Swat Projects Ltd.
VENDOR DOCUMENT APPROVAL STAMP

- ☐ A - PROCEED
- ☐ B - PROCEED, CHANGE AS NOTED AND RESUBMIT BY: _____ (RESUBMITTAL DATE FOR STATUS B)
- ☐ I/O - DATA ACCEPTED FOR INFORMATION ONLY
- ☐ C - DO NOT PROCEED, CHANGE AS NOTED AND RESUBMIT BY: _____ (RESUBMITTAL DATE FOR STATUS C)

SIGN: _____ DATE SIGNED: _____

VDR CODE(S): _____

AUTHORIZATION TO PROCEED DOES NOT WAIVE SUPPLIER'S RESPONSIBILITY OR LIABILITY UNDER THE CONTRACT/PURCHASE ORDER FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN INCH UNLESS OTHERWISE NOTED.
2. ALL BOLT HOLES TO STRADDLE NATURAL VESSEL CENTER LINES UNLESS OTHERWISE NOTED.
3. CORNER RADIUS 1/8" MINIMUM FOR NOZZLES AND 1/8" MINIMUM FOR MANWAYS.
4. ALL REPADS TO HAVE A 1/4" NPT WEEP HOLE ON DOWN-HILL SIDE OF NOZZLE OR MANWAY.
5. 1/4" NPT WEEP HOLES REQUIRED ON ALL REPADS, WEAR PADS AND POISON PADS. AIR/SOAP TEST @ 15 PSIG REQUIRED.
6. IF PSV IS NOT SHOWN IN NOZZLE SCHEDULE, IT IS THE USER'S RESPONSIBILITY TO LOCATE THE PSV IN ADJACENT PIPING PER ASME UG-125.
7. VESSEL TO BE REGISTERED IN ALBERTA, B.C., SASKATCHEWAN AND MANITOBA.

FABRICATION NOTES:
1. FOR FABRICATION TOLERANCES REFER TO "STANDARD FABRICATION TOLERANCES FOR UNFIRED PRESSURE VESSELS. (REV. 0)"
2. FULL PENETRATION WELDS TO BE GOUGED BEFORE FILLING.
3. SURFACE PREP.: SSPC-SP-6.
4. PRIMER: POLYAMIDE EPOXY, CLOVAPRIME 21, 4.0-6.0 MILS DFT.
5. PAINT: DTM POLYURETHANE 835 (TAUPE 16555) 2.0-2.5 MILS DFT, TOP COAT NOT REQUIRED ON INSULATED SECTIONS OF VESSEL.
6. INTERNALLY COATED UP TO NLL - PRIME DEVOE 253, 5 MILS/TOP COAT DEVMAT 111 (2 COATS OF 10 MIL PER, HOLIDAY FREE).
7. GMAW WIRE ER70-S2
8. PREHEAT TO 200°F PRIOR TO WELDING.
9. RETURN DWG. TO QC AFTER FABRICATION.
10. IMPACT TEST COUPONS MUST BE 12"x12" MINIMUM WHEN TACKED TO SHELL, IF NOT, CONTACT QC DEPARTMENT.
11. TACK RUN OFF TABS ONTO COUPON.

INSPECTION NOTES:
1. RT-1 (100%) FULL X-RAY ON LONG & CIRC SEAMS & ALL BUTTWELDED NOZZLES AS PER UW-51 & UW11(a).
2. HARDNESS TEST REQUIRED AFTER PWHT PER WELDER PER PROCEDURE PER CATEGORY.
3. MPI ON LIFTING LUGS.

DWG. RELEASE
FABRICATION COPY NO: __ OF __
DATE: _____
SIGNED: _____

SPECIAL MATERIAL CONSULT QC/SPECS

NO FCAW
SOUR SERVICE
SPECTRUM NACE

BILL OF MATERIAL

ITEM	QTY.	SIZE	TYPE	RATING	SCH./W.T.	MAT'L SPEC	DESCRIPTION	WEIGHT
100. VESSEL								
101	4	108" ID	ROLLED PLATE	-	3.0"	SA-516-70N	ROLLED PLATE 3" THK. x 108" [2743mm] ID x 10'-0" [3048mm] LG.	64535
102	2	108" ID	FORMED PLATE	-	3.0"	SA-516-70N	HEAD, HOT FORMED, ASME 2:1 SE, 3" MIN. THK. c/w 2" SF (2.75" MIN. THK.)	10959
103	1	18" ID	ROLLED PLATE	-	2.0"	SA-516-70N	ROLLED PLATE, 2" THK. x 18" (457mm) ID x 30" [761mm] LG. c/w 3:1 TAPER BORE 1/2 TO 3/4" THK. AT BOTTOM END	484
104	1	22" OD	FORMED PLATE	-	0.75"	SA-516-70N	HEAD, HOT FORMED, ASME 2:1 SE, 3/4" NOM. THK. c/w 2" SF (5/8" MIN. THK.)	77
105	1	2" THK.	REPAD PLATE	-	2.0"	SA-516-70N	REPAD FOR 22" OD NOZZLE x 6" [152mm] WIDE ROLL TO 57" [1448mm] I.R.	272
200. CONNECTIONS								
201	1	24" NPS	RFT2	CL600	4.00"	SA-350-LF2-CL1	ANSI FLANGED FORGING x 18" [457mm] LG.	878
202	2	10" NPS	RFHB	CL600	2.72"	SA-350-LF2-CL1	ANSI FLANGED FORGING x 16" [406mm] LG.	502
203	1	4" NPS	RFHB	CL600	1.62"	SA-350-LF2-CL1	ANSI FLANGED FORGING x 16" [406mm] LG.	65
204	1	4" NPS	RFHB	CL600	1.62"	SA-350-LF2-CL1	ANSI FLANGED FORGING x 12" [305mm] LG.	51
205	1	3" NPS	RFHB	CL600	1.24"	SA-350-LF2-CL1	ANSI FLANGED FORGING x 14.5" [368mm] LG.	34
206	1	3" NPS	RFWN	CL600	SCH 160	SA-350-LF2-CL1	ANSI FLANGE	10
207	11	2" NPS	RFWN	CL600	SCH 160	SA-350-LF2-CL1	ANSI FLANGE	60
208	1	2" NPS	ELBOW	-	SCH 160	SA-234-WPB	ELBOW, 90° LR, BW	2
209	AS REQ'D	2" NPS	SMLS PIPE	-	SCH 160	SA-106-B	PIPE, SMLS	
400. EXTERNAL ASSEMBLIES								
401	2	3/8" THK.	WEAR PLATE	-	0.375"	SA-516-70N	WEAR PLATE, 11'-0" [3353mm] LG. x 24" [610mm] WD. ROLL TO 57" [1448mm] I.R.	307
402	2	1 3/4" THK.	BASE PLATE	-	1.75"	SA-36	BASE PLATE, 8'-6" [2591mm] LG. x 20" [508mm] WD.	921
403	2	3/4" THK.	WEB PLATE	-	0.75"	SA-36	WEB PLATE, 8'-3 1/2" [2527mm] LG. x 8'-5 11/16" [1973mm] WD.	1494
404	4	3/4" THK.	END PLATE	-	0.75"	SA-36	END PLATE, 8'-5 11/16" [1973mm] LG. x 20" [508mm] WD.	601
405	2	3/4" THK.	RIB PLATE	-	0.75"	SA-36	RIB PLATE, 4'-0 7/8" [1241mm] LG. x 19 1/4" [489mm] WD.	182
406	1	4" X 6"	NAME PLATE	-	0.25"	SA-516-70N SS	SPECTRUM STANDARD NAMEPLATE AND BRACKET ASSY	1
407	2	2" x 2"	GROUND LUG	-	0.25"	SA-240-316LSS	SPECTRUM STANDARD GROUND LUG DWG GL-SPS-02025-01	1
408	1	24"	HINGE ASS'Y	CL600	-	SA-516-70N	SPECTRUM STANDARD 24" CL600 MANWAY HINGE ASSY DWG MH-SPS-24600-01	44
409	2	3" THK.	PLATE	-	3.00"	SA-516-70N	LIFT LUG, PLATE, 3" THK., 12" [305mm] LG. x 10" [254mm] WD.	93
410	1	24"	BLIND RF	CL600	-	SA-350-LF2-CL1	ANSI BLIND FLANGE, RF, 24"-CL600	567
411	2	2" x 3/4"	RED. BLIND RF	CL600	-	SA-105N	ANSI RED. BLIND FLANGE, RF, 2"-CL600 x 3/4" NPT	9
412	2	24"	GASKET RF	CL600	-	-	GASKET, RF, 24"-CL600 PSI LINEBACKER c/w G10 RETAINER & TEFLON SEAL ELEMENT; (1) SERVICE, (1) HYDRO	
413	2	2"	GASKET RF	CL600	-	-	GASKET, RF, 2"-CL600 PSI LINEBACKER c/w G10 RETAINER & TEFLON SEAL ELEMENT	
414	1 SET	#1 7/8" x 13" LG.	STUDS & NUTS	-	-	SA-193-B7M SA-194-2HM	24"-CL600 FLANGE BOLT-UP (24) STUDS & (48) BOLTS	163
415	2 SETS	#6/8" x 4 1/4" LG.	STUDS & NUTS	-	-	SA-193-B7M SA-194-2HM	2"-CL600 FLANGE BOLT-UP (8) STUDS & (16) BOLTS	4
								82316

NOZZLE SCHEDULE

MARK	SIZE	RATING	NECK O.D.	TYPE	SERVICE	W.D.	FILLET WELD SIZE W41	W42	W43	PROJECTION H (MIN.)	EXT. PROJ.	PIPE LENGTH	ITEM
N1	10"	CL600	15.00"	RFHB	INLET	5, 14	3/8"	-	BW	SF	10"	-	202 -
N2	10"	CL600	15.00"	RFHB	GAS OUTLET	5, 14	3/8"	-	BW	SF	10"	-	202 -
N3	4"	CL600	7.06"	RFHB	OIL OUTLET	5, 14	3/8"	-	BW	4"	8"	-	203 -
N4	2"	CL600	2.375"	RFWN	WATER OUTLET	5, 9A, 14	3/8"	-	BW	CF	AS	6 1/4"	207, 208, 209
N5	4"	CL600	7.06"	RFHB	PSV	5, 14	3/8"	-	BW	SF	8"	-	204 -
N6a	2"	CL600	2.375"	RFWN	UPPER OIL BRIDLE CONN	5, 9A, 9K, 14	3/8"	-	BW	SF	AS	10"	207, 209
N6b	2"	CL600	2.375"	RFWN	LOWER OIL BRIDLE CONN	5, 9A, 14	3/8"	-	BW	3"	AS	10 1/2"	207, 209
N7a	2"	CL600	2.375"	RFWN	UPPER WATER BRIDLE CONN	9A, 9K, 14	3/8"	-	BW	SF	AS	10"	207, 209
N7b	2"	CL600	2.375"	RFWN	MID WATER BRIDLE CONN	PA, 9K, 14	3/8"	-	BW	SF	AS	10 3/4"	207, 209
N7c	2"	CL600	2.375"	RFWN	LOWER WATER BRIDLE CONN	5, 9A, 14	3/8"	-	BW	CF	6"	5"	207, 209
N8	2"	CL600	2.375"	RFWN	WATER TI	9A, 9K, 14	3/8"	-	BW	CF	AS	10 3/4"	207, 209 411, 413, 415
N9	2"	CL600	2.375"	RFWN	GAS PIT	9A, 9K, 14	3/8"	-	BW	SF	AS	9 3/4"	207, 209 411, 413, 415
N10	2"	CL600	2.375"	RFWN	GAS PURGE	5, 9A, 14	3/8"	-	BW	SF	6"	6"	207, 209 -
N11	2"	CL600	2.375"	RFWN	WATER DRAIN	5, 9A, 14	3/8"	-	BW	CF	6"	6"	207, 209 -
N12	2"	CL600	2.375"	RFWN	OIL DRAIN	5, 9A, 14	3/8"	-	BW	CF	6"	6"	207, 209 -
N13	3"	CL600	5.38"	RFHB	OIL LSHH	9K, 14	3/4"	-	BW	SF	AS	-	205 -
N14	3"	CL600	3.50"	RFWN	WATER LSLL	5, 14	3/8"	-	BW	CF	AS	-	206 -
B1	18"	-	22"	PLATE	BOOT	1A, 7K, 14	3/8"	5/8"	BW	CF	AS	30"	103, 104, 105
M1	24"	CL600	32"	RFT2	MANWAY	5, 14	3/8"	-	BW	1"	AS	-	201, 408 410, 412, 414

BW = BACKWELD
SF = SQUARE-CUT FLUSH
CF = CONTOUR-CUT FLUSH
WD = WELD DESIGN
AS = AS SHOWN
AND = AS REQ'D W/O CUTTING

DESIGN DATA

DESIGN & CONSTRUCTION	Vessel to be designed and constructed in accordance with ASME Boiler and Pressure Vessel Code Section VIII Div. I Code Year:2015 Addenda:N/A			
MDMT	-20°F ; Production impact testing req'd as per UG-84, material testing req'd on items 101-105. (12/18 ft. lbs)			
MAWP	943 psig	6502 kPag	SERIAL No.	18-05336-31
DESIGN TEMPERATURE	113°F	45°C	CRN (AB, BC, SK, MB)	
HYDROTEST PRESS.	1415 psig	9753 kPag	TAG No.	V-100
CORR. ALLOWANCE	0.125"	3.2mm	YEAR BUILT	2018
VOLUME	2763 CU. FT.	78 CU. M.	INSPECTION By	ABSA
RADIOGRAPHY *	RT-1 100%		APPROX. SHIPPING WT.	193547 LB. [87792 KG.]
CRN DRAWING No.	18-05336-310-001 R0		FINAL JOINT EFF.	1.0
STRESS RELIEVE	YES @ 1150°F FOR 135 MIN.		MAEWP @ Deg.F	FC @ 113°F/-20°F
				HYDROTEST WEIGHT: 365860 LB. [165953 KG.]

Note: * Full on circ. seams, long seams, and all butt welded as per UW11a & UW51

Note: For fabrication tolerances refer to "Standard Fabrication Tolerances for Unfired Pressure Vessels. (Rev. 0)"

No.	DATE	REVISIONS	BY	CHK	REW	APP	PM	QC
A	OCT 01, 2018	ISSUED FOR APPROVAL	TD					

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ENGINEERS RECORD		DATE
DRAWN BY	TANYA DIXON	SEP 07, 2018
CHECKED BY		
REVIEWED BY		
APPROVED BY		
PM APPD. BY		
Q.C. APPD. BY		

SPECTRUM Process Systems

CLIENT: CRESCENT POINT ENERGY CORP. c/o SWAT PROJECTS LTD.
PROJECT: INLET SEPARATOR BUILDING TURNER VALLEY SOUR DEHY FACILITY LSD: 08-05-021-04 W5M
TITLE: 108" [2743] ID x 40'-0" [12192] S/S INLET SEPARATOR

P.O. #	Scale	JOB No.	DWG. No.	REV.
	1:40 UNO	SPS-18-05336	18-05336-310-001	A