

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

Job # 10.114550

District: Grande Prairie AB.	Skid No.
Facility: Gold Creek Gas Gathering	Location (LSD): 09-20-67-05W6M
Vessel Name Equipment Number: Glycol Contactor	
Orientation: Vertical	
Status: In Service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. A 3027767		CRN Number: M6214.2	
Vessel serial number: 94C5196-07		Size: 21 ft 5 in. X 28 ft.	
Shell thickness: 31.8mm		Shell material: SA 516-70N	
Head thickness: 29.7mm		Head material: SA 516-70N	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 9928 kPa	Operating pressure	Shell: 0 – 1500 PSI
	Tubes:		Tubes:
Design Temp.	Shell: 38 Deg C	Operating temperature	Shell: 50 – 120 Deg F C
	Tubes:		Tubes:
X-ray: RT 2		Heat treatment: Nil	
Code parameters: ASME VIII, Div 1		Coated: no	
Manufacturer: Alco Gas & Oil		Year built: 1995	
Corrosion allowance: 1.6mm		Manway: No	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure (kPa)	Capacity (scfm)	Service Date
20307G	Mercer	8114421117R	21843	9936 KPA	4958	06/2010
CRN #	Service By	Block Valve	Location	Size	Code Stamp	
OG8841.5C	Unified valve	No	Lower shell	1"x 1"	UV/NB	

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

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

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	Vessel 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 in good overall 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				Skirt: 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				Anchor bolts are securely fastened. No deformation.
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				Stud threads are fully engaged to nuts – no short bolts. 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 clean – no leakage. Suitable for operational range of vessel. Pressure gauge 0 – 1500 PSI / temperature gauge -50 to 50 Deg C.
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; no deflection, all clamps and supports are in place. Paint in good condition – no exposed metal.
Valve: Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				Valves are supported properly – no leaks.
PSV Ensure PSV is set at pressure at or below that of vessel.	X				Located on lower shell of vessel. Set below MAWP of vessel – PSV seal in place. Discharge piping is same size as valve outlet. No block valve between vessel and PSV.

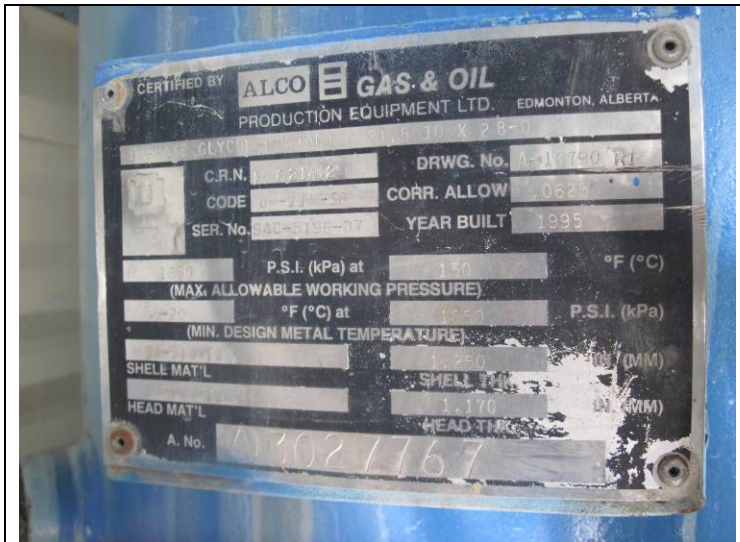
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)	X		Ultrasonic corrosion survey carried out – pipe metal thickness detected below nominal minus corrosion allowance. Thickness calculations carried out: UT point 2635 (4" elbow) – nominal thickness is 8.6mm / min thickness is 7.4mm / T min thickness is 4.7mm
Other			
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 at this time. Summary: This vessel is in good condition, visual external and ultrasonic thickness inspection carried out – pipe metal thickness detected below nominal minus corrosion allowance. Thickness calculations carried out to ensure sufficient metal exists for safe operation. Corrosion rate based on greatest thickness loss – no corrosion rate to assess. Vessel is fit for service.			

Inspected By: Dellas Wiedman

Date: July 30, 2014

Photo Table

	
<p>LSD</p>	<p>Building Overview</p>
	
<p>Vessel Overview Top</p>	<p>Vessel Overview Bottom</p>



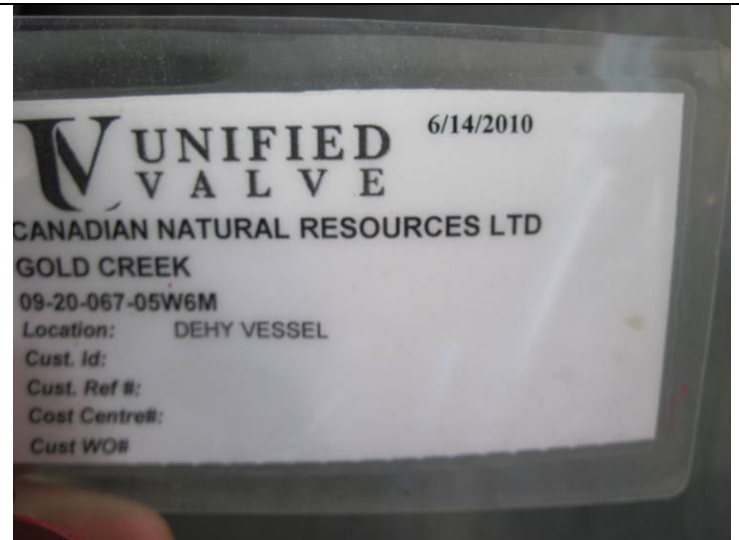
Data Plate

Pressure Gauge



Temperature Gauge

Skirt



PSV Overview

PSV Tag Front

UVL ID#: 20307G **S N:** 21843

Man: MERCER **Model:** 8114421117R

Set Press: 1440 PSI **Capacity:** 4956 SCFM

Cold Diff: **Back Press:**

Size: 1 inch MNPT X 1 inch FNPT

A#: A3027767

Vessel SN:

WO#: 512274

PO#:

PO Line#

REVISION 2 5-24-08

PSV Tag Back