

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

Job # 10.112227

District: Fort St. John BC.	Skid No.
Facility: Milligan Main Battery	Location (LSD): b-63-G-94-H-2
Vessel Name Equipment Number: Line Heater	
Orientation: Horizontal	
Status: In Service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. CN5056		CRN Number: None Code	
Vessel serial number: LIH-1161		Size: 48 in. X 15 ft.	
Shell thickness: 6.4mm		Shell material: SA 36	
Head thickness: 6.4mm		Head material: SA 36	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 15 PSI	Operating pressure	Shell:
	Tubes:		Tubes:
Design Temp.	Shell:	Operating temperature	Shell: 0 – 250 Deg F.
	Tubes:		Tubes:
X-ray: Nil		Heat treatment: Nil	
Code parameters: ASME VIII, Div 1		Coated: No	
Manufacturer: CE. Natco		Year built: 1981	
Corrosion allowance: not stated		Manway: No	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure (kPa)	Capacity (scfm)	Service Date
CRN #	Service By	Block Valve	Location	Size	Code Stamp	

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

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

Other (Describe):

Inspection Interval _____ **PSV Service Interval** _____

(Determined by MIC in conjunction with Chief Inspector following guidelines of CNRL 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				No damage – no open or torn sections. Sealed around saddles and nozzles.
External Condition Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage)	X				Paint in good condition – No exposed metal.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No leaks observed.
Saddle/Skirt 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				Saddles: bolted directly to skid floor. No buckling or dents. No corrosion at attachment welds to vessel. Ground wire attached to skid.
Anchor Bolts Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				Vessel saddles are anchored to skid frame.
Concrete foundation Check for cracks, spalling, etc.				X	
Ladder / Platform Describe general condition, ensure support is secure to vessel, 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				Threaded nozzle joints are fully engaged. No damage or deflections – no leaks. Nozzles are not gusseted.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				Clear and within operational range for service – temperature gauge 0 – 250 Deg F.
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				Well supported – all clamps and supports in place and secure. Piping insulated – no open or torn sections.
Valve: Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				No leaks – valve supported.
PSV Ensure PSV is set at pressure at or below that of vessel.				X	No 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.
Other					
<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: No recommendations. Summary: Vessel is in overall good condition, visual external inspection and ultrasonic corrosion survey performed – no metal thickness detected below nominal. Vessel is fit for service.</p>					

Inspected By: Gerry Avery / D. Wiedman

Date: September 25, 2012

Photo Table



LSD

Vessel data plate



Vessel overview

Temperature gauge