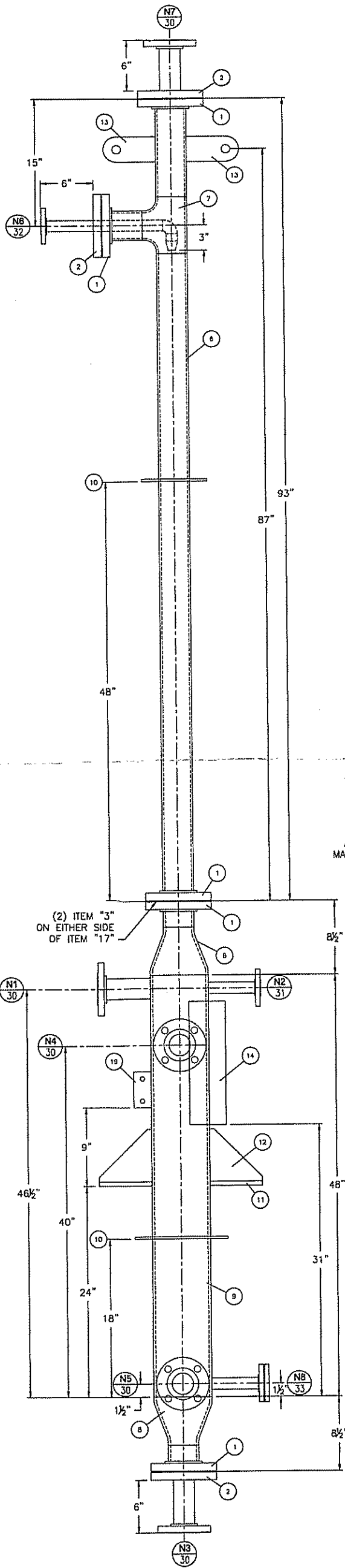


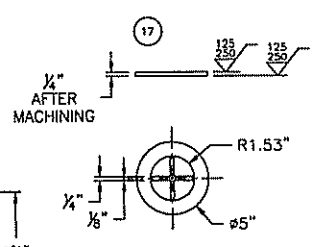
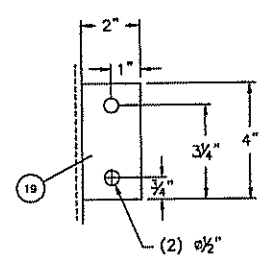
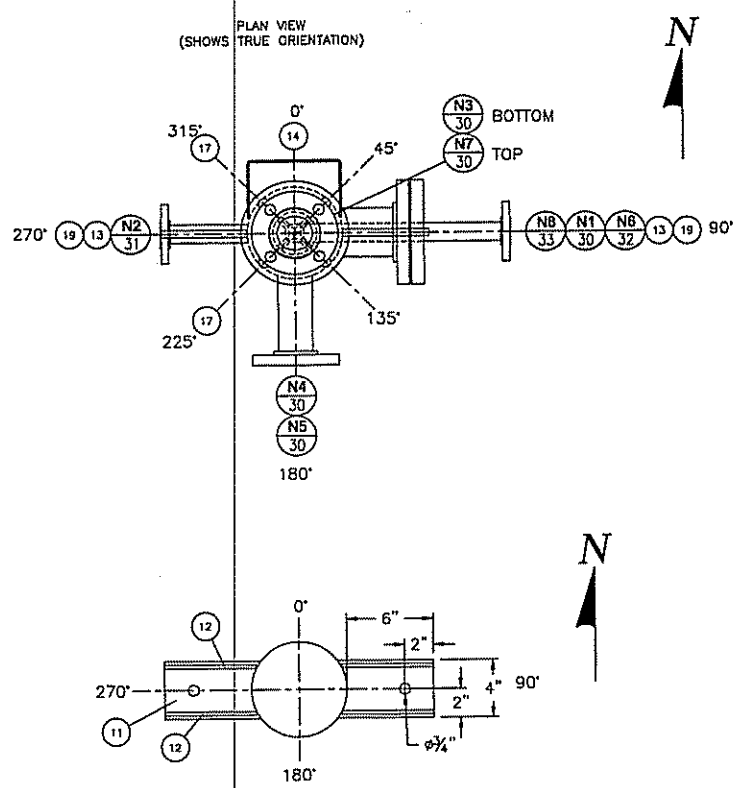
NOZZLE SCHEDULE																
MARK	SIZE	CONNECTION TYPE	SERVICE	PROJECT #1/4		DETAIL NO.		WELD SIZE								
				IN	OUT	T1	T2	T3	T4	T5	T6	T7				
N1	2"	150# RFSO	PROCESS IN #1	6"		H-1 / PF-1	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16
N2	1"	150# RFSO	PROCESS IN #2	6"		H-1 / PF-1	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16
N3	2"	150# RFSO	PROCESS OUT	6"		H-1 / PF-1	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16
N4	2"	150# RFSO	LEVEL #1	6"		H-1 / PF-1	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16
N5	2"	150# RFSO	LEVEL #2	6"		H-1 / PF-1	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16
N6	1"	150# RFSO	WATER	6"		H-1 / PF-1	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16
N7	2"	150# RFSO	VAPOR	6"		H-1 / PF-1	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16
N8	1"	150# RFSO	SPARE	6"		H-1 / PF-1	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16	3/16

STANDARD - NOZZLE PROJECTIONS GIVEN IN SCHEDULE ARE FOR SHORT SIDE LENGTHS MEASURED FROM ID OF VESSEL

BILL OF MATERIAL						
ID	ITEM	QTY	DESCRIPTION	MAT'L SPEC	DWG/REF	NOTES
1	5	3"	150# RFSO FLANGE	SA-182F-304L		
2	3	3"	150# RFSO BLIND FLANGE	SA-182F-304L		
3	5	3"	150# RFSO GASKET 1/8" THK - CARLOCK GRAPHIC	CARLOCK		
4	16	3/8"	1/2" X 3 1/2"	A-184-2H		
5	18	NUT	3/8" X 1 1/2"	A-184-2H		
6	1	SHELL	3" SCH 40S PPE	SA-312-304L		
7	1	TEE	3" SCH 40S	SA-312-304L		
8	2	6" X 3"	SCH 40S CONCENTRIC REDUCER	SA-403-304L		
9	1	SHELL	6" SCH 40S PPE	SA-312-304L		
10	2	REGULATION RING	1/4" X 2" WGE	SA-240-304L		
11	2	SUPPORT LUG BASE	1" X 4" X 6"	SA-240-304L		
12	4	SUPPORT LUG CUSSETS	1/4" X 6" X 6"	SA-240-304L		
13	2	LIFT LUGS	1/2" X 3" X 6"	SA-240-304L		
14	1	STANDARD TAG MOUNTING BRACKET (4" STANDOFF)		SA-240-304L		
15	1	ANSI ASME ID TAG		SA-240-316L		
16	1	ANSI LOGO - MEDIUM		VMTL		
17	1	PACKING SUPPORT - 1/4" THK AFTER MACHINING X 5" OD		SA-240-304L		SHIP LOOSE
18	1	ADDITIONAL ID TAG		SA-240-316L		
19	2	GROUND LUGS - 1/4" X 2" X 4"		SA-240-304L		
N1, N3-N5	30	5	2" 150# RFSO FLANGE	SA-182F-304L		
N7	5	2"	SCH WLD PPE	SA-312-304L		
N2	31	1	1" 150# RFSO FLANGE	SA-182F-304L		
		1	1" SCH WLD PPE	SA-312-304L		
N6	32	1	1" 150# RFSO FLANGE	SA-182F-304L		
		1	1" SCH WLD PPE	SA-312-304L		
		1	1" SCH 40S 90 ELBOW	SA-403-304L		
		1	1 1/2" X 2" SCH 40S CONCENTRIC REDUCER	SA-403-304L		
N8	33	1	1" 150# RFSO FLANGE	SA-182F-304L		
		1	1" SCH WLD PPE	SA-312-304L		
		1	1" 150# RFSO FLANGE	SA-182F-304L		
		1	CARLOCK GRAPHIC GASKET & NUTS / BOLTS			



1. NO INTERNALS INSTALLED
2. SHIP UPPER SECTION LOOSE FROM LOWER SECTION.



CERTIFIED BY		A&B PROCESS SYSTEMS	
VESSEL/SHELL			
W	MAWP: 14	PSI @	302 °F
M	MACWP: 5	PSI @	302 °F
M	MDWT: 20	F @	14 PSI
JACKET/TUBE			
W	MAWP: ---	PSI @	--- °F
M	MACWP: ---	PSI @	--- °F
M	MDWT: ---	F @	--- PSI
S/N: 1001860601		Y/B: 2009	

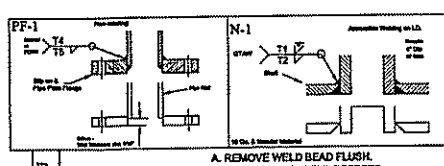
This drawing is being submitted by A&B Process Systems for design verification.
Please note this version supercedes all previous documentation.
 APPROVED
 APPROVED AS NOTED
BY: _____
DATE: _____

18) EQUIP. NAME: DISTILLATION SCRUBBER
ITEM NUMBER: V4010
P.O. NUMBER: D0CE11-0105
TOTAL VOLUME: 10 GALLONS
TANK MOC: 304L

MATERIAL IS 16 GA. 316LSS 2B/2B SA-240
MTR'S ARE REQUIRED
CHARACTER 302 5/32"

DESIGN DATA	
DESIGN AND FABRICATOR / LINE SECTION / W/ APPROX 1 - NOT STAMPED	ET: 2007 04 04
DESIGN PRESSURE, PSIG	14
DESIGN TEMPERATURE, °F	302
HIGHEST PRESSURE, PSIG	14
MAWP, PSIG	14
MACTWP, PSIG	5
CORROSION ALLOWANCE, IN	0.00
HYDROSTATIC DAMPENING	NONE
JOINT EFFICIENCY, %	78
WIND SPEED MPH	100
SEISMIC CODE	ASCE 7-05
SEISMIC WIND W/ 100 YRS RETRN PERIOD	1.5 X 11.85
SEISMIC WIND W/ 50 YRS RETRN PERIOD	1.5 X 11.85
SMALLER PLATE THICKNESS	1/2"
TRANSFER MEDIA	3
DIRECTION (SHIPPING) WEIGHT, LBS	480 LBS
WEIGHT, FULL OF MEDIA, LBS	8 LBS
DATA NOT SHOWN ARE NOT FACTOR IN DESIGN	

- NOTES:
- 1) UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES.
 - 2) DIMENSIONS ENCLOSED WITHIN PARENTHESES INDICATE REFERENCE.
 - 3) EQUIVALENT ALTERNATIVE MATERIAL MAY BE USED AFTER A.I.'S APPROVAL.
 - 4) ALL WELDS TO BE CONTINUOUS WELDED PER MANUFACTURERS STD UNLESS OTHERWISE NOTED.
 - 5) WELDS SHALL BE NEAT IN APPEARANCE, FREE OF SLAG, UNDERCUTS AND OTHER DEFECTS.
 - 6) VESSEL TO BE THOROUGHLY CLEANED AND DRIED WHERE ACCESSIBLE BEFORE SHIPPING.
 - 7) PROTECT ALL MACHINED SURFACES, AND ALL CONNECTIONS WITH WOOD OR PLASTIC PROTECTORS BEFORE SHIPMENT.
 - 8) REINFORCING PADS AND PAD SECTIONS SHALL HAVE 1/8" WEEP HOLE LOCATED AS LOW AS POSSIBLE IN THE PAD WHEN THE VESSEL IS IN OPERATING POSITION.
 - 9) FLANGE BOLT HOLES SHALL STRADDLE MAJOR VESSEL CENTERLINES UNLESS NOTED.
 - 10) IF USED IN CONTACT WITH MATERIALS CONTAINING SALT, CHLORIDES OR OTHER CORROSIVE MATERIALS, THE CORROSION RESISTANCE OF THIS EQUIPMENT IS NOT THE RESPONSIBILITY OF A&B PROCESS SYSTEMS CORP.
 - 11.) PASSIVATION REQ'D. - NO
 - 12.) RIBOFLAVIN TESTING REQ'D. - NO
 - 13.) ORBITAL WELDING REQ'D. - NO
 - 14.) PIPE WELD MAPPING REQ'D. - NO
 - 15.) (1) TANK REQUIRED AS SHOWN.



ID	3"	F-7	40-80 RA / 80 GRIT	A. REMOVE WELD BEAD FLUSH. B. PATCH MAJOR WELD DEFECTS. (PTS OVER 1/4" IN DIA) C. FORMAX BUFF.
ID	6"	F-3	CLEANED ONLY	A. MECHANICALLY REMOVE HEAT TINT. B. NO STRIP TAPPING. C. USE BLACK WHEEL OR SS WIRE BRUSH.
OD	F-1	AS WELDED	REMOVE SLAG AND SPATTER (DO NOT REMOVE DISCOLORATION)	
ID/OD	MATERIAL FINISH		MILL	
				A & B PROCESS SYSTEMS CORP. 201 S. WISCONSIN AVE. STRATFORD, WI. 54484 (715) 687-4332 www.abprocess.com
TITLE: V4010 DISTILLATION SCRUBBER ASSEMBLY DRAWING SCALE: 2"=1' SHEET: 1 of 1 REV: 1				

MACHINING TOLERANCES (UNLESS NOTED OTHERWISE)	FABRICATION TOLERANCES (UNLESS NOTED OTHERWISE)
±.005	X OR FRACT. = ±1/4
±.010	HOLE DIAMETERS = ±1/8
±.020	HOLD DIA'S ±1/32"
X OR FRACT. = ±.030	X DEGREE = ± 1 DEGREE
	TOLERANCES DO NOT APPLY TO LISTED REF DIA'S

1	11/14/09	REVISED PER CUST	TMP	TJC
0	10/14/09	SUBMITTED FOR APPROVAL	TMP	AAA
NO.	DATE	REVISION DESCRIPTION	OWN BY	CHK BY
CLIENT NAME: GENERA ENERGY, LLC		DRAWN BY: TMP		
CLIENT LOCATION: YONORE, TN 37885		JOB NUMBER: 1001860601		
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