

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

Job 10.112838

District: Fort St. John North	Skid No.
Facility: Daiber Compressor Station	Location (LSD): c-76-D/94-B-16
Vessel Name Equipment Number: Flare Knock Out Drum	
Orientation: Horizontal	
Status: In Service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. C34761		CRN Number: Non code	
Vessel serial number: 006826		Size: 6 ft. x 10 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: Atmospheric	Operating pressure	Shell:
	Tubes:		Tubes:
Design Temp.	Shell:	Operating temperature	Shell:
	Tubes:		Tubes:
X-ray: Nil		Heat treatment: No	
Code parameters: NON CODE		Coated: not stated	
Manufacturer: NUSCO		Year built: 2003	
Corrosion allowance: N/S		Manway: No	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacture / Model / Serial	Set Pressure (PSI / kPa)	Capacity (scfm)	Size	Block Valve	Location	Service by Date

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

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

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				Tar over foam insulation – small isolated spots of torn sections – sealed around nozzles – 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		Underbelly paint in poor overall condition – paint loss and surface corrosion to 100% - pit depths to 0.015 inch
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, 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				Saddle in good overall condition: bolted directly to skid frame – no corrosion – no buckling or dents - no sign of leaking - ground wire attached to skid frame
Anchor Bolts Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				Vessel is securely bolted to skid floor – no sign 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			Truck out drain nozzle paint in poor condition – surface corrosion to 100% - pit depths to 0.020 inch – all stud threads fully engaged – no leaks – no damage or deflection – nozzles are not gusseted
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.				X	No gauges
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 – no evidence of structural overload – no deflection – paint in good condition – no corrosion
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				Valves properly supported – no sign of leaking
PSV Ensure PSV is set at pressure at or below that of vessel.				X	No PSV – rupture disc in place on top shell – vents to atmosphere
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.
Other Secondary containment	X				Vessel is double walled
<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: Summary: This vessel is in good condition, visual external and ultrasonic thickness inspection carried out – no metal thickness detected below nominal minus corrosion allowance. Vessel is fit for service.</p>					

Inspected By: Andrew Neis / D. Wiedman

Date: March 6, 2013

