

Canadian Natural Resources Limited GENERAL PRESSURE VESSEL INFORMATION								Job # 10.111424
District: <b>Grande Prairie, AB</b>				Skid No.				
Facility: <b>Waskahigan Battery</b>				Location (LSD): <b>06-14-63-24-W5M</b>				
Vessel Name & Equipment Number: <b>Glycol Contactor</b>				Moved from Ante Creek field to site				
Orientation: <b>Vertical</b>								
Status: <b>Not In Service</b>				Regulatory Inspection				
PRESSURE VESSEL NAMEPLATE DATA								
Registration Number <b>A0416743</b>				CRN Number <b>F 9578.231</b>				
Vessel serial number: <b>97C-5832-09B</b>				Size: <b>20 in. x 29 ft.</b>				
Shell thickness: <b>22.2 mm</b>				Shell material: <b>SA 516 70N</b>				
Head thickness: <b>20.8 mm</b>				Head material: <b>SA 516 70N</b>				
Tube wall thickness:				Tube material:				
Tube diameter:				Tube length:				
Channel thickness:				Channel material:				
Design pressure	Shell: <b>1440 PSI</b>			Operating pressure	Shell:			
	Tubes:				Tubes:			
Design Temp.	Shell: <b>130 deg F</b>			Operating temperature	Shell:			
	Tubes:				Tubes:			
X-ray: <b>RT-2</b>				Heat treatment: <b>No</b>				
Code parameters: <b>ASME VIII / Div 1</b>				Coated: <b>No</b>				
Manufacturer: <b>Alco Gas and Oil</b>				Built: <b>1997</b>				
Corrosion allowance: <b>Nil</b>				Manway: <b>No</b>				
PRESSURE SAFETY VALVE NAMEPLATE DATA								
PSV Tag Shell	Manufacture / Model # / Serial #	Set Pressure (kPa / PSI)	Capacity (scfm / usgpm)	Size	Block Valve	Location	Service by / Date	
PSV Tag Tube	Manufacture / Model # / Serial #	Set Pressure (kPa / PSI)	Capacity (scfm / usgpm)	Size	Block Valve	Location	Service by / Date	
SERVICE CONDITONS-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's Owner-User Inspection Program)

Reports reviewed and accepted by:  
**Mechanical Integrity Coordinator** \_\_\_\_\_ **Date** \_\_\_\_\_

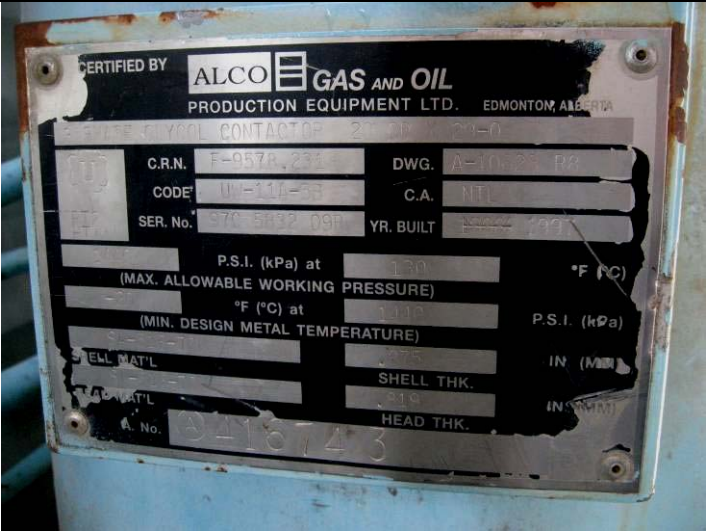
Fill out all forms as completely as possible. All information is important! Use back of sheets to record additional information or sketch if required.  
 Copy of report to be filed by MIC at site, and copy sent to Chief Inspector

External Inspection Items	G	F	P	N/A	Comments
<b>Insulation</b> Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture.	X				Vessel is 60% insulated – this is in good condition, no open or torn sections and cut outs revealed that there is no under insulation corrosion.
<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 is in good overall condition – no chipped or exposed metal - no previous corrosion.
<b>Leakage</b> Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No evidence of leakage at flanges or threaded joints
<b>Saddle</b> 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				Paint is in good condition - no exposed metal. No buckling or dents to skirt, and no corrosion at attachment welds. Skid package is grounded.
<b>Anchor Bolts</b> Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				Vessel is firmly welded to steel deck.
<b>Concrete foundation</b> Check for cracks, spalling, etc.				X	No concrete.
<b>Ladder / Platform</b> Describe general condition, ensure support is secure to vessel, and describe any hazards.				X	None.
<b>Nozzle</b> Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted?	X				The piping is not installed yet therefore bolting could not be addressed. Paint is in good condition – no corrosion. Nozzles are not gusseted
<b>Gauges</b> Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.				X	No gauges on vessel.
<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 not yet installed on this vessel.
<b>Valving</b> Ensure no leaks are visible. Valves are properly supported and chained if necessary.				X	No valves installed yet.
<b>PSV</b> Ensure PSV is set at pressure at or below that of vessel.				X	The PSV will be installed on the lower shell – not yet installed.
<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 – no pitting detected.
<b>Other:</b>					
<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: 1. Caustic wash internal of vessel. 2. Pressure test both glycol coils. 3. Install PSV set at or below MAWP of vessel.</b> <b>Summary: This vessel is in good over all condition, visual external and ultrasonic thickness survey carried out – no metal thickness detected below nominal.</b> <b>Corrosion rate is base on most aggressive rate – no rate to assess.</b> <b>Vessel is fit for service.</b>					

Inspected By: Dellas Wiedman

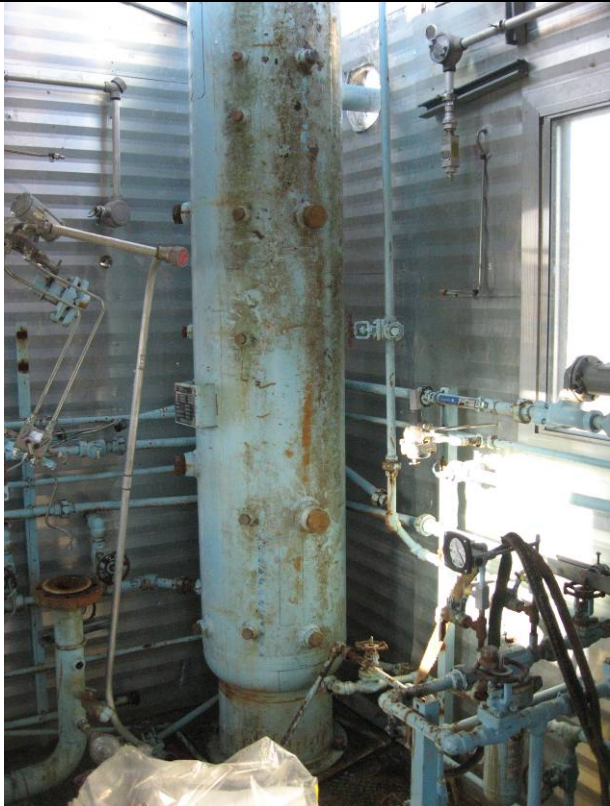
Date: Feb 15, 2012

Photo Table



Data Plate

Overview



Skirt and lower shell – dirt, not corrosion

