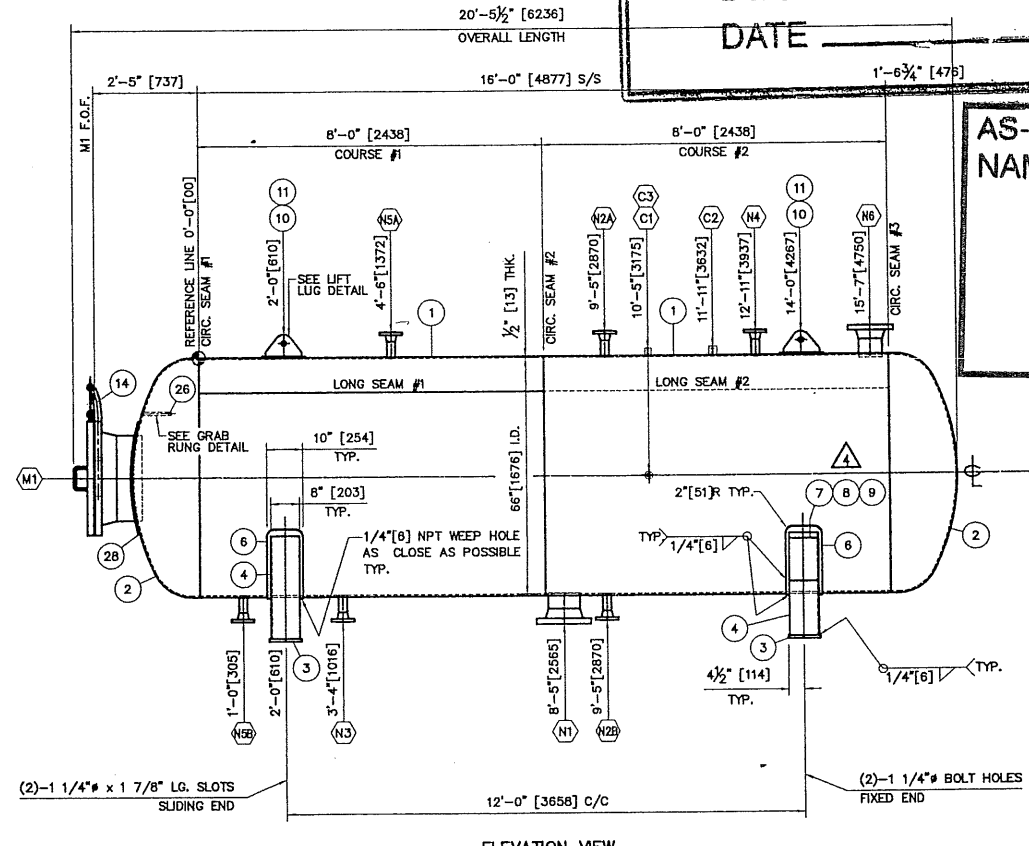
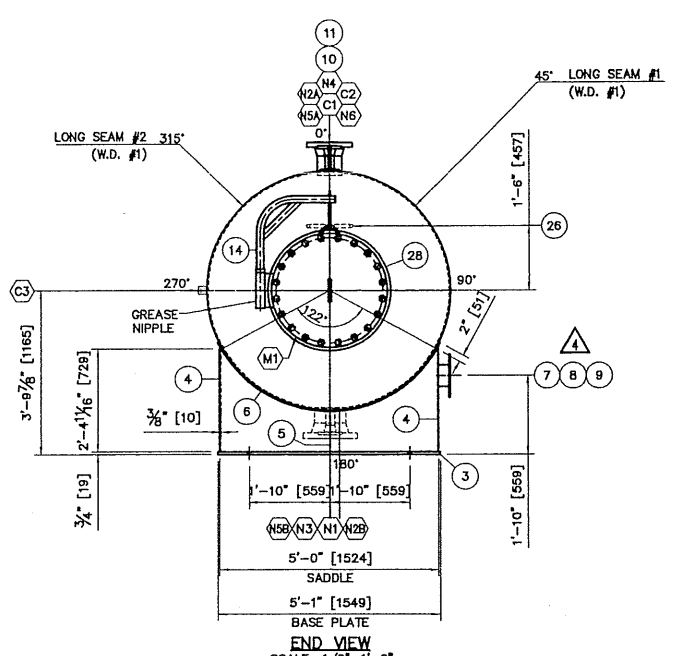
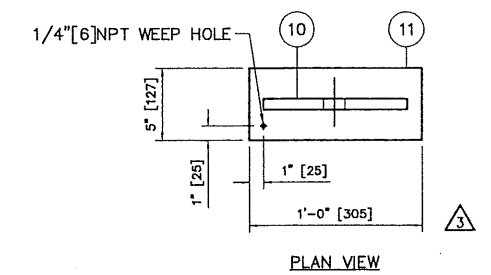
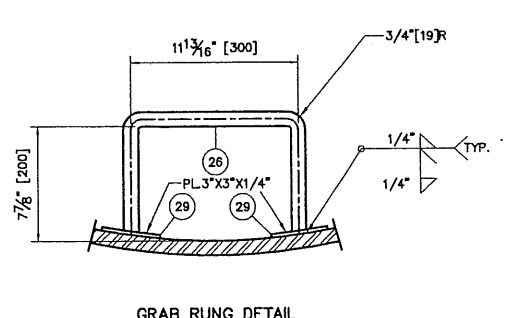
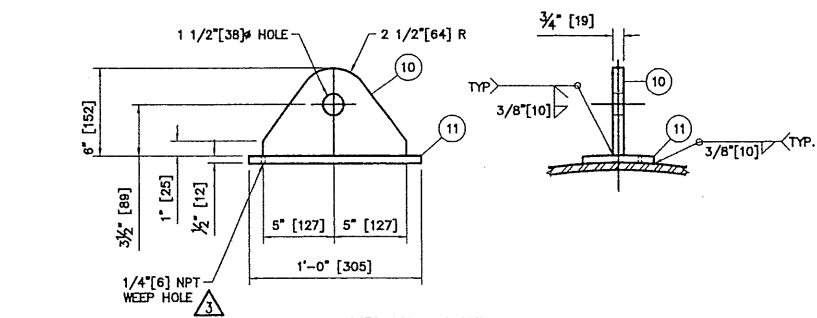


As Built Drawings and Calculations

3

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A B C D E F G H



REVISED DRAWING
ISSUED FOR CONSTRUCTION
DESTROY PREVIOUS ISSUE
DATE FEB 25 2009

AS-BUILT DRAWING
NAME: *B...*
FEB 26 2009

NAME PLATE DETAIL
SCALE: 2"=1'-0"

PYRAMID PROCESS FABRICATORS
DOCUMENT CONTROL
RECEIVED
FEB 26 2009

NOZZLE SCHEDULE

MARK	NO. REV'D	SERVICE	SIZE	RTG.	TYPE	NOZZLE O.D.	NOZZLE BORE	WELD DETAIL	WELD SIZE			PROJECTION		ITEM	REMARKS
									"A"	"B"	"C"	INSIDE	OUTSIDE		
N1	1	INLET/OUTLET	8"	CL300	RFWN	8 5/8"	SCH.160	2,3	1/2"					18,19	
N2A	1	BRIDLE	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"					20,21	
N2B	1	BRIDLE	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"					20,21	
N3	1	DRAIN	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"					20,21	
N4	1	PSV	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"					20,21	
N5A	1	STEAM OUT	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"					20,21	
N5B	1	STEAM OUT	2"	CL300	RFWN	2 3/8"	SCH.160	2,3	3/8"					20,21	
N6	1	VENT	6"	CL300	RFWN	6 5/8"	SCH.160	2,3	3/8"	1/4"			8"	22,23	
C1	1	PIT	3/4"	CL6000	CPLG.	1 3/4"	N/A	3	3/8"					24	
C2	1	BLANKET GAS	1"	CL6000	CPLG.	2 1/4"	N/A	3	3/8"					25	
C3	1	TG	1"	CL6000	CPLG.	2 1/4"	N/A	3	3/8"					25	
M1	1	MANWAY	24"	CL150	RFWN	24"	SCH.10	4	3/8"	3/8"	3/8"		12-17,27,28	W/ BLIND DAMT & REPAD	

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	MATERIAL
1	2	SHELL: 66"[1676] ID x 1/2"[113] THK. x B"-0"[2438] LG. (BBE)	SA-516-70N
2	2	HEADS: 66"[1676] ID x 1/2"[113] THK. (0.4375" MIN) 2:1 S.E. w/ 2" S.F.	SA-516-70N
3	2	BASE PLATE: 3/4"[19] THK. x 9"[229] WD. x 6"-1"[1549] LG.	G40.21-300W
4	2	SKIRT [203] WD. [16] x 5'-0"[1524] WD. (W/ 3/8"[10] THK. x 2'-4 11/16"[229] LG FORM CHANNEL)	G40.21-300W
5	2	SADDLE RIB: 7 5/8"[194] WD. x 3/8"[10] THK. x 11 1/2"[292] LG.	G40.21-300W
6	2	WEAR PLATE: 10"[254] WD. x 3/8"[10] THK. x 6'-4 1/8"[1934] LG. (FORM TO 33 1/2" LR)	SA-516-70N
7	1	PL: 1/4"[6] THK. x 3"[76] WD. x 6"[152] LG. (NAME PLATE BRACKET)	SA-516-70N
8	1	PL: 1/4"[6] THK. x 8"[203] WD. x 12"[305] LG. (NAME PLATE BRACKET)	G40.21-300W
9	1	PYRAMID/ENCANA STANDARD NAME PLATE	SS
10	2	LIFT LUGS: 10"[254] x 6"[203] x 3/4"[19] THK. c/w 1 1/2"[38] HOLE (TRM AS SHOWN)	G40.21-300W
11	2	LIFT LUG REPAD: 5"[127] WD. x 12"[305] LG. x 1/2"[13] THK. (ROLL TO 33 1/2" LR)	SA-516-70N
12	1	24"-CL150 ANSI RFWN FLG. c/w SCH.10 BORE	(M1) SA-350-LF2 CL1
13	1	24"-CL150 ANSI RF BLIND FLG	(M1) SA-350-LF2 CL1
14	1	24"-CL150 PYRAMID STD. MANWAY DAMT ASSY. (DWG. B-08-3191-0000-003)	(M1) -
15	1	24" ANSI CL150 RF FLEXITALLIC GASKET x 1/8" THK. (GREY STRIPE)	(M1) 316 SS
16	20	1 1/4" x 7" LG. STUD (24"-CL150)	(M1) SA-193-B7M
17	40	1 1/4" HEX HD. NUTS (24"-CL150)	(M1) SA-194-2HM
18	1	6"-CL300 ANSI RFWN FLG. c/w SCH.160 BORE	(M1) SA-350-LF2 CL1
19	1	8" SCH.160 SMLS PIPE x 4 13/16"[113] LG. (BOE,POE)	(M1) SA-333-GR.6
20	6	2"-CL300 ANSI RFWN FLG. c/w SCH.160 BORE (N2A/B,N3,N4,N5A/B)	(M1) SA-350-LF2 CL1
21	6	2" SCH.160 SMLS PIPE x 5"[127] LG. (BOE,POE) (N2A/B,N3,N4,N5A/B)	(M1) SA-333-GR.6
22	1	6"-CL300 ANSI RFWN FLG. c/w SCH.160 BORE	(M1) SA-350-LF2 CL1
23	1	6" SCH.160 SMLS PIPE x 6"[141] LG. (BOE,POE)	(M1) SA-333-GR.6
24	1	3/4"-CL6000 THRD FULL CPLG.	(M1) SA-350-LF2 CL1
25	2	1"-CL6000 THRD FULL CPLG.	(M1) SA-350-LF2 CL1
26	1	RB: 7/8"[22] x 2'-3 1/16"[687] ± LG. (BEND AS PER DETAIL)	(GRAB RUNG) G40.21-300W
27	1	24" SCH.10 SMLS PIPE x 6 15/16"[177] LG. (BOE,POE)	(M1) SA-333-GR.6
28	1	REPAD: 1/2" THK 32" O.D. x 24 1/8" I.D. (FORM TO HEAD)	(M1) SA-516-70N
29	1	REPAD: 3"X3"X1/4" (FORM TO HEAD)	SA-516-70N

SHOP NOTES

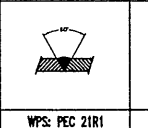
- ALL BOLT HOLES STRADDLE NATURAL VESSEL CENTERLINES.
- CLEAN ENTIRE VESSEL OF WELD SLAG AND OTHER FOREIGN MATERIAL.
- ALL MISCELLANEOUS AND ATTACHMENT WELDS SHALL BE 1/4" FILLET WELDS UNLESS SHOWN OTHERWISE.
- COATING SPECIFICATIONS**
SURFACE PREP: - EXTERNAL: SSPC-SP8
- INTERNAL: NONE
PRIMING: - EXTERNAL: ONE (1) COAT OF DEVCO BAR RUST 236 EPOXY COAT TO DFT OF 4-8mils
- INTERNAL: NONE
FINISH: - EXTERNAL: TWO (2) COATS OF DEVCO DEVTANE 379 URETHANE TO A DFT OF 2-3mils (WARM GREY)
- INTERNAL: NONE
- IMPACT TEST REQUIREMENTS**
- HEADS AND SHELLS IMPACT TEST EXEMPT PER FIG. UCS-66 CURVE D AND FIG. UCS-66.1
- NOZZLES AND FLANGES ARE EXEMPT FROM IMPACT TESTING PER UCS-66(g)
- STUDS & NUTS ARE EXEMPT FROM IMPACT TESTING PER UCS-66 NOTE(c)
- ALL NOZZLE LENGTH INCLUDES 1/8" WELD GAP.
- BLEND ALL INTERNAL ROOT AND FILLET WELDS. RADIUS ALL INTERNAL EDGES.
- DIMENSIONS IN [] ARE IN MM.
- HYDROTEST SHALL BE HELD FOR A MINIMUM OF ONE (1) HOUR.
- THE HYDROTEST WATER SHALL BE AT LEAST 59°F (15°C) THROUGHOUT THE TESTING CYCLE.
- A MINIMUM OF TWO (2) PRESSURE GAUGES WILL BE USED FOR THE HYDROTEST, ONE (1) AT THE PUMP AND ONE (1) AT THE SYSTEM HIGH POINT.

- GASKETS USED FOR THE HYDROTEST SHALL BE OF THE SAME MATERIAL AND DESIGN AS THE GASKETS TO BE FURNISHED WITH THE VESSEL.
- THE USE OF SHELLAC, GLUE, COMPOUND, LEAD, ETC., ON HYDROTEST GASKETS IS NOT PERMITTED.
- ONLY NEW, UNUSED, STUDS, NUTS AND GASKETS SHALL BE FURNISHED WITH THE VESSEL.
- NO VESSEL OR ITS COMPONENT SHALL BE GIVEN A HYDROSTATIC TEST UNLESS APPROVAL IS OBTAINED IN WRITING FROM ENCANA FCCL OIL SANDS LTD. OR ITS REPRESENTATIVE.
- ALL WEEP HOLES ARE TO BE PNEUMATICALLY TESTED WITH 103 kPa (AIR) PRIOR TO THERMAL STRESS RELIEF AND/OR HYDROSTATIC TEST.
- WEEP HOLES SHALL NOT BE PLUGGED DURING THE FINAL HYDROSTATIC TEST OF THE VESSEL. AFTER HYDROTEST, WEEP HOLES SHALL BE PLUGGED WITH GREASE. WHERE THE WEEP HOLES IS COVERED BY INSULATION, A NIPPLE SHALL BE FITTED TO EXTEND THE HOLE OUTSIDE THE INSULATION CLADDING.
- LONG SEAMS: FULL UW-11(o).
- CIRC. SEAMS: SPOT UW-11(o)(5)b. RADIOGRAPH AT "T" INTERSECTION (TYP).
- MP VESSEL OR ITS COMPONENT SHALL BE GIVEN A HYDROSTATIC TEST UNLESS APPROVAL IS OBTAINED IN WRITING FROM ENCANA FCCL OIL SANDS LTD. OR ITS REPRESENTATIVE.
- REGISTER VESSEL IN ALBERTA.
- HEAT #4 STAMPED ON ALL MATERIAL.
- HARDNESS TEST REQ'D AFTER WELDING PER SPEC-225 BHN MAX.
- VESSEL TO BE BLOWN DRY AFTER HYDROTEST.
- NO FCAW ON WELDS.
- AFTER WELDING, HARDNESS IN THE BASE MATERIAL OR HEAT AFFECTED ZONE (HAZ) SHALL NOT EXCEED 225 BHN FOR LOW CARBON STEEL MATERIALS.
- FULL UT EXAMINATION ON ALL CATEGORY D WELDS. THIS IS TO BE DONE BEFORE REINFORCING PADS ARE WELDED TO THE NOZZLES.
- MAKE SURE ALL THE MIG ROOTS ARE MADE USING ER-70S-6 WIRE GOOD TO -50°F.

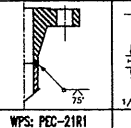
SHIPPING NOTES

- ALL FLANGE SURFACES TO BE PROTECTED WITH AN ASPHALTIC RUST PREVENTIVE, TYPE B SUCH AS RUST VETO 344 OR TECTYL 891.
- EQUIPMENT SHALL BE ADEQUATELY PREPARED TO PROVIDE AGAINST ENTRY OF DIRT OR WATER DURING SHIPMENT.
- ALL OPEN FLANGES TO BE COVERED WITH 12.5mm PLYWOOD COVERS SECURELY FASTENED WITH BOLTS OR CLAMPS.
- ALL DRAINS, VENTS AND SMALL PIPING CONNECTIONS SHALL BE CAPPED OR PLUGGED.
- BEFORE SHIPMENT, MARK ON, OR SECURELY ATTACH TO THE EQUIPMENT, OR IN THE SHIPPING CONTAINER, A LIST OF THE SPECIFIC RUST PREVENTIVES USED TO PROTECT THE EQUIPMENT. THIS LIST SHALL INCLUDE INTERNAL AS WELL AS EXTERNAL RUST PREVENTIVE, GIVING MANUFACTURER AND TYPE NUMBER, AND THE LOCATIONS WHERE EACH HAS BEEN APPLIED.
- INCLUDE WITH THE ABOVE LIST ANY SPECIAL INSTRUCTIONS NECESSARY FOR THE REMOVAL OR REPLACEMENT OF ANY RUST PREVENTIVE TOGETHER WITH ANY SPECIAL PRECAUTIONS TO BE TAKEN IN THE CARE OF THE EQUIPMENT DURING THE PERIOD OF JOBSITE STORAGE.
- A COPY OF THIS INFORMATION SHALL BE SUPPLIED, UNDER SEPARATE COVER, TO THE BUYER AT THE JOBSITE.

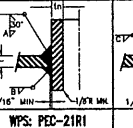
1. SEAMS



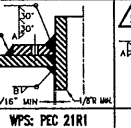
2. NOZZLE TO WN FLG.



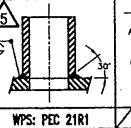
3. SET-THRU NOZZLE/CPLG.



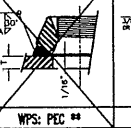
4. 1/16" FILLET WELDS/CPLG.



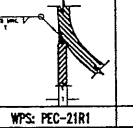
5. SET-ON NOZZLE/CPLG.



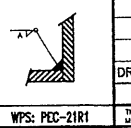
6. O'LET.



7. SKIRT-TO-HEAD.



8. MISCELLANEOUS.



REV.	DATE	DESCRIPTION	BY	CHECKED BY	DATE
1	FEB 25/09	REVISED NOZZLE SCHEDULE AS SHOWN	ADN		
2	FEB 25/09	REVISED AS SHOWN			
3	JAN 22/09	REVISED ITEM #8 AS SHOWN			
4	JAN 06/09	REVISED LIFT LUG REPAD DETAIL			

DRAWING NO. _____ DESCRIPTION _____
 REFERENCE DRAWINGS _____ REVISIONS _____
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DESIGN DATA	
CONSTRUCTION:	ASME SECTION VIII DIV 1 2007 EDITION
INTERNAL DESIGN PRESSURE:	200 PSIG @ 351°F [1379 kPa @ 177°C] (MAX)
EXTERNAL DESIGN PRESSURE:	15 PSIG @ 351°F [103 kPa @ 177°C] (MAX)
HYDROTEST PRESSURE:	280 PSIG @ 351°F [1793 kPa @ 177°C] (ONE HR. MIN)
MINIMUM DESIGN METAL TEMP.:	-50°F @ 200 PSIG [-46°C @ 1379 kPa]
CORROSION ALLOWANCE: 1/16" [1.6] RADIOGRAPHY:	RT-2(SEE SHOP NOTE #7 & #8)
P.W.H.T.:	NONE VOLUME: 432 ft ³ [12 m ³]
WEIGHT (EMPTY): 9559 LBS [4336 KG] WEIGHT (TEST): 36,518 LBS [16564 KG]	
C.R.N.:	ΔUB042-2 SERIAL NO: 08-3191-0000 SERVICE: SWEET
PYRAMID PROCESS FABRICATORS 3191-0000 ENCANIA PCCL OIL LTD. c/o DPH FOCUS FCRSR-DPH-40100 FOSTER CREEK	
66"[1676] I.D. x 16'-0"[4876] LG. S/S x 200 PSIG [1379 kPa] UTILITY GLYCOL SURGE TANK (V-5775)	
(1)-ONE 1/2"=1'-0" D-08-3191-0000-001	