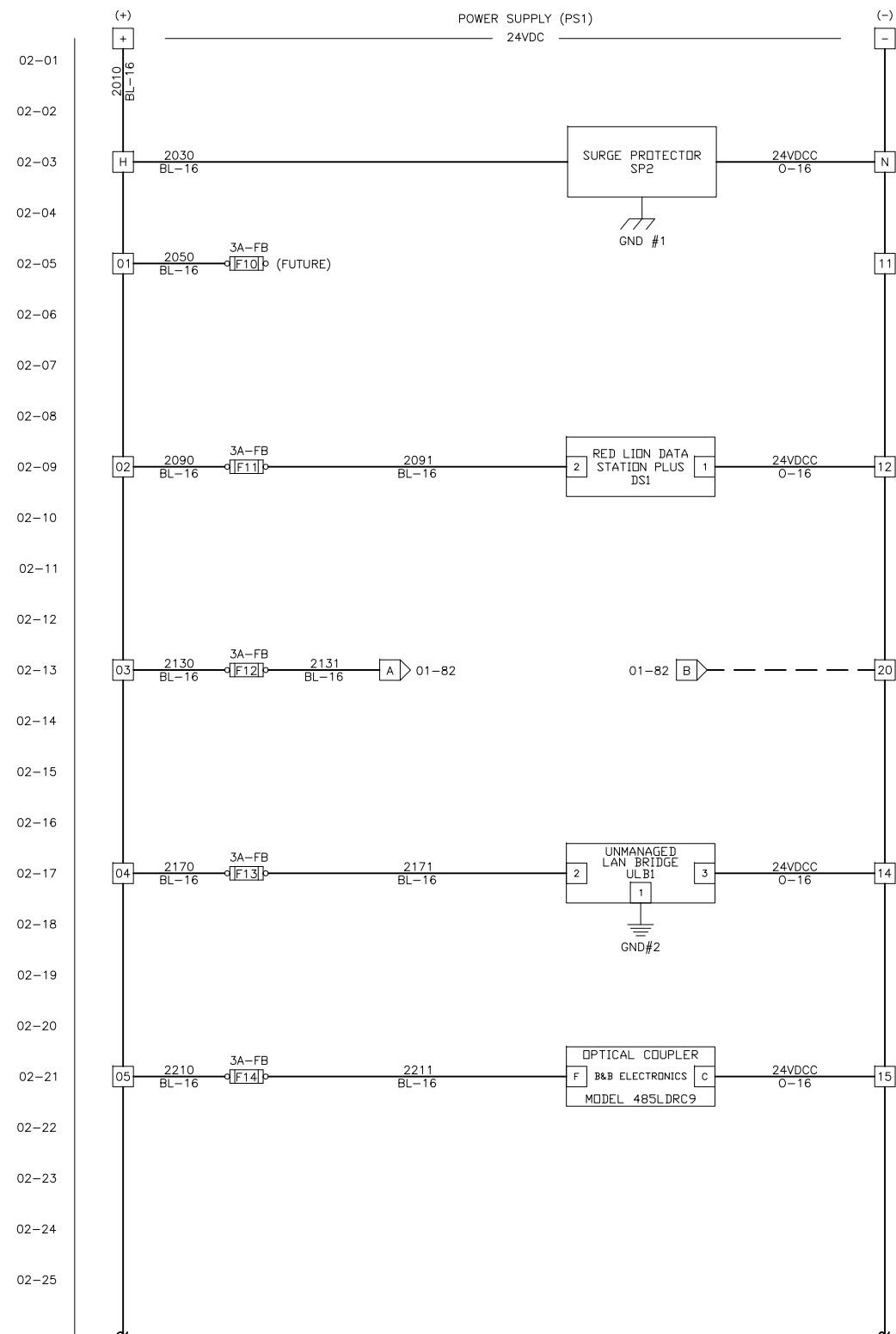
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CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
**CAMP STANLEY
BIOREACTOR**

SHEET TITLE
**RTU 903-1
LINE-TO-LINE
WIRING DIAGRAM**

DATE:	8/10/2009
SCALE:	N/A
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CAD FILE:	SCI3079_RTU903-1
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REV #	DATE	REVISION

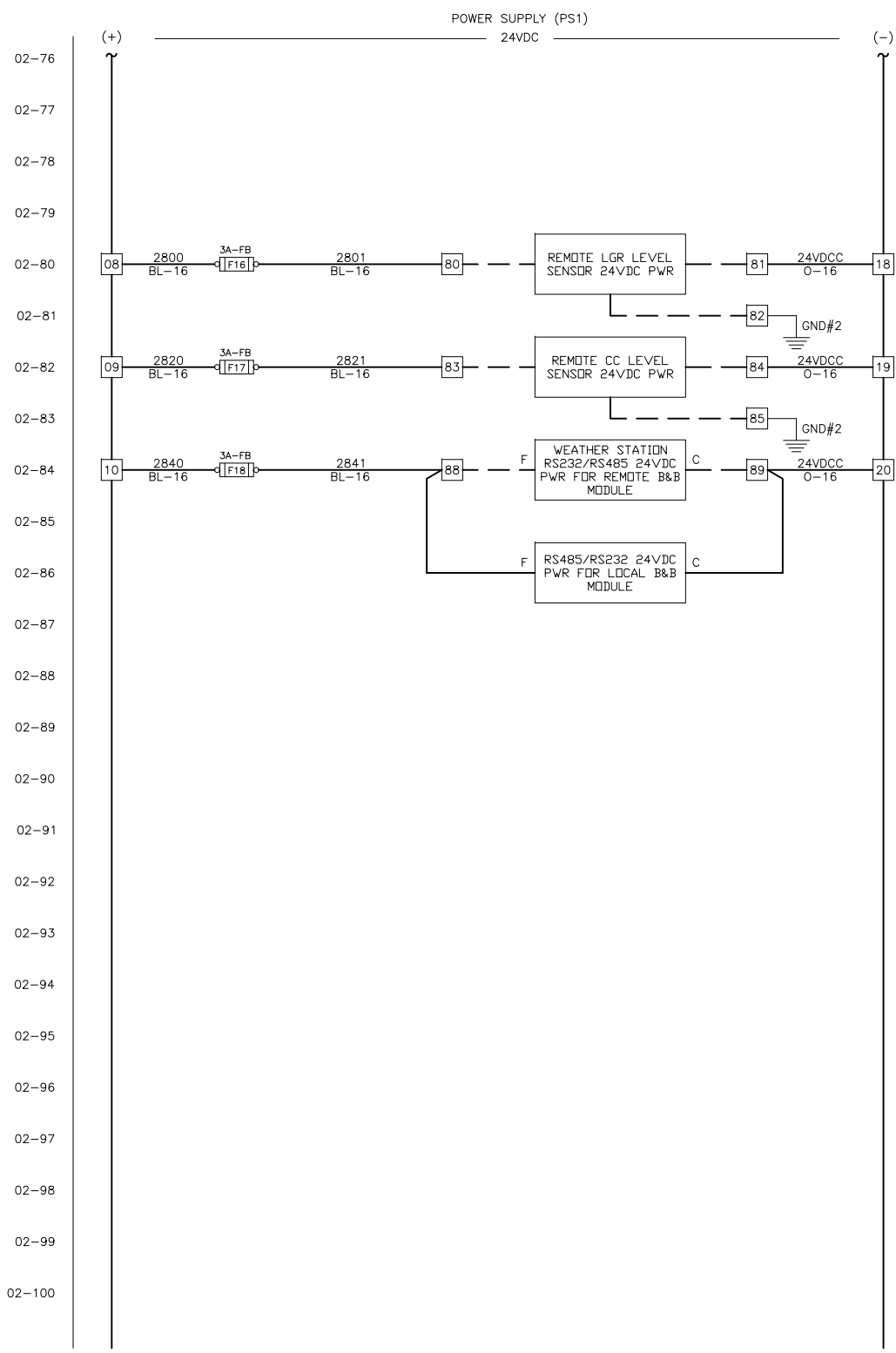
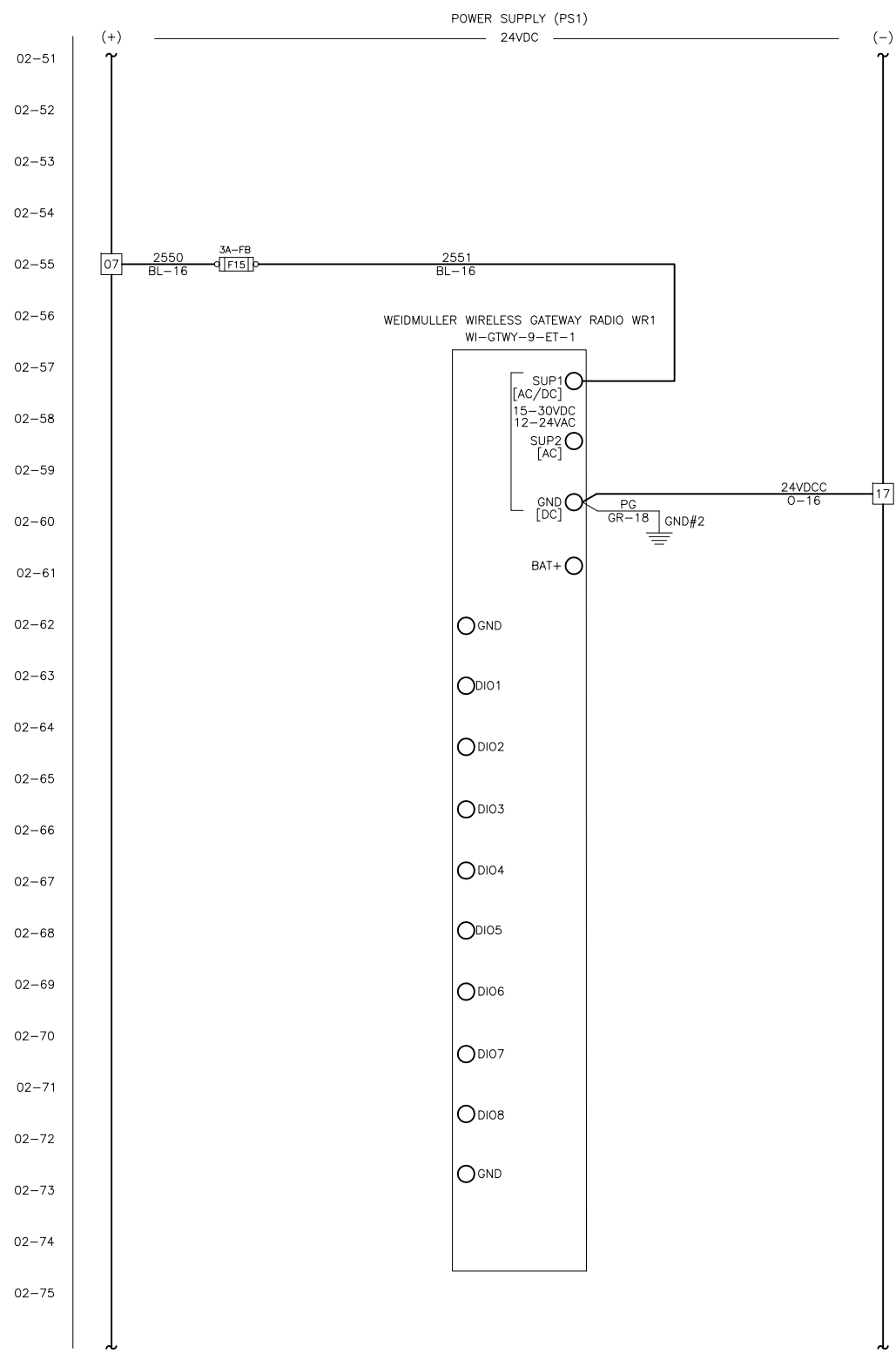

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CONVERSE, TEXAS 78109
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ENGINEER

PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
RTU 903-1
LINE-TO-LINE
WIRING DIAGRAM

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-1
DWG. NO.	3079
SH	3
OF	12




COLOR CODE	
CLR	CLEAR
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OR	ORANGE
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BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION


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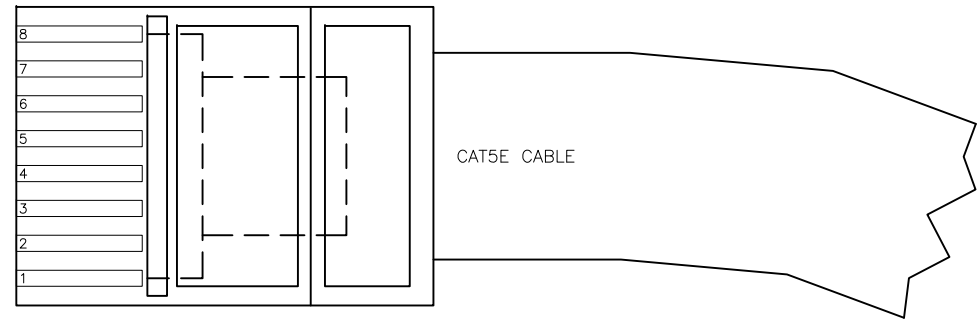
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PROJECT TITLE
**CAMP STANLEY
BIOREACTOR**

SHEET TITLE
**RTU 903-1
LINE-TO-LINE
WIRING DIAGRAM**

DATE:	8/10/2009
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DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-1
DWG. NO.	3079
SH	OF
4	12

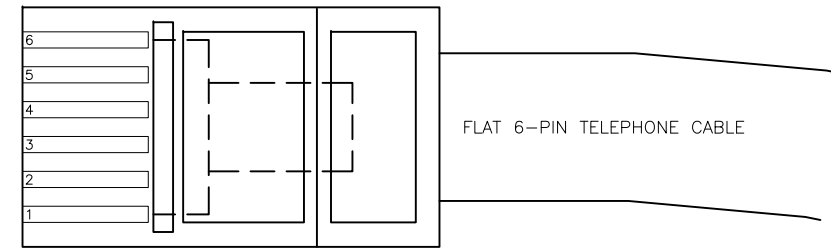
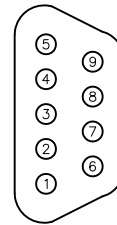
RED LION USING USING RJ-45 CONNECTOR FOR RS485 SIGNAL



STANDARD ETHERNET WIRE COLOR CABLE USING RJ-45 PIN-OUT DETAIL				
RJ-45 PIN	WIRE COLOR	RED LION SIGNAL PIN OUT	RED LION RS485 2-WIRE	RJ-45 PIN
1	WHITE-GREEN	TxB	YES	1
2	GREEN	TxA	YES	2
3	WHITE-ORANGE	RxA		3
4	BLUE	RxB		4
5	WHITE-BLUE	TxEN		5
6	ORANGE	CDM	YES	6
7	WHITE-BROWN	TxB		7
8	BROWN	TxA		8

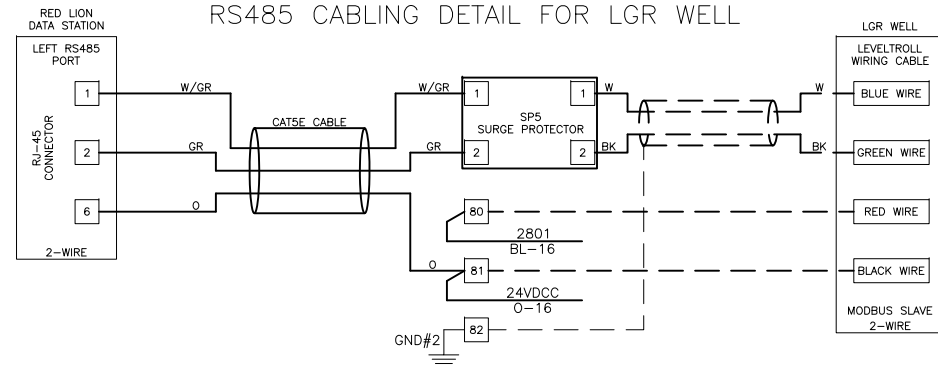
RED LION USING USING 6-PIN CONNECTOR FOR RS232 SIGNAL

BACK OF DB9
RS232 CONNECTOR

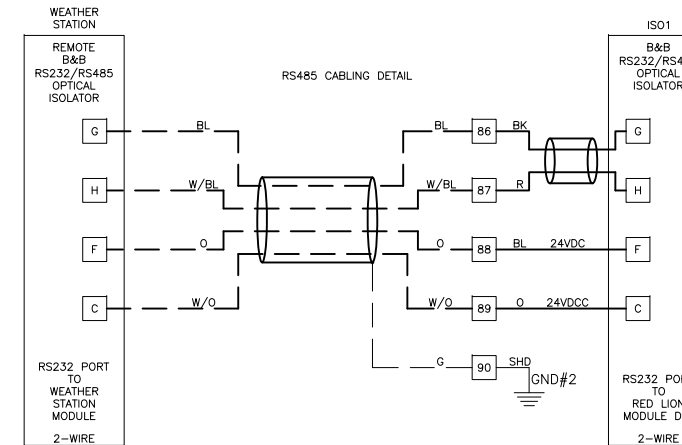
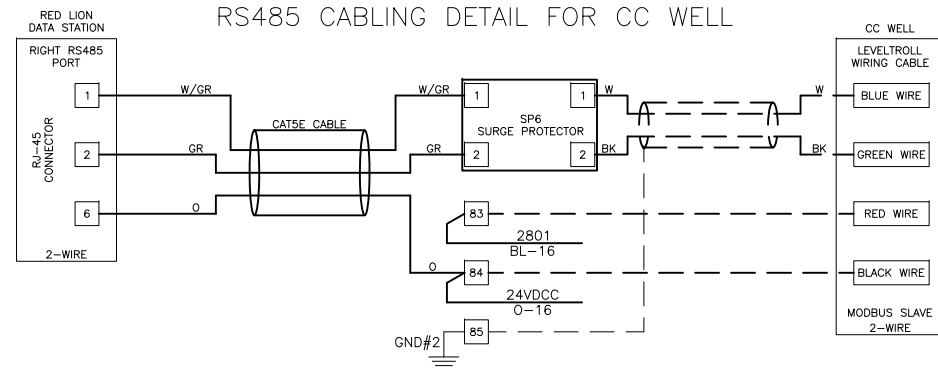


DB9 RS232 CUSTOM CONNECTOR TO 6-PIN TELEPHONE CONNECTOR PIN OUT				
DB9 RS232 CONNECTOR	JUMPER WIRE COLOR	RED LION SIGNAL PIN OUT	RED LION RS232	6-PIN TELE CONNECTOR
8	<-- ORANGE	CTS	YES	1
2	<-- BLACK	Rx	YES	2
-	<-- RED	CDM		3
5	<-- GREEN	CDM	YES	4
3	<-- YELLOW	Tx	YES	5
7	<-- BROWN	RTS	YES	6

RS485 CABLING DETAIL FOR LGR WELL



RS485 CABLING DETAIL FOR CC WELL




COLOR CODE	
CLR	CLEAR
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GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION

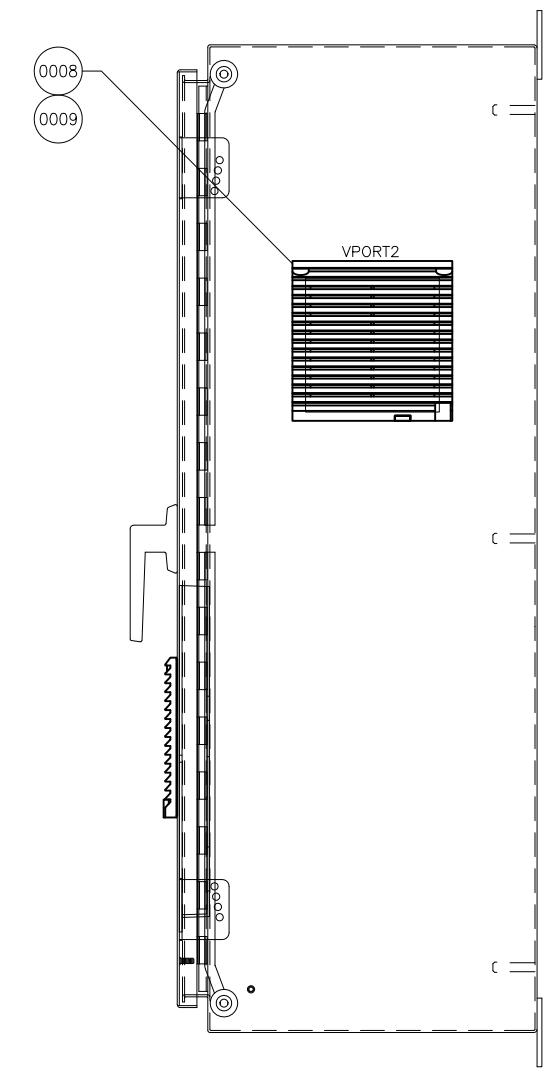
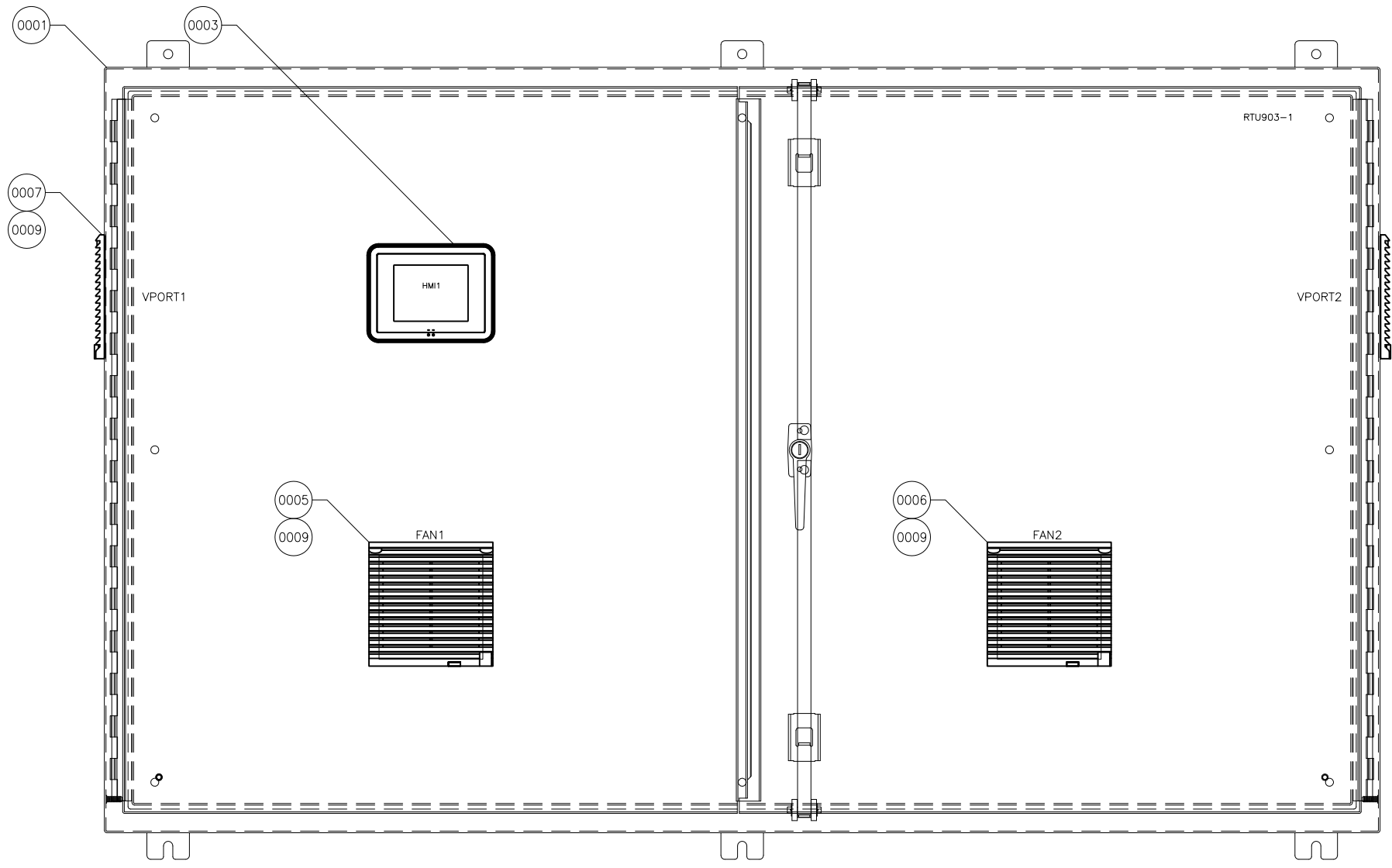

11218 IH-10 EAST
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ENGINEER

PROJECT TITLE
CAMP STANLEY BIOREACTOR

SHEET TITLE
RTU 903-1 LINE-TO-LINE WIRING DIAGRAM

DATE:	8/10/2009	SH	OF
SCALE:	N/A	3079	5 12
DRAWN BY:	RMF		
CAD FILE:	SCI3079_RTU903-1		
DWG. NO.			



REV #	DATE	REVISION

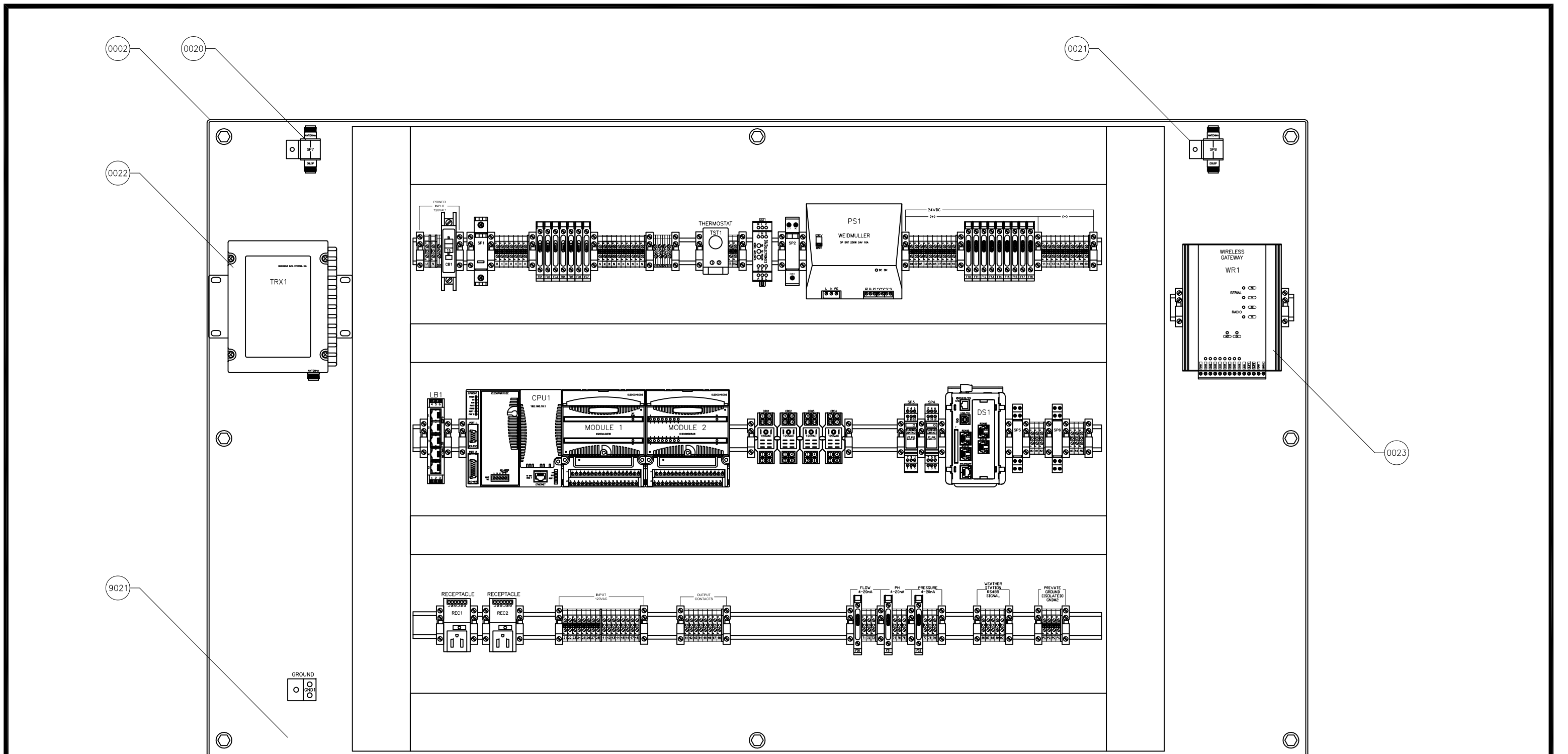

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ENGINEER

PROJECT TITLE
**CAMP STANLEY
 BIOREACTOR**

SHEET TITLE
**RTU 903-1
 ENCLOSURE LAYOUT**

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-1
DWG. NO.	3079
SH	6
OF	12



REV #	DATE	REVISION



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ENGINEER

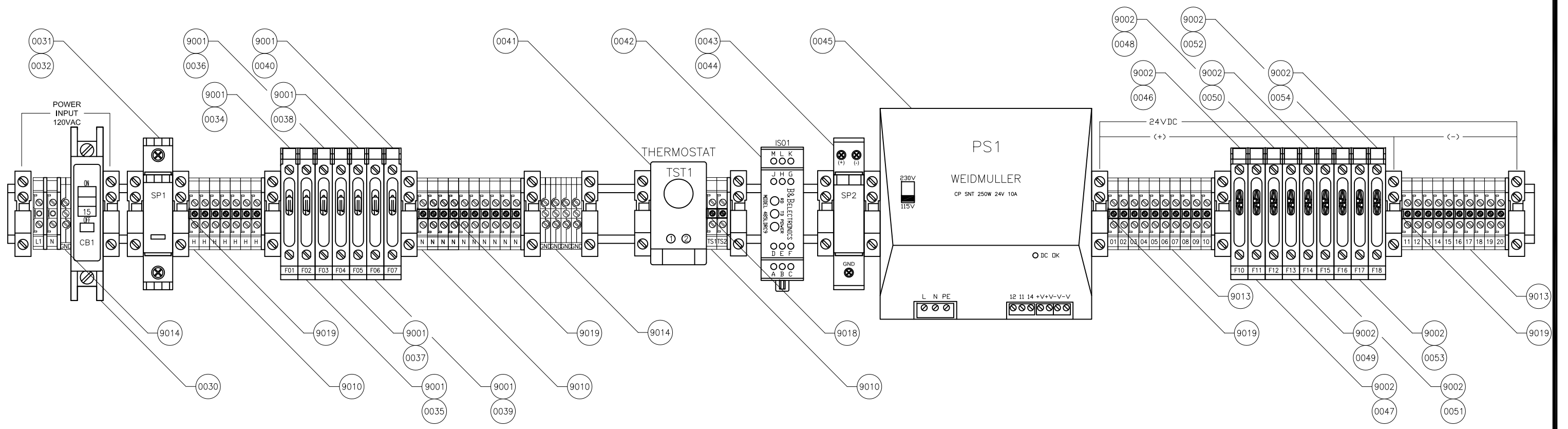
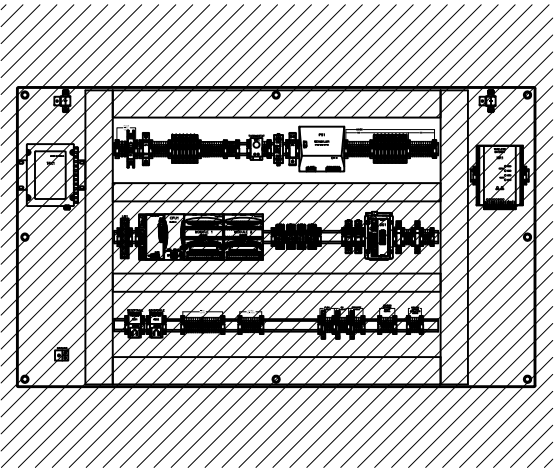
PROJECT TITLE

CAMP STANLEY
 BIOREACTOR


SHEET TITLE

RTU 903-1
 BACK PANEL
 LAYOUT

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-1
DWG. NO.	3079
SH	7
OF	12



REV #	DATE	REVISION

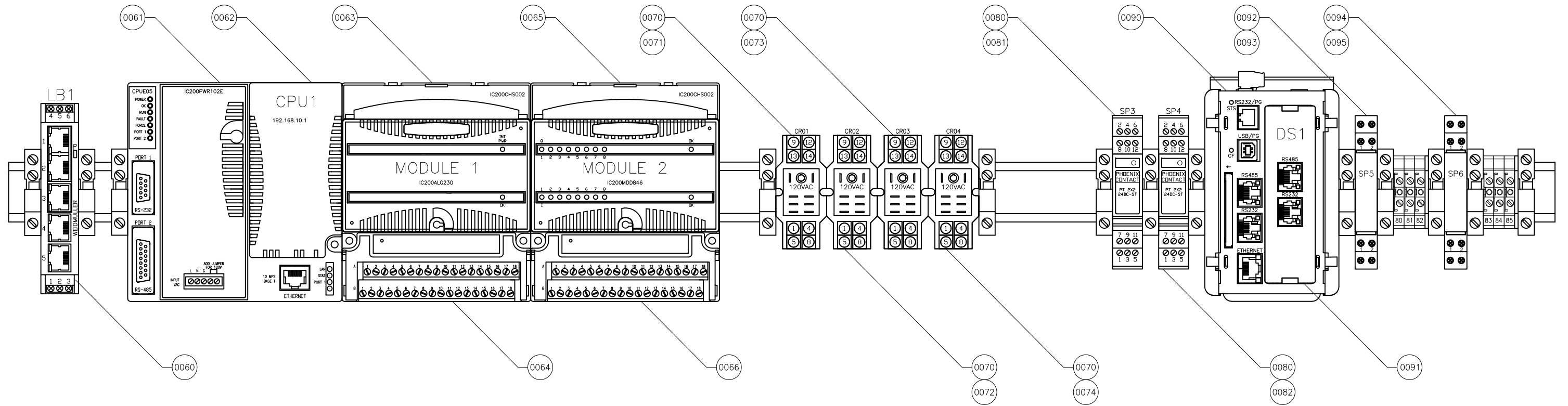
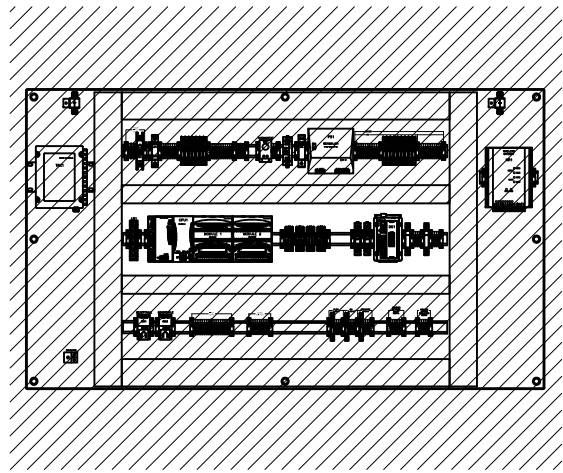

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ENGINEER

PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
RTU 903-1
BACK PANEL LAYOUT

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-1
DWG. NO.	3079
SH	OF
8	12



REV #	DATE	REVISION



11218 IH-10 EAST
CONVERSE, TEXAS 78109
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ENGINEER

PROJECT TITLE

CAMP STANLEY
BIOREACTOR

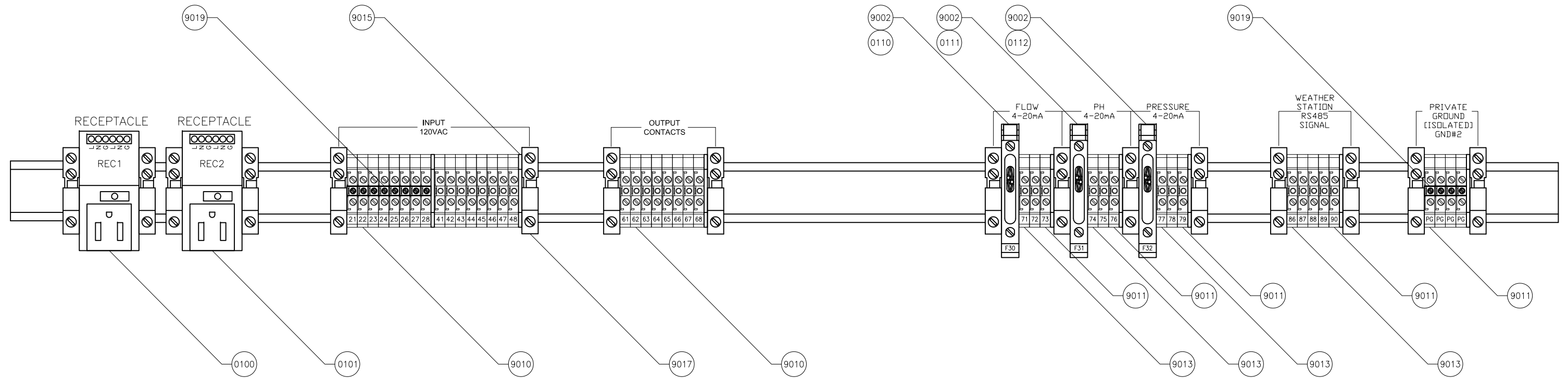
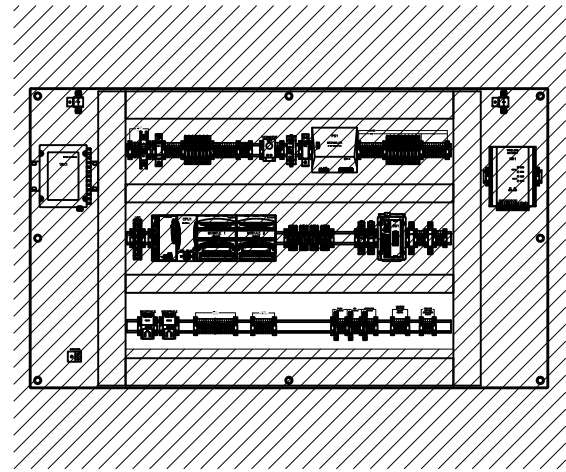
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RTU 903-1
BACK PANEL LAYOUT

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CAD FILE: SCI3079_RTU903-1

3079

SH 9 OF 12



REV #	DATE	REVISION



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ENGINEER

PROJECT TITLE

CAMP STANLEY
BIOREACTOR

SHEET TITLE

RTU 903-1
BACK PANEL LAYOUT

DATE: 8/10/2009
SCALE: N/A
DRAWN BY: RMF
CAD FILE: SCI3079_RTU903-1
DWG. NO. 3079

SH 10 OF 12

BILL OF MATERIAL			
ITEM_ID	DEVICE_ID	QUANTITY	DESCRIPTION
0001	RTU903-1	1	ENCLOSURE, 36"X60"X12"D, NEMA12
0002	RTU903-1	1	BACK PANEL, 36"X60"W, STEEL
0003	HMI1	1	HMI 6" COLOR TOUCH SCREEN, 24VDC, LAN PORT
0005	FAN1	1	FAN, FILTER UNIT, 39CFM, 115VAC, 0.24A, 50/60HZ, 19W, NEMA 12, LIGHT GREY, 13F-131F, 49DBKA, CUTDOUT 124MM SQUARE
0006	FAN2	1	FAN, FILTER UNIT, 39CFM, 115VAC, 0.24A, 50/60HZ, 19W, NEMA 12, LIGHT GREY, 13F-131F, 49DBKA, CUTDOUT 124MM SQUARE
0007	VPORT1	1	FILTER UNIT, HOLDER ONLY, 124MM
0008	VPORT2	1	FILTER UNIT, HOLDER ONLY, 124MM
0009		4	REPLACEMENT FILTER PADS, FDR 58"SO FANS
0020	SP7	1	BROADBAND DC BLOCKED PROTECTOR, 125-1000MHZ, 50 OHM, 50-375V, VSWR 1:1.1, SURGE 50KA, N-FEMALE X N-FEMALE
0021	SP8	1	BROADBAND DC BLOCKED PROTECTOR, 125-1000MHZ, 50 OHM, 50-375V, VSWR 1:1.1, SURGE 50KA, N-FEMALE X N-FEMALE
0022	TRX1	1	DATA TRANSCEIVER, 173MHZ, RS232 INPUT, 13.8VDC
0023	WR1	1	WIRELESS GATEWAY RADIO, DIN-RAIL MOUNT, 15-30VDC, 4 INPUTS/OUTPUTS, ETHERNET, RS485
0030	CB1	1	CIRCUIT BREAKER, 15A, UL-489, 10K AIR, 1-#14-#2, CU DR AL
0031	SP1	1	SURGE PROTECTION MODULE, 130VAC, IN:20KA, IMAX:40KA, L-N
0032		1	HOLDER, SURGE PROTECTION
0034		1	FUSE, TIME DELAY FURRULE, 5A, 250VAC, 1/4"X1.25"
0035		1	FUSE, TIME DELAY FURRULE, 5A, 250VAC, 1/4"X1.25"
0036		1	FUSE, FAST ACTING FURRULE, 3A, 250VAC, 1/4"X1.25"
0037		1	FUSE, TIME DELAY FURRULE, 5A, 250VAC, 1/4"X1.25"
0038		1	FUSE, FAST ACTING FURRULE, 3A, 250VAC, 1/4"X1.25"
0040		1	FUSE, FAST ACTING FURRULE, 3A, 250VAC, 1/4"X1.25"
0041	TST1	1	THERMISTAT, DIN-RAIL MOUNT, 30-140F, HYSTERESIS +/-4F, 15A, 120VAC
0042		1	OPTICAL ISOLATOR, RS-232 TO RS-422/485 CONVERTER
0043	SP2	1	SURGE PROTECTION MODULE, 24VDC, IMAX:2KA, VMAX: 30V
0044		1	HOLDER, SURGE PROTECTION
0045	PS1	1	POWER SUPPLY, TS-35 DIN-RAIL MOUNT, 88-132VAC, 176-264VAC, 3.6A@115VAC/2A@230VAC, 50/60HZ, 24-28VDC, 10.0A, 230W
0046		1	FUSE, FAST ACTING FURRULE, 3A, 250VAC, 1/4"X1.25"
0047		1	FUSE, FAST ACTING FURRULE, 3A, 250VAC, 1/4"X1.25"
0048		1	FUSE, FAST ACTING FURRULE, 3A, 250VAC, 1/4"X1.25"
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0052		1	FUSE, FAST ACTING FURRULE, 3A, 250VAC, 1/4"X1.25"
0053		1	FUSE, FAST ACTING FURRULE, 3A, 250VAC, 1/4"X1.25"
0054		1	FUSE, FAST ACTING FURRULE, 3A, 250VAC, 1/4"X1.25"
0060	LB1	1	UNMANAGED LAN BRIDGE, 5-PORT, 4W/ 10-35VDC, 6VA 10-24VAC, 32-140F, CLASS 1 DIV 2
0061		1	POWER SUPPLY, 120/240VAC, 27VA, 50/60HZ, EXPANDED 3.3VDC
0062	CPU1	1	PLC CPU MODULE
0063		1	BOX STYLE I/O CARRIER, AVG 22-14, 24V POINT, 8A/ POWER DR GND, 264VAC MAX
0064	MODULE 1	1	ANALOG MODULE, 4-CH, 12 BIT, VOLTAGE/CURRENT
0065		1	BOX STYLE I/O CARRIER, AVG 22-14, 24V POINT, 8A/ POWER DR GND, 264VAC MAX
0066	MODULE 2	1	MIXED MODULE, 8-INPUT, 8-OUTPUT, 120VAC INPUT, RELAY OUTPUT
0070		4	RELAY, 2PDT, COIL: 120VAC/ 92MA, 1/6HP, W/INDICATOR & CHECK BUTTON
0071		1	RELAY MOUNTING SOCKET, DIN RAIL, 2PDT, 300V/10A, 2-#12
0072		1	RELAY MOUNTING SOCKET, DIN RAIL, 2PDT, 300V/10A, 2-#12
0073		1	RELAY MOUNTING SOCKET, DIN RAIL, 2PDT, 300V/10A, 2-#12
0074		1	RELAY MOUNTING SOCKET, DIN RAIL, 2PDT, 300V/10A, 2-#12
0080		2	PROTECTIVE PLUG, 2-2-CORE FLOATING SIGNALS, 24VDC, MAX CORE SURGE 10KA @ (8-20US)
0081		1	BASE, GAS-FILLED SURGE ARRESTOR, 2-2-WIRE FLOATING SIGNALS, 600V/ 450MA, DIN RAIL
0082		1	BASE, GAS-FILLED SURGE ARRESTOR, 2-2-WIRE FLOATING SIGNALS, 600V/ 450MA, DIN RAIL
0090	DS1	1	DATA STATION PLUS, PROTOCOL CONVERTER, 24VDC@200MA, 1A MAX. W/ WEB SERVER & DATA LOGGER
0091		1	DATA STATION PLUS, RS-232/RS-485 ADD-ON MODULE
0092	SP5	1	SURGE PROTECTION MODULE, RS232/RS485, IMAX:20KA, VMAX: 8VDC, IPAIR SHIELD
0093		1	HOLDER, SURGE PROTECTION, ILA SERIES
0094	SP6	1	SURGE PROTECTION MODULE, RS232/RS485, IMAX:20KA, VMAX: 8VDC, IPAIR SHIELD
0095		1	HOLDER, SURGE PROTECTION, ILA SERIES
0100	REC1	1	RECEPTACLE, SIMPLEX 15A, 120VAC, UL, T35 DIN RAIL MOUNT
0101	REC2	1	RECEPTACLE, SIMPLEX 15A, 120VAC, UL, T35 DIN RAIL MOUNT
0110		1	FUSE, FAST ACTING FURRULE, 250MA, 250VAC, 1/4"X1.25"
0111		1	FUSE, FAST ACTING FURRULE, 250MA, 250VAC, 1/4"X1.25"
0112		1	FUSE, FAST ACTING FURRULE, 250MA, 250VAC, 1/4"X1.25"
9001		7	FUSE BLOCK, ILL 10-250V, 600V/10A, 26-8AVG
9002		12	FUSE BLOCK, ILL 15-30V, 600V/10A, 26-8AVG
9009		8	TERMINAL BLOCK, YELLOW, 600V/30A, 30-10AWG
9010		40	TERMINAL BLOCK, GRAY, 600V/30A, 30-10AWG
9011		10	TERMINAL BLOCK, GREEN, 600V/30A, 30-10AWG
9013		34	TERMINAL BLOCK, DRANGE, 600V/30A, 30-10AWG
9014		5	GROUND TERMINAL, 26-10AWG
9015		17	END COVER PLATE, GRAY
9017		47	END CLAMP, GRAY
9018		1	CROSS CONNECTOR/JUMPER, 2 POSITION, AL
9019		5	CROSS CONNECTOR/JUMPER, 10 POSITION, AL
9020		1	CROSS CONNECTOR/JUMPER, 10 POSITION, AL
9021	GND1	1	GROUNDING LUG, 2 CONDUCTOR, 1/0-14AWG



SYSTEM CONTROLS & INSTRUMENTATION

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PHONE (210) 661-9901

ENGINEER

PROJECT TITLE

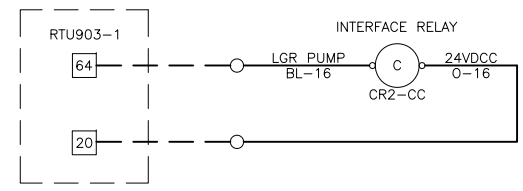
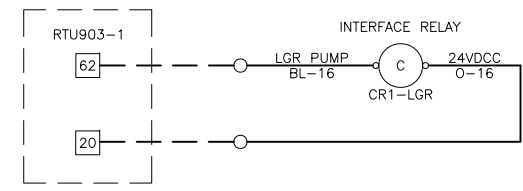
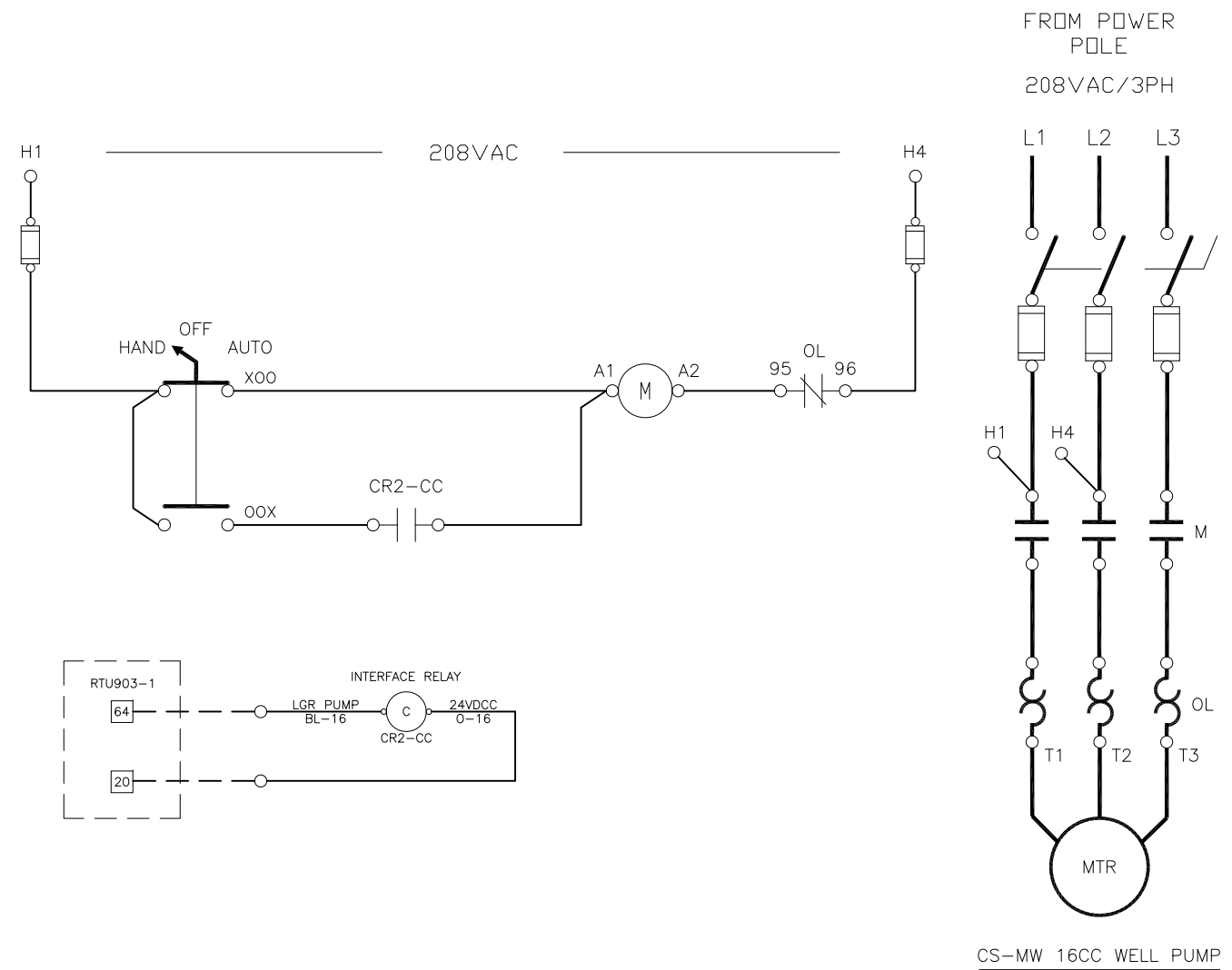
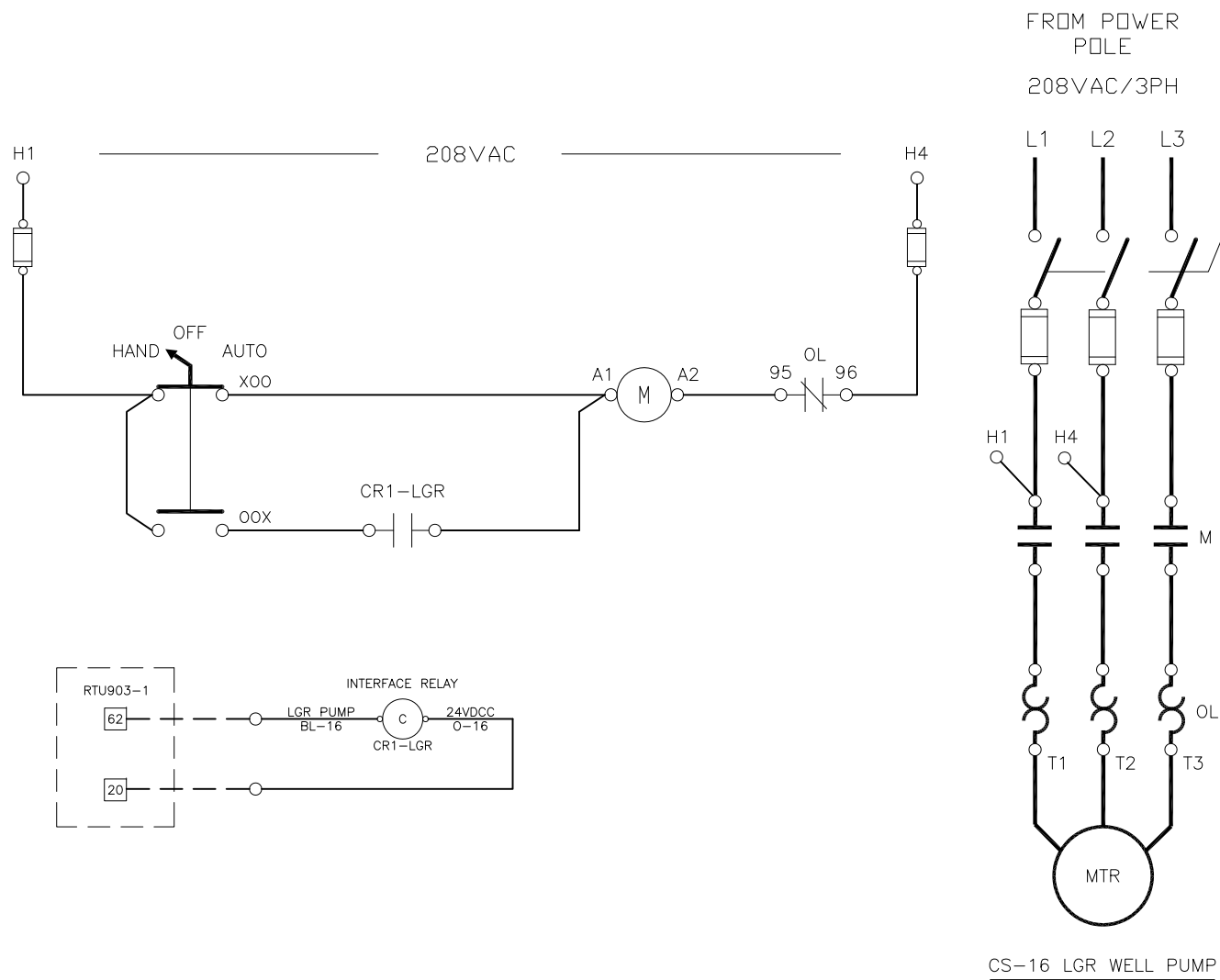
CAMP STANLEY
BIOREACTOR

SHEET TITLE

RTU 903-1
BILL OF MATERIALS

DATE: 8/10/2009
SCALE: N/A
DRAWN BY: RMF
CAD FILE: SCI3079_RTU903-1
DWG. NO. 3079

SH 11 OF 12



COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
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GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION

SCI
SYSTEM CONTROLS & INSTRUMENTATION

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CONVERSE, TEXAS 78109
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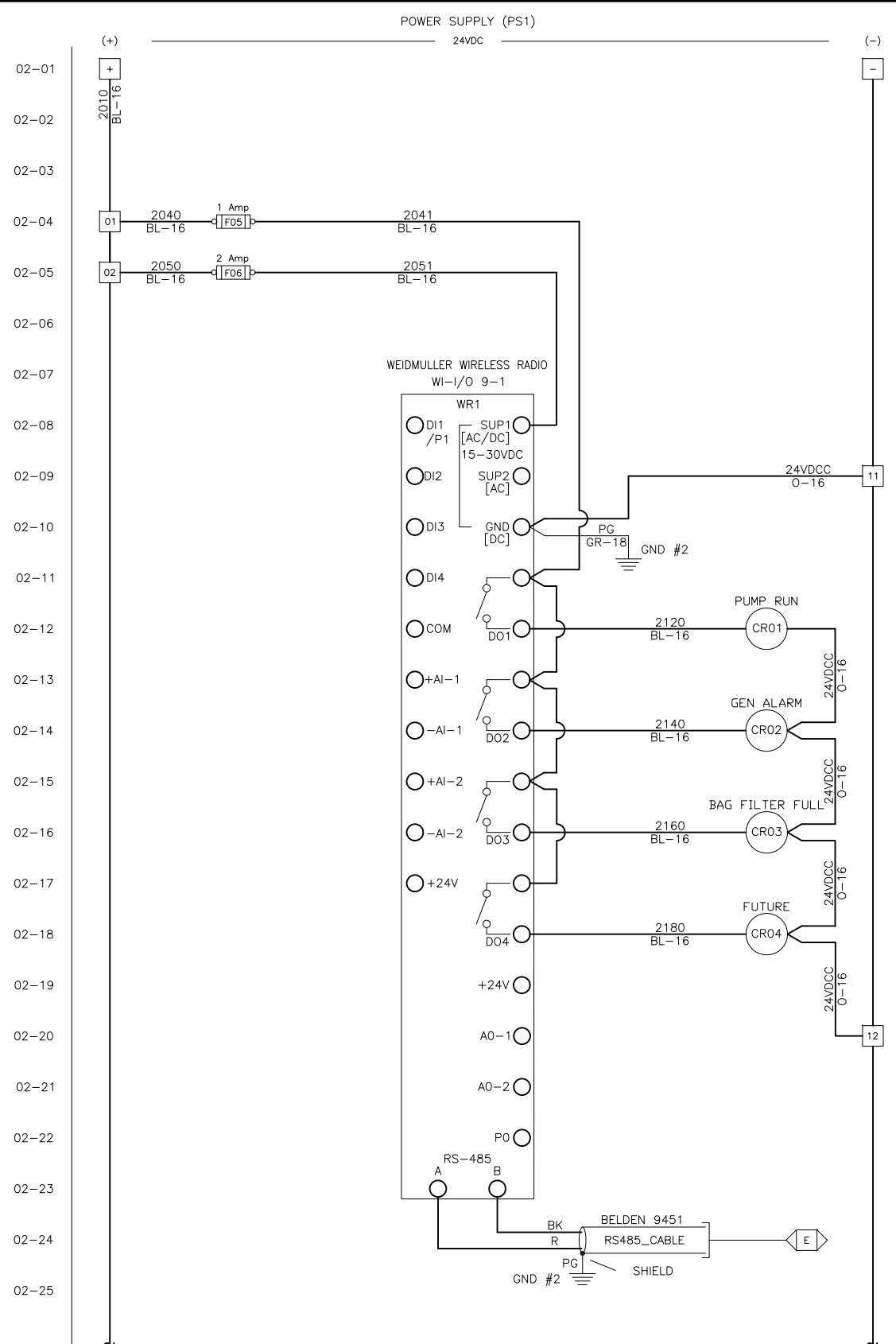
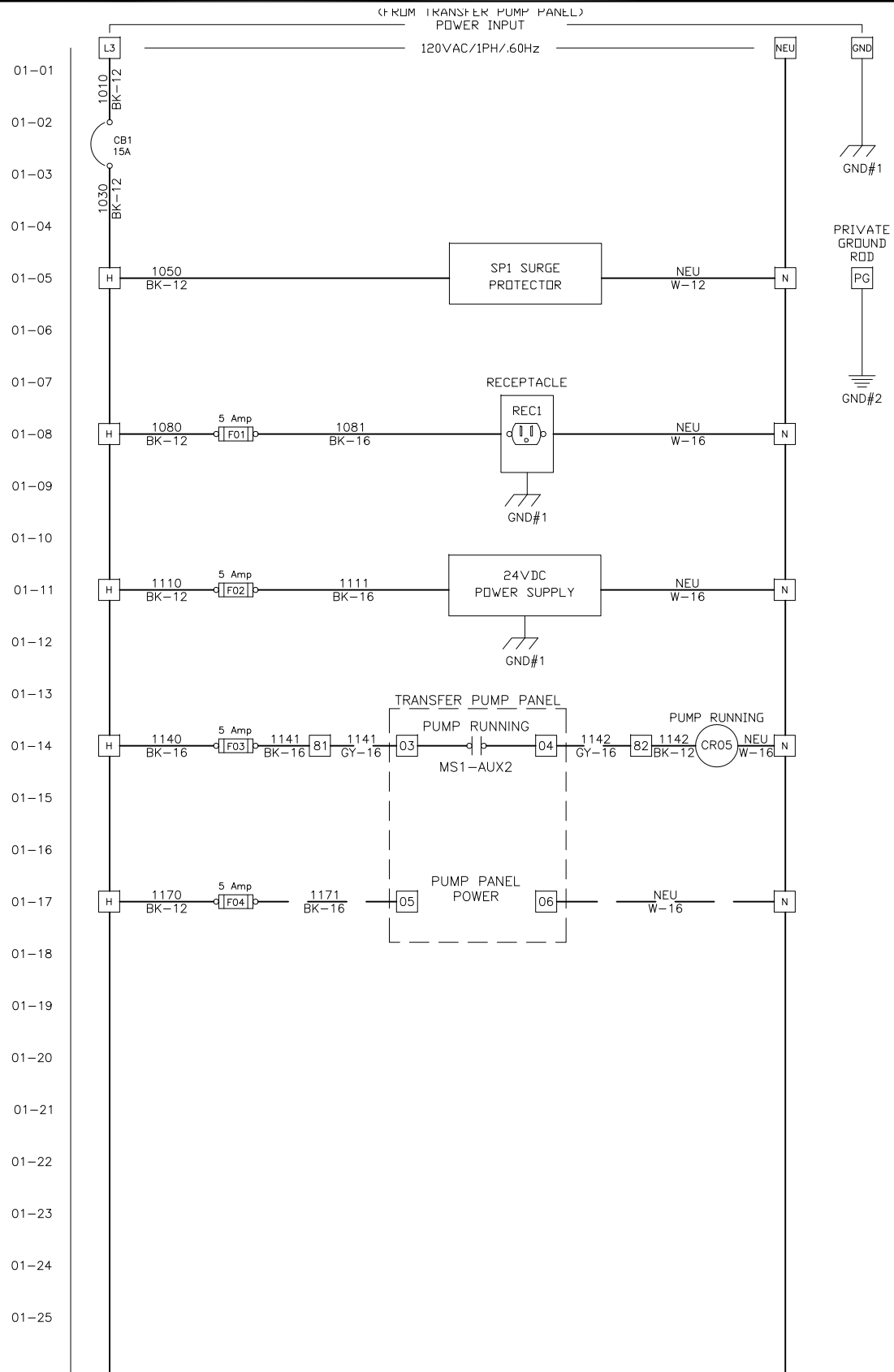
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PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
LGR / CC PUMP PANELS
LINE-TO-LINE
FIELD WIRING DIAGRAM

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CAD FILE:	SCI3079_RTU903-1
DWG. NO.	3079
SH	12
OF	12

RTU 903-2: BIOREACTOR TANK AND TRANSFER PUMP



NOTE 1: DASHED LINES INDICATE FIELD WIRING

COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
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OR	ORANGE
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G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

REV #	DATE	REVISION

SCI
SYSTEM CONTROLS & INSTRUMENTATION

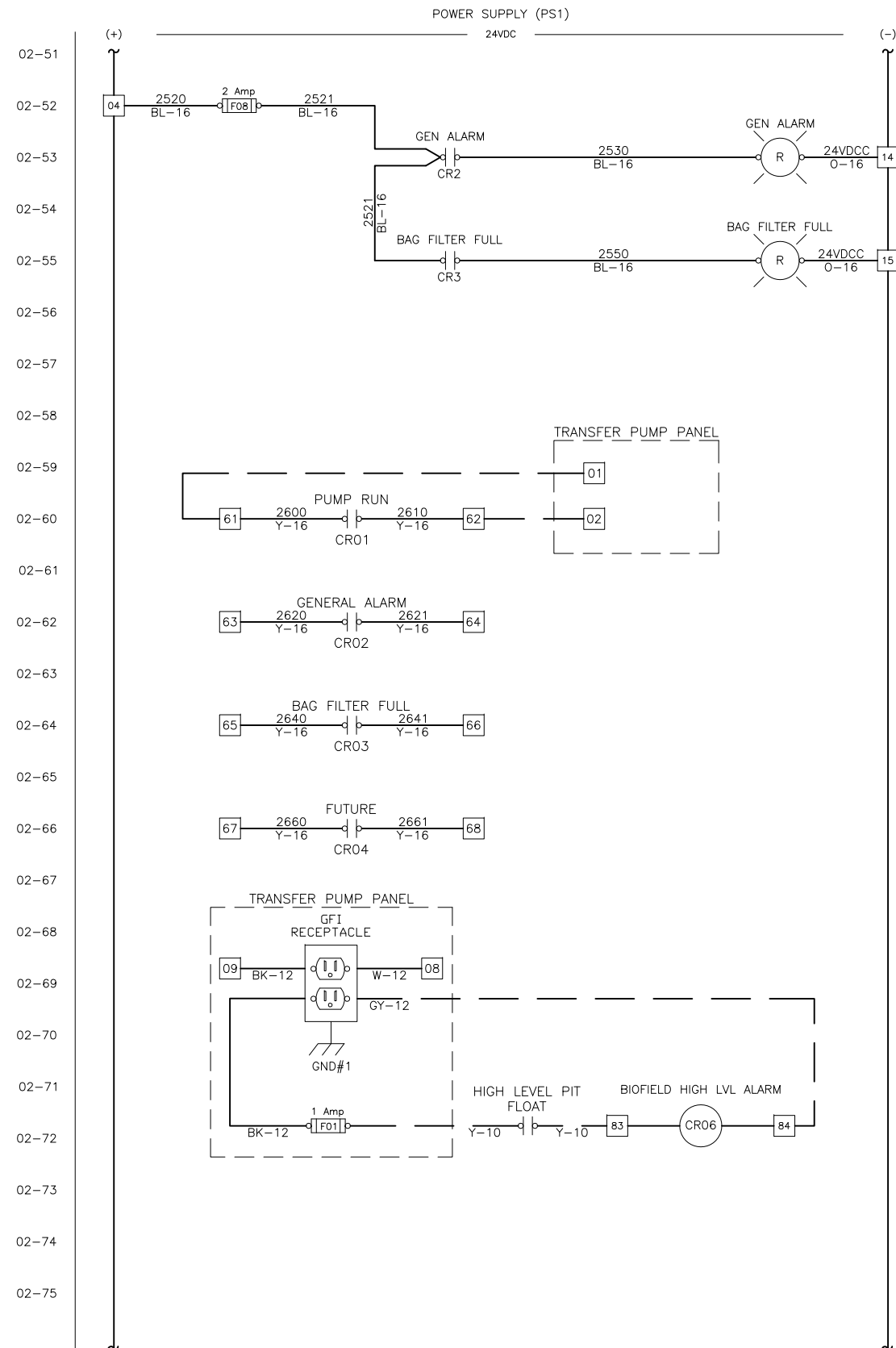
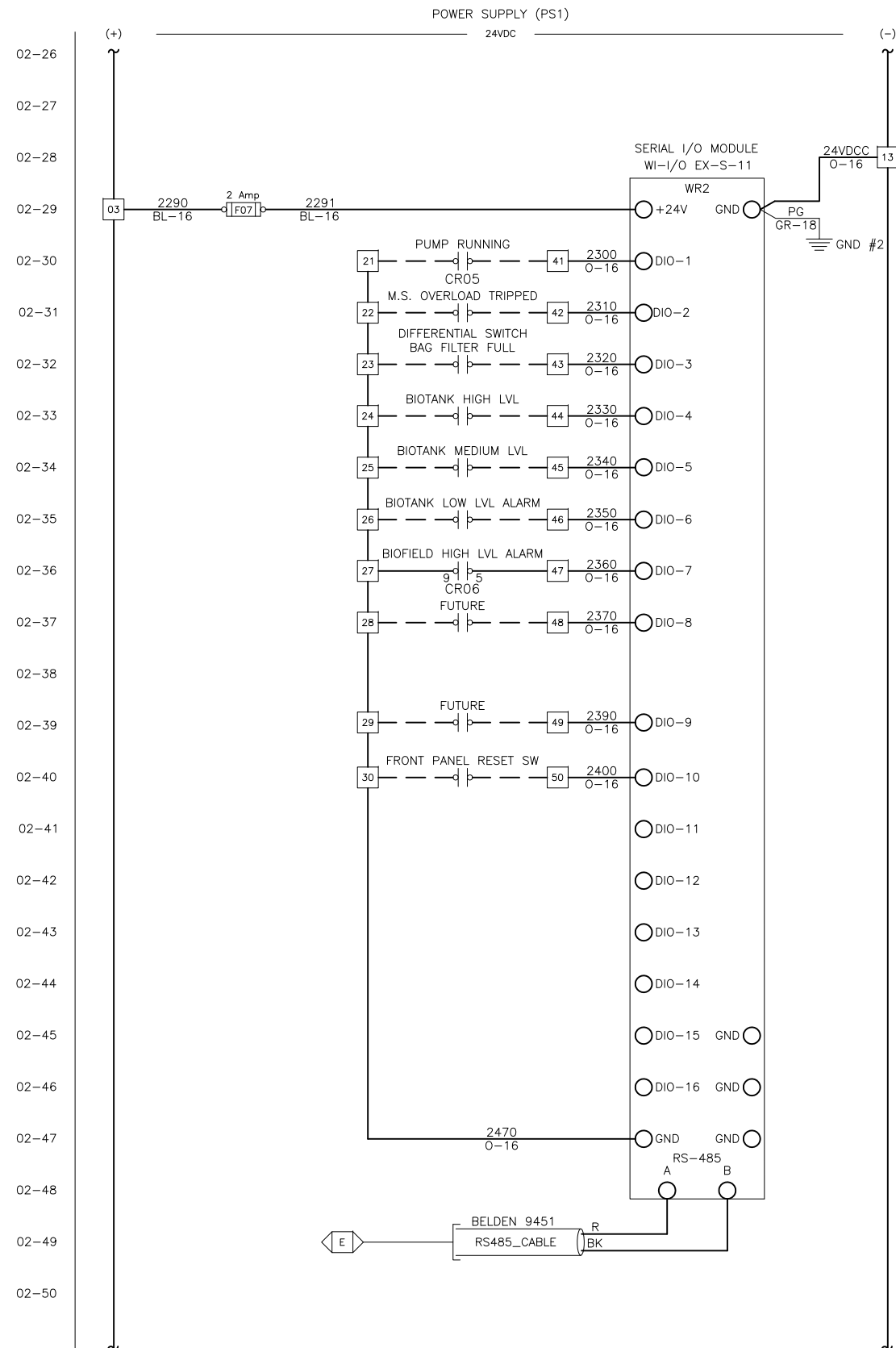
11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
**CAMP STANLEY
BIOREACTOR**

SHEET TITLE
**RTU 903-2
PROCESS TANK WIRING DIAGRAM**

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-2
DWG. NO.	3079
SH	OF
1	8




COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
OR	ORANGE
Y	YELLOW
G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y-18	

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION


SYSTEM CONTROLS & INSTRUMENTATION
 11218 IH-10 EAST
 CONVERSE, TEXAS 78109
 PHONE (210) 661-9901

ENGINEER

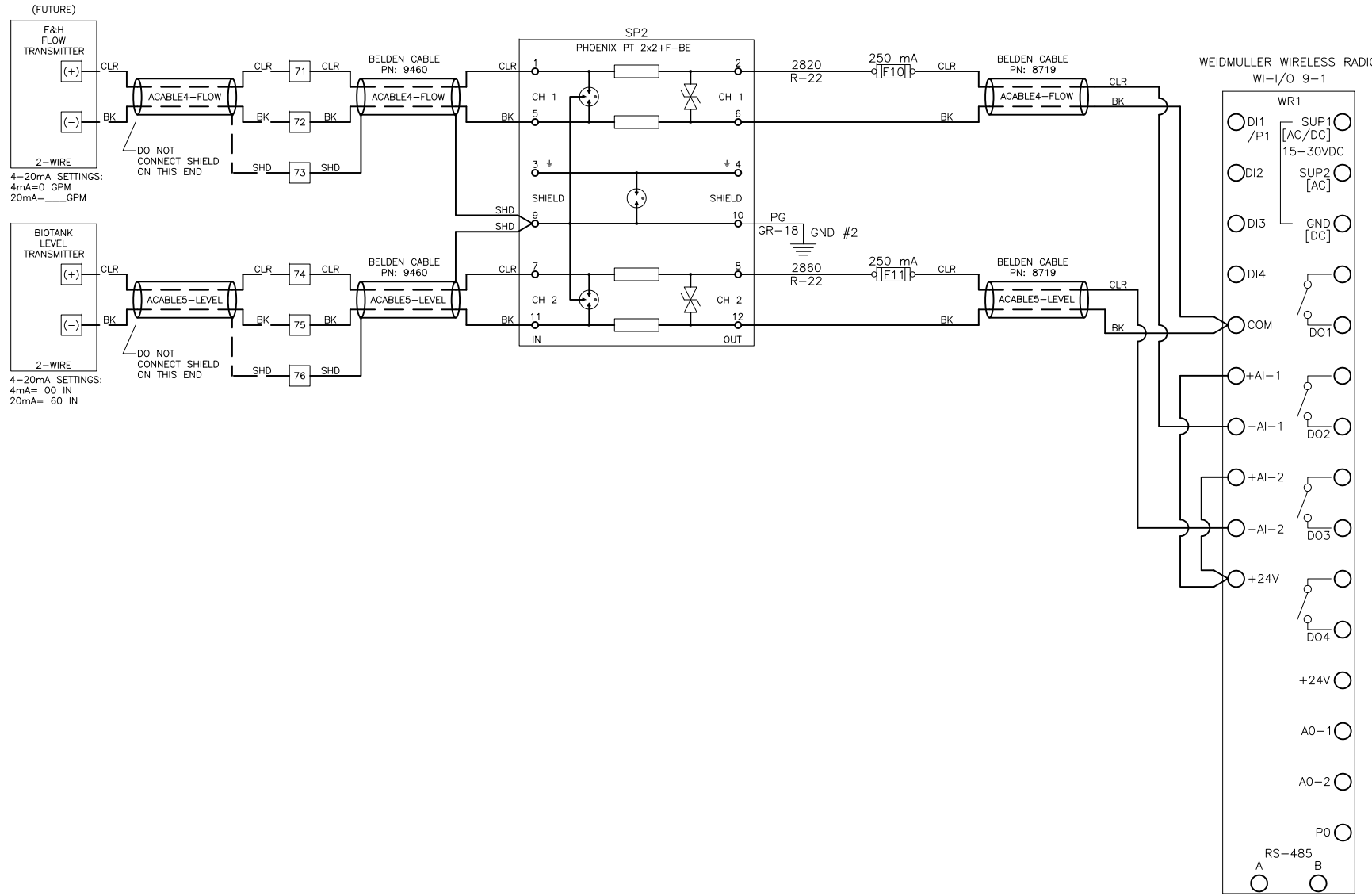
PROJECT TITLE
**CAMP STANLEY
 BIOREACTOR**

SHEET TITLE
**RTU 903-2
 PROCESS TANK WIRING DIAGRAM**

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-2
DWG. NO.	3079
SH	2
OF	8

POWER SUPPLY (PS1)
24VDC

02-76
02-77
02-78
02-79
02-80
02-81
02-82
02-83
02-84
02-85
02-86
02-87
02-88
02-89
02-90
02-91
02-92
02-93
02-94
02-95
02-96
02-97
02-98
02-99
02-100



COLOR CODE	
CLR	CLEAR
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GY	GREY
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WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION

SCI
SYSTEM CONTROLS & INSTRUMENTATION

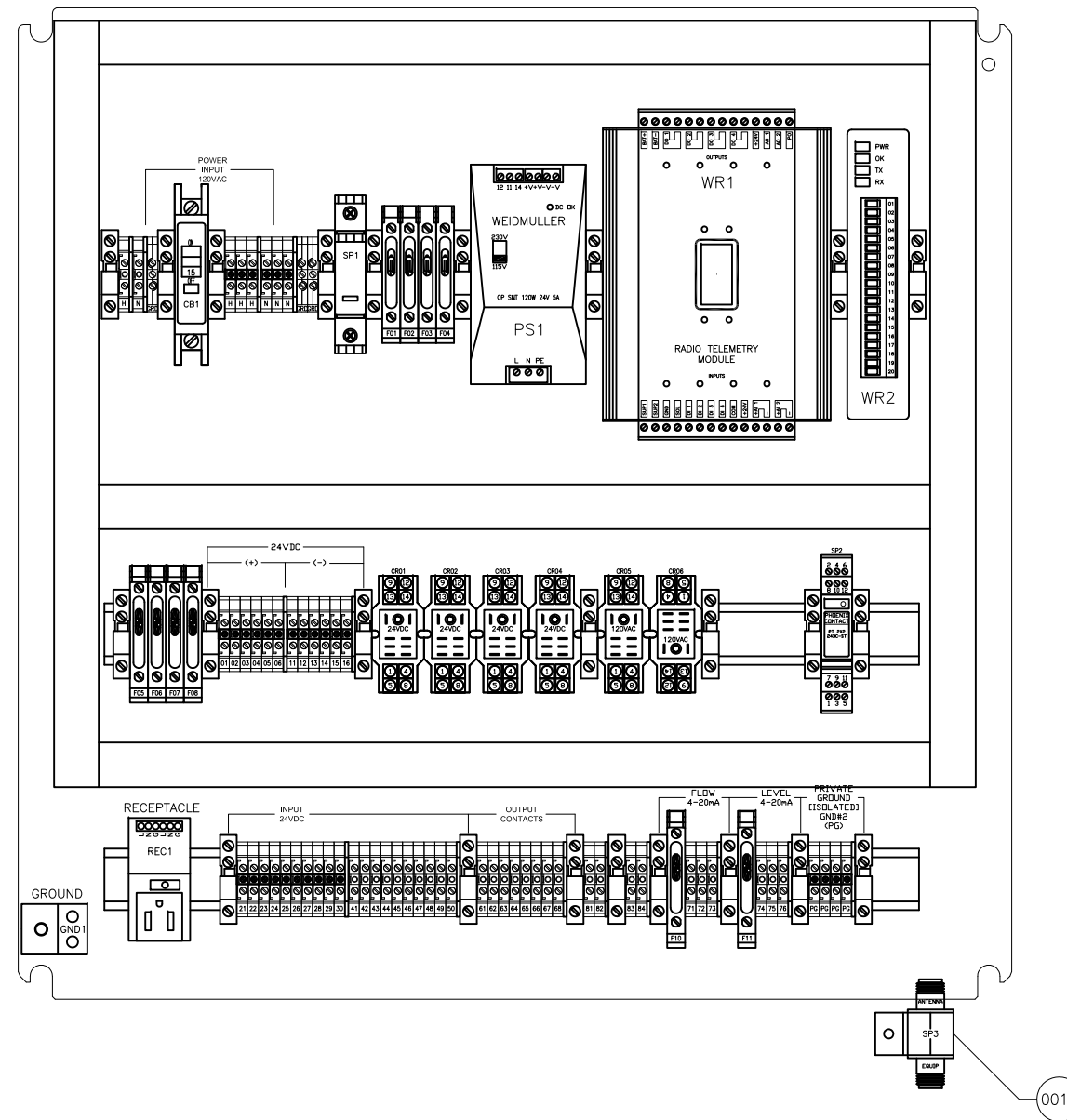
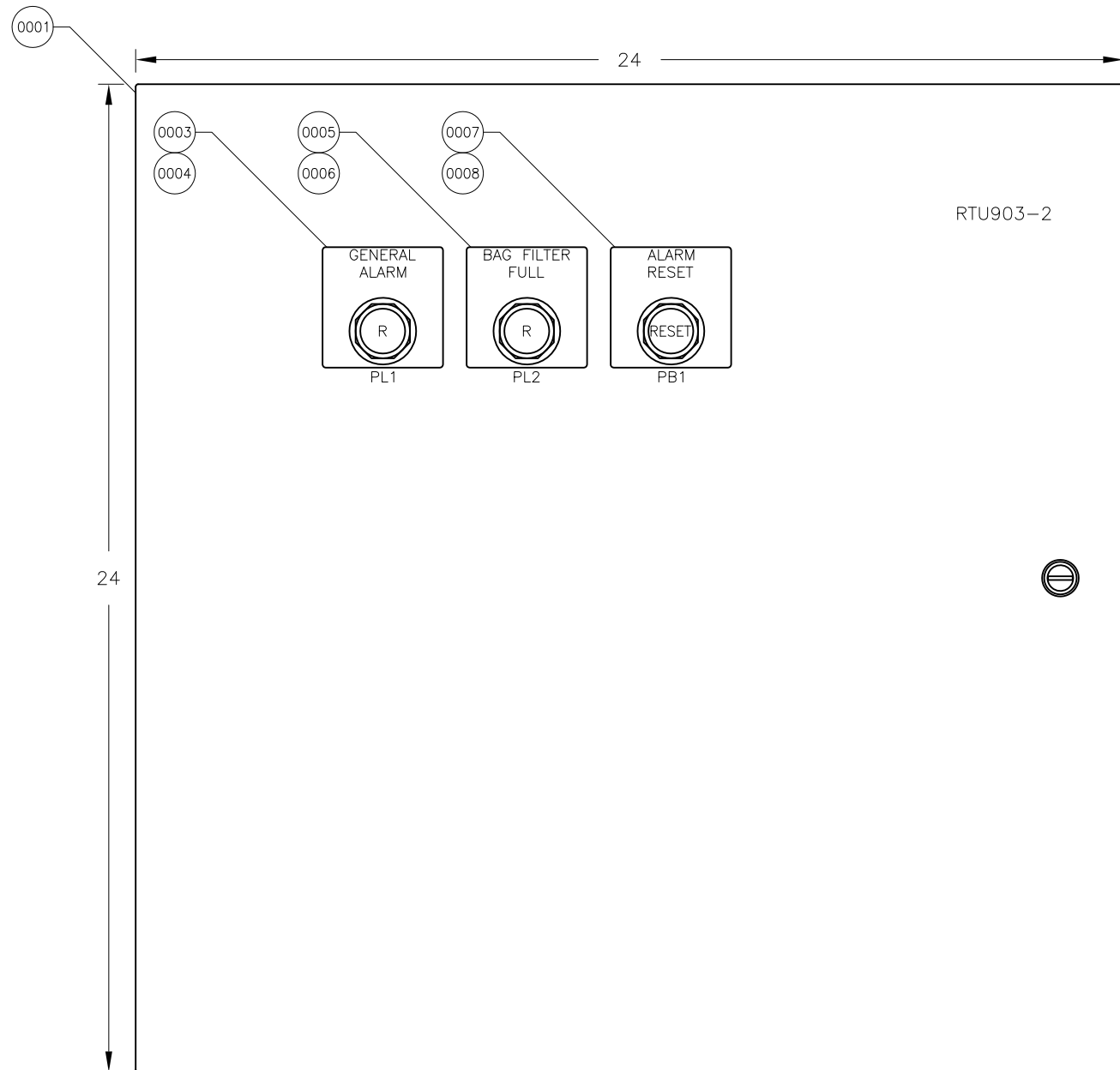
11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
RTU 903-2
PROCESS TANK WIRING DIAGRAM

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-2
DWG. NO.	3079
SH	3
OF	8



REV #	DATE	REVISION


 11218 IH-10 EAST
 CONVERSE, TEXAS 78109
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 SYSTEM CONTROLS & INSTRUMENTATION

ENGINEER

PROJECT TITLE

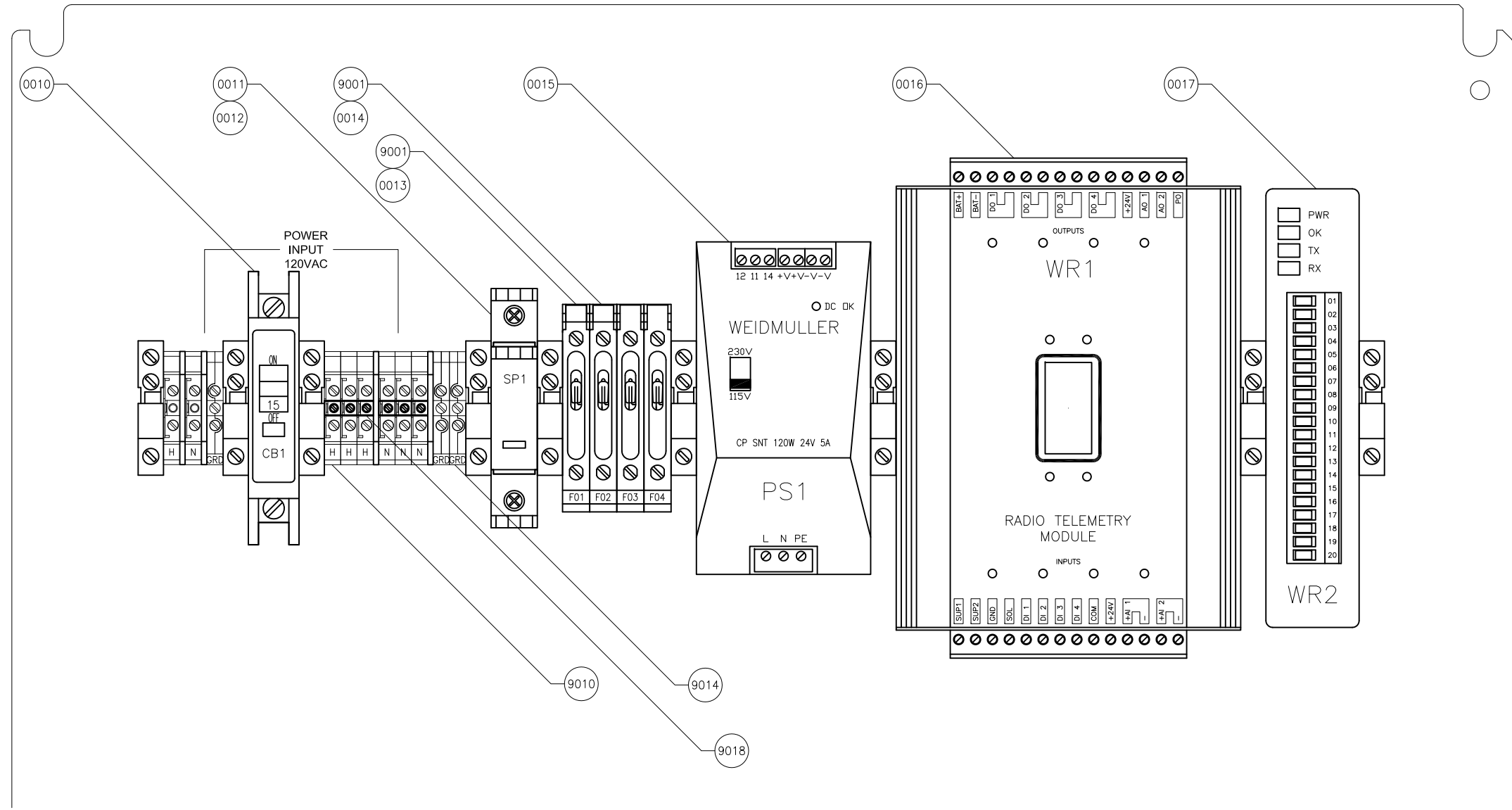
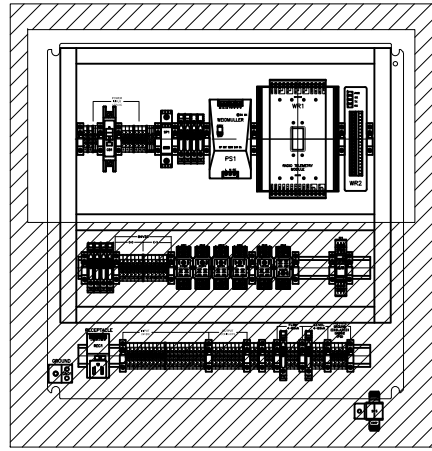
CAMP STANLEY
BIOREACTOR

SHEET TITLE

RTU 903-2
PROCESS TANK FRONT PANEL
& BACK PANEL LAYOUT

DATE: 8/10/2009
 SCALE: N/A
 DRAWN BY: RMF
 CAD FILE: SCI3079_RTU903-2
 DWG. NO.: 3079

SH 4 OF 8



REV #	DATE	REVISION

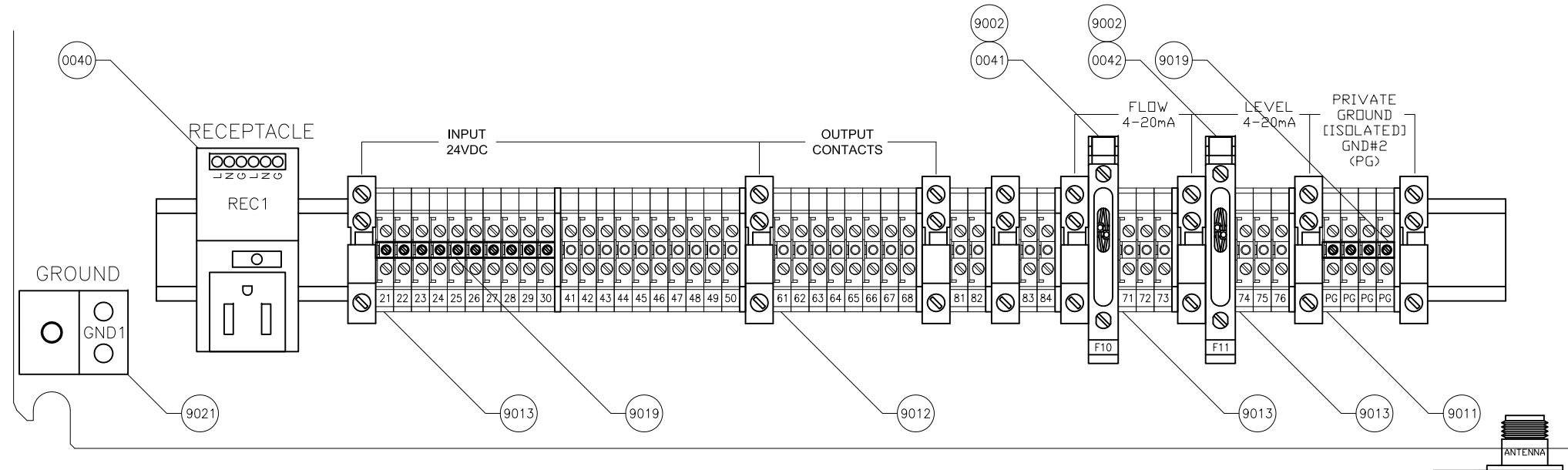
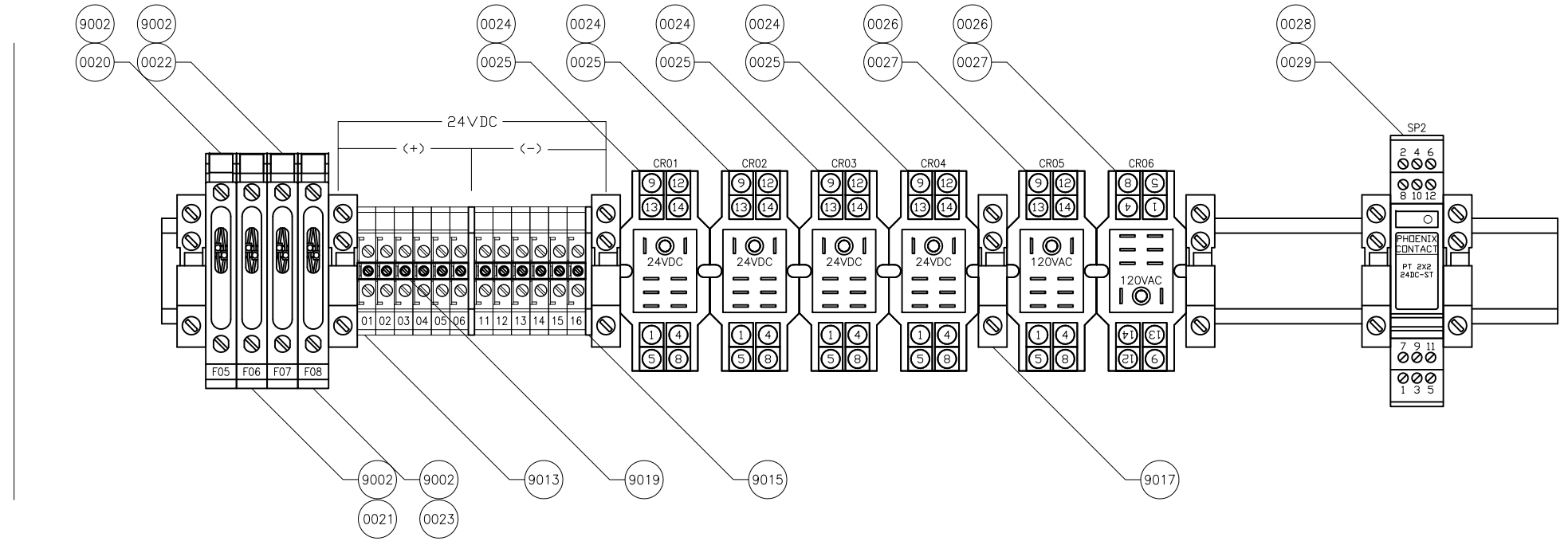
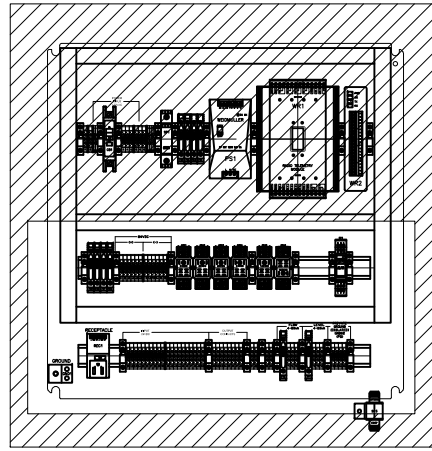

11218 IH-10 EAST
 CONVERSE, TEXAS 78109
 PHONE (210) 661-9901
 SYSTEM CONTROLS & INSTRUMENTATION

ENGINEER

PROJECT TITLE
CAMP STANLEY BIOREACTOR

SHEET TITLE
**RTU 903-2
 PROCESS TANK PARTS LAYOUT**

DATE:	8/10/09
SCALE:	1:2
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-2
DWG. NO.	3079
SH	5
OF	8



REV #	DATE	REVISION



11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

PROJECT TITLE

CAMP STANLEY
BIOREACTOR


SHEET TITLE

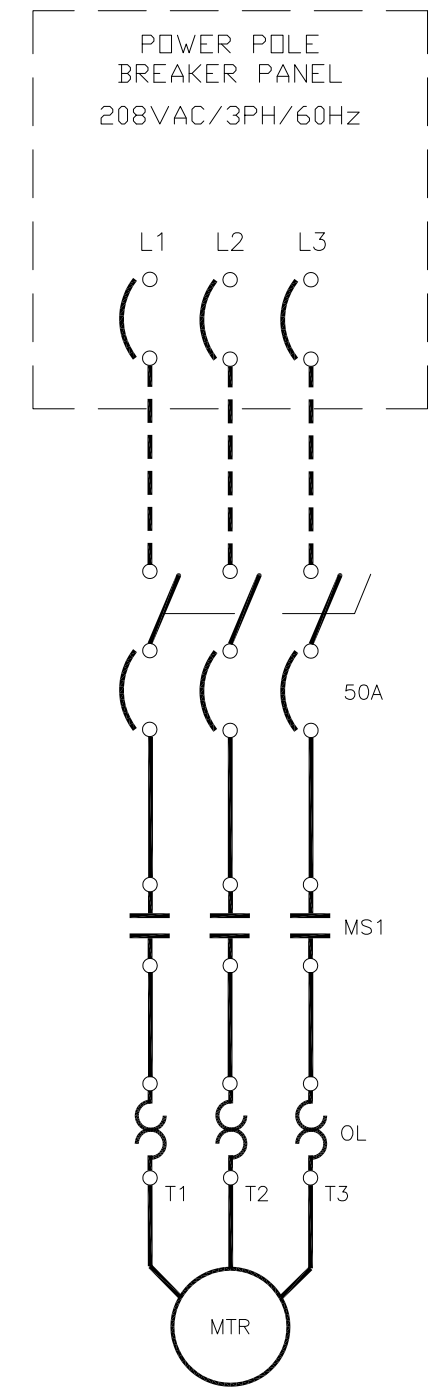
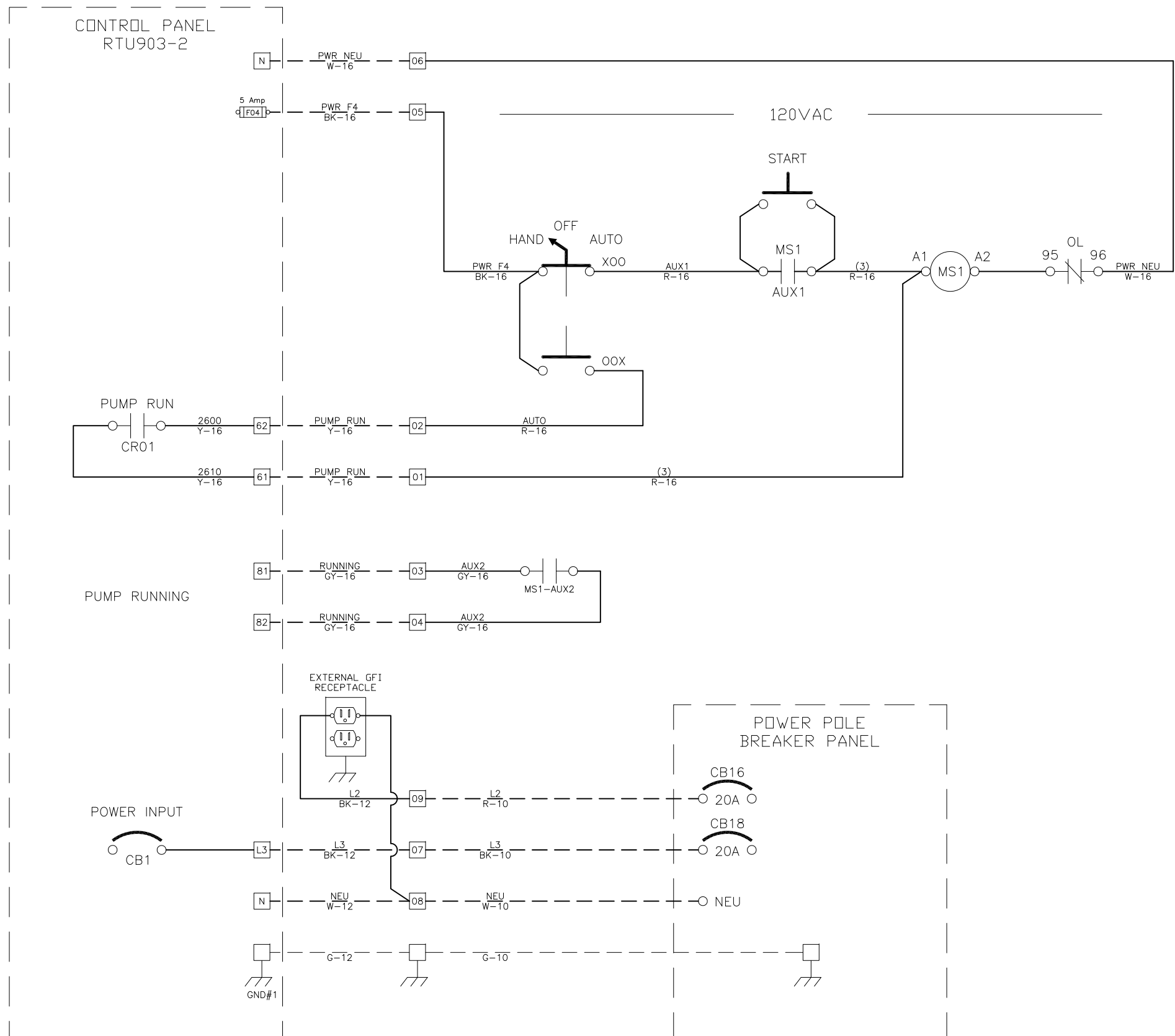
RTU 903-2
PROCESS TANK PARTS LAYOUT

DATE: 8/10/09
SCALE: 1:2
DRAWN BY: RMF
CAD FILE: SCI3079_RTU903-2
DWG. NO. 3079

SH 6 OF 8

BILL OF MATERIAL					
ITEM_ID	DEVICE_ID	QUANTITY	DESCRIPTION	MFG_#	MFG_NAME
0001	RTU903-2	1	CONCEPT ENCLOSURE, 24"HX24"WX10"D NEMA 4, 304SS	CSD242410SS	HOFFMAN
0002	RTU903-2	1	CONCEPT ENCLOSURE BACK PANEL, 24"X24"	CP2424	HOFFMAN
0003	PL1	1	PUSH BUTTON PILOT LED, 30.5MM, 24VDC, RED LENS, 1ND / 1NC	800T-QBH24R	AB
0004	PL1	1	PLASTIC LABEL, 30.5MM PILOT LAMP, RED W/WHITE LETTERING, 2.4"WX2.4"H		SCI
0005	PL2	1	PUSH BUTTON PILOT LED, 30.5MM, 24VDC, RED LENS, 1ND / 1NC	800T-QBH24R	AB
0006	PL2	1	PLASTIC LABEL, 30.5MM PILOT LAMP, RED W/WHITE LETTERING, 2.4"WX2.4"H		SCI
0007	PB1	1	PUSH BUTTON OPERATOR, METAL, 30.5MM, FLUSH HEAD, BLUE W/WHITE LETTERING, 1-ND / 1-NC	800T-A707WA	AB
0008	PB1	1	PUSH BUTTON LABEL, PLASTIC, RED W/WHITE LETTERING, 2.4"WX2.4"H		SCI
0010	CB1	1	CIRCUIT BREAKER, 15A, UL489, 10K AIR, 1-#14-#2, CU OR AL	QDU115	SQD
0011	SP1	1	SURGE PROTECTION MODULE, 130VAC, IN:20KA, IMA:40KA, L-N	PU II 1	WEIDMULLER
0012		1	HOLDER, SURGE PROTECTION	PU II 1S	WEIDMULLER
0013		1	FUSE, TIME DELAY FURRULE, 5A, 250VAC, 1/4"X1.25"	MDL-5	BUSSMANN
0014		1	FUSE, TIME DELAY FURRULE, 5A, 250VAC, 1/4"X1.25"	MDL-5	BUSSMANN
0015	PS1	1	POWER SUPPLY, TS-35 DIN-RAIL MOUNT, 88-132VAC, 176-264VAC, 3A@115VAC/2A@230VAC, 50/60HZ, 24-28VDC, 5.0A, 120W	CP SNT 120W 24V 5A	WEIDMULLER
0016	WR1	1	WIRELESS RADIO, DIN-RAIL MOUNT, 15-30VDC, 4 INPUTS, 2- 4-20MA INPUTS, 4 OUTPUTS, 2- 4-20MA OUTPUTS, RS232/RS485	WI-I/O 9-1	WEIDMULLER
0017	WR2	1	EXPANSION I/O MODULE, 10.8-30VDC, 16 I/O INPUT/OUTPUTS, DIN RAIL MOUNTING	WI-I/O-EX-S-11	WEIDMULLER
0018	SP3	1	BROADBAND DC BLOCKED PROTECTOR, 125-1000MHZ, 50 OHM, 50-375W, VSWR: 1.1:1, SURGE 50KA, N-FEMALE X N-FEMALE	IS-50NX-C2	POLYPHASER
0020		1	FUSE, FAST ACTING FURRULE, 2A, 250VAC, 1/4"X1.25"	AGC-2	BUSSMANN
0021		1	FUSE, FAST ACTING FURRULE, 1A, 250VAC, 1/4"X1.25"	AGC-1	BUSSMANN
0022		1	FUSE, FAST ACTING FURRULE, 2A, 250VAC, 1/4"X1.25"	AGC-2	BUSSMANN
0023		1	FUSE, FAST ACTING FURRULE, 2A, 250VAC, 1/4"X1.25"	AGC-2	BUSSMANN
0024		4	RELAY MOUNTING SOCKET, DIN RAIL, 2PDT, 300V/10A, 2-#12	SH2B-05	IDEC
0025		4	RELAY, 2PDT, COIL: 24VDC/ 36.9MA, 1/6HP, W/INDICATOR & CHECK BUTTON	RH2B-ULC-DC24V	IDEC
0026		2	RELAY MOUNTING SOCKET, DIN RAIL, 2PDT, 300V/10A, 2-#12	SH2B-05	IDEC
0027		2	RELAY, 2PDT, COIL: 120VAC, 1/6HP, W/INDICATOR	RH2B-ULC-AC120V	IDEC
0028		1	BASE, GAS-FILLED SURGE ARRESTOR, 2 2-WIRE FLOATING SIGNALS, 600V/ 450MA, DIN RAIL	PT 2X2+F-BE	PHOENIX
0029		1	PROTECTIVE PLUG, 2 2-CORE FLOATING SIGNALS, 24VDC, MAX CORE SURGE 10KA @ (8-20US)	PT 2X2-24DC-ST	PHOENIX
0040	REC1	1	RECEPTACLE, SIMPLEX 15A, 120VAC, UL, T35 DIN RAIL MOUNT	991548	WEIDMULLER
0041		1	FUSE, FAST ACTING FURRULE, 250MA, 250VAC, 1/4"X1.25"	AGC-1/4	BUSSMANN
0042		1	FUSE, FAST ACTING FURRULE, 250MA, 250VAC, 1/4"X1.25"	AGC-1/4	BUSSMANN
9001		4	FUSE BLOCK, ILL 110-250V, 600V/10A, 26-8AWG	UK 6,3-HESILA 250	PHOENIX
9002		6	FUSE BLOCK, ILL 15-30V, 600V/10A, 26-8AWG	UK 6,3-HESILED 24	PHOENIX
9010		12	TERMINAL BLOCK, GRAY, 600V/30A, 30-10AWG	UK 5 N	PHOENIX
9011		6	TERMINAL BLOCK, GREEN, 600V/30A, 30-10AWG	UK 5 N GN	PHOENIX
9012		8	TERMINAL BLOCK, YELLOW, 600V/30A, 30-10AWG	UK 5 N YE	PHOENIX
9013		36	TERMINAL BLOCK, ORANGE, 600V/30A, 30-10AWG	UK 5 N OG	PHOENIX
9014		3	GROUND TERMINAL, 26-10AWG	UKLKG 5	PHOENIX
9015		14	END COVER PLATE, GRAY	D-UK 4/10	PHOENIX
9017		24	END CLAMP, GRAY	E/UK	PHOENIX
9018		2	CROSS CONNECTOR/JUMPER, 10 POSITION, AL	FBI 10-6	PHOENIX
9019		4	CROSS CONNECTOR/JUMPER, 10 POSITION, AL	FBI 10-6	PHOENIX
9021	GND1	1	GROUNDING LUG, 2 CONDUCTOR, 1/0-14AWG	K2A25U	BURNDY

REV #	DATE	REVISION	 11218 IH-10 EAST CONVERSE, TEXAS 78109 PHONE (210) 661-9901	ENGINEER	PROJECT TITLE	SHEET TITLE	DATE:	8/10/2009	DWG. NO. 3079	SH 7 OF 8
					CAMP STANLEY BIOREACTOR	RTU 903-2 PROCESS TANK BILL OF MATERIALS	SCALE:	N/A		
						DRAWN BY:	RMF			
						CAD FILE:	SCI3079_RTU903-2			




BIOREACTOR TRANSFER PUMP

COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
OR	ORANGE
Y	YELLOW
G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION



11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

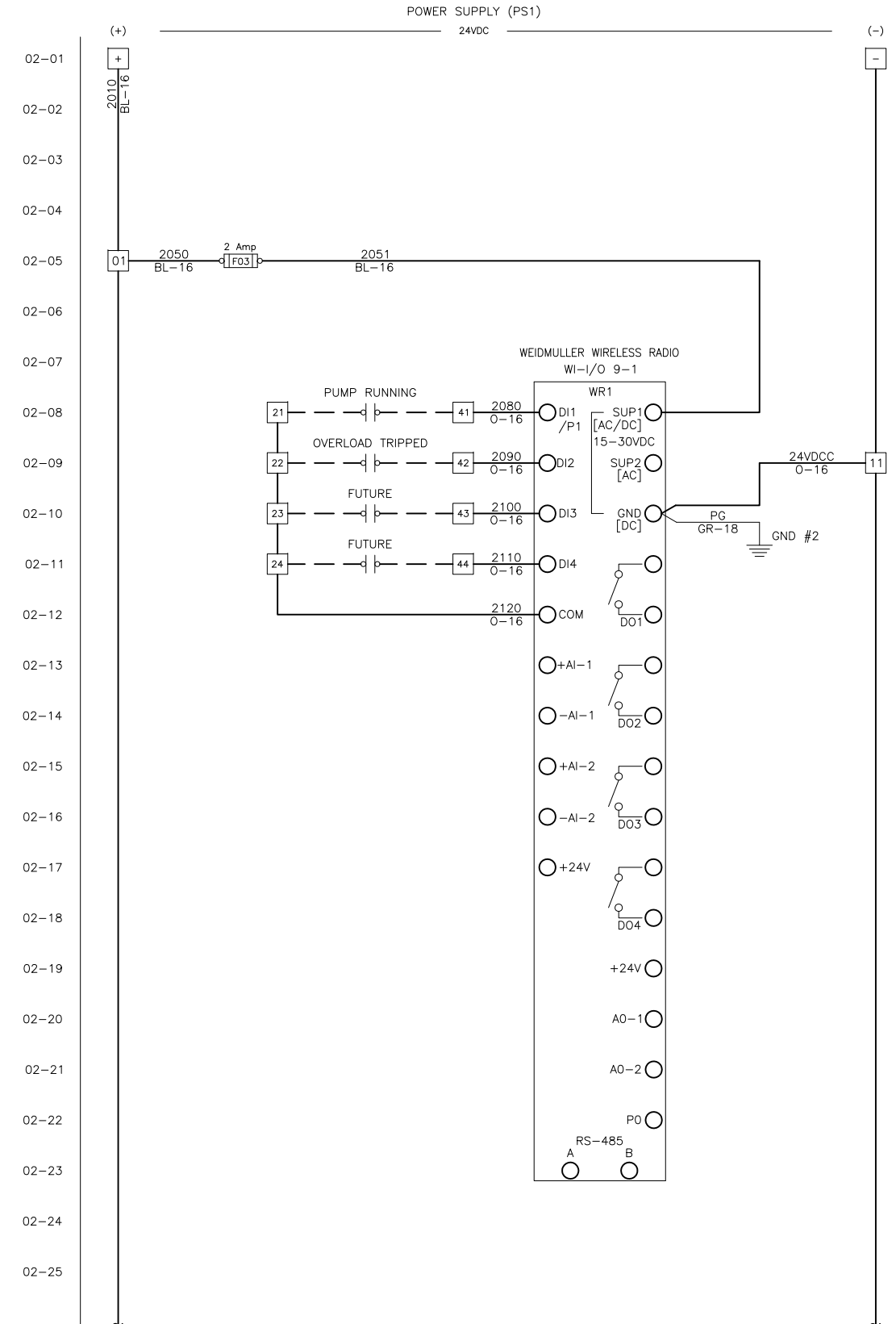
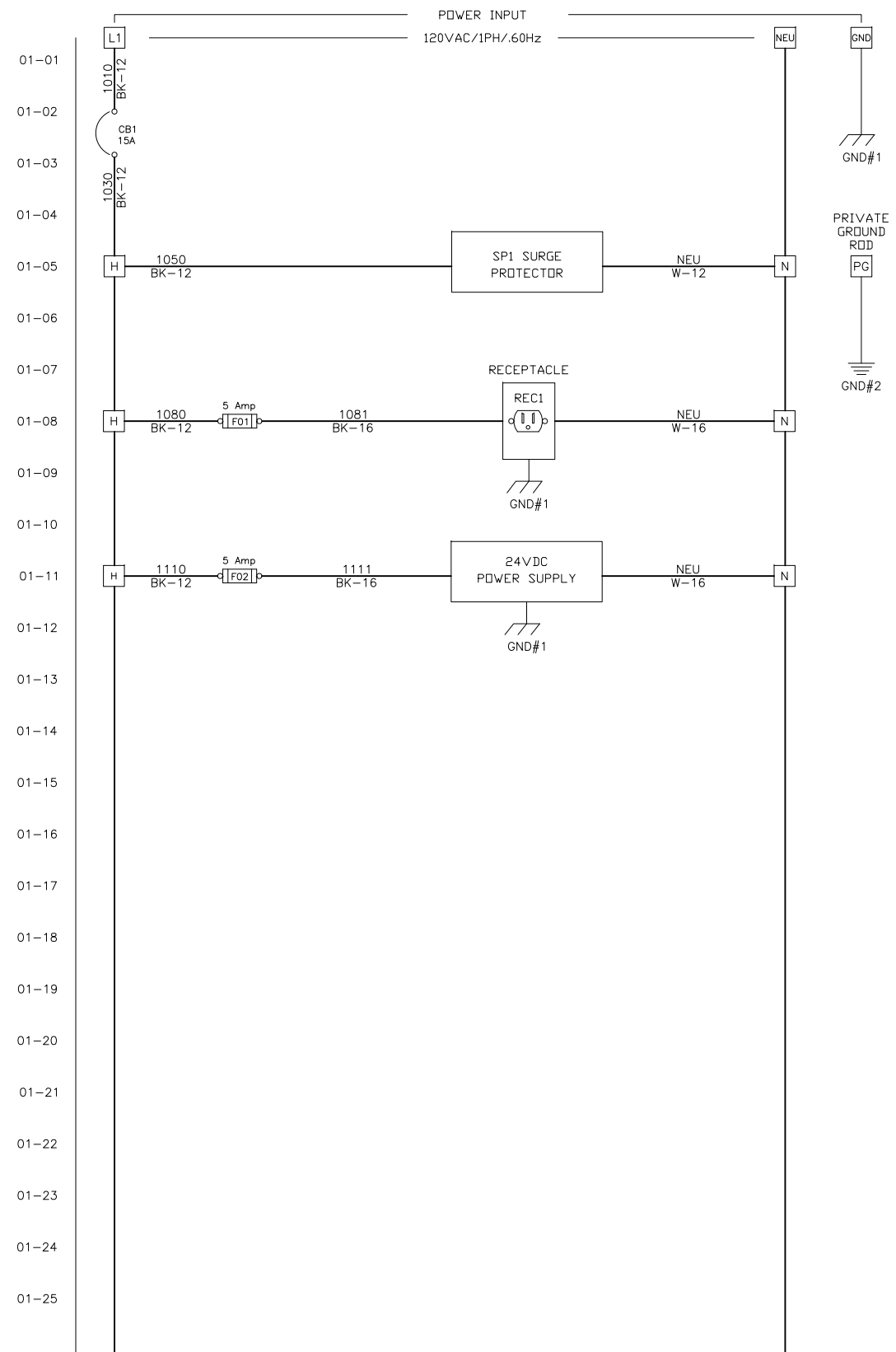
ENGINEER

PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
TRANSFER PUMP PANEL
FIELD WIRING DIAGRAM

DATE:	4/1/2010
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-2
DWG. NO.	3079
SH	8
OF	8

RTU 903-3: CS-EXW01



NOTE 1: DASHED LINES INDICATE FIELD WIRING

COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
OR	ORANGE
Y	YELLOW
G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

REV #	DATE	REVISION

SCI
SYSTEM CONTROLS & INSTRUMENTATION

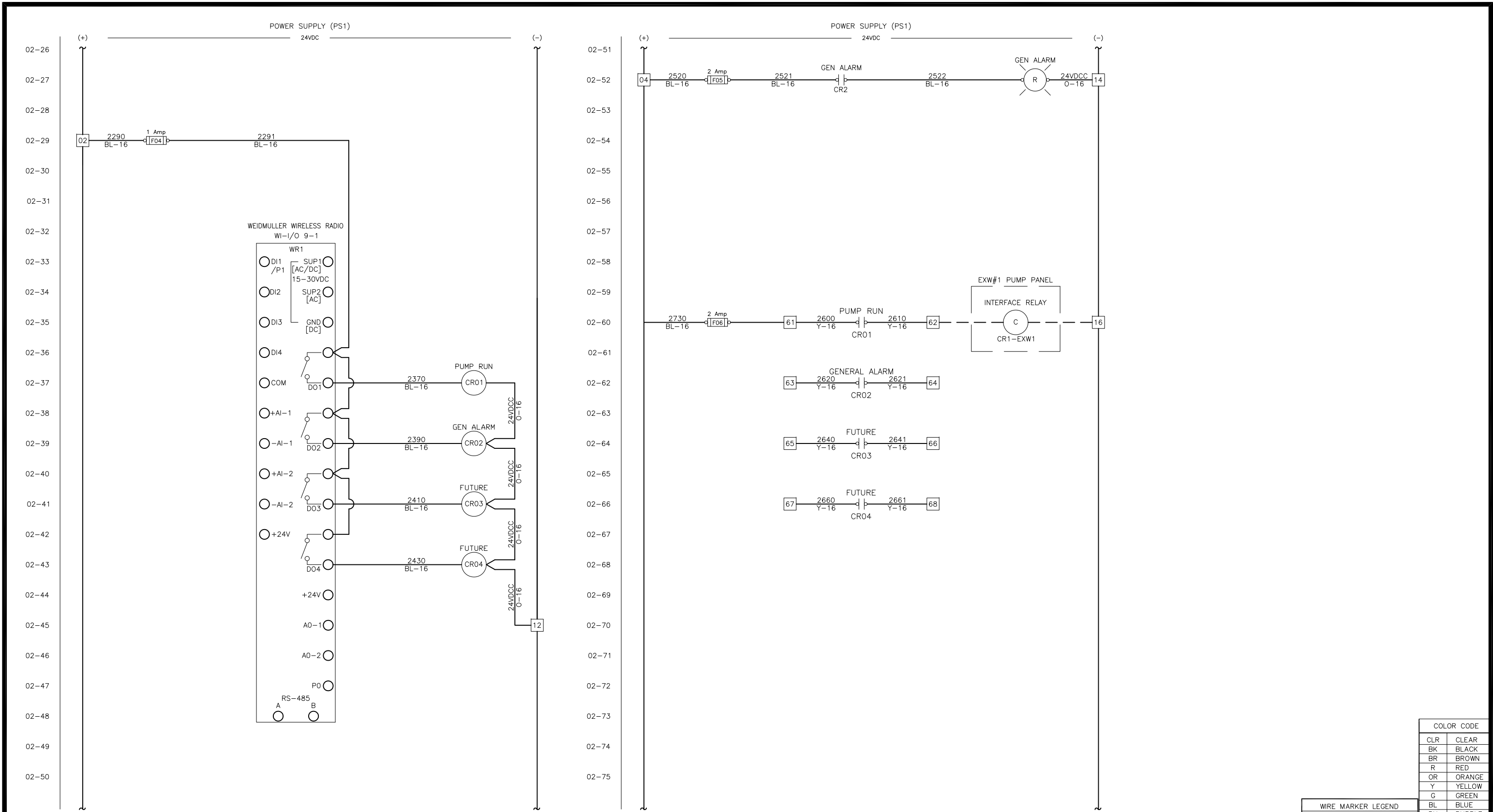
11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
CAMP STANLEY BIOREACTOR

SHEET TITLE
RTU 903-3 CONTROL PANEL FOR EXTRACTION WELL #1

DATE:	8/10/2009	SH	OF
SCALE:	N/A	3079	1 8
DRAWN BY:	RMF		
CAD FILE:	SCI3079_RTU903-3		
DWG. NO.			



NOTE 1: DASHED LINES INDICATE FIELD WIRING

COLOR CODE	
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G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

REV #	DATE	REVISION

11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

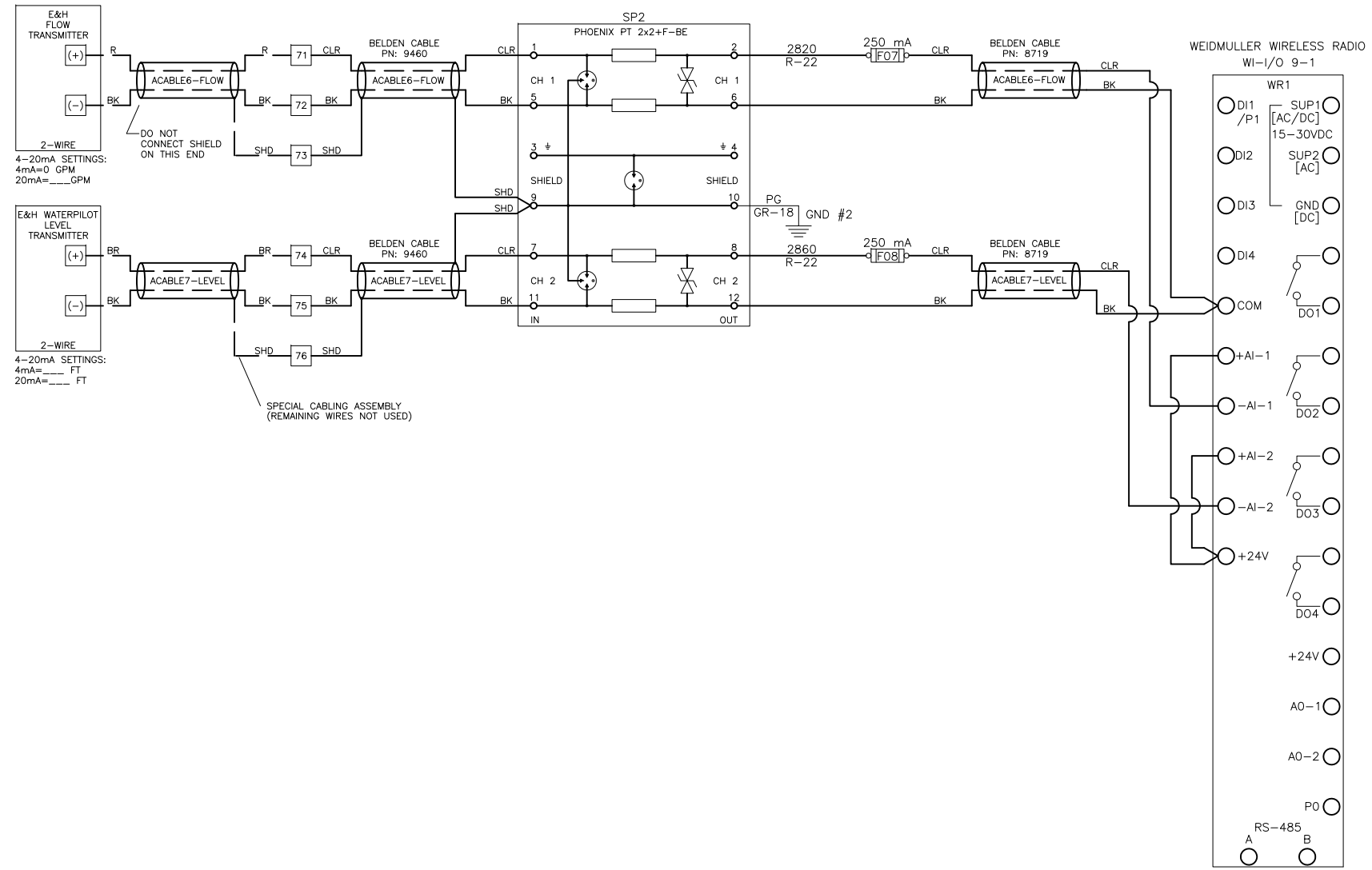
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**CAMP STANLEY
BIOREACTOR**

SHEET TITLE
**RTU 903-3
CONTROL PANEL FOR
EXTRACCTION WELL #1**

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-3
DWG. NO.	3079
SH	2
OF	8

POWER SUPPLY (PS1)
24VDC

02-76
02-77
02-78
02-79
02-80
02-81
02-82
02-83
02-84
02-85
02-86
02-87
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02-97
02-98
02-99
02-100



E&H FLOW TRANSMITTER
2-WIRE
4-20mA SETTINGS:
4mA=D GPM
20mA=___GPM

E&H WATERPILOT LEVEL TRANSMITTER
2-WIRE
4-20mA SETTINGS:
4mA=___ FT
20mA=___ FT

SPECIAL CABLING ASSEMBLY
(REMAINING WIRES NOT USED)

COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
OR	ORANGE
Y	YELLOW
G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION

SCI
SYSTEM CONTROLS & INSTRUMENTATION

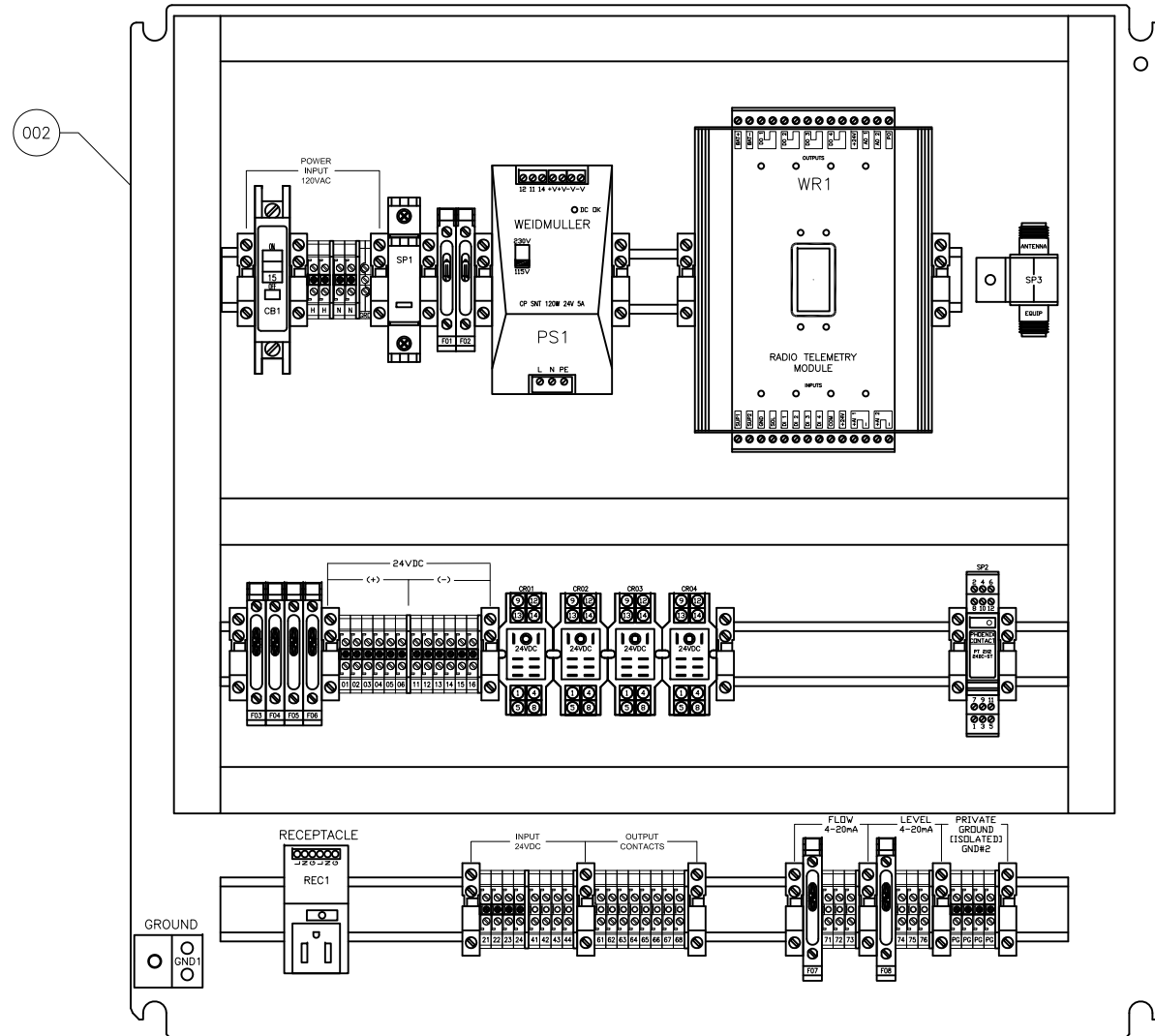
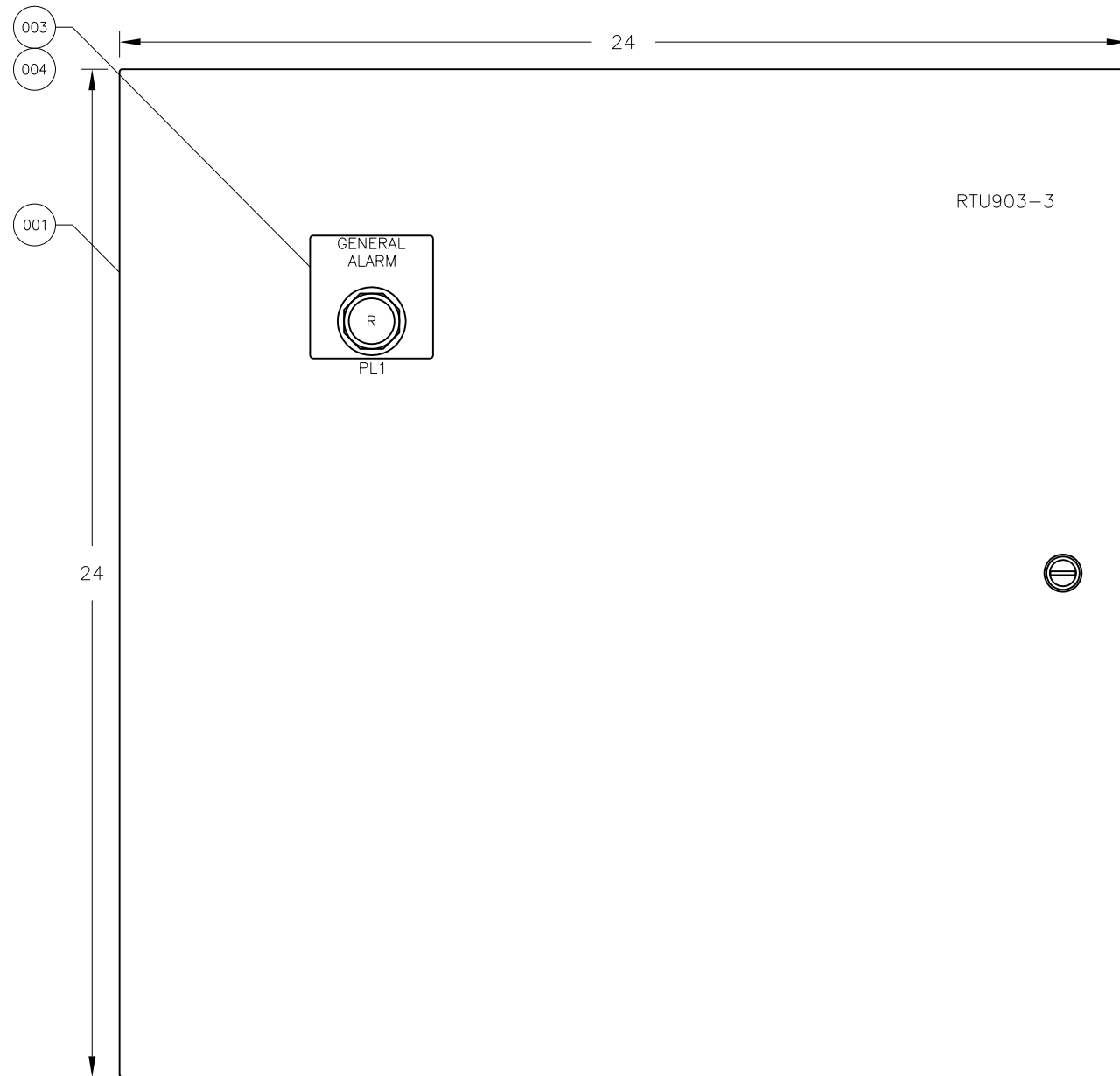
11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
RTU 903-3
CONTROL PANEL FOR
EXTRACTION WELL #1

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-3
DWG. NO.	3079
SH	OF
3	8



REV #	DATE	REVISION

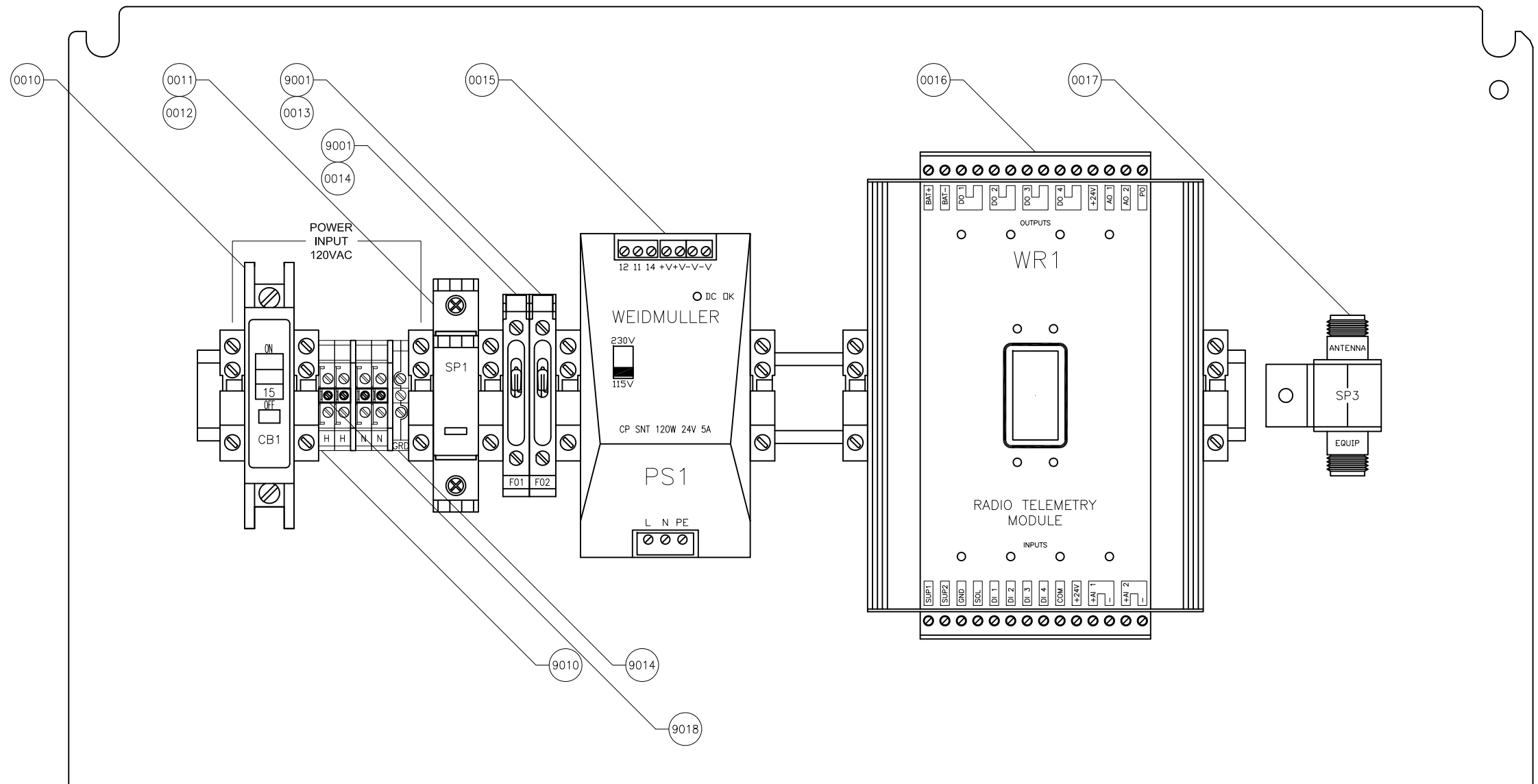
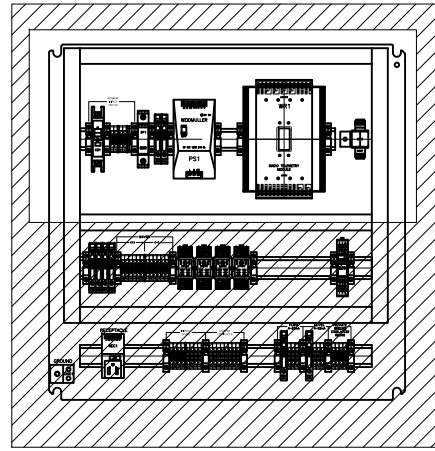

SYSTEM CONTROLS & INSTRUMENTATION
 11218 IH-10 EAST
 CONVERSE, TEXAS 78109
 PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
**CAMP STANLEY
 BIOREACTOR**

SHEET TITLE
**RTU 903-3
 CONTROL BACK PANEL
 FOR EXTRACTION WELL #1**

DATE:	8/10/2009
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-3
DWG. NO.	3079
SH	4
OF	8



REV #	DATE	REVISION

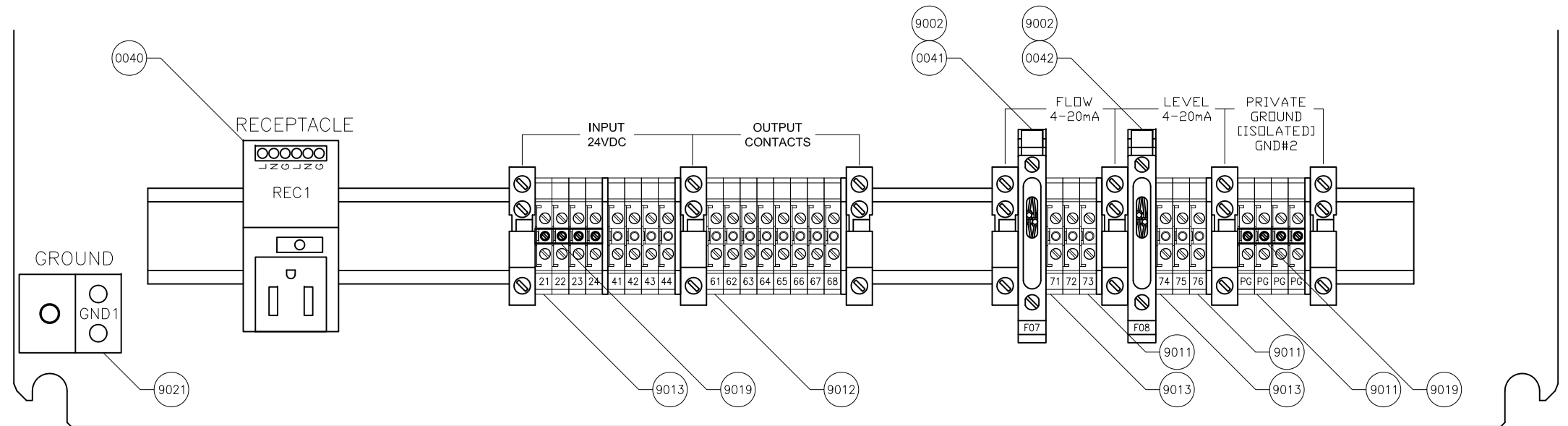
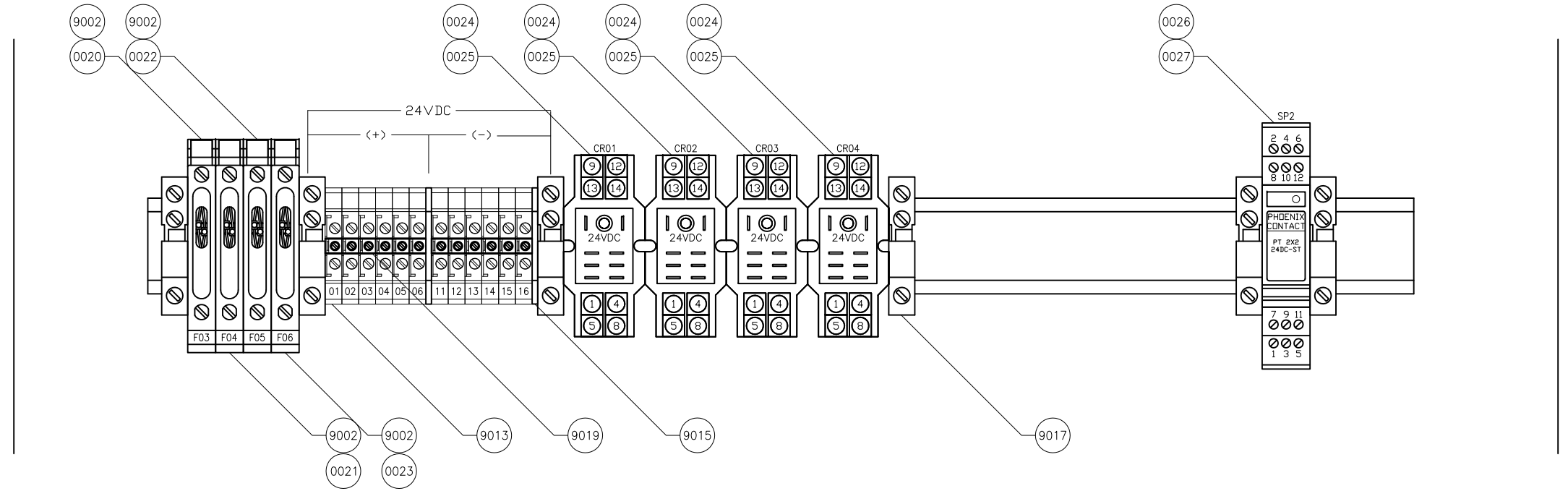
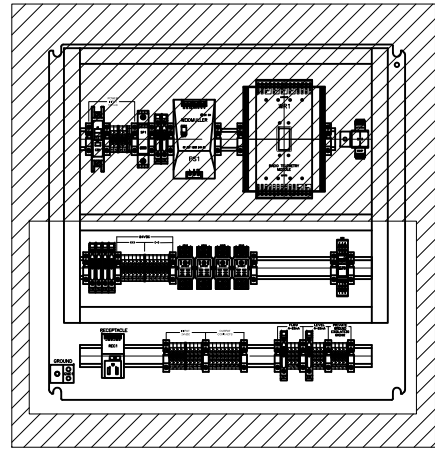

SCI
 SYSTEM CONTROLS & INSTRUMENTATION
 11218 IH-10 EAST
 CONVERSE, TEXAS 78109
 PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
RTU 903-3
CONTROL PANEL PARTS LAYOUT
EXTRACTION WELL #1

DATE: 8/10/09
 SCALE: 1:2
 DRAWN BY: RMF
 CAD FILE: SCI3079_RTU903-3
 DWG. NO. 3079
 SH 5 OF 8



REV #	DATE	REVISION


SYSTEM CONTROLS & INSTRUMENTATION
 11218 IH-10 EAST
 CONVERSE, TEXAS 78109
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ENGINEER

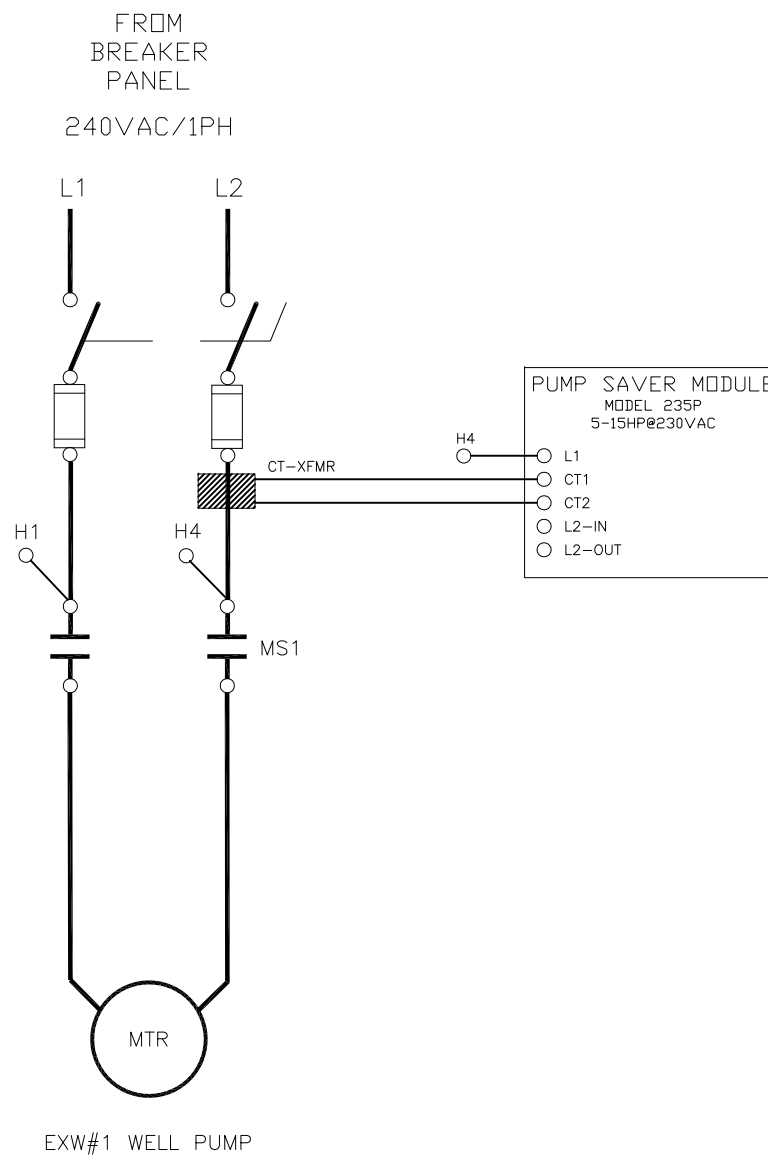
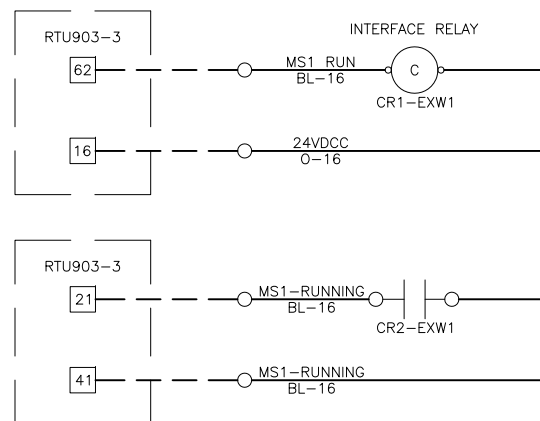
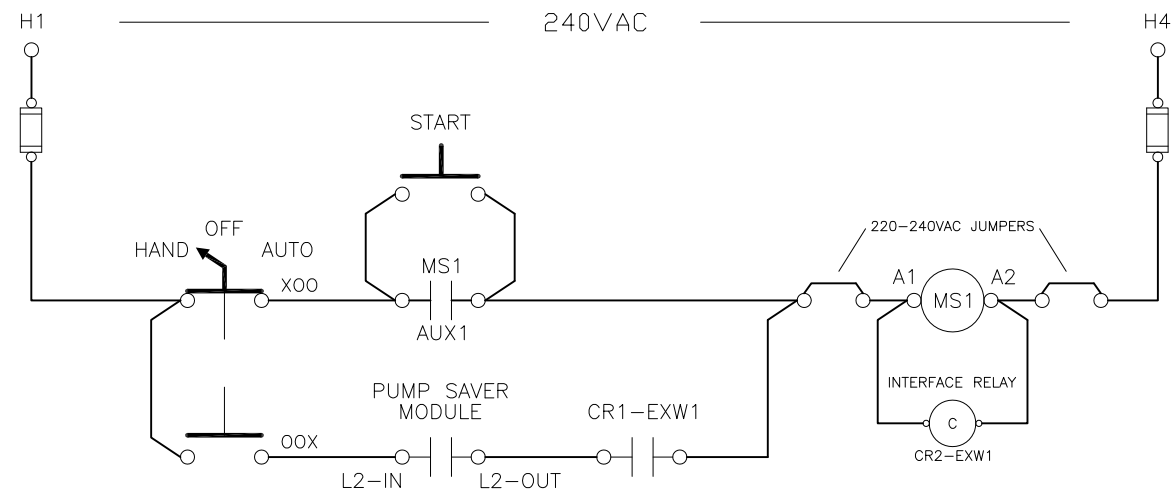
PROJECT TITLE
**CAMP STANLEY
 BIOREACTOR**

SHEET TITLE
**RTU 903-3
 CONTROL PANEL PARTS LAYOUT
 EXTRACTION WELL #1**

DATE:	8/10/09
SCALE:	1:2
DRAWN BY:	RMF
CAD FILE:	SCI3079_RTU903-3
DWG. NO.	3079
SH	OF
6	8

BILL OF MATERIAL						
ITEM_ID	DEVICE_ID	COUNT	MFG_#	DESCRIPTION	MFG_NAME	PART_KEY_#
0001	RTU903-3	1	CSD242410SS	CONCEPT ENCLOSURE, 24"HX24"WX10"D NEMA 4, 304SS	HOFFMAN	
0002	RTU903-3	1	CP2424	CONCEPT ENCLOSURE BACK PANEL, 24"X24"	HOFFMAN	
0003	PL1	1	800T-QBH24R	PUSH BUTTON PILOT LED, 30.5MM, 24VDC, RED LENS, 1NO / 1NC	AB	
0004	PL1	1		PLASTIC LABEL, 30.5MM PILOT LAMP, RED W/WHITE LETTERING, 2.4"WX2.4"H	SCI	999999
0010	CB1	1	QOU115	CIRCUIT BREAKER, 15A, UL489, 10K AIR, 1-#14-#2, CU OR AL	SQD	
0011		1	PU II 1S	HOLDER, SURGE PROTECTION	WEIDMULLER	
0012	SP1	1	PU II 1	SURGE PROTECTION MODULE, 130VAC, IN:20KA, IMAX:40KA, L-N	WEIDMULLER	8859950000
0013		1	MDL-5	FUSE, TIME DELAY FURRULE, 5A, 250VAC, 1/4"X1.25"	BUSSMANN	
0014		1	MDL-5	FUSE, TIME DELAY FURRULE, 5A, 250VAC, 1/4"X1.25"	BUSSMANN	
0015	PS1	1	CP SNT 120W 24V 5A	POWER SUPPLY, TS-35 DIN-RAIL MOUNT, 88-132VAC, 176-264VAC, 3A@115VAC/2A@230VAC, 50/60HZ, 24-28VDC, 5.0A, 120W	WEIDMULLER	
0016	WR1	1	WI-I/O 9-1	WIRELESS RADIO, DIN-RAIL MOUNT, 15-30VDC, 4 INPUTS, 2- 4-20MA INPUTS, 4 OUTPUTS, 2- 4-20MA OUTPUTS, RS232/RS485	WEIDMULLER	8708670000
0017	SP3	1	IS-50NX-C2	BROADBAND DC BLOCKED PROTECTOR, 125-1000MHZ, 50 OHM, 50-375W, VSWR: 1.1:1, SURGE 50KA, N-FEMALE X N-FEMALE	POLYPHASER	
0020		1	AGC-2	FUSE, FAST ACTING FURRULE, 2A, 250VAC, 1/4"X1.25"	BUSSMANN	
0021		1	AGC-1	FUSE, FAST ACTING FURRULE, 1A, 250VAC, 1/4"X1.25"	BUSSMANN	
0022		1	AGC-2	FUSE, FAST ACTING FURRULE, 2A, 250VAC, 1/4"X1.25"	BUSSMANN	
0023		1	AGC-2	FUSE, FAST ACTING FURRULE, 2A, 250VAC, 1/4"X1.25"	BUSSMANN	
0024		4	SH2B-05	RELAY MOUNTING SOCKET, DIN RAIL, 2PDT, 300V/10A, 2-#12	IDEC	
0025		4	RH2B-ULC-DC24V	RELAY, 2PDT, COIL: 24VDC/ 36.9MA, 1/6HP, W/INDICATOR & CHECK BUTTON	IDEC	
0026		1	PT 2X2+F-BE	BASE, GAS-FILLED SURGE ARRESTOR, 2 2-WIRE FLOATING SIGNALS, 600V/ 450MA, DIN RAIL	PHOENIX	2839224
0027		1	PT 2X2-24DC-ST	PROTECTIVE PLUG, 2 2-CORE FLOATING SIGNALS, 24VDC, MAX CORE SURGE 10KA @ (8-20US)	PHOENIX	2838228
0040	REC1	1	991548	RECEPTACLE, SIMPLEX 15A, 120VAC, UL, T35 DIN RAIL MOUNT	WEIDMULLER	991548
0041		1	AGC-1/4	FUSE, FAST ACTING FURRULE, 250MA, 250VAC, 1/4"X1.25"	BUSSMANN	
0042		1	AGC-1/4	FUSE, FAST ACTING FURRULE, 250MA, 250VAC, 1/4"X1.25"	BUSSMANN	
9001		2	UK 6,3-HESILA 250	FUSE BLOCK, ILL 110-250V, 600V/10A, 26-8AWG	PHOENIX	3004249
9002		6	UK 6,3-HESILED 24	FUSE BLOCK, ILL 15-30V, 600V/10A, 26-8AWG	PHOENIX	3004265
9010		4	UK 5 N	TERMINAL BLOCK, GRAY, 600V/30A, 30-10AWG	PHOENIX	3004362
9011		6	UK 5 N GN	TERMINAL BLOCK, GREEN, 600V/30A, 30-10AWG	PHOENIX	3003965
9012		8	UK 5 N YE	TERMINAL BLOCK, YELLOW, 600V/30A, 30-10AWG	PHOENIX	3003952
9013		24	UK 5 N OG	TERMINAL BLOCK, ORANGE, 600V/30A, 30-10AWG	PHOENIX	3002908
9014		1	UKLKG 5	GROUND TERMINAL, 26-10AWG	PHOENIX	0441504
9015		10	D-UK 4/10	END COVER PLATE, GRAY	PHOENIX	3003020
9017		21	E/UK	END CLAMP, GRAY	PHOENIX	1201442
9018		2	FBI 2-6	CROSS CONNECTOR/JUMPER, 2 POSITION, AL	PHOENIX	0203438
9019		2	FBI 10-6	CROSS CONNECTOR/JUMPER, 10 POSITION, AL	PHOENIX	0203250
9019		2	FBI 10-6	CROSS CONNECTOR/JUMPER, 10 POSITION, AL	PHOENIX	0203250
9021	GND1	1	K2A25U	GROUNDING LUG, 2 CONDUCTOR, 1/0-14AWG	BURNDY	

REV #	DATE	REVISION	 SYSTEM CONTROLS & INSTRUMENTATION	11218 IH-10 EAST CONVERSE, TEXAS 78109 PHONE (210) 661-9901	ENGINEER	PROJECT TITLE	SHEET TITLE	DATE:	8/10/2009	SH	OF	
						CAMP STANLEY BIOREACTOR	RTU 903-3 CONTROL PANEL BILL OF MATERIALS FOR EXTRACTION WELL #1	SCALE:	N/A			DRAWN BY:
								CAD FILE:	SCI3079_RTU903-3		7	8




COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
OR	ORANGE
Y	YELLOW
G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION


SYSTEM CONTROLS & INSTRUMENTATION
 11218 IH-10 EAST
 CONVERSE, TEXAS 78109
 PHONE (210) 661-9901

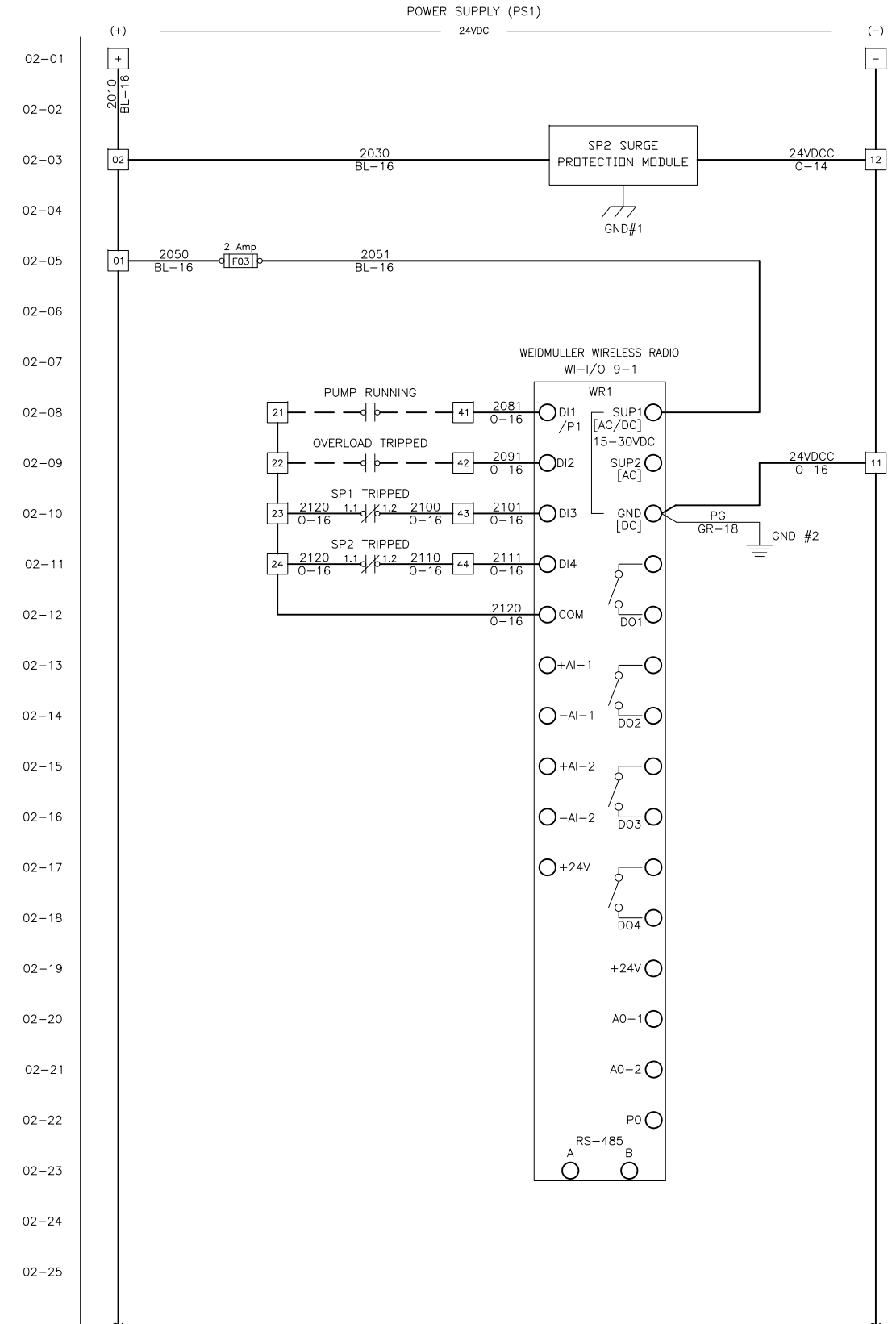
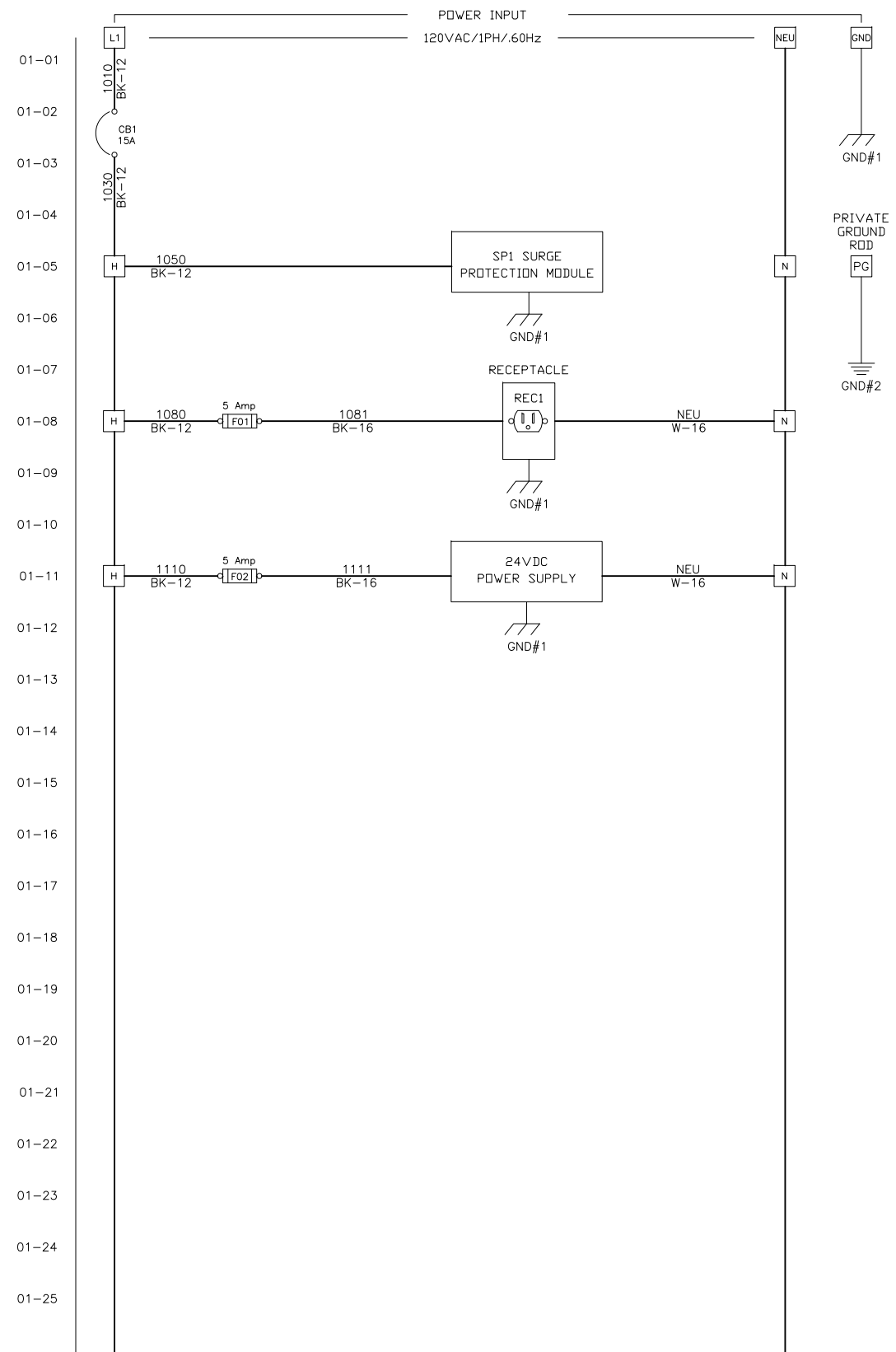
ENGINEER

PROJECT TITLE
**CAMP STANLEY
 BIOREACTOR**

SHEET TITLE
**PUMP CONTROL PANEL
 FIELD WIRING DIAGRAM
 FOR EXTRACTION WELL #1**

DATE:	3/1/2010	SH	OF
SCALE:	N/A	8	8
DRAWN BY:	RMF		
CAD FILE:	SCI3079_RTU903-3		
DWG. NO.	3079		

RTU 903-4: CS-EXW02



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NOTE 1: DASHED LINES INDICATE FIELD WIRING

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
OR	ORANGE
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BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

REV #	DATE	REVISION



11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

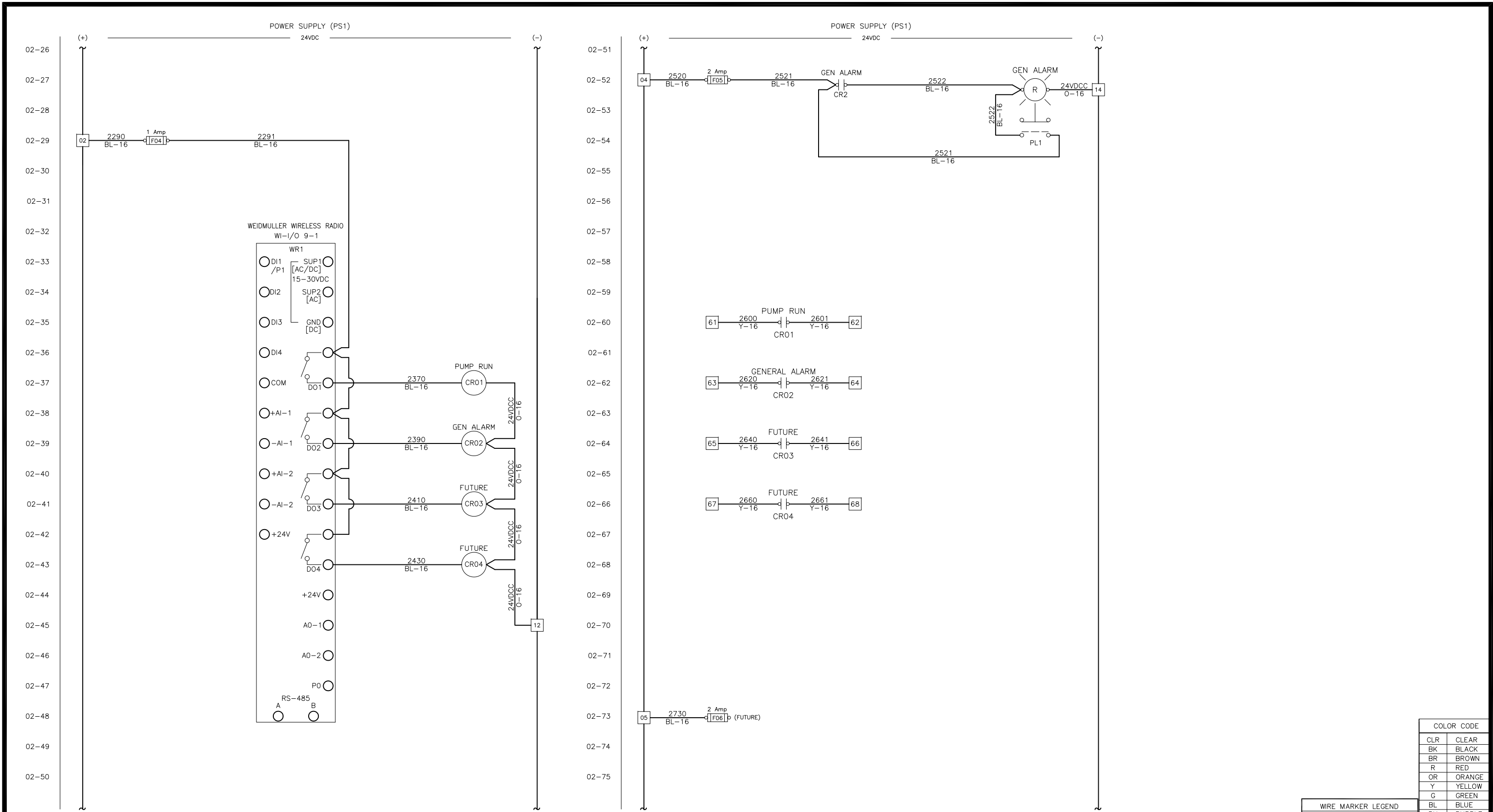
SYSTEM CONTROLS & INSTRUMENTATION

ENGINEER

PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
RTU 903-4
WELL #2 WIRING DIAGRAM

DATE:	3/1/2010
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI2829_RTU903-4
DWG. NO.	2829
SH	OF
1	7



COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
R	RED
OR	ORANGE
Y	YELLOW
G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION

SCI
SYSTEM CONTROLS & INSTRUMENTATION

11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

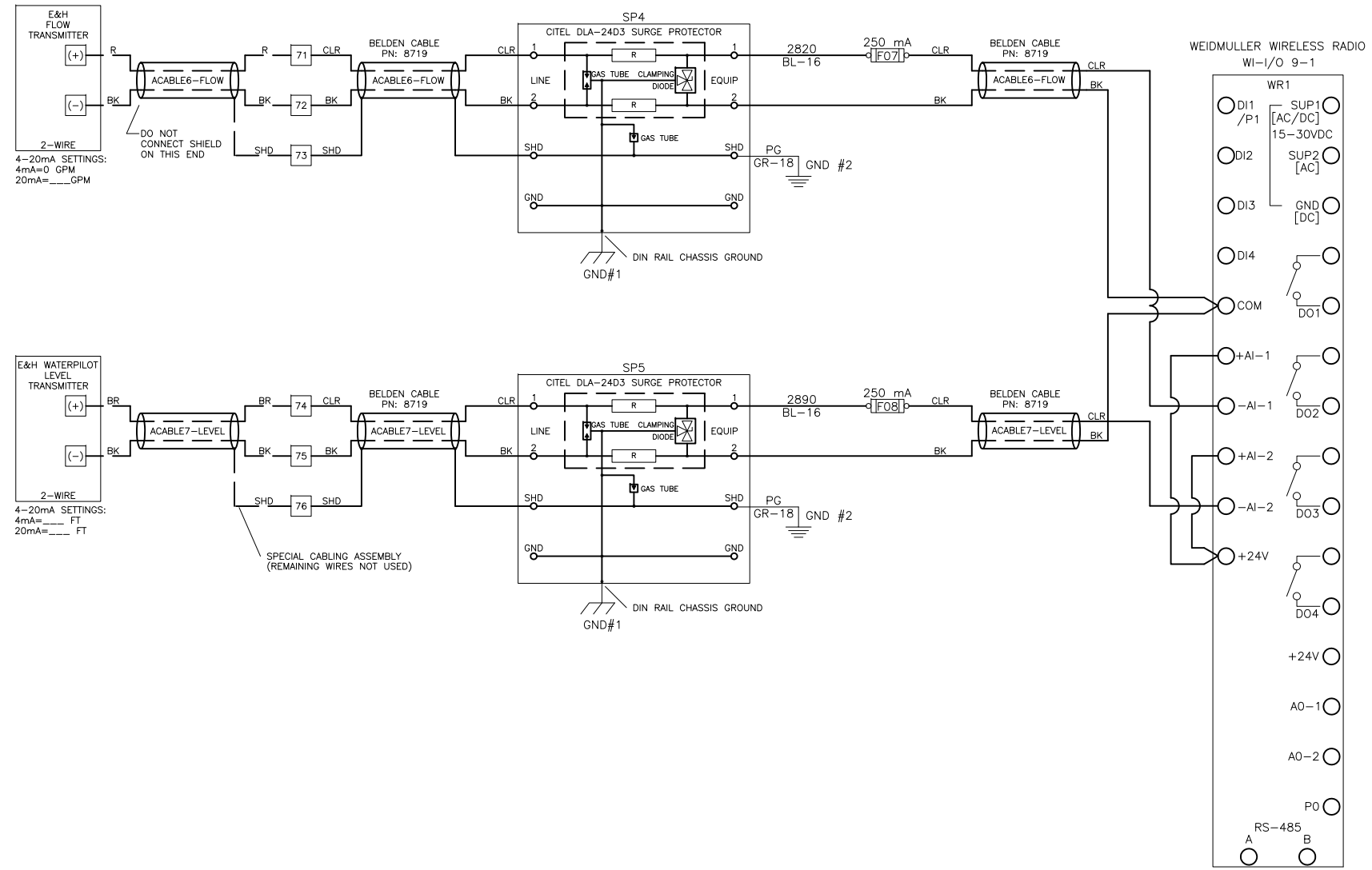
PROJECT TITLE
**CAMP STANLEY
BIOREACTOR**

SHEET TITLE
**RTU 903-4
WELL #2 WIRING DIAGRAM**

DATE:	3/1/2010	SH	OF
SCALE:	N/A	2	7
DRAWN BY:	RMF		
CAD FILE:	SCI2829_RTU903-4		
DWG. NO.	2829		

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02-99
02-100

POWER SUPPLY (PS1)
24VDC



E&H FLOW TRANSMITTER
2-WIRE
4-20mA SETTINGS:
4mA=D GPM
20mA=___GPM

E&H WATERPILOT LEVEL TRANSMITTER
2-WIRE
4-20mA SETTINGS:
4mA=___ FT
20mA=___ FT

WEIDMULLER WIRELESS RADIO
WI-I/O 9-1

COLOR CODE	
CLR	CLEAR
BK	BLACK
BR	BROWN
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Y	YELLOW
G	GREEN
BL	BLUE
PU	PURPLE
GY	GREY
W	WHITE

WIRE MARKER LEGEND	
COLOR	SIZE
Y	18

NOTE 1: DASHED LINES INDICATE FIELD WIRING

REV #	DATE	REVISION

SCI
SYSTEM CONTROLS & INSTRUMENTATION

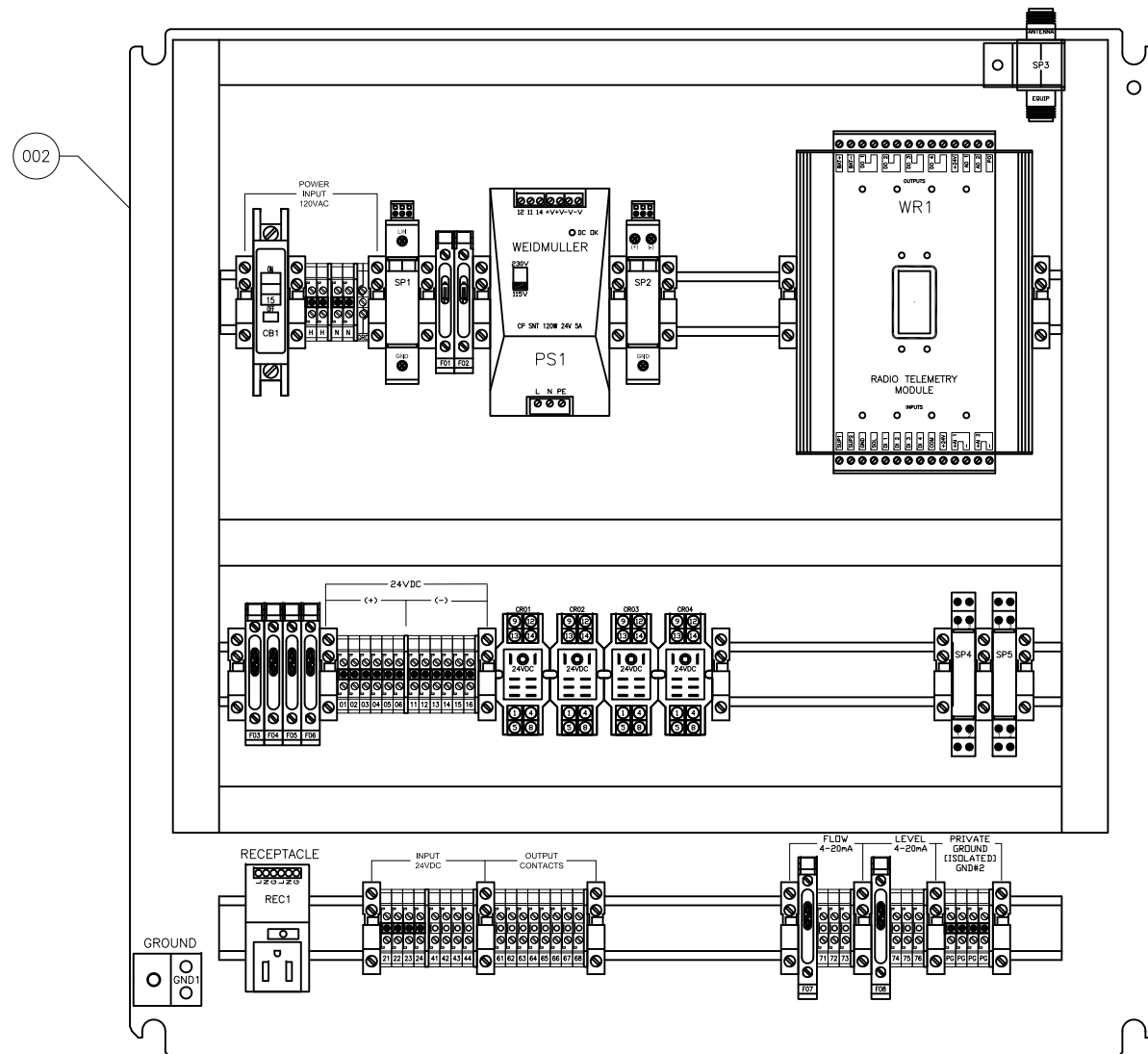
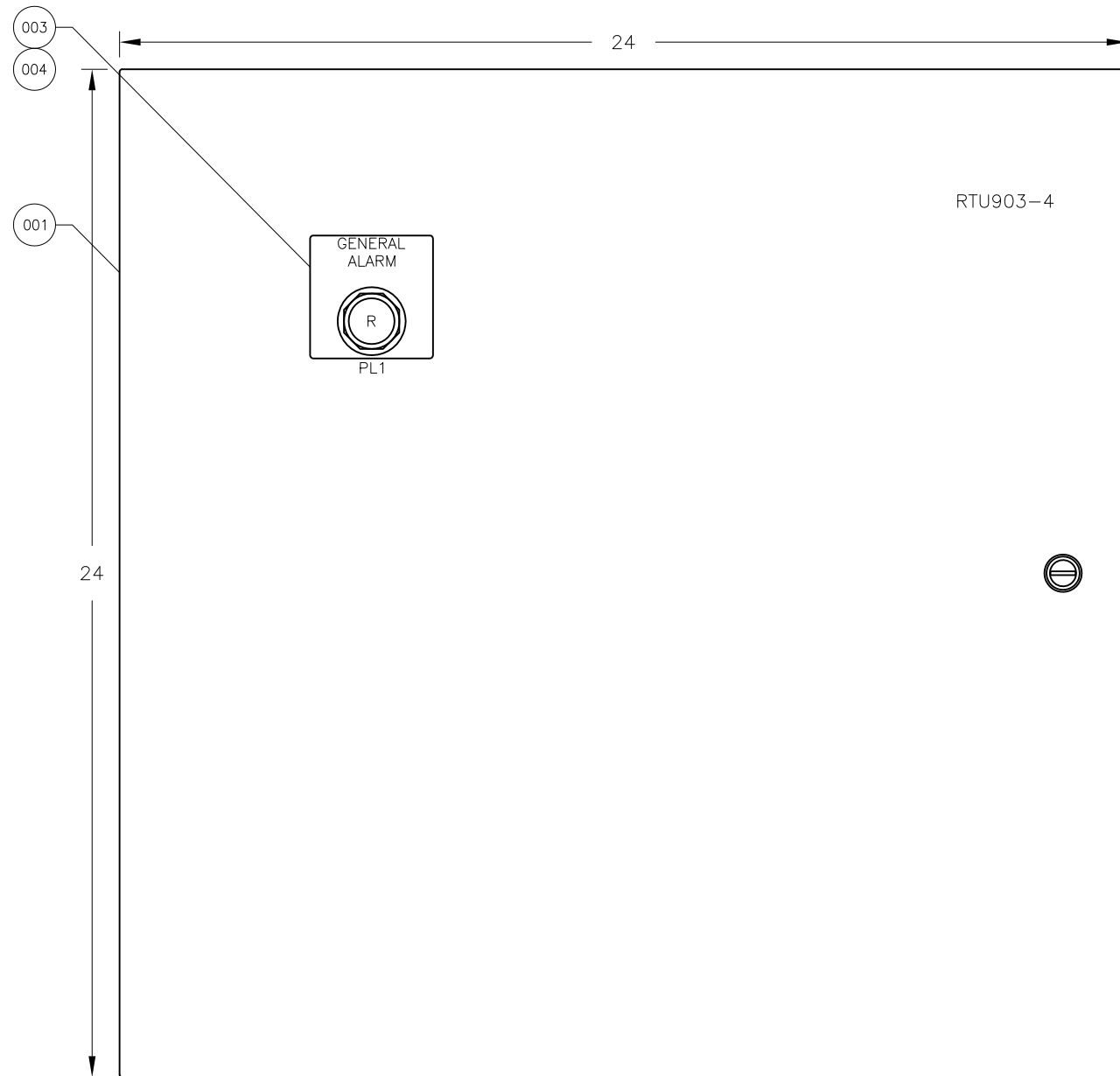
11218 IH-10 EAST
CONVERSE, TEXAS 78109
PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
RTU 903-4
WELL #2 WIRING DIAGRAM

DATE:	3/1/2010
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI2829_RTU903-4
DWG. NO.	2829
SH	3
OF	7



REV #	DATE	REVISION

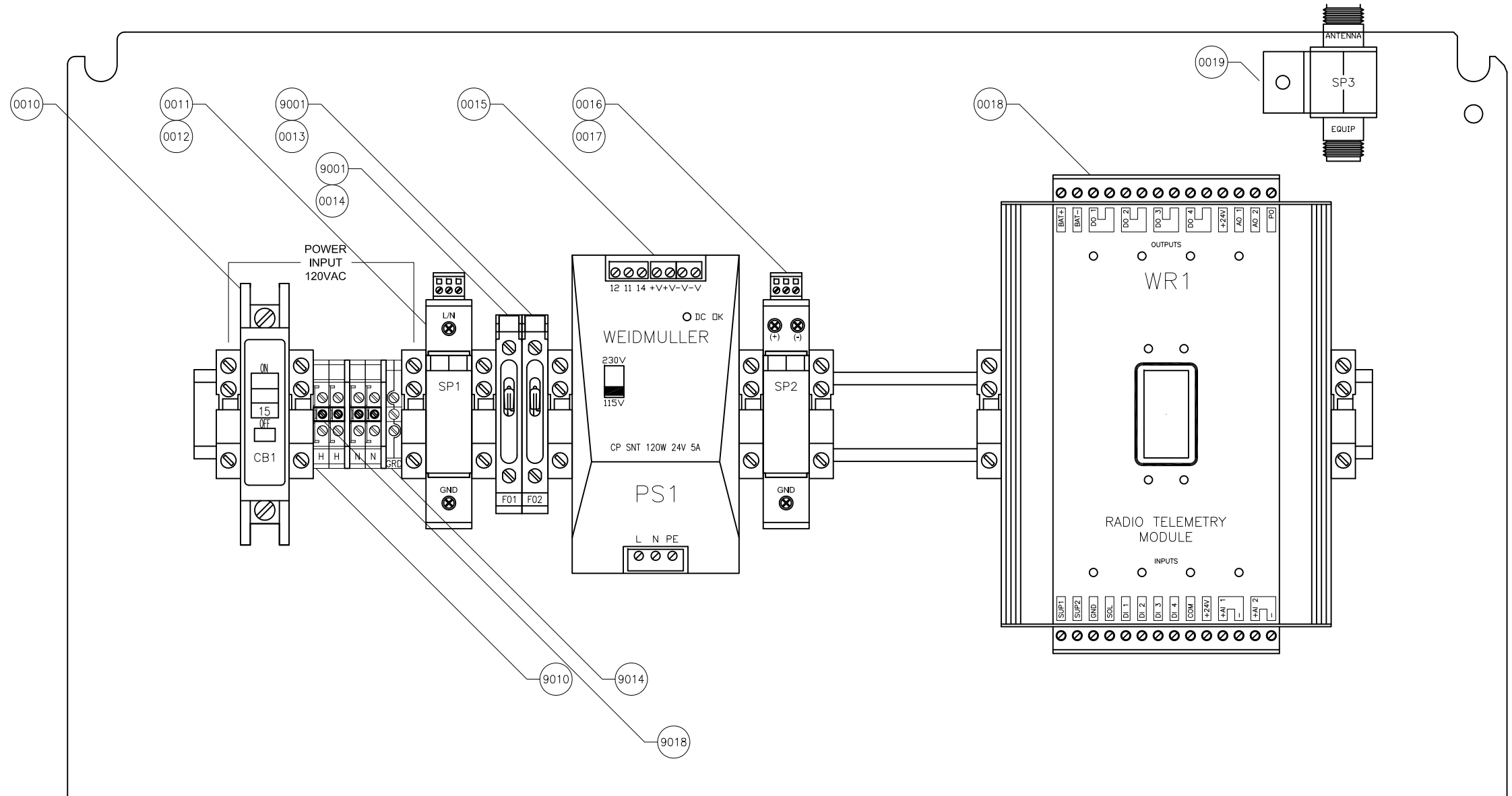
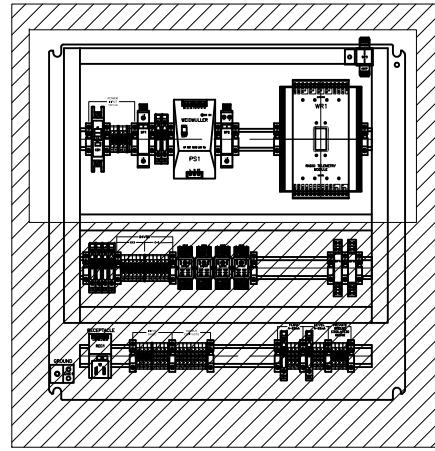

SYSTEM CONTROLS & INSTRUMENTATION
 11218 IH-10 EAST
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 PHONE (210) 661-9901

ENGINEER

PROJECT TITLE
**CAMP STANLEY
 BIOREACTOR**

SHEET TITLE
**RTU 903-4
 WELL #2 BACK PANEL LAYOUT**

DATE:	3/1/2010
SCALE:	N/A
DRAWN BY:	RMF
CAD FILE:	SCI2829_RTU903-4
DWG. NO.	2829
SH	4
OF	7



REV #	DATE	REVISION


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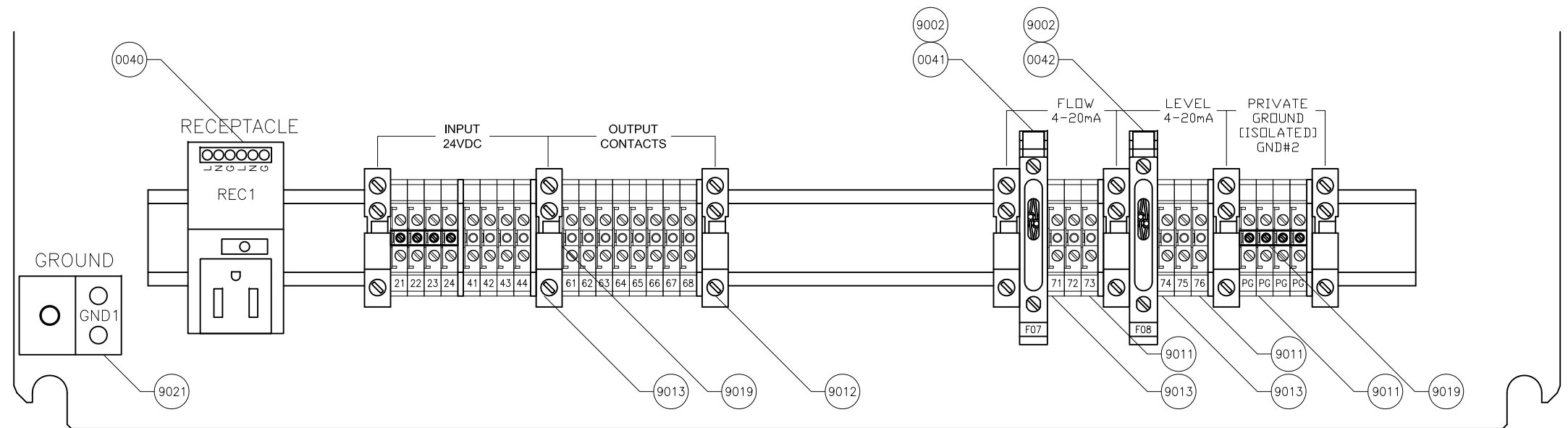
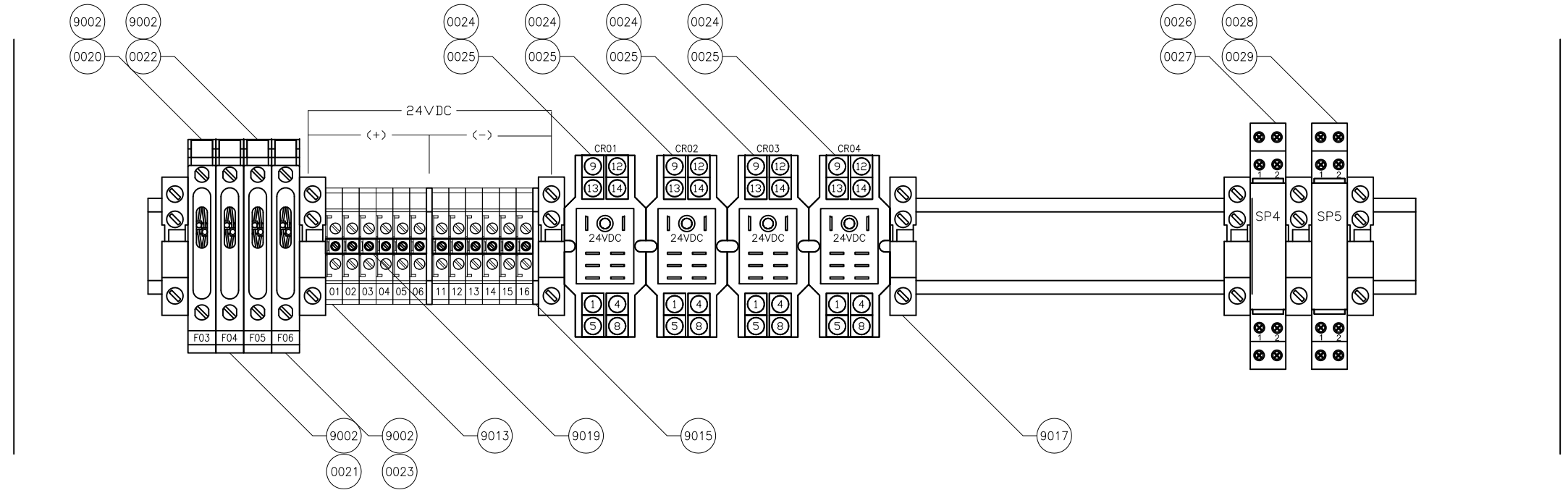
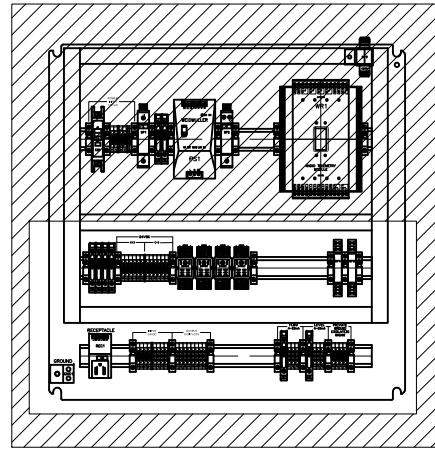
ENGINEER

PROJECT TITLE
CAMP STANLEY
BIOREACTOR

SHEET TITLE
RTU 903-4
WELL #2 PARTS LAYOUT

DATE: 3/1/2010
 SCALE: 1:2
 DRAWN BY: RMF
 CAD FILE: SCI2829_RTU903-4
 DWG. NO. 2829

SH	OF
5	7



REV #	DATE	REVISION


SYSTEM CONTROLS & INSTRUMENTATION
 11218 IH-10 EAST
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ENGINEER

PROJECT TITLE
**CAMP STANLEY
 BIOREACTOR**

SHEET TITLE
**RTU 903-4
 WELL #2 PARTS LAYOUT**

DATE:	3/1/2010
SCALE:	1:2
DRAWN BY:	RMF
CAD FILE:	SCI2829_RTU903-4
DWG. NO.	2829
SH	OF
6	7

BILL OF MATERIALS					
ITEM_ID	DEVICE_ID	QUANTITY	DESCRIPTION	MFG_#	MFG_NAME
0001	RTU903-4	1	CONCEPT ENCLOSURE, 24"X24"X10"D NEMA 4, 304SS	CSD242410SS	HOFFMAN
0002	RTU903-4	1	CONCEPT ENCLOSURE BACK PANEL, 24"X24"	CP2424	HOFFMAN
0003	PL1	1	PUSH BUTTON PILOT LED, 30.5MM, 24VDC, RED LENS, 1ND / 1NC	800T-QBH24R	AB
0004	PL1	1	PLASTIC LABEL, 30.5MM PILOT LAMP, RED W/WHITE LETTERING, 2.4"X2.4"H		SCI
0010	CB1	1	CIRCUIT BREAKER, 15A, UL489, 10K AIR, 1-#14-#2, CU DR AL	QDU115	SQD
0011	SP1	1	SURGE PROTECTION MODULE, 120VAC, IMAx:40KA, VMAx: 150V	DS41-120	CITEL
0012		1	HOLDER, SURGE PROTECTION	DS41-120	CITEL
0013		1	FUSE, TIME DELAY FURRULE, 5A, 250VAC, 1/4"X1.25"	MDL-5	BUSSMANN
0014		1	FUSE, TIME DELAY FURRULE, 5A, 250VAC, 1/4"X1.25"	MDL-5	BUSSMANN
0015	PS1	1	POWER SUPPLY, TS-35 DIN-RAIL MOUNT, 88-132VAC, 176-264VAC, 3A@115VAC/2A@230VAC, 50/60HZ, 24-28VDC, 5.0A, 120W	CP SNT 120W 24V 5A	WEIDMULLER
0016	SP2	1	SURGE PROTECTION MODULE, 24VDC, IMAx:2KA, VMAx: 30V	DS220-24DC	CITEL
0017		1	HOLDER, SURGE PROTECTION	DS220-24DC	CITEL
0018	WR1	1	WIRELESS RADIO, DIN-RAIL MOUNT, 15-30VDC, 4 INPUTS, 2- 4-20MA INPUTS, 4 OUTPUTS, 2- 4-20MA OUTPUTS, RS232/RS485	WI-I/D 9-1	WEIDMULLER
0019	SP3	1	SURGE PROTECTOR, GAS TUBE, DC-5GHZ, 50 OHM, MAX POWER: 25W, VSWR: 1.2:1, SURGE 20KA, N-FEMALE X N-FEMALE, BULKHEAD MOUNT	P8AX09-N/FF	CITEL
0020		1	FUSE, FAST ACTING FURRULE, 2A, 250VAC, 1/4"X1.25"	AGC-2	BUSSMANN
0021		1	FUSE, FAST ACTING FURRULE, 1A, 250VAC, 1/4"X1.25"	AGC-1	BUSSMANN
0022		1	FUSE, FAST ACTING FURRULE, 2A, 250VAC, 1/4"X1.25"	AGC-2	BUSSMANN
0023		1	FUSE, FAST ACTING FURRULE, 2A, 250VAC, 1/4"X1.25"	AGC-2	BUSSMANN
0024		4	RELAY MOUNTING SOCKET, DIN RAIL, 2PDT, 300V/10A, 2-#12	SH2B-05	IDEC
0025		4	RELAY, 2PDT, COIL: 24VDC/ 36.9MA, 1/6HP, W/INDICATOR & CHECK BUTTON	RH2B-ULC-DC24V	IDEC
0026	SP4	1	SURGE PROTECTION MODULE, 4-20MA, IMAx:20KA, VMAx: 28VDC	DLA-24D3	CITEL
0027		1	HOLDER, SURGE PROTECTION, DLA SERIES	DLA-24D3	CITEL
0028	SP5	1	SURGE PROTECTION MODULE, 4-20MA, IMAx:20KA, VMAx: 28VDC	DLA-24D3	CITEL
0029		1	HOLDER, SURGE PROTECTION, DLA SERIES	DLA-24D3	CITEL
0040	REC1	1	RECEPTACLE, SIMPLEX 15A, 120VAC, UL, T35 DIN RAIL MOUNT	991548	WEIDMULLER
0041		1	FUSE, FAST ACTING FURRULE, 250MA, 250VAC, 1/4"X1.25"	AGC-1/4	BUSSMANN
0042		1	FUSE, FAST ACTING FURRULE, 250MA, 250VAC, 1/4"X1.25"	AGC-1/4	BUSSMANN
9001		2	FUSE BLOCK, ILL 110-250V, 600V/10A, 26-8AWG	UK 6,3-HESILA 250	PHOENIX
9002		6	FUSE BLOCK, ILL 15-30V, 600V/10A, 26-8AWG	UK 6,3-HESILED 24	PHOENIX
9010		4	TERMINAL BLOCK, GRAY, 600V/30A, 30-10AWG	UK 5 N	PHOENIX
9011		6	TERMINAL BLOCK, GREEN, 600V/30A, 30-10AWG	UK 5 N GN	PHOENIX
9012		8	TERMINAL BLOCK, YELLOW, 600V/30A, 30-10AWG	UK 5 N YE	PHOENIX
9013		24	TERMINAL BLOCK, ORANGE, 600V/30A, 30-10AWG	UK 5 N OG	PHOENIX
9014		1	GROUND TERMINAL, 26-10AWG	UKLKG 5	PHOENIX
9015		10	END COVER PLATE, GRAY	D-UK 4/10	PHOENIX
9017		23	END CLAMP, GRAY	E/UK	PHOENIX
9018		2	CROSS CONNECTOR/JUMPER, 2 POSITION, AL	FBI 2-6	PHOENIX
9019		4	CROSS CONNECTOR/JUMPER, 10 POSITION, AL	FBI 10-6	PHOENIX
9021	GND1	1	GROUNDING LUG, 2 CONDUCTOR, 1/0-14AWG	K2A25U	BURNDY

REV #	DATE	REVISION	 11218 IH-10 EAST CONVERSE, TEXAS 78109 PHONE (210) 661-9901	ENGINEER	PROJECT TITLE	SHEET TITLE	DATE:	3/1/2010	SH	OF
					CAMP STANLEY BIOREACTOR	RTU 903-4 WELL #2 BILL OF MATERIALS	SCALE:	N/A		
							DRAWN BY:	RMF		
							CAD FILE:	SCI2829_RTU903-4		
							DWG. NO.:	2829	7	7