DESIGN REVIEW BOARD
Staff Report

Planning and Environmental Services
130 Cremona Drive, Suite B, Goleta, CA 93117
Phone: (805) 961-7500 Fax: (805) 961-7551
www.cityofgoleta.org

AGENDA ITEM L-2

DATE: May 11, 2010
TO: Goleta Design Review Board
FROM: Shine Ling, Assistant Planner
SUBJECT: 10-049-DRB; Raytheon SBRC Nitrogen Tanks; 44 Castilian Drive; APN 073-150-003

APPLICANT: Brian Beebe
Anderson Systems
5958 Corta Street.
Goleta, CA 93117

PROJECT DESCRIPTION:
This is a request for *Conceptual/Preliminary* review. The property includes a 46,750-square foot commercial building, a 650-square foot water filtration equipment yard, and a 3,623-square foot rear equipment yard, and a 138-square foot emergency generator/equipment area, on a 3.25-acre parcel in the M-RP zone district. The applicant proposes to replace two liquid nitrogen storage tanks within the rear equipment yard with two larger tanks. The tanks occupy an area of approximately 105 square feet and have a height of 31 feet. The project would be constructed in phases, with one tank to be installed in 2010 and the other in 2011. No changes to parking or landscaping are proposed. The project was filed by Brian Beebe of Anderson Systems, agent, on behalf of Peter Goodell for Castilian Associates, property owner. Related cases: 09-147-LUP.

BACKGROUND:
The project was submitted on March 31, 2010. This is the first time the project has been before the DRB. There are no known violations on the property.

ANALYSIS:

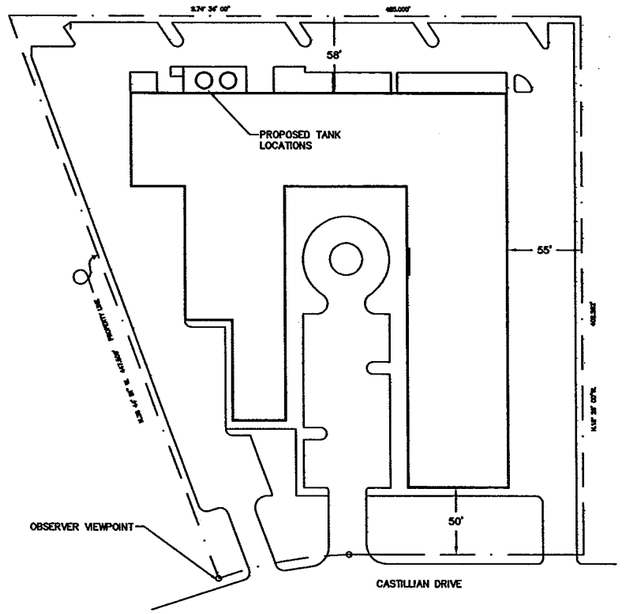
Zoning Consistency:

	Required	Proposed	Consistent Y/N
Front Yard Setback	80 feet from Centerline 50 feet from right-of-way	80 feet from Centerline 50 feet from right-of-way (no change)	Yes
Side Yard Setback	10 feet	Greater than 10 feet (no change)	Yes
Rear Yard Setback	10 feet	Greater than 10 feet (no change)	Yes
Building Height	35 feet	Building height, 21 feet Tank height, 31 feet (no change)	Yes
Lot Coverage	Not more than 35% of the net area of the property shall be covered by buildings or structures	33.5%	Yes
Parking spaces	1 space per 500 square feet of floor area 94 spaces required	100 spaces	Yes
Landscaping	Not less than 30% of the net area of the property shall be landscaped	16.3%	Yes, per Development Plan 77-MP-6

The proposed project is consistent with the above requirements of the Inland Zoning Ordinance (Article III of Chapter 35).

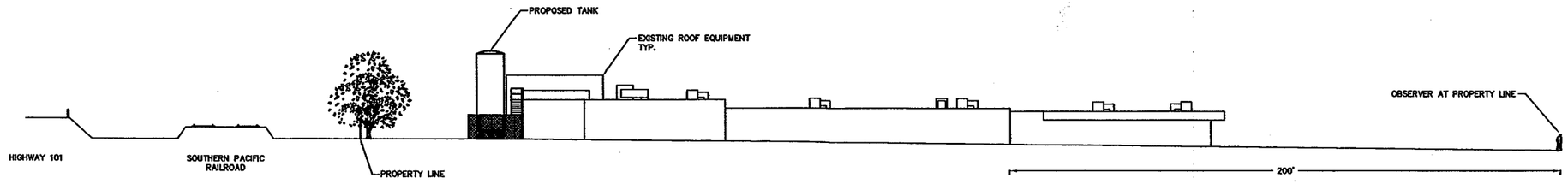
ATTACHMENTS:

- Reduced 11” x 17” copies of site plans and elevations.



Site Plan & LN2 Tank Locations

SCALE: 1" = 50'



Building Elevation

NO SCALE

RECEIVED

MAR 3 1 2010

City of Goleta
Planning & Environmental Svcs.

ANDERSON SYSTEMS
5958 CORTA STREET, GOLETA, CA 93117
(805) 683-6133 FAX: (805) 964 2357
E-MAIL: MIKE@ANDERSONSYSTEMS.COM
CA LICENSE # 497982

REV	DESCRIPTION	DATE	APPV
	REVISIONS		

Raytheon - B08
44 Castilian Drive
Goleta, CA 93117

Nitrogen Tank Replacement

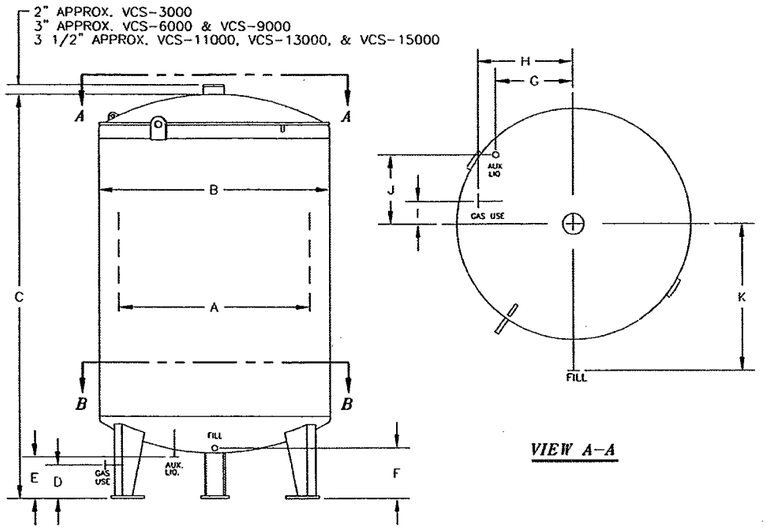
Replacement N2 Tank Plan & Elevations

JOB No. 10-0018
DRAWING DATE: 3/30/10
DRAWING NO.

PL-1

SHEET OF
PLOT SCALE: 1 = 1
REV: -

NO. D-34905



VIEW A-A

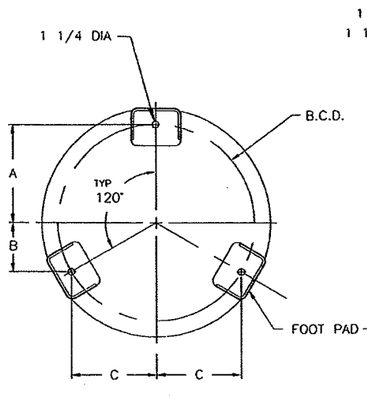
MODEL	DIMENSION DATA IN INCHES										
	A	B	C	D	E	F	G	H	I	J	K
VCS-525	42	48	135	–	N/A	19 1/4	N/A	–	–	N/A	29 1/2
VCS-900	54	60	142	–	21 1/2	19 1/4	21	–	–	12	37 1/2
VCS-1500	60	66	180	–	21 1/2	19 1/2	23 1/2	–	–	13 1/2	41
VCS-3000	84	96	192	15 9/16	19 3/8	22 3/4	32 1/4	40 1/4	12 1/2	20 3/16	60 3/4
VCS-6000	84	96	327	15 9/16	19 3/8	22 3/4	32 1/4	40 1/4	12 1/2	20 3/16	60 3/4
VCS-9000	96 3/8	114	369 1/8	18 1/8	19 1/2	24 7/8	32 1/4	40 1/4	12 1/2	20 3/16	60 3/4
VCS-11000	96 3/8	114	430 1/4	18 1/4	19 5/8	25	32 1/4	40 1/4	12 1/2	20 3/16	60 3/4
VCS-13000	104	120	436 1/4	18 1/4	19 5/8	25	40 7/16	40 5/8	20 7/8	28 1/16	60 3/4
VCS-15000	104	120	488	18 1/4	19 5/8	25	40 7/16	40 5/8	20 7/8	28 1/16	60 3/4

* DIMENSIONS ARE ROUNDED TO THE NEAREST WHOLE NUMBER AND ARE PRELIMINARY ESTIMATES

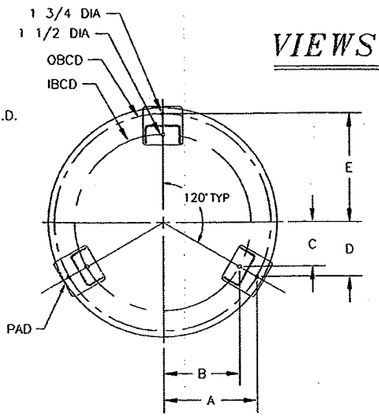
WEIGHTS/SHIPPING DATA										
MODEL		VCS-525	VCS-900	VCS-1500	VCS-3000	VCS-6000	VCS-9000	VCS-11000	VCS-13000	VCS-15000
CAPACITY IN GALLONS	GROSS	555	967	1639	3,157	6,250	9,375	11,458	13,336	15,191
	NET	500	900	1541	3,000	6,000	9,000	11,000	12,803	14,735
GASEOUS EQUIVALENT AT 0 PSIG & 70° F IN SCF	OXYGEN	57,550	103,590	177,369	345,300	690,600	1,035,900	1,266,100	1,473,625	1,695,999
	NITROGEN	46,555	83,799	143,482	279,330	558,660	837,990	1,024,210	1,192,087	1,371,976
	ARGON	56,250	10,250	173,362	337,500	675,000	1,012,500	1,237,500	1,440,337	1,657,688
WEIGHT EMPTY (SC) **		3,468	5,424	8,516	16,641	30,325	48,210	59,805	66,804	--
WEIGHT FULL (SC) **	OXYGEN	8,232	13,999	23,199	45,222	87,487	133,953	164,602	188,779	--
	NITROGEN	6,841	11,495	18,910	36,876	70,795	108,915	134,000	153,161	--
	ARGON	9,283	15,891	26,438	51,531	100,105	152,880	187,735	215,703	--
WEIGHT EMPTY (NC) **		--	--	--	--	26,270	42,337	53,200	58,647	74,503
WEIGHT FULL (NC) **	OXYGEN	--	--	--	--	83,432	128,080	157,997	180,622	214,883
	NITROGEN	--	--	--	--	66,740	103,042	127,395	145,004	173,891
	ARGON	--	--	--	--	99,972	147,007	181,130	207,546	245,871
MAWP IN PSI		250	250	250	250	250	250	250	250	250
SHIPPING DIMENSIONS (H*W*L)		51*50*137	61*62*144	67*68*182	96*98*194	104*100*330	122*118*372	114*117*434	120*123*440	120*123*488

** 3000 IS NC

LINE SIZE DATA										
LINE	FUNCTION	VCS-525	VCS-900	VCS-1500	VCS-3000	VCS-6000	VCS-9000	VCS-11000	VCS-13000	VCS-15000
A	TOP FILL	1 PS	1 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS
B	BOTTOM FILL	1 PS	1 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS
C	AUXILARY LIQUID	–	1 PS	1 1/2 PS	1 1/2 PS	2 PS	2 PS	2 PS	2 PS	2 PS
D	GAS USE	1 PS	1 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS
E	LIQUID PHASE	1/2 OD	1/2 OD	1/2 OD	1/2 OD	1/2 OD	1/2 OD	1/2 OD	1/2 OD	1/2 OD
F	VAPOR PHASE	3/8 OD	3/8 OD	3/8 OD	3/8 OD	3/8 OD	3/8 OD	3/8 OD	3/8 OD	3/8 OD
G	FULL TRYCOCK	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD
H	VENT	1 PS	1 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS
J	AUXILARY VAPOR	–	1 PS	1 PS	1 PS	1 PS	1 PS	1 PS	1 PS	1 PS
K	ECONOMIZER	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD	5/8 OD
L	P B RETURN	1 PS	1 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS	1 1/2 PS



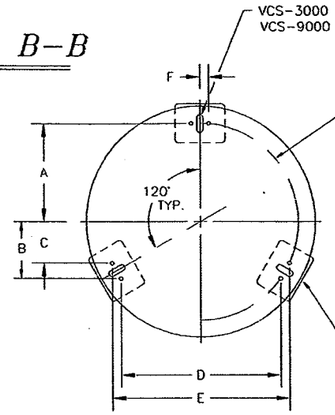
VCS-525 THRU 900						
	A	B	C	BCD	FOOT PAD
VCS-525	21 1/2	10 7/8	18 3/4	43 1/4	3/8*5*9 1/4
VCS-900	27 1/2	13 7/8	23 15/16	55	5/8*6*11 1/4



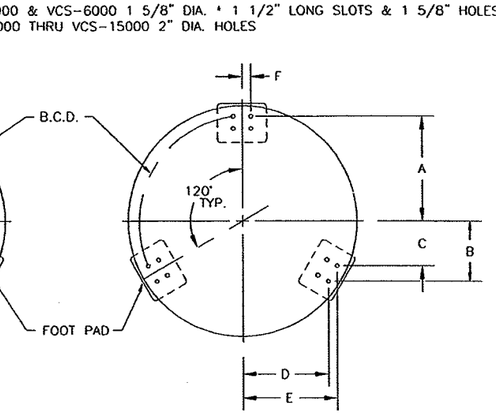
VCS-1500								
A	B	C	D	E	IBCD	OBCD	FOOT PAD
32 1/16	26 1/16	15 1/16	18 1/2	37	60 1/4	74	1*7 1/8*13 1/2

VIEWS B-B

VCS-3000 & VCS-6000 1 5/8" DIA. * 1 1/2" LONG SLOTS & 1 5/8" HOLES
VCS-9000 THRU VCS-15000 2" DIA. HOLES



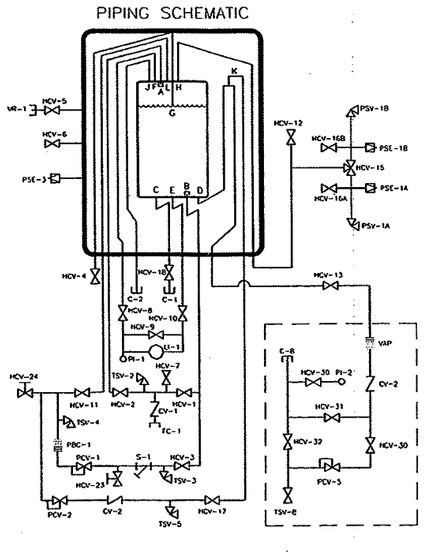
VCS-3000 AND 6000							
A	B	C	D	E	F	BCD	FOOT PAD
42 3/4	28 5/16	14 7/16	66	82	8	87	1 3/8*14*22



VCS 9000 THRU 15000							
A	B	C	D	E	F	BCD	FOOT PAD
47	30 7/16	16 9/16	36 11/16	44 11/16	8	95 3/8	1 5/8*22*22

DESIGN DATA		
1.) INNER VESSEL:		CODE COMPLIANCE: ASME SECTION VIII DIVISION 1
MAWP:		250 PSI
DESIGN PRESSURE:		MAWP PLUS 14.7 PSI FOR TANKS GREATER THAN 1500 GAL
DESIGN TEMPERATURE:		-320 F TO +100 F
MATERIAL OF CONSTRUCTION:		SA553 9% NICKEL STEEL
2.) OUTER VESSEL:		
DESIGN:		FULL VACUUM PER CGA-341
DESIGN TEMPERATURE:		-20 F TO 300 F
MATERIAL OF CONSTRUCTION:		A36 CARBON STEEL
3.) INSULATION TYPE:		VACUUM AND COMPOSITE INSULATION ON ALL UNITS
EVACUATION CONNECTION:		1 1/2 PS GRINNELL VACUUM VALVE
VACUUM GAUGE CONNECTION:		FREDRICKS #2100-10-2A

PIPING SCHEMATIC



BOC TAG NUMBER	MVE TAG NUMBER	FUNCTION	DESCRIPTION	SIZE 525 THRU 3000	SIZE 6000 THRU 15000
V-1	HCV-1	VLV, BOTTOM FILL	ANGLE GLOBE VALVE, REGO #BK9412S	1 1/2 NOM	1 1/2 NOM
V-2	HCV-2	VLV, TOP FILL	ANGLE GLOBE VALVE, REGO #BK9412S	1 1/2 NOM	1 1/2 NOM
V-3	HCV-3	VLV, PBC INLET	GLOBE VALVE, REGO #BK9404SE	1/2 NOM	1/2 NOM
V-4	HCV-4	VLV, FULL TRYCOCK	GLOBE VALVE, REGO #BK84048E	1/2 NOM	1/2 NOM
V-5	HCV-5	VLV, VACUUM GAUGE TUBE	BELLOWS SEALED VALVE, HOKE #411L2B	1/8 MPT	1/8 FPT
V-6	HCV-6	VLV, EVACUATION	DIAPHRAGM VALVE, GRINNEL #015-2402-903-004	1 1/2 NPT	1 1/2 NPT
V-14	HCV-7	VLV, FILL LINE DRAIN	GLOBE VALVE, GODDARD #B-202	3/8 NPT	3/8 NPT
V-8	HCV-8	VLV, LI-1 VAPOR PHASE	ANGLE VALVE, NUPRO #B4JNA2-7858	1/4 NPT	1/4 NPT
V-7	HCV-9	VLV, LI-1 EQUALIZER	ANGLE VALVE, NUPRO #B4JNA2-7858	1/4 NPT	1/4 NPT
V-8	HCV-10	VLV, LI-1 LIQUID PHASE	ANGLE VALVE, NUPRO #B4JNA2-7858	1/4 NPT	1/4 NPT
V-10	HCV-11	VLV, PB OUTLET	GLOBE VALVE, REGO #B-K94125E	1-1/2 NOM	1-1/2 NOM
V-9	HCV-12	VLV, VAPOR VENT	GLOBE VALVE, REGO	1" NOM	1" NOM
V-11	HCV-13	VLV, VAPORIZER INLET	GLOBE VALVE, REGO	1 1/2 NPT	1 1/2 NPT
SWV	HCV-15	VLV, SAFETY RELIEF SLCTR	DIVERTER BALL VALVE, BESTOBELL #DN20	1 NPT	1 NPT
V-19	HCV-16A	VLV, TEST	ANGLE VALVE, NUPRO #B-4JNA2-7858	1/4 NPT	1/4 NPT
V-19	HCV-16B	VLV, TEST	ANGLE VALVE, NUPRO #B-4JNA2-7858	1/4 NPT	1/4 NPT
CV-1	CV-1	VLV, FILL CHECK	CHECK VALVE, POWELL #560Y PER MSS SP-80	1 1/2 NPT	1 1/2 NPT
SV-1	PSV-1A	SAFETY, INR VESSEL PRES	RELIEF VALVE, ROCKWOOD #RXS0 250 PSI	1/2 * 3/4	1/2 * 3/4
SV-1	PSV-1B	SAFETY, INR VESSEL PRES	RELIEF VALVE, ROCKWOOD #RXS0 250 PSI	1/2 * 3/4	1/2 * 3/4
SV-2	TSV-2	SAFETY, FILL LINE THERM	RELIEF VALVE, REGO #B9422N300 300 PSI	1/4 NPT	1/4 NPT
SV-2	TSV-3	SAFETY, PB CIRC THERM	RELIEF VALVE, REGO #B9422N300 300 PSI	1/4 NPT	1/4 NPT
SV-2	TSV-4	SAFETY, PB CIRC THERM	RELIEF VALVE, REGO #B9422N300 300 PSI	1/4 NPT	1/4 NPT
S-2	S-1	STRAINER, PRESS BLDG	STRAINER, UNITED BRASS 100 MESH	1/2 NPT	1/2 NPT
PCV-1	PCV-1	PRESS CONTROL, INR VES	REGULATOR, AW CASH #B @120 PSI	1/2 NPT	1/2 NPT
SH-1	PSE-1A	RELIEF DEVICE, INR VES	RUPTURE DISC, BS&B STA-KUL	3/4 MPT	3/4 MPT
SH-1	PSE-1B	RELIEF DEVICE, INR VES	RUPTURE DISC, BS&B STA-KUL	3/4 MPT	3/4 MPT
SH-2	PSE-3	RELIEF DEVICE, OTR VES	LIFT PLATE	6 I.D.	8 I.D.
PB	PBC-1	PRESSURE BUILDING COIL	COIL, LARKIN #46ECS214-2-660-0012		
PI-1	PI-1	PRESS INDICATOR, INR VES	PRESSURE GAUGE, MOSHOOK #40-100-400 0-400 PSI	4 DIAL	4 DIAL
LI-1	LI-1	LEVEL INDICATOR, INR VES	DIFFERENTIAL PRESSURE GAUGE, BARTON #II-12 LOW POWER	6 DIAL	6 DIAL
FC	FC-1	CONNECTION, FILL	CGA	1 1/2	1 1/2
C-2	C-2	CONNECTION, AUX VAPOR	CAP BRASS	1 FPT	1 FPT
C-1	C-1	CONNECTION, AUX LIQUID	CAP	1 1/2 NPT	N/A
TC	VR-1	VACUUM PROBE	VACUUM PROBE, FREDRICKS @2100-10-2A	1/8 MPT	1/8 MPT
V-12	HCV-17	VLV, ECONOMIZER	GLOBE VALVE REGO #BK8404SE	1/2 NOM	1/2 NOM
SV-2	TSV-5	SAFETY, ECONOMIZER	RELIEF VALVE, REGO #B9422N300 300 PSI	1/4 NPT	1/4 NPT
PCV-2	PCV-2	PRESS CONTROL, ECONOMIZER	REGULATOR, AW CASH #FRM @ 140 PSI	1/4 MPT	1/4 MPT
V-15	HCV-18	VLV, AUX LIQUID	GLOBE VALVE, GODDARD #B 222 16T	N/A	2 NPT
CV-2	CV-2	VLV, HOUSELINE CHECK	CHECK VALVE, POWELL #560Y PER MSS SP-80	1/2 NPT	1/2 NPT
V-3A	HCV-23	VLV, PB COIL INLET	GLOBE VALVE, REGO #BK9404SE	N/A	1/2 NOM
V-18	HCV-24	VLV, PB COIL OUTLET	GLOBE VALVE, REGO #BK9412SE	N/A	1-1/2 NOM

* NOTE: PSE-3 FOR 6000 GALLON VESSEL IS A 6" LIFT PLATE

RECEIVED
MAR 31 2010
City of Goleta
Planning & Environmental Svcs.

REV.	ECO #	REVISION DESCRIPTION	BY	DATE	APPROVED	DATE
N	10858	CHGD FOOT PAD DIM, VCS-3000 & 6000	MDS	10/23/98		
M	9893	MADE UPDATES AND CORRECTIONS	TDT	1/28/97	DRAWN BY GP	2-5-90
L	9277	REVISE & REDRAW; SEE OBS. FILE FOR PREV. REV.	--	8-7-96	CHK'D BY GP	2-5-90
					PROJ. ENGR. JR	5-5-90
					MFG. ENGR. –	–
					MFG. SERV. –	–
					QUAL. CONT. –	–

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MAT'L

PART NUMBER 10692080

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES FRACTIONS ± 1/16" ANGLES ± 1° 2 PLACE DECIMALS ± 3 PLACE DECIMALS ±

NEXT ASSY	USED ON	NEXT ASSY	FINAL ASSY
APPLICATION		QUANTITY REQ'D	

MVE, Inc.
NEW PRAGUE, MINNESOTA 56071

TITLE
SPECIFICATION VCS-525 THRU VCS-15000 BOC

DRAWING NO. D-34905 REV. M

SCALE N/A DO NOT SCALE DRAWING SHEET 1 of 1