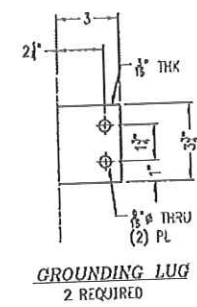
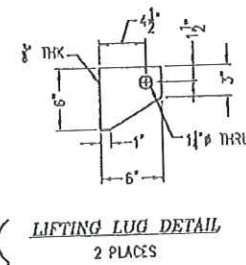
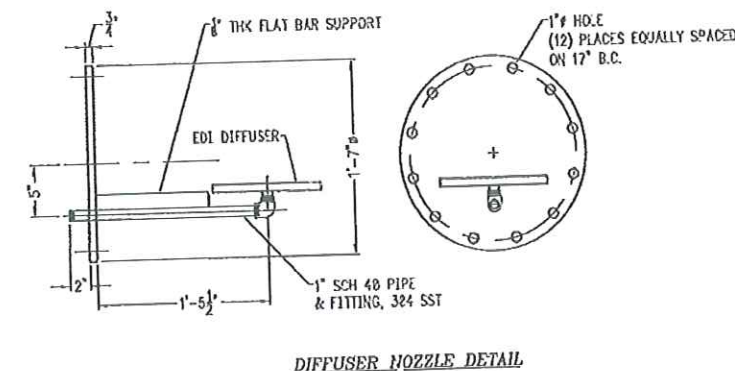
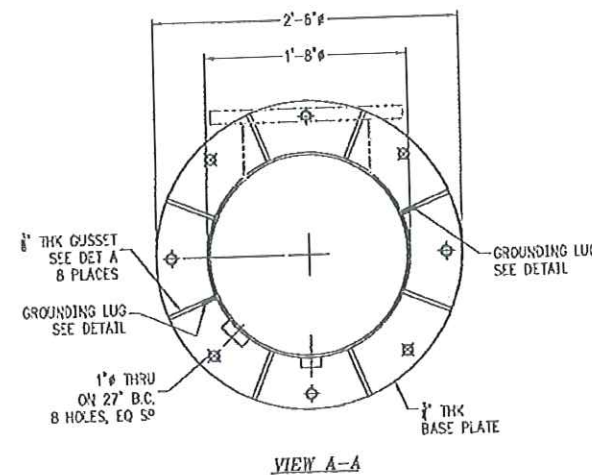
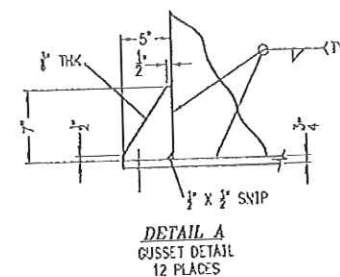
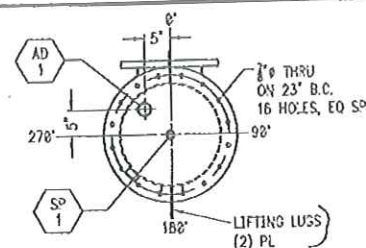
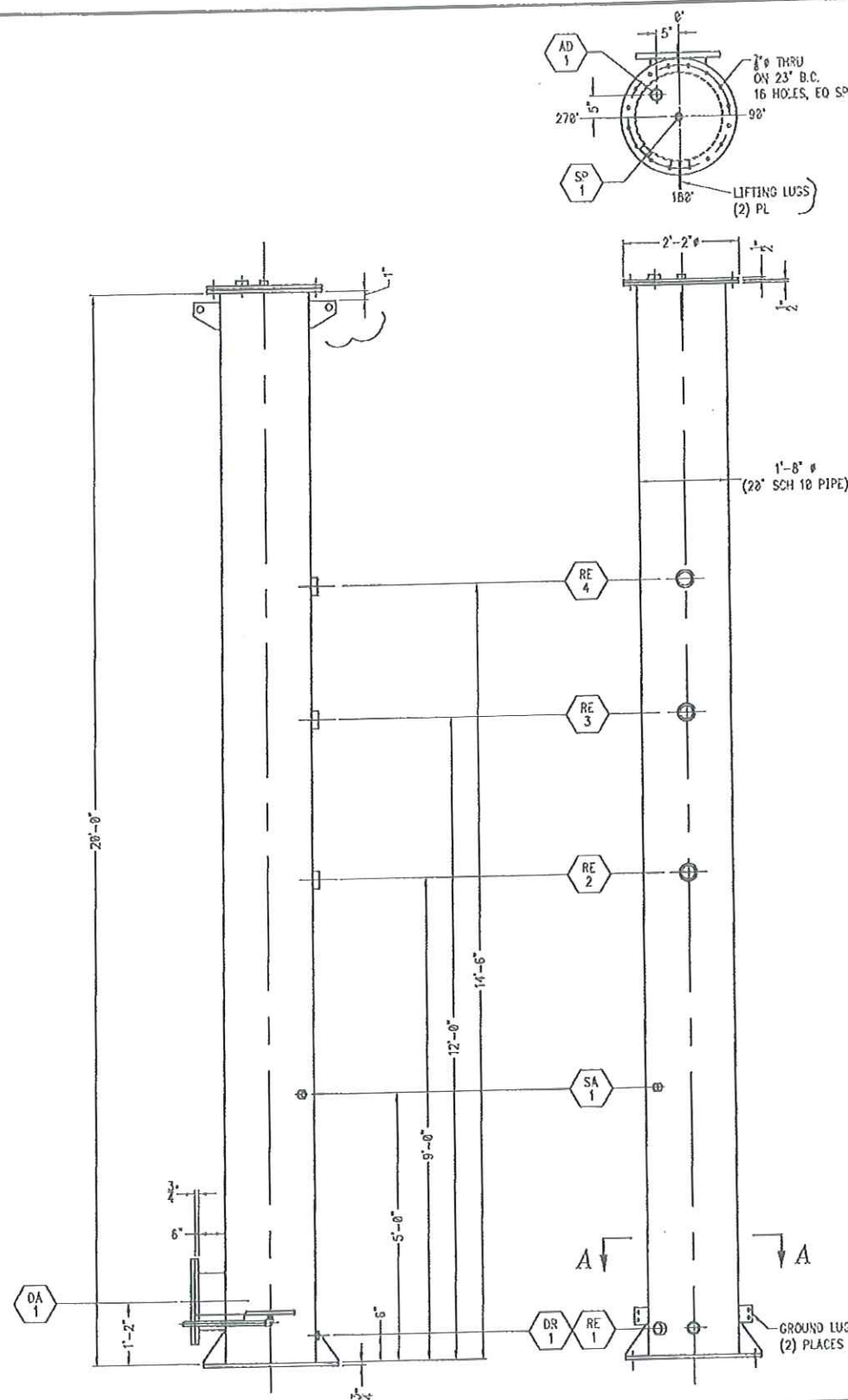


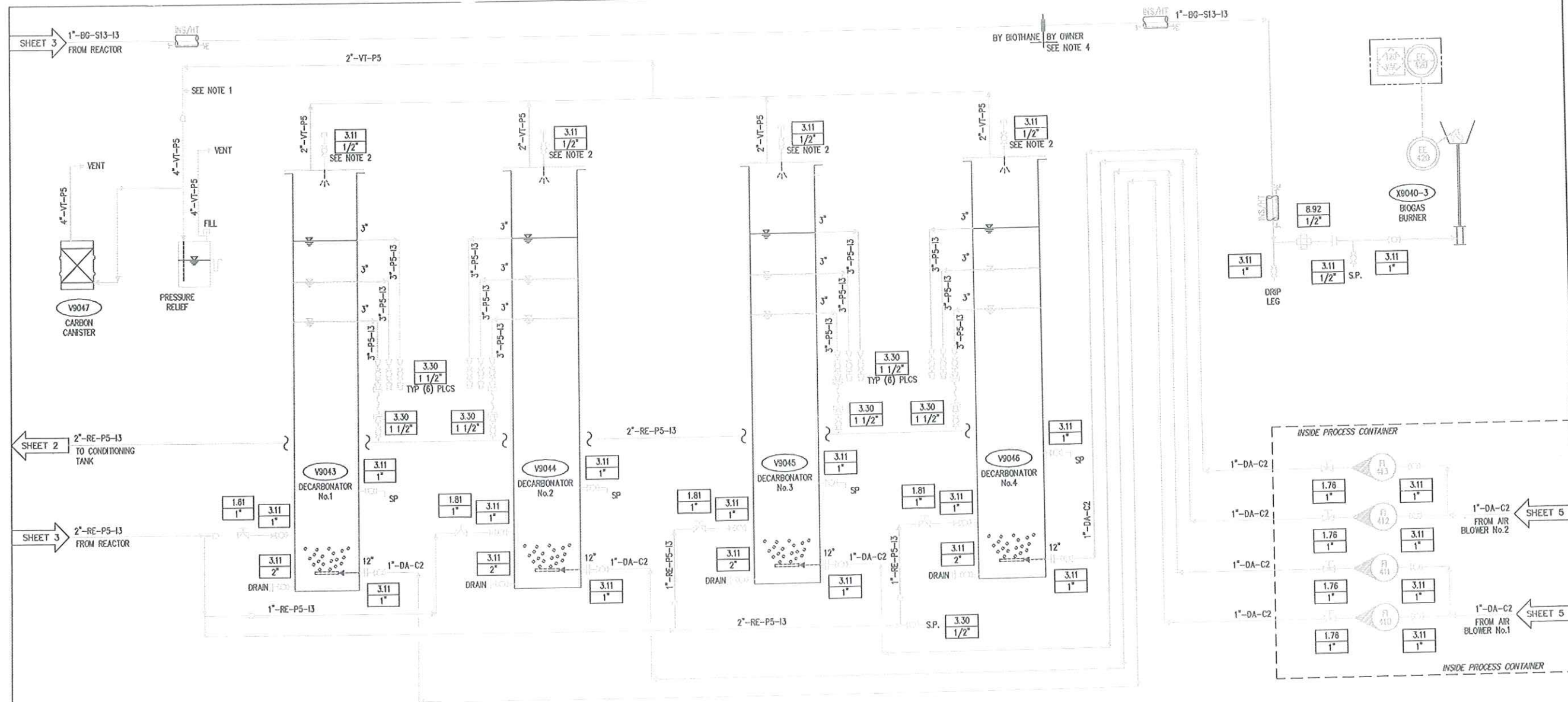
108950-108953



- NOTES:**
1. MATERIAL - 304 SST.
 2. FABRICATOR TO PROVIDE ALL FLANGE GASKETS AND HARDWARE. HARDWARE IS TO BE CORROSION RESISTANT, CATHODIC PLATED.
 3. REMOVE ALL BURRS AND SHARP EDGES.
 4. ESTIMATED WEIGHT - 1400 LBS.

NOZZLE LEGEND					
No.	SIZE	DESCRIPTION	ORIENTATION	ELEV.	ELEV.
AD-1	2"	AIR DISCHARGE	TOP	TOP	3022# HALF COUPLING
DA-1	12"	DIFFUSER NOZZLE	0°	1'-2"	SEE DETAIL
DR-1	2"	DRAIN	225°	6"	3022# HALF COUPLING
RE-1	2"	RECYCLE INLET	180°	6"	3022# HALF COUPLING
RE-2	3"	RECYCLE DISCHARGE	180°	9'-0"	3022# HALF COUPLING
RE-3	3"	RECYCLE DISCHARGE	180°	12'-0"	3022# HALF COUPLING
RE-4	3"	RECYCLE DISCHARGE	180°	14'-6"	3022# HALF COUPLING
SA-1	1"	SAMPLE PORT	225°	5'-0"	3022# HALF COUPLING
SP-1	1"	SPRAY NOZZLE	TOP	TOP	3022# HALF COUPLING

BIOTHANE 2500 BROADWAY CAWDOX, NJ 08104 TEL: 856-541-3500 FAX: 856-541-3313 VEOLIA CONTENT OF THIS DRAWING (INCLUDING BUT NOT LIMITED TO ALL CONFIDENTIAL & COPYRIGHTED MATERIAL, PATENTED OR PATENT PENDING DESIGNS) IS PROPRIETARY AND REMAINS THE PROPERTY OF BIOTHANE, LLC. IT IS SENT TO YOU SUBJECT TO RETURN UPON DEMAND AND FOR THE SOLE PURPOSE AS EXPRESSED IN WRITING IN THIS TRANSMITTAL. IT IS NOT TO BE COPIED, REPRODUCED OR USED IN ANY WAY, DIRECTLY OR INDIRECTLY, DETRIMENTAL TO OUR INTERESTS.						SCALE 3/4" = 1'-0" DATE 9/22/09 DECARBONATOR FABRICATION DETAIL DUPONT DANISCO CELLULOSE ETHANOL VENORE, TN	
REV. NO. DATE DESCRIPTION 3 10/30/2009 DVA DVA -- -- -- -- -- ADDED LIFTING LUGS, NOTE 4 2 10/20/2009 DVA DVA -- -- -- -- -- ADDED GROUND LUGS, GUSSET QTY 1 10/01/2009 DVA DVA -- -- -- -- -- WAS Dwg #507, CHANGED HOLE QTY'S 0 09/22/2009 DVA EW -- -- -- -- -- ISSUED FOR BID						52010026.511 3	



V9047
CARBON CANISTER
CAPACITY = 170 lbs
DIMENSIONS = 24" DIA X 36" H
MATERIALS = ACTIVATED CARBON

V9043 & V9044
DECARBONATOR No.1 & No.2
CAPACITY EACH = 140 - 225 GAL
DIMENSIONS = 20" DIA. x 20'-0" H
MATERIALS =
20" SCH 10 PIPE
STAINLESS STEEL FLANGES
DESIGN PRESSURE = 8 PSI

V9045 & V9046
DECARBONATOR No.3 & No.4
CAPACITY EACH = 140 - 225 GAL
DIMENSIONS = 20" DIA. x 20'-0" H
MATERIALS =
20" SCH 10 PIPE
STAINLESS STEEL FLANGES
DESIGN PRESSURE = 8 PSI

X9040-3
BIOGAS BURNER
TYPE = PILOT STYLE BURNER
SIZE = 8" X 35"
MATERIALS = 304 SST

- NOTES:**
1. VENT GAS BALANCING TEST POINT, 5/8" DIAMETER HOLE WITH PLUG.
 2. SPRAY NOZZLE CONSISTS OF A 1/4" PIPE PASSED THROUGH A 1" THREADED PLUG WITH 1/4" FULL CONE SPRAY NOZZLE ON END.
 3. SEE DWG. 706 FOR MOTOR CONTROLS AND INTERLOCK DESCRIPTIONS.
 4. OWNER TO INSTALL BIOGAS PIPING AND COMPONENTS AS INDICATED. MATERIAL AND COMPONENTS SUPPLIED BY BIOTHANE.

3	11/25/09	DVA	MTS	DVA	WOD	---	AS-BUILT
2	11/05/09	DVA	MTS	DVA	WOD	---	GENERAL REVISION
1	10/5/2009	DVA	MTS	DVA	WOD	---	WAS 2", ADDED S.P.
0	9/18/2009	DVA	MTS	DVA	WOD	---	ISSUED FOR CONSTRUCTION
B	08/11/2009	MTS	DVA	DVA	---	---	CHG'D TAG NO's, ADDED 2ND BLOWER
A	07/9/2009	MTS	MTS	DWV	WOD	---	PRELIMINARY ISSUE - FOR INFORMATION
REV NO.	DATE	APPROVED BY		APPROVED BY		DATE	
		APPROVED BY		APPROVED BY		DATE	
		APPROVED BY		APPROVED BY		DATE	

BIOTHANE

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PROCESS PIPING & INSTRUMENTATION
DIAGRAM SHEET #4
DUPONT DANISCO CELLULOSIC
ETHANOL, VONORE, TN

52010026.704

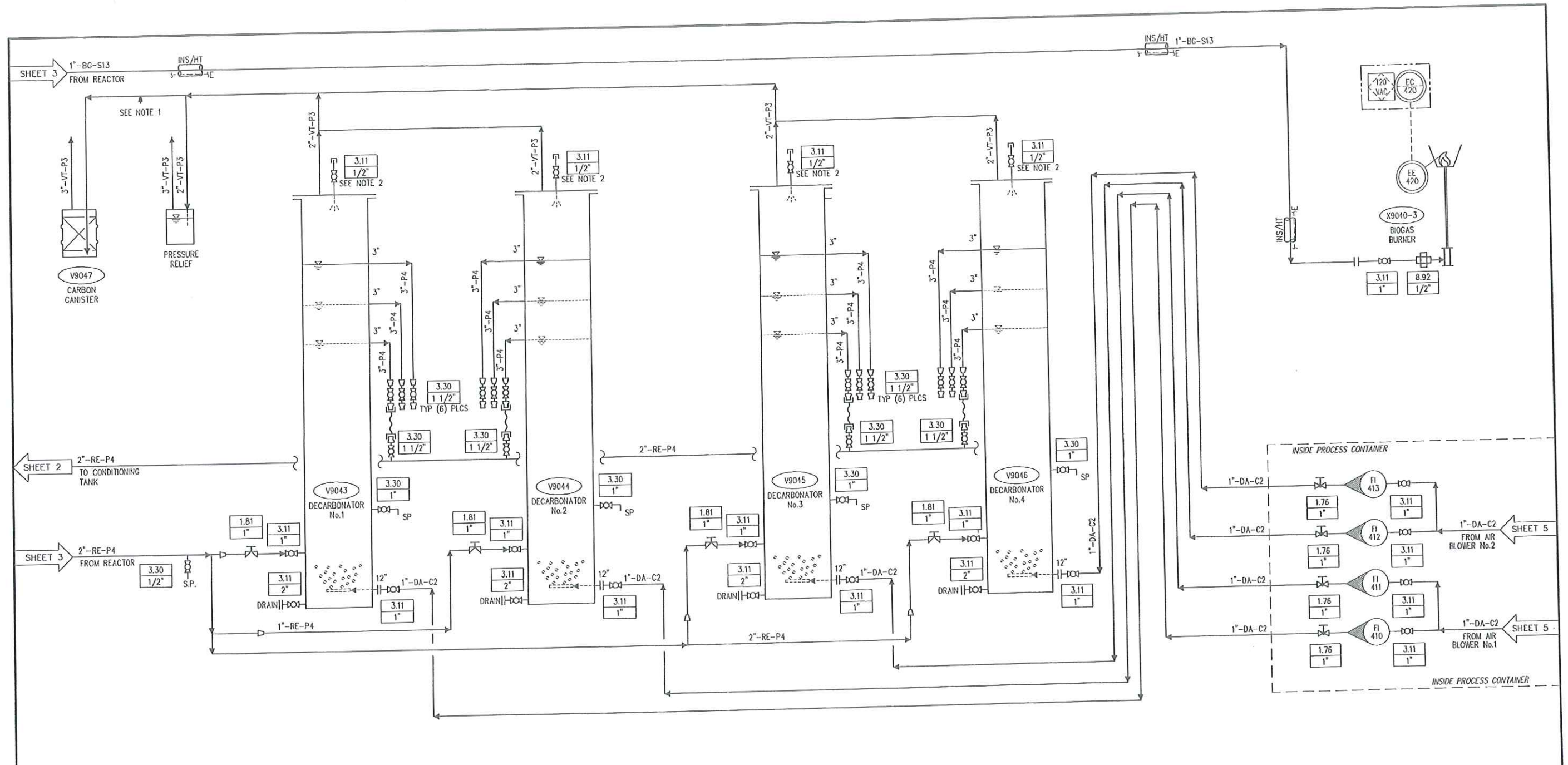
3

Rev 4 2009/12/01

9000

SHEET W453

Dupont Danisco Cellulosic Ethanol, LLC
Vonore, TN USA
Anaerobic Digester (Sheet 4)



V9047
CARBON CANISTER
CAPACITY = 170 lbs
DIMENSIONS = 24" DIA X 36" H
MATERIALS = ACTIVATED CARBON

V9043 & V9044
DECARBONATOR No.1 & No.2
CAPACITY EACH = 140 - 225 GAL
DIMENSIONS = 20" DIA. X 20'-0" H
MATERIALS =
20" SCH 10 PIPE
STAINLESS STEEL FLANGES
DESIGN PRESSURE = 8 PSI

V9045 & V9046
DECARBONATOR No.3 & No.4
CAPACITY EACH = 140 - 225 GAL
DIMENSIONS = 20" DIA. X 20'-0" H
MATERIALS =
20" SCH 10 PIPE
STAINLESS STEEL FLANGES
DESIGN PRESSURE = 8 PSI

X9040-3
BIOGAS BURNER
TYPE = PILOT STYLE BURNER
SIZE = 8" X 35"
MATERIALS = 304 SST

- NOTES:**
1. VENT GAS BALANCING TEST POINT, 5/8" DIAMETER HOLE WITH PLUG.
 2. SPRAY NOZZLE CONSISTS OF A 1/4" PIPE PASSED THROUGH A 1" THREADED PLUG WITH 1/4" FULL CONE SPRAY NOZZLE ON END.
 3. SEE DWG .706 FOR MOTOR CONTROLS AND INTERLOCK DESCRIPTIONS.

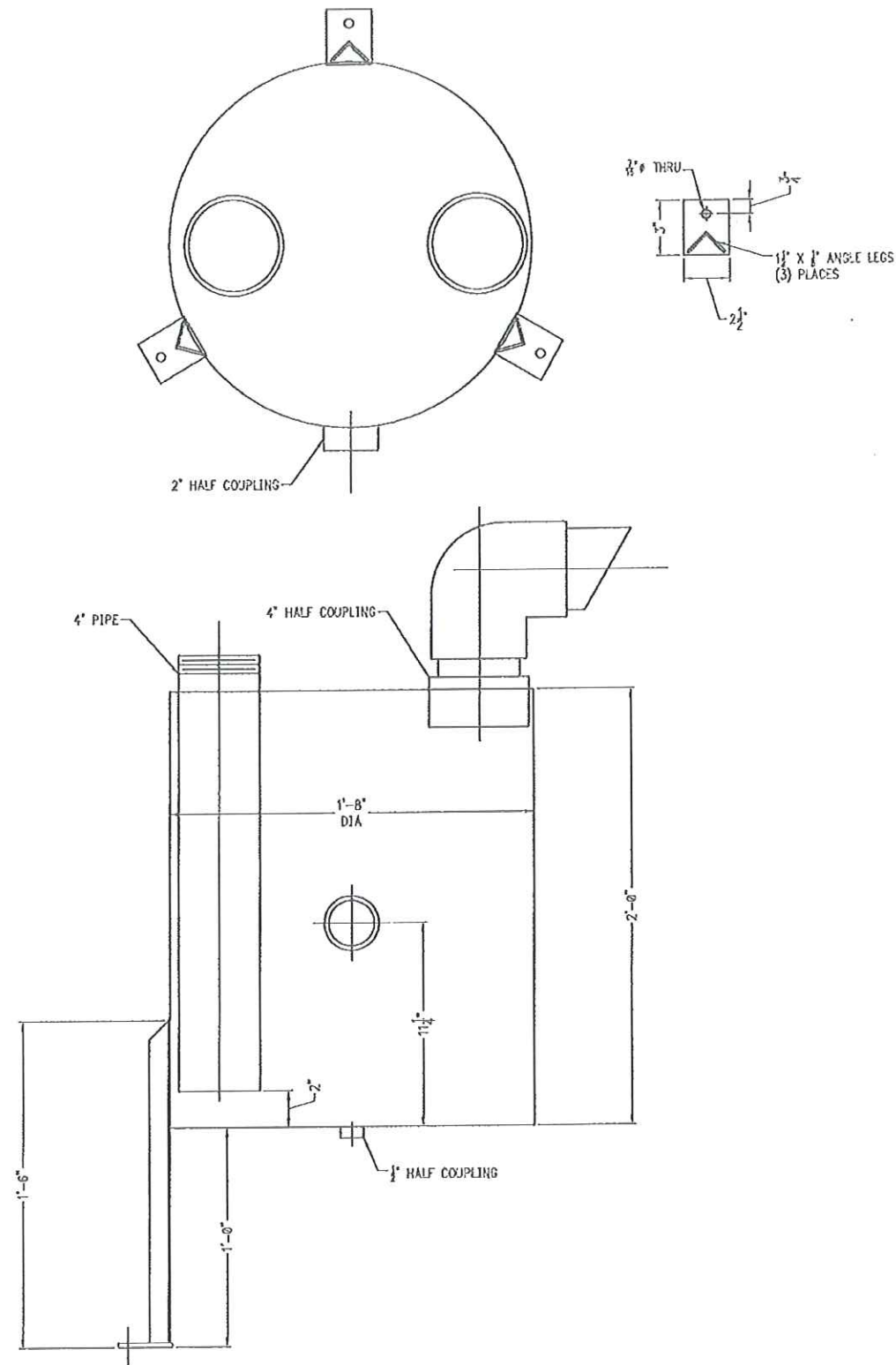
REV	NO.	DATE	ISSUED BY	CHECKED BY	DESIGNED BY	REVIEWED BY	APPROVED BY	DESCRIPTION
0	9/18/2009	DVA	MTS	DVA	WOOD			ISSUED FOR CONSTRUCTION
B	08/11/2009	MTS	DVA	DVA				CHG'D TAG NO's, ADDED 2ND BLOWER
A	07/9/2009	MTS	MTS	DWV	WOOD			PRELIMINARY ISSUE - FOR INFORMATION
DRAWINGS WITH ALPHA REVISIONS ARE PRELIMINARY AND SHALL NOT BE USED FOR FINAL DESIGN WORK OR FABRICATION								

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SCALE	NONE	FIRST ISSUE DATE	07/9/09
TITLE	PROCESS PIPING & INSTRUMENTATION DIAGRAM SHEET #4 DUPONT DANISCO CELLULOSIC ETHANOL, VONORE, TN		
DWG. NO.	52010026.704	REV	0



REV.	DATE	DESCRIPTION
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SCALE 3/4" = 1'-0"

DATE 10/22/09

TITLE

PRESSURE RELIEF
FABRICATION DETAIL
DUPONT DANISCO CELLUOSIC ETHANOL
VENORE, TN

ORA NO 52010026.513

REV 0