

GENERAL NOTES

- ALL WIRING SHALL BE AS DIRECTED ON DWGS. AND AS FOLLOWS:
 MINIMUM WIRE SIZES (SIZE PER SCHEMATIC DIAGRAM)
 PANEL WIRING - TB TO PLC
 120VAC - #14 AWG (BELDEN #8520)
 24VDC - #18 AWG (BELDEN #8521)
 24VDC (ANALOG) - 2/C#16 SHLD (BELDEN #8451)

- FIELD WIRING
 120VAC - #14 AWG MTW
 24VDC (POWER) - #16 AWG MTW
 24VDC (ANALOG) - 2/C#16 SHLD
 24VDC (DIGITAL) - 2/C#16 TW

- WIRE COLOR CODES
 120VAC POWER-L - BLACK
 120VAC POWER-N - WHITE
 120VAC CONTROL - RED
 120VAC CONTROL NEUTRAL - WHITE
 24VDC - BLUE
 24VDC RETURN - BROWN
 GROUND - GREEN
 24VDC ANALOG (+) - RED
 24VDC ANALOG (-) - BLACK
 EXTERNAL CONTROL - YELLOW

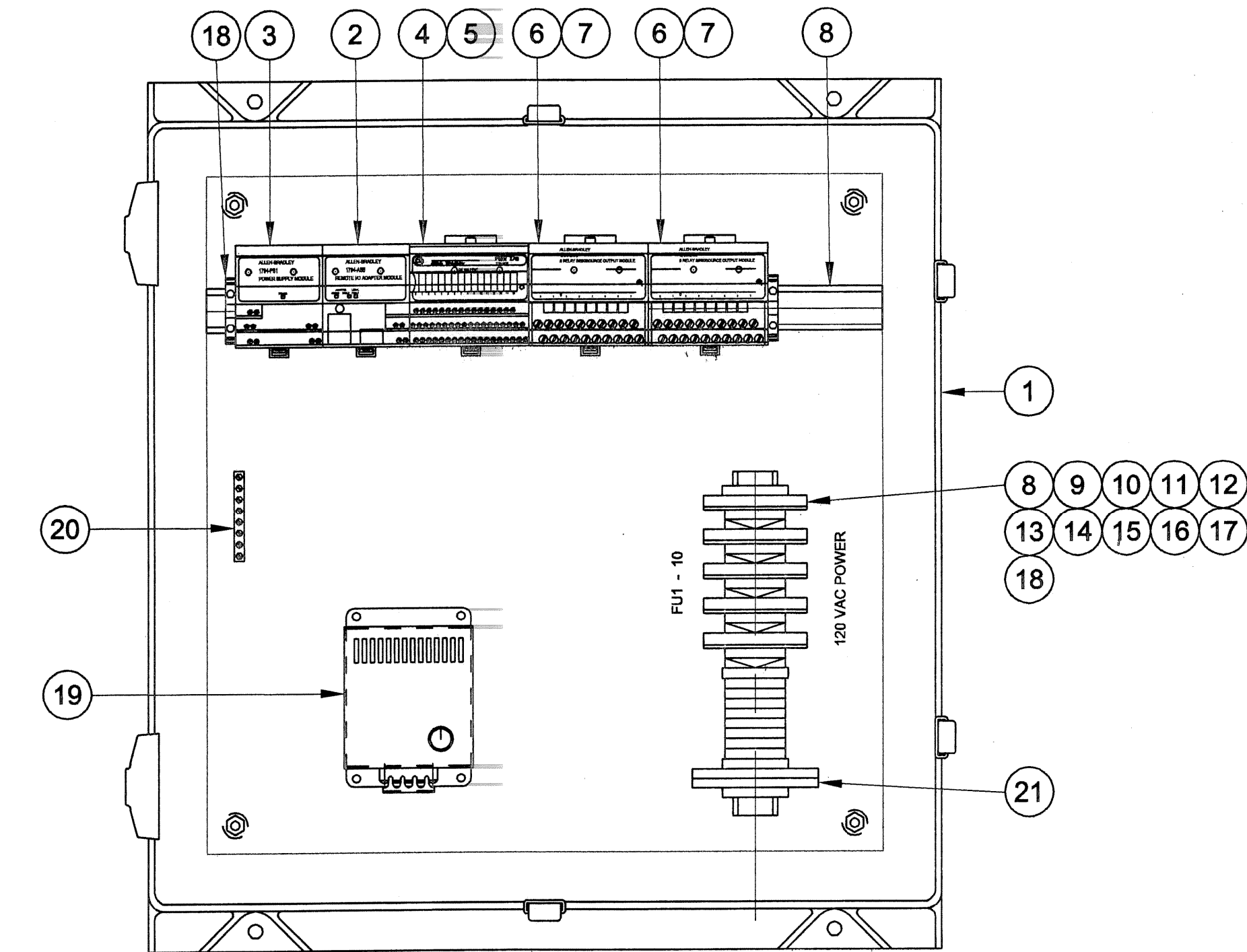
- CONNECTIONS SHALL BE MADE TO DEVICES PER SCHEMATIC WIRING DIAGRAMS

- ALL PANEL EQUIPMENT SHALL BE INSTALLED SO THAT THERE IS ACCESS TO ALL NECESSARY COMPONENTS AND SO THAT ALL EQUIPMENT DOORS CAN OPEN 90°.

NAMEPLATE ENGRAVING

N1	INJECTION WELL IW-1	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N2	INJECTION WELL IW-2	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N3	INJECTION WELL IW-3	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N4	INJECTION WELL IW-4	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N5	INJECTION WELL IW-5	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N6	INJECTION WELL IW-6	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N7	INJECTION WELL IW-7	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N8	INJECTION WELL IW-8	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N9	INJECTION WELL IW-9	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N10	INJECTION WELL IW-10	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N11	INJECTION WELL IW-11	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N12	INJECTION WELL IW-12	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N13	INJECTION WELL IW-13	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N14	INJECTION WELL IW-14	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N15	INJECTION WELL IW-15	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N16	INJECTION WELL IW-16	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N17	INJECTION WELL IW-17	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N18	INJECTION WELL IW-18	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N19	INJECTION WELL IW-19	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N20	INJECTION WELL IW-20	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N21	INJECTION WELL IW-21	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING
N22	INJECTION WELL IW-22	4" x 1" WHITE SURFACE
	PLC CONTROL PANEL	3/16" HIGH BLACK LETTERING

																						BILL OF MATERIAL	
																						ITEM	DESCRIPTION
IW-1	IW-2	IW-3	IW-4	IW-5	IW-6	IW-7	IW-8	IW-9	IW-10	IW-11	IW-12	IW-13	IW-14	IW-15	IW-16	IW-17	IW-18	IW-19	IW-20	IW-21	IW-22	1	HOFFMAN NEMA 4X ENCLOSURE CAT. #A24H2408GRLP WITH PANEL #A24P24
QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	QTY.	2	ALLEN-BRADLEY REMOTE I/O ADAPTER CAT. #1794-ASB/E
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	ALLEN-BRADLEY FLEX I/O POWER SUPPLY CAT. #1794-PS3
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	ALLEN-BRADLEY FLEX I/O 120 VAC INPUT MODULE CAT. #1794-IA16
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	ALLEN-BRADLEY FLEX I/O TERMINAL BASE UNIT CAT. #1794-TB3
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	ALLEN-BRADLEY FLEX I/O RELAY OUTPUT MODULE CAT. #1794-OW8
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	ALLEN-BRADLEY FLEX I/O TERMINAL BASE UNIT CAT. #1794-TBNF
3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	8	ALLEN-BRADLEY DIN MOUNTING RAIL CAT. #199-DR1
13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	9	ALLEN-BRADLEY IEC FEED-THROUGH TERMINAL BLOCK CAT. #1492-W10
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	ALLEN-BRADLEY TERMINAL BLOCK END BARRIER CAT. #1492-EB10
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	11	ALLEN-BRADLEY GROUNDING TERMINAL BLOCK CAT. #1492-WG10S
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	ALLEN-BRADLEY TERMINAL BLOCK END BARRIER CAT. #1492-EB10-Y
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	13	ALLEN-BRADLEY FUSE TERMINAL BLOCK CAT. #1492-H6
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	14	ALLEN-BRADLEY FUSE TERMINAL END BARRIER CAT. #1492-N37
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	15	FUSE ELEMENTS - LITTLEFUSE OR EQUAL SEE SCHEMATIC DIAGRAMS FOR FUSE SIZE
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	ALLEN-BRADLEY TERMINAL GROUP MARKER CAT. #1492-GM35
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17	ALLEN-BRADLEY TERMINAL MARKER (1-100) CAT. #1492-SM8X12H1-100
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	18	ALLEN-BRADLEY END ANCHOR CAT. #1492-EA35
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	19	HOFFMAN ELECTRICA HEATER 120VAC CAT. #DAH1001A
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	SQUARE-D GROUND BAR KIT CAT. #PK0GT6
1	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	1	21	MTL SURGE TECHNOLOGIES SURGE SUPPRESSOR CAT. #SD32X
																						22	



FRONT VIEW
WITH DOORS REMOVED

REFERENCE DRAWINGS

- E-01 SITE PLAN
- E-12 WELL PLAN
- E-16 WIRING DIAGRAM

DATE PRINTED
5/28/05

100% REVIEW DRAWINGS
NOT FOR CONSTRUCTION

SCALE VERIFICATION: THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

No	Revision	Date	Initial

Approved



HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

BIOSPARGE TREATMENT SYSTEM

TYPICAL INJECTION WELL
REMOTE I/O PANEL ARRANGEMENT



Source Reference:		Date:	
Project Manager: J. KAY		SEPTEMBER 2003	
Reviewed By: BME/TFP	Designed By: D. SZALACH	Drawn By: D. SZALACH	
Scale: 6"=1'-0"	Project No: 06883-10	Report No: 045	Drawing No: E-15