

C.6. Bill of Materials

Provide a Bill of Materials, complete with number of items, item description, materials of construction, part numbers, size, brand names and model numbers to construct one completely operational DPVE and groundwater treatment system with a forty (40) horsepower (hp) motor. Costs are to be excluded from the Bill of Materials.

The Bill of Materials is a list of all components included in the product to be provided. It will assist the state in evaluating the technical competency of the Proposer to build a completely operational DPVE and groundwater treatment system.

MK Environmental's DPVE and Groundwater Treatment system includes the following equipment:

1. Liquid Ring Pump – Travaini TRVX 1005. See Section C.1 also
2. Liquid Ring Motor – 40hp TEFC, 3ph
3. Air/Water Separator – MKE 200gal (see detailed BOM)
4. AWS transfer pump – Meyers 1.5hp CT-10 (see detailed BOM)
5. Air/Oil Separator – MKE 60gal (see detailed BOM)
6. Air/Oil Heat exchanger – (see detailed BOM)
7. Stripperator – MKE 15gpm OWS/Air stripper/sump (see detailed BOM)
8. Effluent transfer pump – Meyers 1.5hp CT-10 (see detailed BOM)
9. Additional water treatment (qty 2 bag filters/qty 2 carbon filters)
10. System Enclosure with wall panels and sound box – MKE 12' removable wall enclosure. (See detailed BOM)
11. System Control panel with meter base, disconnect, and weatherhead (see detailed BOM)

A BOM breakdown of these components of the DPVE and Groundwater Treatment System is included in the end of this section.

C.6. BILL OF MATERIALS

BOM, DPVE and Groundwater Treatment System, in part number order

QTY	Part #	DESCRIPTION
1	10017	BARB,GALV, 1" BRB X THD
2	10017	BARB CS GALV 1.0"NPTX 1.0"HOSE
1	10020	BARB, BRASS, 1/2" BARB X 1/4" THD
1	10025	BARB, BRASS, 1/2" BRB X THD
1	10025	BARB, BRASS, 1/2" BRB X THD
2	10031	BARB, BRASS, 1/4" BRB X THD
1	10031	BARB, BRASS, 1/4" BRB X THD
1	10031	BARB, BRASS, 1/4" BRB X THD
1	10031	BARB, BRASS, 1/4" BRB X THD
1	10031	BARB, BRASS, 1/4" BRB X THD
1	10031	BARB, BRASS, 1/4" BRB X THD
1	10031	BARB, BRASS, 1/4" BRB X THD
1	10031	BARB, BRASS, 1/4" BRB X THD
5	10046	10-32 BARBS
1	10091	BUSHING, GALV, BRASS, 1/4" X 1/8"
2	10099	BUSHING, RED, GALV., 1-1/4" X 1"
1	10326	MAGNEHELIC GAUGE 20" WC
1	10337	GAUGE, PRESSURE, 0 - 100 PSI BACK MOUNT
1	10337	GAUGE 0-100PSI BACK MOUNT
1	10349	HOSE, 1/2" I.D., RED ORTAC, 1-BRAID, 250 #
6	10349	HOSE, 1/2" I.D., RED ORTAC, 1-BRAID, 250 #
20	10357	HOSE, 1/4" I.D., RED ORTAC, 1-BRAID, 250 #
1	10357	HOSE, 1/4" I.D., RED ORTAC, 1-BRAID, 250 #
1	10357	HOSE, 1/4" I.D., RED ORTAC, 1-BRAID, 250 #
1	10357	HOSE, 1/4" I.D., RED ORTAC, 1-BRAID, 250 #
2.5	10357	HOSE, 1/4" I.D., RED ORTAC, 1-BRAID, 250 #
1	10357	HOSE, 1/4" I.D., RED ORTAC, 1-BRAID, 250 #
15	10357	HOSE, 1/4" I.D., RED ORTAC, 1-BRAID, 250 #
1	10426	NIPPLE, BRASS, 1/2" X CLOSE
2	10427	NIPPLE, BRASS, 1/4" X CLOSE
1	10667	TEE, BRASS, 1/4"
1	10667	TEE, GALV, 1/4"
1	10681	10-32 BRANCH TEE
1	10744	VALVE, BALL, BRASS, 1/2"
1	10744	VALVE, BALL, BRASS, 1/2"
1	10744	VALVE, BALL, BRASS, 1/2"
1	10788	VALVE, PLUG, 1/4"
1	10788	VALVE, PLUG, 1/4"
1	10788	VALVE, PLUG, 1/4"
1	10788	VALVE, PLUG, 1/4"
1	10789	VALVE, SWING CHECK, BRASS, 1"
4	10820	WASHER, ZINC, FLAT, 5/16
4	10820	WASHER, ZINC, FLAT, 5/16
1	12230	NIPPLE, GALV., 1" X CLOSE
3	12230	NIPPLE, GALV., 1" X CLOSE
1	12230	NIPPLE, GALV., 1" X CLOSE
1	12230	NIPPLE, GALV., 1" X CLOSE
3	12230	NIPPLE, GALV., 1" X CLOSE
3	12230	NIPPLE, GALV., 1" X CLOSE
1	12345	MSP 3HP
4	13092	PIPE,PVC, SCH 40, 1.25"
5	13092	PIPE,PVC, SCH 40, 1.25"

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BOM, DPVE and Groundwater Treatment System

QTY	Part #	DESCRIPTION
2	13637	VALVE, GATE, BRASS, 1"
1	13637	VALVE, GATE, BRASS, 1"
1	13637	VALVE, GATE, BRASS, 1"
1	13707	ELBOW, GALV, STREET, 1.25"
1	14174	COUPLING, FLEX, PVC, 1-1/4" FERNCO
1	14174	COUPLING, FLEX, PVC, 1-1/4" FERNCO
1	14305	TEE, PVC, SCH 40
3	14359	PIPE, PVC, SCH 40
2	14552	GATE, BLAST, FULL, 6"
1	14693	TEE, 6" X 6" X 6"
1	14695	RAIN CAP, GALV., 6"
1	14714	PIPE, 2", PVC 24"
1	14714	PIPE, PVC, 2" X 3" LONG
1	14987	GAUGE, TEMP, 1/2" 50-400 F
1	15104	ELECTRIC MOTOR 1.5HP 208/230-460V TEFC
1	15104	ELECTRIC MOTOR 1.5HP 208/230-460V TEFC
2	15143	BULKHEAD 1/8" X 10-32
1	15195	ELBOW, SCH 40, 4", SOC
1	15209	COUPLING, FLEX, PVC, 2" FERNCO
1	15248	ELBOW, SCH 40, 2", SOC
2	15538	WW67
4	15570	CAM LOCK, ALUMINUM, 1" FXBARB
1	15714	ELBOW, STREET, GALV., 1"
1	15714	ELBOW, STREET, GALV., 1"
2	15714	ELBOW, STREET, GALV., 1"
2	15714	ELBOW, STREET, GALV., 1"
2	15714	ELBOW, STREET, GALV., 1"
1	15714	ELBOW, STREET, GALV., 1"
7	15714	ELBOW, STREET, GALV., 1"
1	15715	TEE, GALV., 1"
3	15715	TEE, GALV., 1"
2	15716	UNION, GALV., 1"
1	15720	ELBOW, STREET, GALV., 2"
1	15730	COUPLING, STEEL, FULL
1	15732	ELBOW, WELD, SHORT RADIUS, 4"
1	15812	VALVE, RELIEF, 2", BRASS, LONG STEM
2	15826	BUSHING, RED, SCH 40, 4" X 2", SPIG X FIPT
1	15976	NIPPLE, GALV., 2" X 4"
1	16132	TIMER TI DELAY
1	16247	BUSHING, GALV, 1" X 1/2"
1	16267	COUPLING, FLEX, PVC, 4"
1	16267	COUPLING, FLEX, PVC, 4"
16.5	16380	HOSE 1" RED ORTAC
36	16380	HOSE 1" RED ORTAC
1	16436	HEATER, WITH THERMOSTAT, X-P, 1 PH, 240 VOLT, 3.6 Kw, 15 F.L.A.
1	16445	GAUGE, VACUUM, 30 - 0 " HG, 1/4" BTM MOUNT
1	16900	ADAPTER, MALE, SCH 40, 4", MIPT X SOC
1	16986	COUPLING, 9S X 42MM
1	16988	COUPLING, SURE FLEX, 9S, ONE PIECE
4	17033	NUT, ZINC, 1/4-20
1	17122	BUSHING REDUCER CS 1.0"X3/4"

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BOM, DPVE and Groundwater Treatment System

QTY	Part #	DESCRIPTION
4	17250	Din Rail 1-21"L 1- 17"L 1- 7"L
1	17260	PLUG 1" NPT SQ HD
2	17260	PLUG, GALV, 1"
1	17293	TIMER T2
1	17347	Transformer (Control)
1	17530	TRANSMITTER,VAC-PRES. 616-9
25	17589	HOSE, TIGERFLEX, 1"
4	17692	CAM LOCK, ALUMINUM, 1" MXM
1	17695	BARB, STEEL, 4"
4	17859	HOSE, TIGER, 1"
1	17954	ELECTRIC MOTOR 40HP 3/60/230-460 TEFC
1	19007	FILTER, PARTICUALTE, 4"
1	19020	COUPLING, 9S X 2-1/8"
1	20005	CLAMP, HOSE, MINI, 1/4"
16	20005	CLAMP HOSE , FOR 1/4" HOSE
1	20006	CLAMP, HOSE, 1/2" TO 1"
1	20007	CLAMP, HOSE, 11/16" TO 1-1/4"
4	20007	CLAMP, HOSE, 11/16" TO 1-1/4"
1	20014	BARB, ZINC, 1" BRB X THD
2	20014	BARB, ZINC, 1" BRB X THD
4	20014	BARB, ZINC, 1" BRB X THD
1	20014	BARB, ZINC, 1" BRB X THD
6	20014	BARB., 1" PLATED ZINC
1	20044	SWITCH, TEMPERATURE, 225^ INCREASING
5	20047	TOP AUX CONTACTOR
1	20049	LINE SIDE FEEDER 4
1	20050	TERMINAL 3 POLE
1	20052	MSP 1.0 HP 3.5-5.0
2	20053	MSP 1.5HP 4.5-6.3
1	20061	MSP 40HP 80-100
4	20062	MODULE LINK 0-3 HP
1	20066	MODULE LINK 20-40
4	20067	CONTACTOR 0-3 HP
1	20073	CONTACTOR 40HP
1	20079	SIDE AUX NO
1	20082	SIDE AUX NC NO
1	20101	DISCONNECT BOX, FUSED, 200 AMP
3	20103	FUSES 200AMP
1	20165	PRESSURE SWITCH 1910-5 1.4-5.5 "WC
1	20184	MESH, WIRE, SS, CTF DRAIN
1	20222	VALVE, VACUUM RELIEF, ANTI-SIPHON, 3/4"
1	20240	CONDUIT, BOX, ALUMINUM, 1/2"
1	20240	1/2" mulberry box 3 hole
1	20271	Cover. White for GFCI
1	20299	GFCI Recpt. 15 amp.
4	20411	WASHER, ZINC, LOCK, 5/16
4	20411	WASHER, ZINC, LOCK, 5/16
1	20411	CONDUIT, IMC, 2.5"
1	20463	STRAINER, 1"
1	20511	NIPPLE, GALV., 1" X 5"
1	20529	FLANGE, 150#, SLIP ON , 4"

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QTY	Part #	DESCRIPTION
1	20541	FILTER SILENCER, 2" MPT, 135 SCFM
1	20556	VALVE,CHECK, BUTTERFLY, 4"
2	20591	PIPE, PVC, 6" X 2"
2	20622	TERMINAL GRAY
1	20677	SWITCH CAM CONTACTOR N.C.
7	20678	SWITCH CAM CONTACTOR N.O,
1	20680	SWITCH FLUSH (PULSE/RESET) 22MM
2	20681	SWITCH 2 POS. MAINTAIN (BLOWER) 22 MM
1	20682	SWITCH 3 POS MAINTAIN (PUMPS) 22MM
1	20683	SWITCH 3 POS. MOMEN. RIGHT (L/R) 22MM
2	20685	LABEL HAND OFF AUTO
1	20686	LABEL (RESET)
1	20687	LABEL ON OFF
1	20688	LABEL OFF RUN START
2	20713	BLANK PLUGS (22MM)
1	20718	LIGHT, RED ESTOP
1	20751	FLASHING, GALV, 4" RUBBER BOOT
3	20756	END COVER FOR DNT-10
4	20758	TERMINAL YELLOW
1	23048	COUPLING 1/4 X 1/8
1	23048	1/4 X 1/8 COUPLING GALV BELL STYLE
1	23165	NIPPLE, CONDUIT, GALV, 2" X 6"
1	23358	BUSHIHG, RED, SCH 40, 2" X 1", SPIG X FIPT
1	23399	CROSS, SCH 40, SOC, 4"
1	23400	COUPLING, PVC, 2",SOCXSOC
1	23400	COUPLING, PVC, 2",SOCXSOC
5	23402	PIPE, PVC, SCH 40, 1"
5	23402	PIPE, PVC, SCH 40, 1"
1	23403	BUSHIHG, RED, SCH 40, 2" X 1/2", SPIG X FIPT
1	23403	BUSHIHG, RED, SCH 40, 2" X 1/2", SPIG X FIPT
1	23499	FILTER, AOS
1	23500	VALVE, BALL, SCH 40 PVC, 2", EPDM GASKET
1	24500	GAUGE, PRESSURE , 0-15 PSI
1	24506	1.5 A 1 POLE BREAKER
2	24507	15 A 1 POLE BREAKER
1	24508	2.0 A 2 POLE BREAKER
1	24509	20 A 2 POLE BREAKER
1	24529	PIPE, PVC, CLEAR, 2" X 13.5" LONG
1	24530	ADAPTER, FEMALE, PVC, SCH 40,1"
4	24534	TERMINAL WHITE
1	24585	CAP, QWIK, 10"
14	25016	PORON GASKET WITH ACRYLIC ADHESIVE ONE SIDE
1	25051	HOUR METER
2	25077	MACHINE SCREW #8-32 x 1/2"
4	25090	NUT, ZINC, 5/16
4	25090	NUT, ZINC, 5/16
16	25091	NUT, ZINC, 5/8 NC
8	25091	NUT, ZINC, 5/8 NC
8	25091	NUT, ZINC, 5/8 NC
32	25092	WASHER, ZINC, FLAT, 5/8
4	25092	WASHER, ZINC, FLAT, 5/8

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BOM, DPVE and Groundwater Treatment System

QTY	Part #	DESCRIPTION
4	25092	WASHER, ZINC, FLAT, 5/8
4	25092	WASHER, ZINC, FLAT, 5/8
8	25096	NUTS, MACHINE SCREW, 8-32
10	26046	HANDLE, Oval-Grip Pull Handle
24	26053	SCREW, SELF-DRILLING, HEX HEAD, ZINC, 12-14 X 3/4" L
3	26075	HD Q-PAC
1	27011	4" WITCHES HAT
1	27022	Elbow 10"
1	40007	HOSE, ALPHA-GOMMA, 4"
2	40019	LIQUID PHASE CARBON (180LBS)
1	40033	PUMP, MYERS CT10
1	40033	PUMP, MYERS CT10
1	40081	CAMLOCK, BARB X XFEMALE CAM,1"
1	40082	CAMLOCK, MPTXMALE CAM, 1"
10	40084	Shield Cable 2 wire w/ ground
1	40101	10-32 ELBOW
1	40108	NYLON TUBE 1/4"
1	40108	TUBING, NYLON, CLEAR 1/4"
3	40200	DIAMOND PLATE
1	40312	SPRING HEAVY
1	40429	TANK, POLY, 75 GALLON
8	40435	BARB., 1/4" BRASS
2	40443	COUPLING CS 1.0" NPT
1	40444	PLUG, GALV 1/2"
1	41001	NIPPLE, GALV, 1/2" X CLOSE
1	41001	NIPPLE, GALV, 1/2" X CLOSE
2	41004	NIPPLE, GALV, 1/4" X CLOSE
3	41004	NIPPLE, GALV, 1/4" X CLOSE
1	41004	NIPPLE, GALV, 1/4" X CLOSE
1	41004	NIPPLE, GALV, 1/4" X CLOSE
1	41005	TEE, GALV, 1/4"
1	41005	TEE, GALV, 1/4"
1	41005	TEE, GALV, 1/4"
6	41006	LEGEND PLATES
1	41007	ELBOW, STREET, GALV, 1/4"
1	41007	ELBOW, STREET, GALV, 1/4"
1	41007	ELBOW, STREET, GALV, 1/4"
1	41007	ELBOW, STREET, GALV, 1/4"
10	41009	CLAMP HOSE , FOR 1" HOSE
2	42063	COMPRESSION FITTING, 1/4 NPT X 1/4" TUBE
1	42065	COMPRESSION FITTING, 1/4 FNPT X 1/4" TUBE
1	42079	BUSHING, RED, GALV, 1/2" X 1/4"
1	42079	BUSHING, REDUCER, 1/2" to 1/4" NPT
2	42118	GASKET, FLANGE, 4"
3	42160	BLACK INSULATION
1	42175	FAN NON-DRIVE END SHAFT
1	42214	SIGHT GLASS, SINGLE POINT, 12"
1	42217	PROBE HEAD, PVC, MACHINED REVA
1	42217	PROBE HEAD, PVC, MACHINED REVA
1	42219	ROD, 304 S.S., 1/4" DIA X 13" L, T.O.E., 8-32
1	42219	ROD, 304 S.S., 1/4" DIA X 13" L, T.O.E., 8-32

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BOM, DPVE and Groundwater Treatment System

QTY	Part #	DESCRIPTION
1	42220	ROD, 304 S.S., 1/4"DIA X 15"L, T.O.E., 8-32
1	42220	ROD, 304 S.S., 1/4"DIA X 15"L, T.O.E., 8-32
2	42221	ROD, 304 S.S., 1/4"DIA X 19"L, T.O.E., 8-32
2	42221	ROD, 304 S.S., 1/4"DIA X 19"L, T.O.E., 8-32
1	42236	TELEMETRY, 570
1	42308	TUBE, SS, 1/4" X 24"
1	42318	Enclosure 36x32x12
12	42329	GROMMET, SPRBA GLAS 110
2	42340	TRIM TAPE, SORBA GLAS 110, 4" (48")
2	42340	TRIM TAPE, SORBA GLAS 110, 4" (48")
1	42351	SOUND BLANET, SORBA GLAS 110, 48" X 122"
1	42351	SOUND BLANET, SORBA GLAS 110, 48" X 171.5"
3	42351	SOUND BLANET, SORBA GLAS 110, 48" X 84"
1	42351	SOUND BLANET, SORBA GLAS 110, 48" X 43"
1	42435	Swing Panel
1	42464	FLATBAR, ALUM, .125 X 1" (43")
1	42464	FLATBAR, ALUM, .125 X 1" (47")
2	42481	PUSH IN FITTING, 1/4"
2	42501	TKHD 4" #8 PVC w/1" In & Out & 1" Riser
1	42508	TEE, RED, SCH 40, 2" X 2" X 1", SOCXSOXFIPT
1	42509	ELBOW, PVC, SCH 40, 1.25"
1	42509	ELBOW, PVC, SCH 40, 1.25"
1	42515	ADAPTER, PVC, MALE, 1.25"
1	42515	ADAPTER, PVC, MALE, 1.25"
2	42515	ADAPTER, PVC, MALE, 1.25"
2	42597	LIQUID-TITE, CONNECTOR, 2" STRAIGHT
1	42599	WEATERHEAD, 2.5"
1	42623	HUB, 2.5" W/GASKET
3	42628	LIQUID-TITE, 2"
150	42666	16 gauge MTW
2	42693	FLOAT, GEMS, GS-7
2	42696	VESSEL, 18" D. X 65"H FIBERGLASS
1	42705	Power distribution block
1	42706	SSAC PHASE MONITOR
1	42718	THERMOMETER, ADJUSTABLE., 50 TO 400 DEG F.
2	42722	GAUGE 0-100 PSI 1/4NPT STEM MOUNT
1	42772	LOCK SEAM ROUND DUCTING, 10" X 60" X 30ga.
1	42772	Solid Duct 10"
1	42778	FERNCO 3X2
1	42902	RADIATOR
16	42906	TUBE, NYLON
1	43023	CORD GRIP, PVC, 1/2"
1	43023	CORD GRIP, PVC, 1/2"
1	43048	CORD, SO, 16/4 X 12'
1	43048	CORD, SO, 16/4 X 12'
1	43214	CLAMP, UNISTRUT, 2.5"
2	43236	PERF PLATE, 12X36"
1	43247	CONDUIT, BOX, ALUMINUM, 1/2", COVER
7	43277	GROUNDING BAR
1	43504	SILENCER
4	43569	CLAMPS, T-BOLT

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BOM, DPVE and Groundwater Treatment System

QTY	Part #	DESCRIPTION
1	43666	Neutral Block
1	43687	ELBOW, STREET, GALV., 1/2"
1	43694	SF, PIPE, EXHAUST 4"
2	43735	SIZE #2 FILTER HOUSING 1" IN OUT
1	43765	BUSHING, GALV, 1/2" X 3/8"
1	43838	VALVE, BALL, BRASS, 1"
1	43936	BY PASS SWITCH SPADE CONNETORS
1	43950	FLOW METER, PULSE, COLD, 1", SEAMETRIC MJR-100-1G
2	44004	JUMPER, 4SPOTS
5	44206	BASE TIMER RELAY 8-PIN
16	44246	TEK SCREWS
12	44246	TEK SCREWS
1	44330	AWS TANK 200 GALLON
1	44337	GUARD, COUPLING
1	44339	SHROUD, FAN, ZINC WITH INLET AIR CONNECTIONS
1	44372	SHEET METAL SHROUD
1	44461	R1 RELAY
1	44461	R2 RELAY
1	44488	NIPPLE, GALV, 1/8 X CLOSE
1	44488	NIPPLE, GALV, 1/8 X CLOSE
1	44518	NIPPLE, GALV., 3/8" X CLOSE
8	44555	STAR LOCKNUTS, 8-32
16	44556	WASHER,ZINC,LOCK, 5/8
4	44556	WASHER,ZINC,LOCK, 5/8
4	44556	WASHER,ZINC,LOCK, 5/8
4	44556	WASHER,ZINC,LOCK, 5/8
1	44557	NUT, CONDUIT, 2"
1	44557	NUT, CONDUIT, 2"
4	44558	BOLT, ZINC, 5/16 X1"
4	44558	BOLT, ZINC, 5/16 X1"
4	44559	BLOCK, 14-18GA #8 RING
4	44559	BLOCK, 14-18GA #8 RING
1	44561	DRAIN, FLOOR, PVC (STRAINER)
1	44562	SPECIALTY FAB, STEEL PIPE, INLET SUPPORT
4	44562	BOLT, ZINC, 5/8 X 4" NC
4	44562	BOLT, ZINC, 5/8 X 4" NC
16	44563	BOLT, ZINC, 5/8 X 3" NC
4	44565	BOLT, ZINC, 1/4-20X1"
4	44565	BOLT, ZINC, 1/4-20X1"
2	44566	1/4" PLUG VALVE MXF THREADS
4	44567	ORING, BUNA, OD 1/4", ID 1/8" 1/16" THICK
4	44567	ORING, BUNA, OD 1/4", ID 1/8" 1/16" THICK
1	44568	PUMP MOTOR MOUNT
1	44568	PUSHLOCK 1/4"NPT-1/4" TUBE
1	44569	MOUNTING PLATE , SF
1	44570	KIT PUMP FLOOR MOUNT HARDWARE 3/8"
2	44571	UNISTRUT CLAMP 1.0"
2	44572	UNISTRUT 6"LONG with 1/4"SCREWS FLOOR MOUNT
1	44573	Back Panel 34"L x 28"
1	44601	BULKHEAD, 1.25, THD X THD
1	44602	CLAMP 10"

C.6. BILL OF MATERIALS

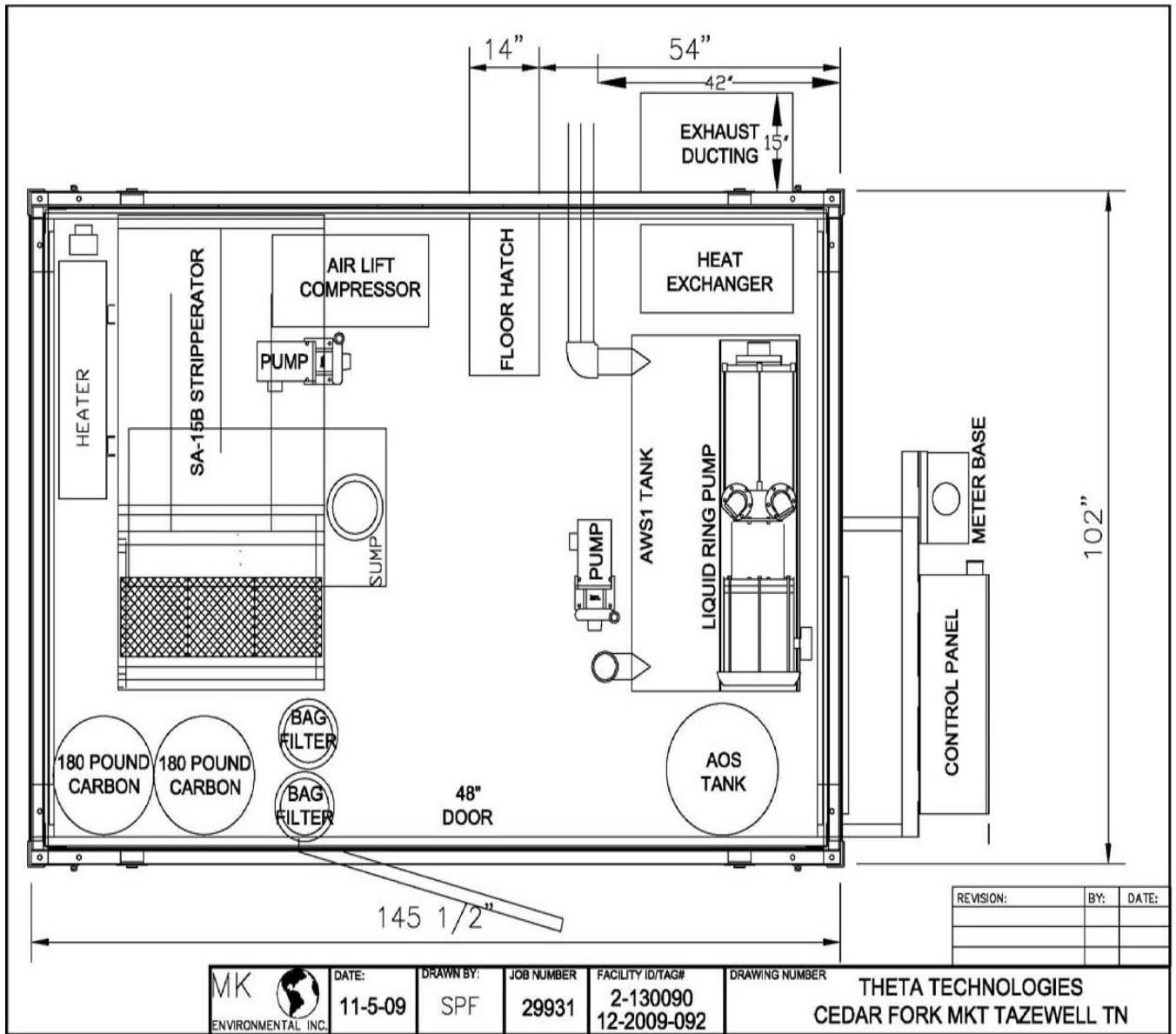
BOM, DPVE and Groundwater Treatment System

QTY	Part #	DESCRIPTION
1	44603	VACUUM PUMP TANK MOUNT
1	44604	PUMP MOTOR COUPLING
1	44605	PUMP MOTOR MOUNT
1	44606	FLANGE, 150#, THREADED , 4"
5.5	44607	Wire gutter and cover 2x2 -32"L-(2)15"L-1-6"L
5.25	44608	Wire gutter and cover 2x1 (2) 23"L- 1-20"L
1	44613	VALVE, CHECK, PVC, SCH 40,BALL, 1" VITON
1	44614	VALVE, CHECK, PVC, SCH 40,BALL, 1" EPDM
16	44620	PLUG, SCH 40, INSERT, 1-1/4"
1	44621	VALVE, BALL, PVC, SCH 40,1"
1	44621	VALVE, BALL, PVC, SCH 40,1"
1	44629	VALVE,BALL, PVC, SCH 40, 1.25"
1	44629	VALVE,BALL, PVC, SCH 40, 1.25"
2	45012	MB RISER 1" (1.315") X 66" LONG
1	45161	TEE, PVC, SCH 40, 1"
1	45161	TEE, PVC, SCH 40, 1"
1	45290	Neutral block cover
1	45296	ELBOW,PVC,SCH 40, 1"
1	45296	ELBOW,PVC,SCH 40, 1"
1	45408	PLUG, GALV, 3/4"
1	45408	PLUG, GALV, 3/4"
1	45410	NIPPLE, GALV., 1" X 2"
1	45517	PUMP, VACUUM, TRVX 1005
1	45572	NIPPLE, GALV, 1" X 8"
1	45652	BUSHING,PVC, SCH 40, 1"X3/4",SLPXTHD
1	45652	BUSHING, RED, SCH 40, 1" X 3/4", SPIG X FNPT
1	50027	PLATE, VAC, 10.625" OD
2	81901	#1 Super V
6	81902	#6 Super V
1	12BLD	FAB, 12' Building
1	40086-D	HUB, 2" W/GASKET
1	42656B	BLOWER, STRIPPERATOR
1	42656M	ELECTRIC MOTOR 2HP 3/60/230-460 TEFC
1	44568A	PUMP MOTOR COUPLING
1	4696S	Wall Panel, Sound Absorption panel 46"X96"
9	4896S	Wall Panel, Sound Absorption panel 48"X96"

C.6. BILL OF MATERIALS

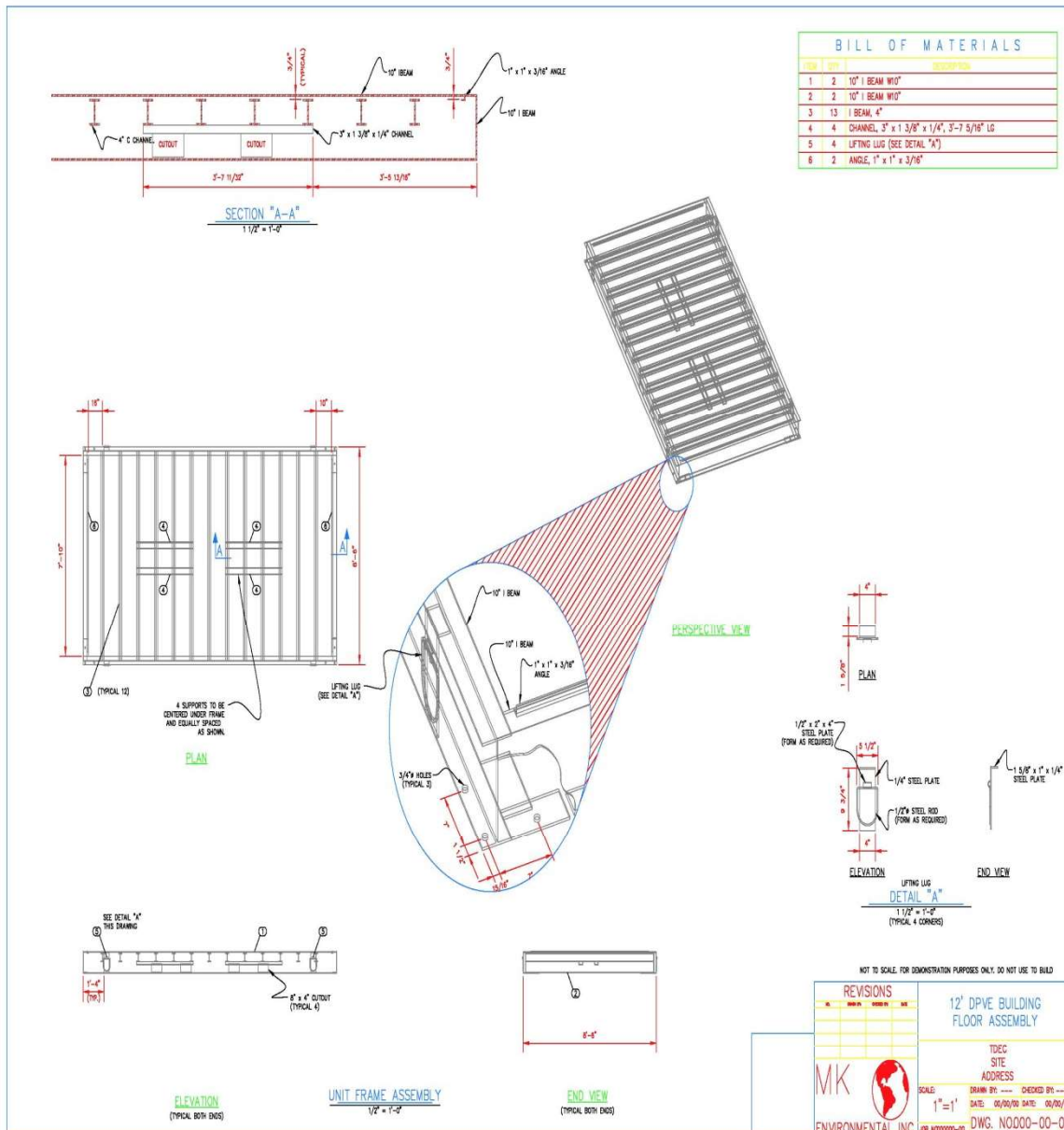
ASSEMBLY ELECTRICAL PLATFORM

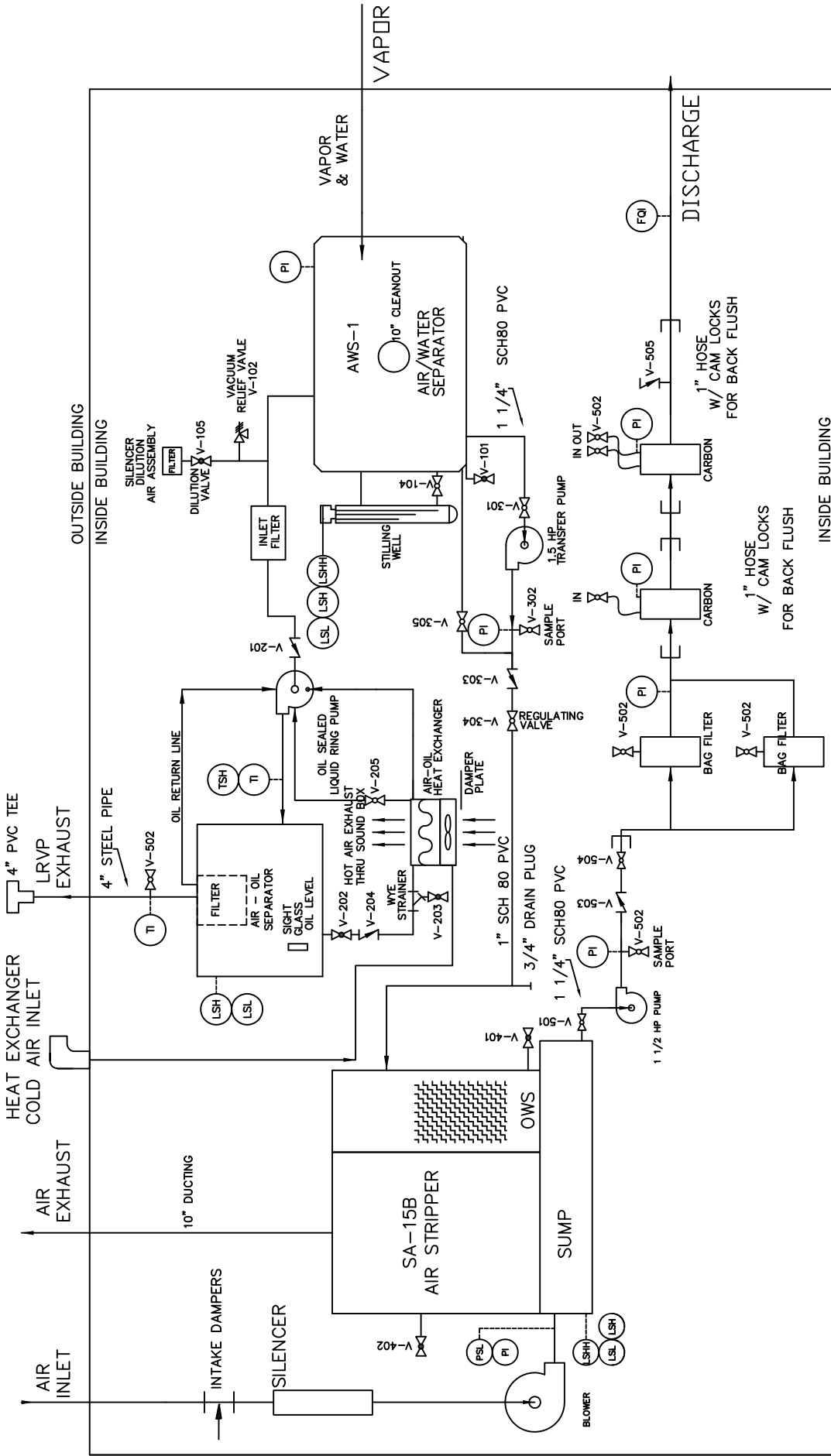
QTY	VPN	DESCRIPTION
1	8599	GFCI RECPT.15AMP
9	1B	3/4" RIGID HANGER
1	17277	LIGHT FIXTURE, KILARK, 4-PART SET
1	52BAR	E-STOP CONTACT BLOCK NO-NC
1	52PA2W2	E-STOP MUSHROOM OPERATOR
3	30203	MULBERRY BOX 1/2" 3HOLE
7	RB75-50	ELECTRICAL RED. BUSHING 3/4" X 1/2"
20	1 1/4-IMC	1 1/4" IMC CONDUIT (10' PER LENTH.)
20	3/4-IMC	3/4" IMC CONDUIT (10' PER LENTH.)
4	B2009-3/4-PLTD	3/4" UNISTRUT CLAMPS
3	11/4GALV COUP	1 1/4" RIGID ELE. COUPLING
1	UNF-205	3/4" RIGID UNION
1	UNF-405	1 1/4" RIGID UNION
4	B2011-11/4-PLTD	1 1/4" UNISTRUT CLAMPS
2	LT125	LIQUIDTIGHT FITTING STRAIGHT 1 1/4"
1	9661	3/4" PULLING ELBOW STD
2	3/4GALVELL	3/4" RIGID SWEEP
3	11/4GALVELL	11/4" RIGID SWEEP
3	BIT 2/0	BURNDY MOTOR TERM. CONNECTOR
3	3/4GALV COUP	3/4" RIGID ELE. COUPLING
1	44607	WEATHERPROOF COVER VERTICAL
2	100-S	SWITHCH, MOM. 100-S SPADE CONNECTION
1	11/4X6	1 1/4" X 6" L ELE. NIPPLE
2	20270	BLANK COVER FOR MULBERRY
0	XP 3/4 ELBOW	3/4" RIGID ELBOW
1	3/4X3	3/4" X 6"L ELE. NIPPLE
16	702-3/4	3/4" RIGID STRAP CLAMP
5	A1200-10-GR	UNI-STRUT
1	BIT-4	BURNDY MOTOR TERM. CONNECTOR
1	BU501	1/2" PLASTIC BUSHING
6	BU502	PLASTIC BUSHING 3/4"
1	BU504	PLASTIC BUSHING 1 1/4"
1	E987N	4X4X4 ENCLOSURE PVC (ESTOP)
1	E987R	6X6X4 ENCLOSURE PVC (INTRIN. SAFE)
1	ERT75	PULLIING TEE XP 3/4"
1	ESY-41	1 1/4" VERT/HORZ. SEAL-OFF XP
4	EYS-26	3/4" VERT/HORZ. SEAL-OFF XP
2	GUAX26	3/4" CONDUIT OUTLET BOX WITH COVER XP(4)
5	UA1 1/4GRY	LIQUIDTIGHT CONDUIT 1 1/4" UL LISTED
45	LA-UL 1/2"	LIQUIDTIGHT CONDUIT 1/2" UL LISTED
6	LN102	LOCK NUT 3/4"
1	LN104	LOCK NUT 1 1/4"
6	LS102	LOCK NUT W/SEALING WASHER 3/4"
1	LS104	LOCK NUT W/SEALING WASHER 1 1/4"
22	LT50	LIQUIDTIGHT FITTING STRAIGHT 1/2"



Provide a description and dimensions of the structural steel skid. At a minimum, flooring design, construction details, thickness and load specifications shall be included.

- 8.5' W x 12'L x 9.5'H MK Enclosed Platform
- 10" structural steel base with 4" steel ibeam cross members
- Diamond steel plate flooring with drainage holes
- Fully insulated 4'W x 8'L sliding removable wall panels with 5 layer aluminum exterior composite core construction
- Continuous single piece .040" thick seamless aluminum roof with 2" steel cross members



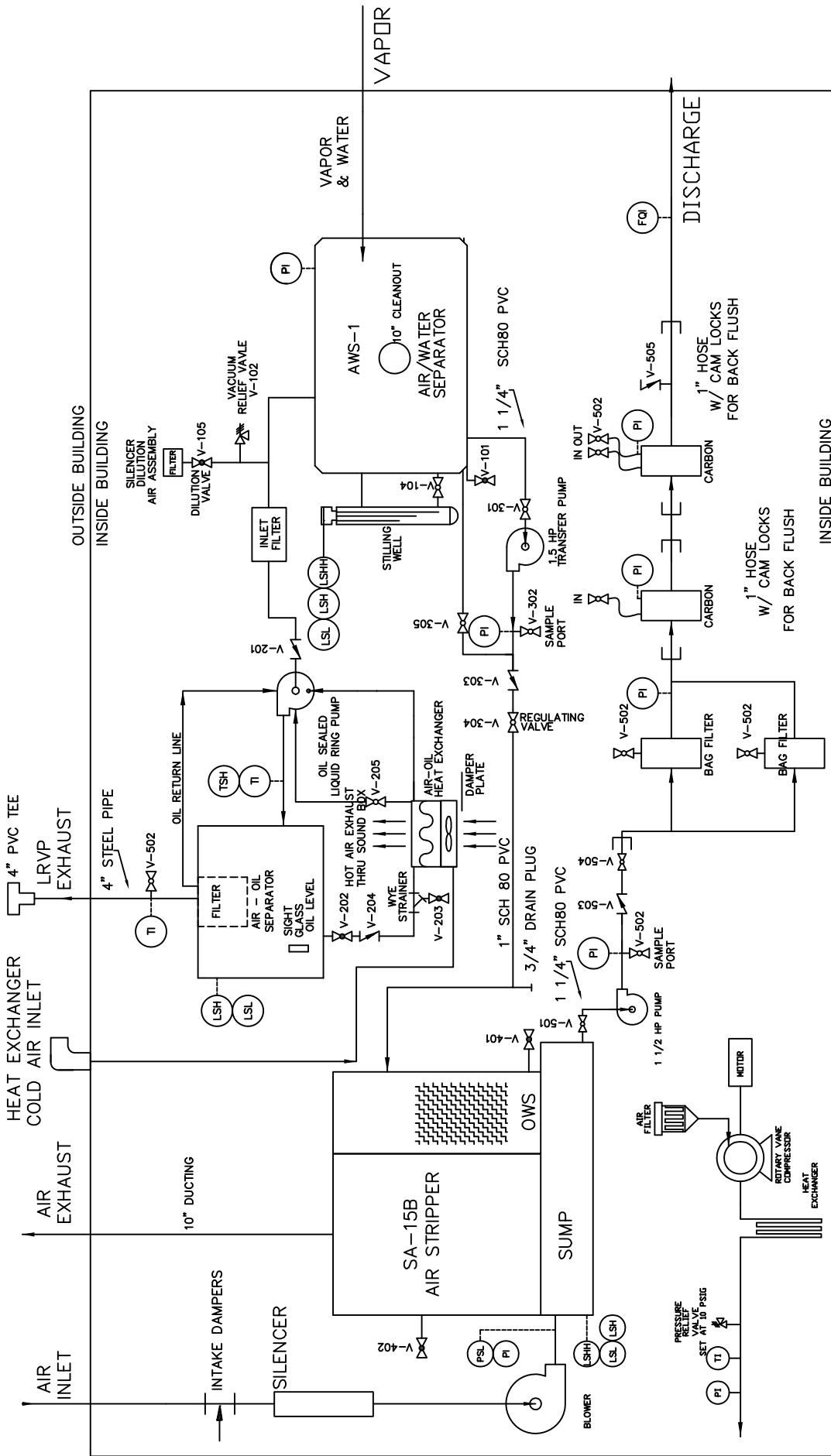


LABEL	DESCRIPTION	VALVE TYPE	LABEL	DESCRIPTION	VALVE TYPE	LABEL	DESCRIPTION	VALVE TYPE	LABEL	DESCRIPTION	VALVE TYPE
V-101	AWS-1 DRAIN	1" BALL VALVE	V-301	AWS-1 PUMP ON/OFF	1-1/4" BALL VALVE	V-401	TOWS DRAIN	1" BALL VALVE	V-501	SUMP PUMP ON/OFF	1-1/4" BALL VALVE
V-102	VACUUM RELIEF	2" VACUUM RELIEF	V-302	INFLEUNT SAMPLE PORT	1/4" BALL VALVE	V-402	AIR STRIPPER DRAIN	1" BALL VALVE	V-502	EFFLUENT SAMPLE PORT	1/4" BALL VALVE
V-103	1/2" BALL VALVE	1/2" BALL VALVE	V-303	AWS-1 CHECK VALVE	1" BALL CHECK	V-503	SUMP CHECK VALVE	1" BALL CHECK	V-504	SUMP FLOW REGULATOR	1" BALL CHECK
V-104	STILLING WELL ON/OFF	1" GATE VALVE	V-304	AWS-1 FLOW REGULATOR	1" BALL VALVE	V-505	ANTI-SIPHON VALVE	3/4" VAC RELIEF			
V-105	DILUTION VALVE	2" BALL VALVE	V-305	AWS-1 RECIRCULATION	1/2" BALL VALVE						

VACUUM INDICATOR I
 PRESSURE FQI
 SWITCH FRI
 LIQUID LEVEL OR LOW T

DATE: 9/2/09
 DRAWN BY: EHT
 JOB NUMBER: XXXXXX
 FACILITY ID/TAG#: XXXXX
 DRAWING NUMBER: P&ID TDEC STANDARD CAS

MK
 ENVIRONMENTAL INC.



LABEL	DESCRIPTION	VALVE TYPE	VALVE DESCRIPTION	LABEL	DESCRIPTION	VALVE TYPE	VALVE DESCRIPTION	LABEL	DESCRIPTION	VALVE TYPE	VALVE DESCRIPTION
V-101	AWS-1 DRAIN	1" BALL VALVE	AWS-1 PUMP ON/OFF	V-301	CHECK VALVE	1-1/4" BALL VALVE	AWS-1 INFLENT SAMPLE PORT	V-401	OWS DRAIN	1" BALL VALVE	OWS DRAIN
V-102	VACUUM RELIEF	2" VACUUM RELIEF	4" BUTTERFLY	V-302	INFLUENT SAMPLE PORT	1/4" BALL VALVE	V-402	AIR STRIPPER DRAIN	1" BALL VALVE	1" BALL VALVE	EFFLUENT SAMPLE PORT
V-103	1/2" SEAL OIL DRAIN	1/2" BALL VALVE	1/2" SEAL OIL DRAIN	V-303	AWS-1 CHECK VALVE	1" BALL CHECK	V-501	SUMP FLOW CHECK VALVE	1" BALL CHECK	1" BALL CHECK	SUMP FLOW CHECK VALVE
V-104	STILLING WELL OIL CHECK VALVE	1" GATE VALVE	1" SWING CHECK	V-304	AWS-1 FLOW REGULATOR	1" BALL VALVE	V-502	SUMP FLOW REGULATOR	1" BALL VALVE	1" BALL VALVE	SUMP FLOW REGULATOR
V-105	DILUTION VALVE	2" BALL VALVE	1/4" BALL VALVE	V-305	AWS-1 RECIRCULATION	1/2" BALL VALVE	V-503	ANTI-SIPHON VALVE	3/4" VAC RELIEF	3/4" VAC RELIEF	ANTI-SIPHON VALVE

VACUUM INDICATOR I
 PRESSURE FQI
 SWITCH FRI
 LIQUID LEVEL OR LOW T

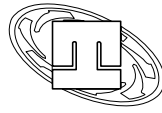
DATE: 9/2/09
 DRAWN BY: EHT
 JOB NUMBER: XXXXX
 FACILITY ID/TAG#: XXXXX
 DRAWING NUMBER: P&ID TDEC AIR LIFT CAS

MK ENVIRONMENTAL INC.

V P S L

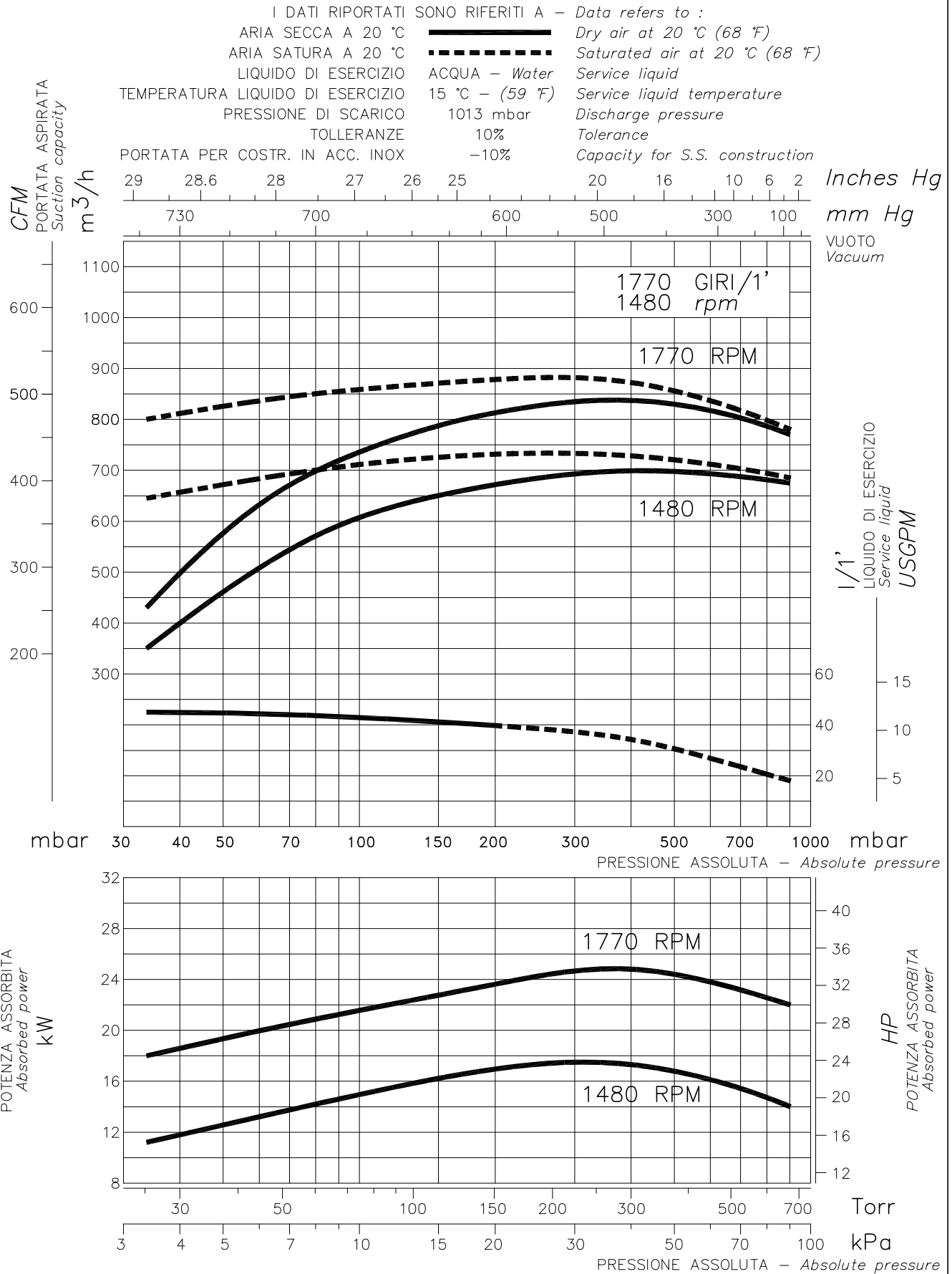
DIAGRAMMA DI FUNZIONAMENTO
Performance curves
POMPA PER VUOTO AD ANELLO DI LIQUIDO
Liquid ring vacuum pump

TIPO
Type **TRVX 1005**



pompetravaini S.p.A.

CASTANO PRIMO (MILANO)

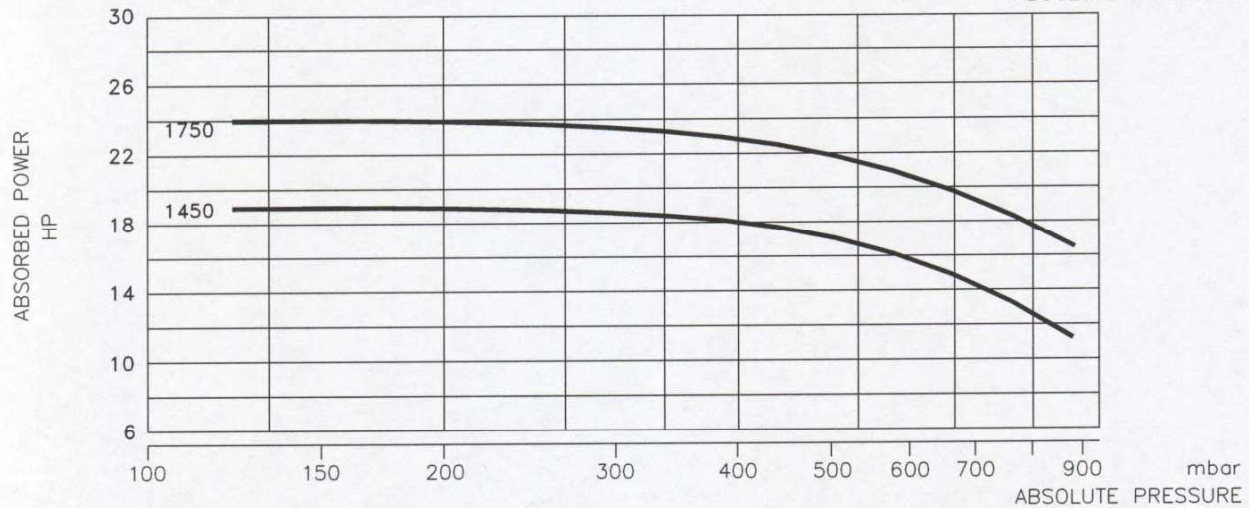


DATA BASED ON :
 DRY AIR AT 68 °F - 20 °C
 SATURATED AIR AT 68 °F - 20 °C
 SERVICE LIQUID WATER
 SERVICE LIQUID TEMPERATURE 59 °F - 15 °C
 DISCHARGE PRESSURE 1013 mbar

S.S. PUMPS
 CAPACITY : -10%

PERFORMANCE DATA
 LIQUID RING VACUUM PUMP
 PUMP MODEL
TRSC 100-550

Tol.: 10%



DATE: APRIL 97

PAGE NO: 3-140

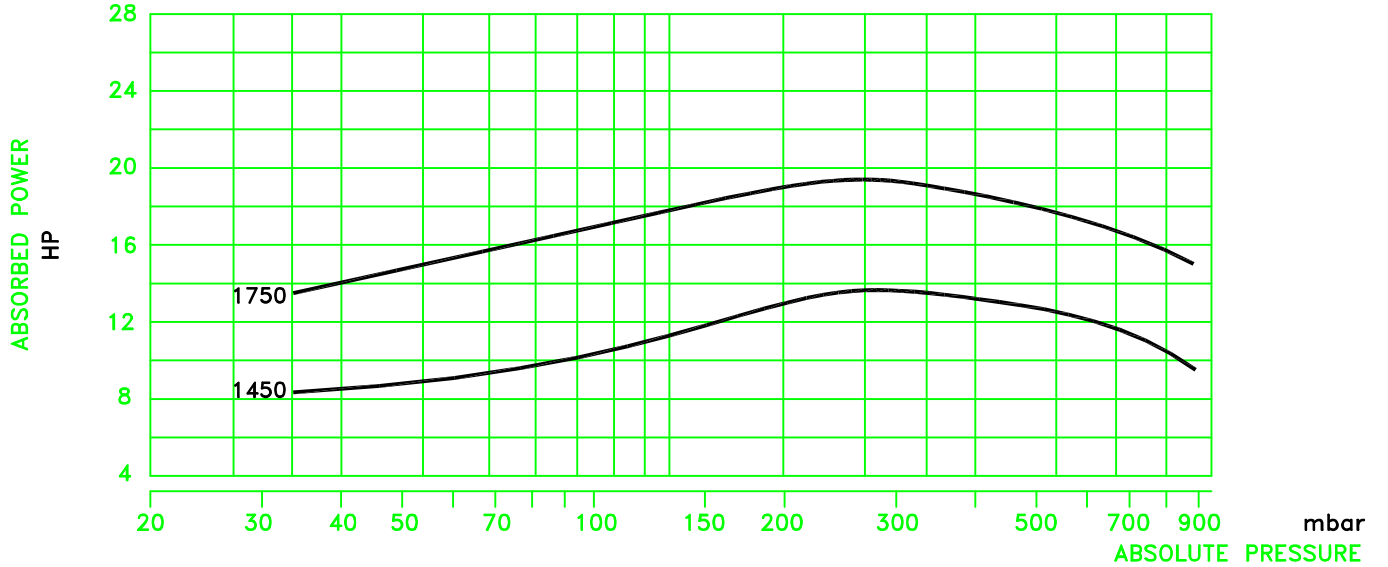
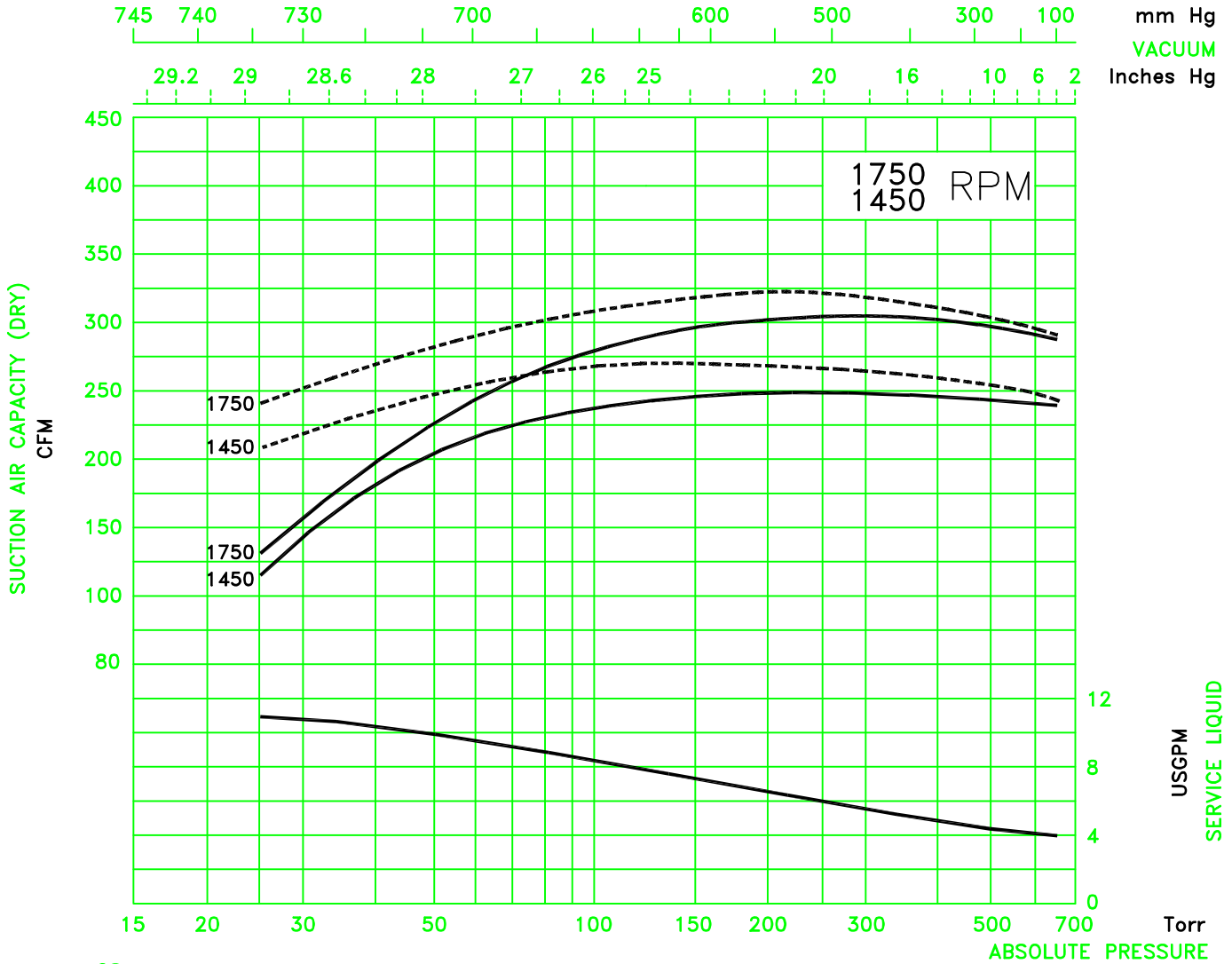
DATA BASED ON :
 DRY AIR AT 68 °F - 20 °C
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 SERVICE LIQUID WATER
 SERVICE LIQUID TEMPERATURE 59 °F - 15 °C
 DISCHARGE PRESSURE 1013 mbar

S.S. PUMPS
 CAPACITY : -10%

Tol.: 10%

PERFORMANCE DATA
 LIQUID RING VACUUM PUMP
 PUMP MODEL

TRVA 65-450



**TRAVAINI
 PUMPS USA**
 Liquid Ring & Rotary Vane Vacuum Pumps and Systems

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DATE: APRIL 97

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