

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

Job # 10.113190

District: Hamburg Oil – GP South	Skid No. 15136
Facility: Hamburg Battery	Location (LSD): 15-21-96-10 W6M
Vessel Name & Equipment Number: Test Separator	
Orientation: Vertical	
Status: In Service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. A0443875		CRN Number L 5152.2	
Vessel serial number: 99C610501		Size: 30in x 120in	
Shell thickness: 19.1mm		Shell material: SA 516 70N	
Head thickness: 18.3mm		Head material: SA 516 70N	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 4964 kPa (720psi)	Operating pressure	Shell:
	Tubes:		Tubes:
Design Temp.	Shell: 38°C	Operating temperature	Shell:
	Tubes:		Tubes:
X-ray: RT-2		Heat treatment: Nil	
Code parameters: ASME VIII DIV 1		Joint efficiency (if on nameplate):	
Manufacturer: Alco Gas & oil		Year built: 1999	
Corrosion allowance: 1.6 mm		Manway No	

PRESSURE SAFETY VALVE NAMEPLATE DATA

Tag Number(s)	Manufacture	Model	Serial Number	Set Pressure	Capacity	Set Date
UVL 5807V/ MWS68397	Farris	27EA34-M20	CE402335-10-KE	720psi	2890 scfm	06/2013
CRN#	Serviced by	Block valve	Location	Size	Code Stamp	
0G0386.9C	Unified Valve	No	Upper Shell	1" x 1.5"	UV	

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

Sweet X	Sour	Oil	Gas X	Water X
Amine	LPG	Condensate	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** _____

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 20% insulated. Cladding in good condition. Roof closure sealed. No egress of moisture.
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 condition. No exposed metal. No damage.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No leaks found.
Skirt/ Saddle Assess condition of paint, fire protection, 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				Paint on skirt is in good condition. No signs of leaks. Welds are acceptable. Ground wire attached to skirt
Anchor Bolts Hammer tap to ensure secure. Look for cracking in threads or signs of deformation.	X				Anchor bolts are tight and secured.
Concrete foundation Check for cracks etc.				X	
Ladder / Platform Describe general condition, ensure support is secure to vessel, and describe any hazards.				X	
Nozzle Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted?	X				Paint is in good condition. No leaks found. Studs are fully engaged to nuts – no short bolts. Threads are fully engaged. No gussets.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				Gauges are visible, working and suitable for range of MAWP and temperature.
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 in place.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				No leaks found.
PSV Ensure PSV is set at pressure at or below that of vessel. Discharge piping is same size as inlet to valve and is properly supported and routed. Ensure no block valves between psv and vessel or if there are they are locked open.	X				Located on discharge piping– set at MAWP of vessel. PSV seal in place. Discharge piping is same size as valve outlet. No block valve between vessel and PSV
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)	X				Ultrasonic thickness survey carried out – no metal thickness detected below nominal minus corrosion allowance.
<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) Recommendations: None at this time. Summary: Vessel is in overall good condition, visual external inspection and ultrasonic corrosion survey performed – no metal thickness detected below nominal minus corrosion allowance. Corrosion rate based on greatest thickness loss (shell) 0.021mm per year. Retirement Date to “T”min is year 2176.</p> <p>Vessel is fit for service</p>					



PSV service tag



PSV service tag