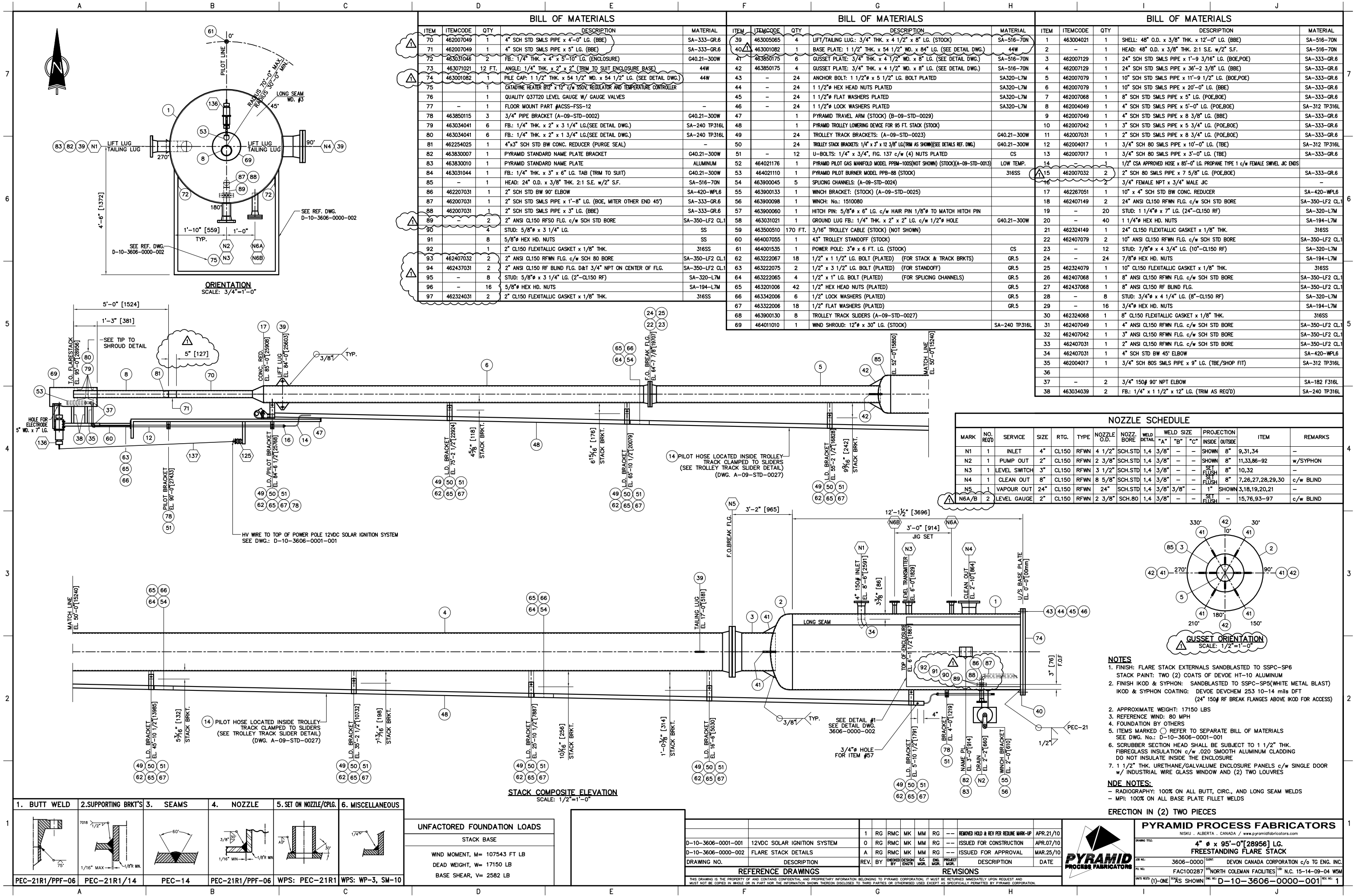




1	2010.04.23	REISSUED FOR REVIEW
0	2010.03.29	REISSUED FOR REVIEW
A	2010.03.25	ISSUED FOR REVIEW
Rev. no.	Issue Date (YYYY.MM.DD)	Revision Description

<b>P.P.F. Job Number:</b>	10-3606
<b>Document Title:</b>	Freestanding Flare Stack
<b>Document Number:</b>	D-10-3606-0000-001_rev1
<b>Devon Canada Corporation Project Name:</b>	North Coleman 15-14-09-04 W5M
<b>Devon Canada Corporation Purchase Order:</b>	FAC-100287

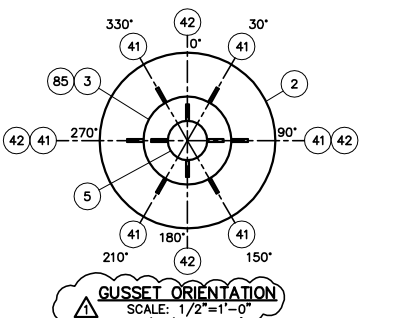


BILL OF MATERIALS				
ITEM	ITEMCODE	QTY	DESCRIPTION	MATERIAL
70	462007049	1	4" SCH STD SMLS PIPE x 4'-0" LG. (BBE)	SA-333-GR.6
71	462007049	1	4" SCH STD SMLS PIPE x 5' LG. (BBE)	SA-333-GR.6
72	463031046	2	FB: 1/4" THK. x 4" x 5'-10" LG. (ENCLOSURE)	G40.21-300W
73	463071021	12 FT.	ANGLE: 1/4" THK. x 2" x 2" (TRIM TO SUIT ENCLOSURE BASE)	44W
74	463001082	1	PILE CAP: 1 1/2" THK. x 54 1/2" WD. x 54 1/2" LG. (SEE DETAIL DWG.)	44W
75	-	1	CATADYNE HEATER B12 x 12" c/w SSOV, REGULATOR AND TEMPERATURE CONTROLLER	-
76	-	1	QUALITY Q37120 LEVEL GAUGE W/ GAUGE VALVES	-
77	-	1	FLOOR MOUNT PART #ACSS-FSS-12	-
78	463850115	3	3/4" PIPE BRACKET (A-09-STD-0002)	G40.21-300W
79	463034041	6	FB: 1/4" THK. x 2" x 3 1/4" LG.(SEE DETAIL DWG.)	SA-240 TP316L
80	463034041	6	FB: 1/4" THK. x 2" x 1 3/4" LG.(SEE DETAIL DWG.)	SA-240 TP316L
81	462254025	1	4"x3" SCH STD BW CONC. REDUCER (PURGE SEAL)	-
82	463830007	1	PYRAMID STANDARD NAME PLATE BRACKET	G40.21-300W
83	463830010	1	PYRAMID STANDARD NAME PLATE	ALUMINUM
84	463031044	1	FB: 1/4" THK. x 3" x 6" LG. TAB (TRIM TO SUIT)	G40.21-300W
85	-	1	HEAD: 24" O.D. x 3/8" THK. 2:1 S.E. w/2" S.F.	SA-516-70N
86	462207031	1	2" SCH STD BW 90° ELBOW	SA-420-WPL6
87	462007031	1	2" SCH STD SMLS PIPE x 1'-8" LG. (BOE, MITER OTHER END 45°)	SA-333-GR.6
88	462007031	1	2" SCH STD SMLS PIPE x 3" LG. (BBE)	SA-333-GR.6
89	-	2	2" ANSI CL150 RFSD FLG. c/w SCH STD BORE	SA-350-LF2 CL.1
90	-	4	STUD: 5/8" x 3 1/4" LG.	SS
91	-	8	5/8" HEX HD. NUTS	SS
92	-	1	2" CL150 FLEXITALLIC GASKET x 1/8" THK.	316SS
93	462407032	2	2" ANSI CL150 RFWN FLG. c/w SCH 80 BORE	SA-350-LF2 CL.1
94	462437031	2	2" ANSI CL150 RF BLIND FLG. D&T 3/4" NPT ON CENTER OF FLG.	SA-350-LF2 CL.1
95	-	8	STUD: 5/8" x 3 1/4" LG. (2"-CL150 RF)	SA-320-L7M
96	-	16	5/8" HEX HD. NUTS	SA-194-L7M
97	462324031	2	2" CL150 FLEXITALLIC GASKET x 1/8" THK.	316SS

BILL OF MATERIALS				
ITEM	ITEMCODE	QTY	DESCRIPTION	MATERIAL
39	463005065	4	LIFT/TAILING LUG: 3/4" THK. x 4 1/2" x 8" LG. (STOCK)	SA-516-70N
40	463001082	1	BASE PLATE: 1 1/2" THK. x 54 1/2" WD. x 84" LG. (SEE DETAIL DWG.)	44W
41	463850175	6	GUSSET PLATE: 3/4" THK. x 4 1/2" WD. x 8" LG. (SEE DETAIL DWG.)	SA-516-70N
42	463850175	4	GUSSET PLATE: 3/4" THK. x 4 1/2" WD. x 8" LG. (SEE DETAIL DWG.)	SA-516-70N
43	-	24	ANCHOR BOLT: 1 1/2" x 5 1/2" LG. BOLT PLATED	SA320-L7M
44	-	24	1 1/2" HEX HEAD NUTS PLATED	SA320-L7M
45	-	24	1 1/2" FLAT WASHERS PLATED	SA320-L7M
46	-	24	1 1/2" LOCK WASHERS PLATED	SA320-L7M
47	-	1	PYRAMID TRAVEL ARM (STOCK) (B-09-STD-0029)	-
48	-	1	PYRAMID TROLLEY LOWERING DEVICE FOR 95 FT. STACK (STOCK)	-
49	-	24	TROLLEY TRACK BRACKETS: (A-09-STD-0023)	G40.21-300W
50	-	24	TROLLEY STACK BRACKETS: 1/4" x 3" x 12 3/8" LG.(TRIM AS SHOWN)(SEE DETAILS REF. DWG.)	G40.21-300W
51	-	12	U-BOLTS: 1/4" x 3/4", FIG. 137 c/w (4) NUTS PLATED	CS
52	464021176	1	PYRAMID PILOT GAS MANIFOLD MODEL PPBM-100S (NOT SHOWN) (STOCK)(A-09-STD-0013)	LOW TEMP.
53	464021110	1	PYRAMID PILOT BURNER MODEL PPB-88 (STOCK)	316SS
54	463900045	5	SPLICING CHANNELS: (A-09-STD-0024)	-
55	463900133	1	WINCH BRACKET: (STOCK) (A-09-STD-0025)	-
56	463900098	1	WINCH: No.: 1510080	-
57	463900060	1	HITCH PIN: 5/8" x 6" LG. c/w HAIR PIN 1/8" TO MATCH HITCH PIN	-
58	463031021	1	GROUND LUG FB: 1/4" THK. x 2" x 2" LG. c/w 1/2" HOLE	G40.21-300W
59	463500510	170 FT.	3/16" TROLLEY CABLE (STOCK) (NOT SHOWN)	-
60	464007055	1	43" TROLLEY STANDOFF (STOCK)	-
61	464001535	1	POWER POLE: 3" x 6 FT. LG. (STOCK)	-
62	463222067	18	1/2" x 1 1/2" LG. BOLT (PLATED) (FOR STACK & TRACK BRKTS)	GR.5
63	463222075	2	1/2" x 3 1/2" LG. BOLT (PLATED) (FOR STANDOFF)	GR.5
64	463222065	4	1/2" x 1" LG. BOLT (PLATED) (FOR SPLICING CHANNELS)	GR.5
65	463201008	42	1/2" HEX HEAD NUTS (PLATED)	GR.5
66	463342006	6	1/2" LOCK WASHERS (PLATED)	GR.5
67	463322006	18	1/2" FLAT WASHERS (PLATED)	GR.5
68	463900130	8	TROLLEY TRACK SLIDERS (A-09-STD-0027)	-
69	464011010	1	WIND SHROUD: 12" x 30" LG. (STOCK)	SA-240 TP316L

BILL OF MATERIALS				
ITEM	ITEMCODE	QTY	DESCRIPTION	MATERIAL
1	463004021	1	SHELL: 48" O.D. x 3/8" THK. x 12'-0" LG. (BBE)	SA-516-70N
2	-	1	HEAD: 48" O.D. x 3/8" THK. 2:1 S.E. w/2" S.F.	SA-516-70N
3	462007129	1	24" SCH STD SMLS PIPE x 1'-9 3/16" LG. (BOE,POE)	SA-333-GR.6
4	462007129	1	24" SCH STD SMLS PIPE x 36'-2 3/8" LG. (BBE)	SA-333-GR.6
5	462007079	1	10" SCH STD SMLS PIPE x 11'-9 1/2" LG. (BOE,POE)	SA-333-GR.6
6	462007079	1	10" SCH STD SMLS PIPE x 20'-0" LG. (BBE)	SA-333-GR.6
7	462007068	1	8" SCH STD SMLS PIPE x 5" LG. (POE,BOE)	SA-333-GR.6
8	462004049	1	4" SCH STD SMLS PIPE x 5'-0" LG. (POE,BOE)	SA-312 TP316L
9	462007049	1	4" SCH STD SMLS PIPE x 8 3/8" LG. (BBE)	SA-333-GR.6
10	462007042	1	3" SCH STD SMLS PIPE x 5 3/4" LG. (POE,BOE)	SA-333-GR.6
11	462007031	1	2" SCH STD SMLS PIPE x 8 3/4" LG. (POE,BOE)	SA-333-GR.6
12	462004017	1	3/4" SCH 80 SMLS PIPE x 10'-0" LG. (TBE)	SA-312 TP316L
13	462007017	1	3/4" SCH 80 SMLS PIPE x 3'-0" LG. (TBE)	SA-333-GR.6
14	-	1	1/2" CSA APPROVED HOSE x 85'-0" LG. PROPANE TYPE 1 c/w FEMALE SWIVEL JC ENDS	-
15	462007032	2	2" SCH 80 SMLS PIPE x 7 5/8" LG. (POE,BOE)	SA-333-GR.6
16	-	2	3/4" FEMALE NPT x 3/4" MALE JC	-
17	462267051	1	10" x 4" SCH STD BW CONC. REDUCER	SA-420-WPL6
18	462407149	2	24" ANSI CL150 RFWN FLG. c/w SCH STD BORE	SA-350-LF2 CL.1
19	-	20	STUD: 1 1/4" x 7" LG. (24"-CL150 RF)	SA-320-L7M
20	-	40	1 1/4" HEX HD. NUTS	SA-194-L7M
21	462324149	1	24" CL150 FLEXITALLIC GASKET x 1/8" THK.	316SS
22	462407079	2	10" ANSI CL150 RFWN FLG. c/w SCH STD BORE	SA-350-LF2 CL.1
23	-	12	STUD: 7/8" x 4 3/4" LG. (10"-CL150 RF)	SA-320-L7M
24	-	24	7/8" HEX HD. NUTS	SA-194-L7M
25	462324079	1	10" CL150 FLEXITALLIC GASKET x 1/8" THK.	316SS
26	462407068	1	8" ANSI CL150 RFWN FLG. c/w SCH STD BORE	SA-350-LF2 CL.1
27	462437068	1	8" ANSI CL150 RF BLIND FLG.	SA-350-LF2 CL.1
28	-	8	STUD: 3/4" x 4 1/4" LG. (8"-CL150 RF)	SA-320-L7M
29	-	16	3/4" HEX HD. NUTS	SA-194-L7M
30	462324068	1	8" CL150 FLEXITALLIC GASKET x 1/8" THK.	316SS
31	462407049	1	4" ANSI CL150 RFWN FLG. c/w SCH STD BORE	SA-350-LF2 CL.1
32	462407042	1	3" ANSI CL150 RFWN FLG. c/w SCH STD BORE	SA-350-LF2 CL.1
33	462407031	1	2" ANSI CL150 RFWN FLG. c/w SCH STD BORE	SA-350-LF2 CL.1
34	462407031	1	4" SCH STD BW 45° ELBOW	SA-420-WPL6
35	462004017	1	3/4" SCH 80S SMLS PIPE x 9" LG. (TBE/SHOP FIT)	SA-312 TP316L
36	-	-	-	-
37	-	2	3/4" 150# 90° NPT ELBOW	SA-182 F316L
38	463034039	2	FB: 1/4" x 1 1/2" x 12" LG. (TRIM AS REQ'D)	SA-240 TP316L

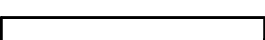
NOZZLE SCHEDULE											
MARK	NO. REQ'D	SERVICE	SIZE	RTG.	TYPE	NOZZLE O.D.	NOZZ. BORE	WELD SIZE	PROJECTION	ITEM	REMARKS
N1	1	INLET	4"	CL150	RFWN	4 1/2"	SCH. STD 1,4	3/8"	8"	9,31,34	-
N2	1	PUMP OUT	2"	CL150	RFWN	2 3/8"	SCH. STD 1,4	3/8"	8"	11,33,86-92	w/SYPHON
N3	1	LEVEL SWITCH	3"	CL150	RFWN	3 1/2"	SCH. STD 1,4	3/8"	8"	10,32	-
N4	1	CLEAN OUT	8"	CL150	RFWN	8 5/8"	SCH. STD 1,4	3/8"	8"	7,26,27,28,29,30	c/w BLIND
N5	1	VAPOUR OUT	24"	CL150	RFWN	24"	SCH. STD 1,4	3/8"	8"	3,18,19,20,21	-
N6A/B	2	LEVEL GAUGE	2"	CL150	RFWN	2 3/8"	SCH. STD 1,4	3/8"	8"	15,76,93-97	c/w BLIND



- NOTES**
- FINISH: FLARE STACK EXTERNALS SANDBLASTED TO SSPC-SP6 STACK PAINT: TWO (2) COATS OF DEVCO HT-10 ALUMINUM
  - FINISH IKOD & SYPHON: SANDBLASTED TO SSPC-SP5(WHITE METAL BLAST) IKOD & SYPHON COATING: DEVCO DEVCHEM 253 10-14 mls DFT (24" 150# RF BREAK FLANGES ABOVE IKOD FOR ACCESS)
  - APPROXIMATE WEIGHT: 17150 LBS
  - REFERENCE WIND: 80 MPH
  - FOUNDATION BY OTHERS
  - ITEMS MARKED ○ REFER TO SEPARATE BILL OF MATERIALS SEE DWG. No.: D-10-3606-0001-001
  - SCRUBBER SECTION HEAD SHALL BE SUBJECT TO 1 1/2" THK. FIBREGLASS INSULATION c/w .020 SMOOTH ALUMINUM CLADDING DO NOT INSULATE INSIDE THE ENCLOSURE
  - 1 1/2" THK. URETHANE/GALVALUME ENCLOSURE PANELS c/w SINGLE DOOR w/ INDUSTRIAL WIRE GLASS WINDOW AND (2) TWO LOUVRES
- NDE NOTES:**
- RADIOGRAPHY: 100% ON ALL BUTT, CIRC., AND LONG SEAM WELDS
  - MPI: 100% ON ALL BASE PLATE FILLET WELDS

1. BUTT WELD	2. SUPPORTING BRKT'S	3. SEAMS	4. NOZZLE	5. SET ON NOZZLE/CPLG.	6. MISCELLANEOUS
PEC-21R1/PPF-06	PEC-21R1/14	PEC-14	PEC-21R1/PPF-06	WPS: PEC-21R1	WPS: WP-3, SM-10

UNFACTORED FOUNDATION LOADS	
STACK BASE	
WIND MOMENT, M= 107543 FT LB	
DEAD WEIGHT, W= 17150 LB	
BASE SHEAR, V= 2582 LB	

E 1/2"=1'-0"												62 65 67									
																					
D-10-3606-0001-001		12VDC SOLAR IGNITION SYSTEM		1		RG		RMC		MK		MM		RG		---		REMOVED HOLD & REV PER REDLINE MARK-UP		APR.21/10	
D-10-3606-0000-002		FLARE STACK DETAILS		0		RG		RMC		MK		MM		RG		---		ISSUED FOR CONSTRUCTION		APR.07/10	
				A		RG		RMC		MK		MM		RG		---		ISSUED FOR APPROVAL		MAR.25/10	
DRAWING NO.		DESCRIPTION		REV.		BY		CHECKED BY		DESIGN ENGR		Q.C. MGR.		ENL. MGR.		PROJECT MGR.		DESCRIPTION		DATE	
		REFERENCE DRAWINGS																REVISIONS			
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**PYRAMID PROCESS FABRICATORS**  
NISKU, ALBERTA - CANADA / www.pyramidfabricators.com

**4" x 95'-0" (28956) LG. FREESTANDING FLARE STACK**

DEVCO CANADA CORPORATION c/o TO ENG. INC.  
FAC1002287  
NORTH COLEMAN FACILITIES  
N.C. 15-14-09-04 WSM

UNITS REQ'D: (1)-ONE (2)-TWO (3)-THREE (4)-FOUR (5)-FIVE (6)-SIX (7)-SEVEN (8)-EIGHT (9)-NINE (10)-TEN (11)-ELEVEN (12)-TWELVE (13)-THIRTEEN (14)-FOURTEEN (15)-FIFTEEN (16)-SIXTEEN (17)-SEVENTEEN (18)-EIGHTEEN (19)-NINETEEN (20)-TWENTY

D-10-3606-0000-001