

**Canadian Natural Resources Limited
GENERAL PRESSURE VESSEL INFORMATION**

Job # 105.00774

District: Ft St John B.C.	Skid No.
Facility: Halfway Battery	Location (LSD): 05-12-87-25-W6M.
Vessel Name & Equipment Number: Test Separator	
Orientation: Vertical	
Status: In service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

Registration Number A0439360		CRN Number N 4676.21	
Vessel serial number: 01-2993-1		Size: 32 in OD X 94 in. S/S	
Shell thickness: 34.9 mm		Shell material: SA 516 70 N	
Head thickness: 33.2 mm		Head material: SA 516 70 N	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 1395 PSI	Operating pressure	Shell:
	Tubes:		Tubes:
Design Temp.	Shell: 150 deg. F	Operating temperature	Shell:
	Tubes:		Tubes:
X-ray: RT-1		Heat treatment: Yes	
Code parameters: ASME VIII Div. 1		Coated: No	
Manufacturer: Opsco		Year built: 1998	
Corrosion allowance: 3.2 mm		Manway: Yes	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure	Capacity (scfm)	Set Date
8246F	Farris	27DA23-M20/S7	CE-403772-16-KE	1345 PSI	3000	06/2008
CRN #	Service By	Block Valve	Location	Size	Code Stamp	
OG0386.9C	Unified	No	Upper Shell	1.5" X 2"	UV	

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

Sweet	Sour X	Oil X	Gas X	Water X
Amine	LPG	Condensate X	Air	Glycol

Other (Describe):

Inspection Interval _____ **PSV Service Interval** _____

(Determined by MIC in conjunction with Chief Inspector following guidelines of CNRL's Owner-User Inspection Program)

Reports reviewed and accepted by:

Mechanical Integrity Coordinator _____ **Date** _____

Fill out all forms as completely as possible. **All information** is important! Use back of sheets to record additional information or sketch if required. Copy of report to be filed by MIC at site, and copy sent to Chief Inspector

External Inspection Items	G	F	P	N/A	Comments
Insulation Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture.				X	Vessel is not insulated.
External Condition Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage)	X				Paint is in good overall condition; no exposed metal – no previous corrosion.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No leaks observed.
Skirt: Assess condition of paint, fire protection, and concrete. Look for corrosion, buckling, dents, etc. Look at vessel surface area near supports. Verify no signs of leakage at attachment to vessel and attachment welds are acceptable. Ground wire attached?	X				Skirt: This vessel Skirt is in good condition, no signs of damage or leakage to attachment welds. Ground firmly secured to skid unit.
Anchor Bolts Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				Firmly bolted to the skid floor. No signs of deformation.
Concrete foundation Check for cracks, spalling, etc.				X	None.
Ladder / Platform Describe general condition, ensure support is secure to vessel, and describe any hazards.				X	None.
Nozzle Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted?	X				Stud threads are fully engaged to nuts. No damage or deflections observed – no leaks. Paint in good condition. Nozzles are not gusseted.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/Temp.	X				Gauges visible, appears to be functional, no leaks and suitable for range of MAWP/Temp. Pressure gauge: 0-1000 PSI / 90 PSI @ gauge. Temperature gauge: 0-250 deg F / 60 deg F @ gauge.
External Piping Ensure pipe is well supported. All clamps, supports, shoes, etc. in place. Look for evidence of structural overload, deflection, etc. Paint condition, external corrosion?	X				Piping is well supported; all clamps, supports, and shoes are in place. No structural overloads or deflections noted. Paint in good overall condition – No exposed metal or surface corrosion.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				Valves are properly supported. No leaks are visible.
PSV Ensure PSV is set at pressure at or below that of vessel.	X				Located on the Upper Shell - set below the Vessel's MAWP. Discharge piping is larger than the inlet to PSV. No block valve present. Seal is intact. PSV vents to flare.
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)	X				Ultrasonic thickness survey carried out - pipe metal thickness detected below nominal minus corrosion allowance. Calculations carried out – UT point 475, 2 inch 90 degree – nominal thickness is 5.5 mm / min thickness is 4.5 mm / T min thickness is 2.7 mm.
<p>Recommendations or corrective actions : Vessel is Fit for Service or describe corrective actions required) (MIC to review corrective actions with Operations, discuss with Chief Inspector where necessary, and get remedial action implemented)</p> <p>Recommendations: 1. No recommendations at this time.</p> <p>Summary: This vessel is in good over all condition, visual external and ultrasonic thickness survey carried out - pipe metal thickness detected below nominal minus corrosion allowance. Thickness calculations carried out to ensure sufficient metal exists for safe operation.</p> <p>Long term corrosion rate based on greatest thickness loss – no corrosion rate to assess.</p> <p>Vessel is fit for continued service.</p>					



LSD Location



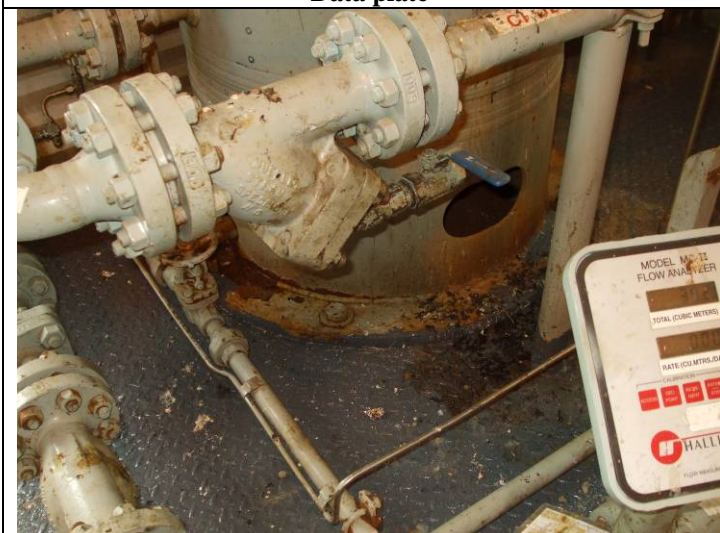
Site overview



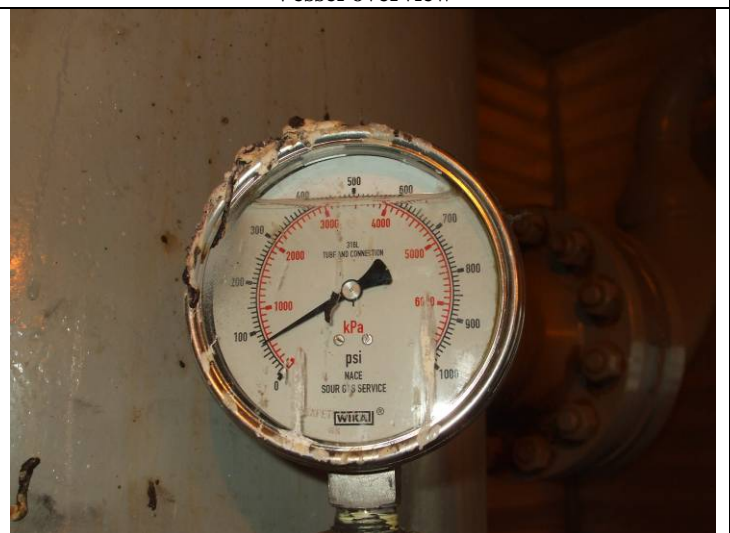
Data plate



Vessel overview



Skirt anchored securely



Pressure gauge



Temperature gauge



PSV service tag



PSV Data plate

