

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

**Job # 10.112227**

District: <b>Fort St. John BC.</b>	Skid No.
Facility: <b>Milligan Compressor</b>	Location (LSD): <b>d-31-G-94-H-2</b>
Vessel Name Equipment Number: <b>Glycol Contactor</b>	
Orientation: <b>Vertical</b>	
Status: <b>In Service</b>	<b>Regulatory Inspection</b>

**PRESSURE VESSEL NAMEPLATE DATA**

"A" or "G" or "S" (Sask.) or BC Registration Number. <b>A455013</b>		CRN Number: <b>L 9154.21</b>	
Vessel serial number: C 1157B-C		Size: 36 in. x 28 ft.	
Shell thickness: 38.6mm		Shell material: SA 516 70N	
Head thickness: 38.1mm		Head material: SA 516 70N	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 1700 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: Rushton		Year built: 2000	
Corrosion allowance: not stated		Manway: no	

**PRESSURE SAFETY VALVE NAMEPLATE DATA**

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure (kPa)	Capacity (scfm)	Service Date
	<b>Mercer</b>	<b>91-33E51P24N1</b>	<b>C012944</b>	<b>1700 PSI</b>	<b>5991</b>	<b>6/14/2012</b>
CRN #	Service By	Block Valve	Location	Size	Code Stamp	
<b>OG8841.5C</b>	<b>Unified Valve</b>	<b>no</b>	<b>lower shell</b>	<b>1.5"x2"</b>	<b>UV NB</b>	

**SERVICE CONDITIONS-INDICATE ALL THAT APPLY**

Sweet X	Sour	Oil	Gas X	Water X
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.

External Inspection Items	G	F	P	N/A	Comments
<b>Insulation</b> Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture.	X			X	Vessel not insulated.
<b>External Condition</b> 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.
<b>Leakage</b> Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No leaks observed.
<b>Saddle/Skirt</b> 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.
<b>Anchor Bolts</b> Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				Securely fastened – no deformation.
<b>Concrete foundation</b> Check for cracks, spalling, etc.				X	
<b>Ladder / Platform</b> Describe general condition, ensure support is secure to vessel, describe any hazards.				X	
<b>Nozzle</b> 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 leaks observed. No damage or deflections. Nozzles are not gusseted
<b>Gauges</b> Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				Pressure: 0 – 200 PSI Temp: 0 – 250 Deg F Suitable for range of operation
<b>External Piping</b> 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 and supports are in place. No structural overloads or deflections. Paint in good condition.
<b>Valving</b> Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				No leaks are visible- valves are supported properly.
<b>PSV</b> Ensure PSV is set at pressure at or below that of vessel.	X				Location: lower shell – set at MAWP of vessel. No block valve between vessel and PSV. Discharge piping is same size as valve outlet. PSV seal in place.
<b>NDE methods</b> Was UT/ MPI done on vessel (MI coordinator to review results)	X				Ultrasonic thickness survey carried out – no metal thickness detected below nominal.
<p><b>Recommendations or corrective actions : Vessel is Fit for Service or describe corrective actions required)</b>                      (MIC to review corrective actions with Operations, discuss with Chief Inspector where necessary, and get remedial action implemented)  <b>Recommendations: No recommendations at this time</b>  <b>Summary:</b> Vessel is in overall good condition, visual external inspection and ultrasonic corrosion survey performed—no metal thickness detected below nominal.  <b>Short term corrosion rate based on greatest thickness loss (head) 0.675mm per year. Retirement Date to “T”min is year 2015.</b>  <b>Vessel is fit for service.</b></p>					



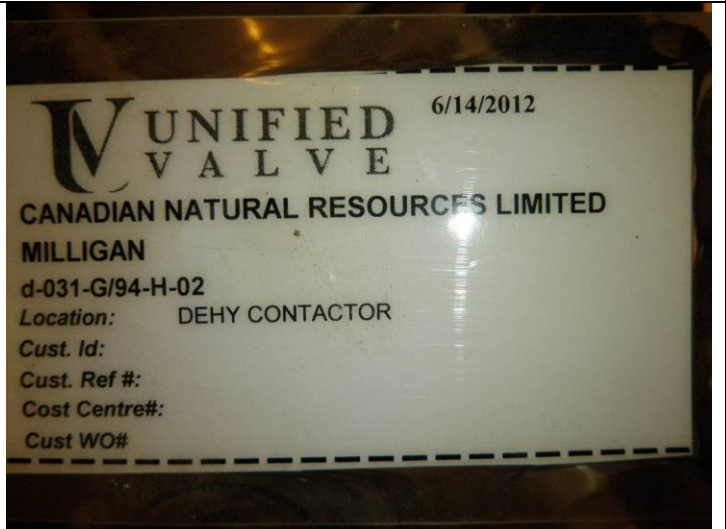
LSD

Overview



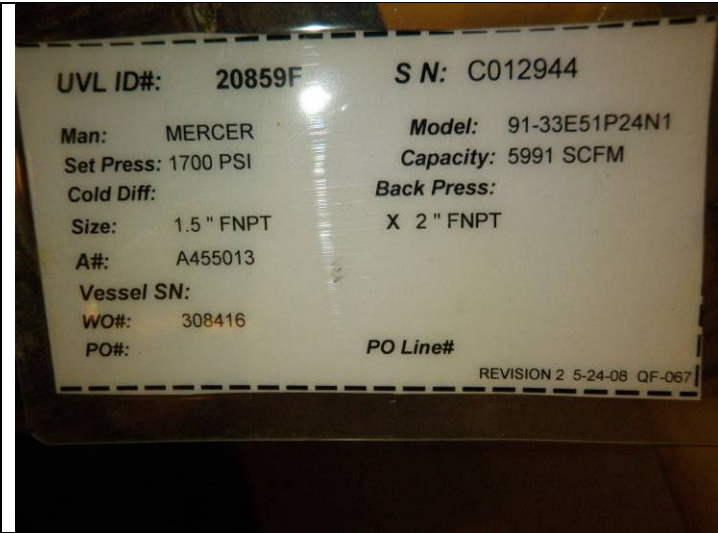
Overview

Data Plate

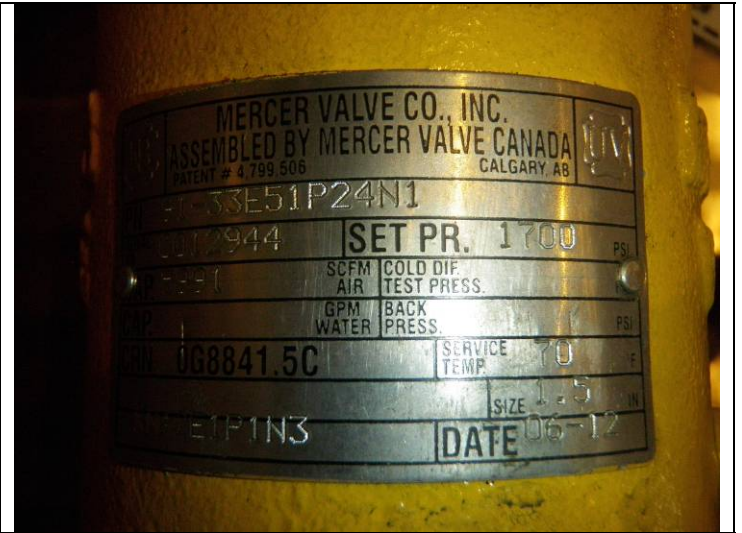


PSV

PSV Data Tag



PSV Data Tag



PSV Data Plate