

**Canadian Natural Resources Ltd.  
GENERAL PRESSURE VESSEL INFORMATION**

**Job# 105.00390**

District: <b>Fort St John, BC</b>	Skid No.
Facility: <b>Ladyfern Compressor</b>	Location (LSD): <b>b-17-I/94-H-01</b>
Vessel Name Equipment Number: <b>LPG Storage Bullet</b>	
Orientation: <b>Horizontal</b>	
Status: <b>In Service</b>	Regulatory Inspection

**PRESSURE VESSEL NAMEPLATE DATA**

"A" or "G" or "S" (Sask.) or BC Registration Number. A# <b>571773</b>		CRN Number: <b>T-3671.23451</b>	
Vessel serial number: <b>S07000B1</b>		Size: <b>9' X 64' 7"</b>	
Shell thickness: <b>17.42mm</b>		Shell material: <b>SA-516-70N</b>	
Head thickness: <b>10.2mm</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>1724 Kpa</b>	Operating pressure	Shell: <b>No gauge</b>
	Tubes:		Tubes:
Design Temp.	Shell: <b>52 deg C</b>	Operating temperature	Shell: <b>No gauge</b>
	Tubes:		Tubes:
X-ray: <b>RT-4</b>		Heat treatment: <b>No</b>	
Code parameters: <b>ASME Sec VIII</b>		Coated: <b>No</b>	
Manufacturer: <b>Trinity Containers, LLC Ltd.</b>		Year built: <b>2007</b>	
Corrosion allowance: <b>N/S</b>		Manway: <b>Yes</b>	

**PRESSURE SAFETY VALVE NAMEPLATE DATA**

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure (Kpa)	Capacity (scfm)	Service Date
<b>12552F</b>	<b>Fisher</b>	<b>H-541-250</b>	<b>10-88-25D</b>	<b>1724</b>	<b>27018</b>	<b>03/2007</b>
CRN #	Service By	Block Valve	Location	Size	Code Stamp	
<b>N/S</b>	<b>Unified</b>	<b>Yes - Locked open</b>	<b>Top Shell</b>	<b>4" X Four 2"</b>	<b>UV/NB</b>	

**SERVICE CONDITIONS-INDICATE ALL THAT APPLY**

Sweet <b>X</b>	Sour	Oil	Gas	Water
Amine	LPG <b>X</b>	Condensate	Air	Glycol

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

<b>External Inspection Items</b>	G	F	P	N/A	<b>Comments</b>
<b>Insulation</b> Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture.				X	<b>Vessel is not insulated.</b>
<b>External Condition</b> Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage)		X			<b>Paint is in fair overall condition – Minimal chipped paint less than 5% with exposed metal - no previous corrosion.</b>
<b>Leakage</b> Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				<b>No leaking detected.</b>
<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				<b>No distortion to saddles – no leaks at saddle to shell welds. No exposed metal – no corrosion. Ground cable firmly attached to skirt &amp; pilings.</b>
<b>Anchor Bolts</b> Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				<b>Vessel is firmly bolted to pilings structural steel. No signs of deformation.</b>
<b>Concrete foundation</b> Check for cracks, spalling, etc.				X	<b>None.</b>
<b>Ladder / Platform</b> Describe general condition, ensure support is secure to vessel, and describe any hazards.				X	<b>None.</b>
<b>Nozzle</b> Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted?	X				<b>All threads connections fully engaged. No deflection – no leaks. No gussets.</b>
<b>Gauges</b> Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.				X	<b>No Pressure gauge: No Temperature gauge:</b>
<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				<b>Well supported – no deflection – all clamps and shoes in place. Piping is painted and in good condition – no exposed metal or surface corrosion found.</b>
<b>Valving</b> Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				<b>Well supported – no leaks.</b>
<b>PSV</b> Ensure PSV is set at pressure at or below that of vessel.	X				<b>Located on Top Shell - set at the LPG Bullet's MAWP. Discharge piping is four 2" outlets. Block valve locked open. Seal is intact. PSV vents to flare.</b>
<b>NDE methods</b> Was UT/ MPI done on vessel (MI coordinator to review results)	X				<b>Ultrasonic thickness survey carried out-no metal thickness detected below nominal.</b>
<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. No recommendations at this time.</b> <b>Summary:</b> This vessel is in good over all condition, visual external and ultrasonic thickness survey carried out-no metal thickness detected below nominal. <b>Vessel is fit for service.</b>					

**Inspected By: Joseph Holdstock**

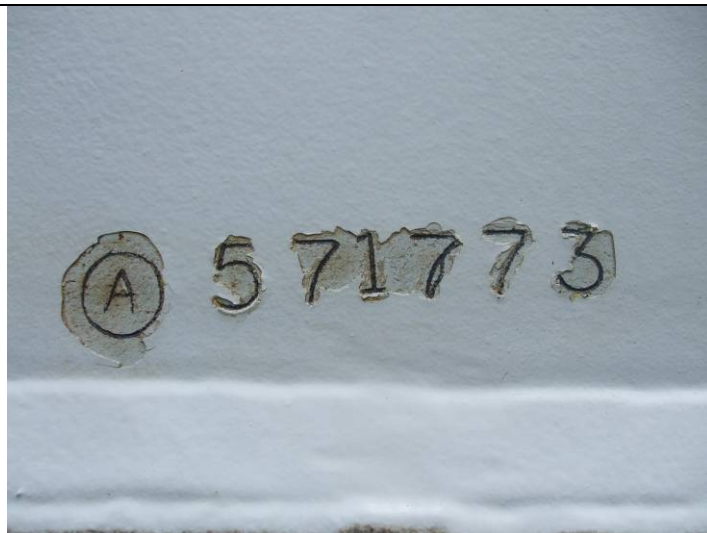
**Date: June-05-2010.**



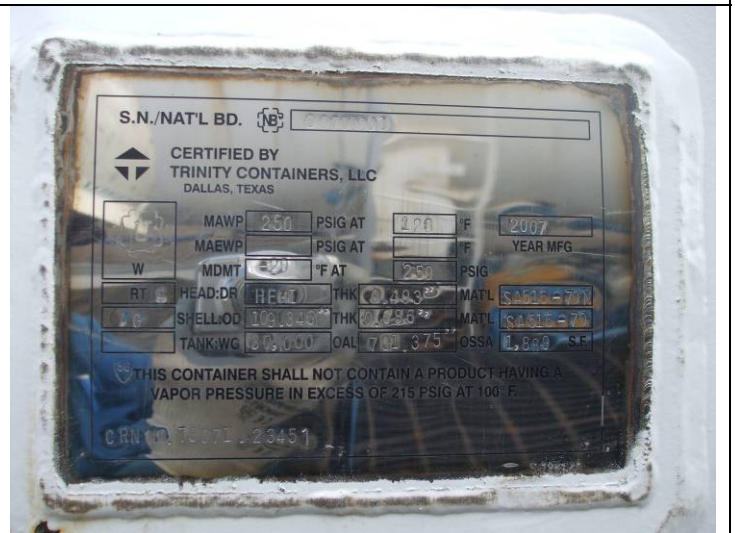
LSD location



Site overview



A# stamped on the shell



Data plate



Overview



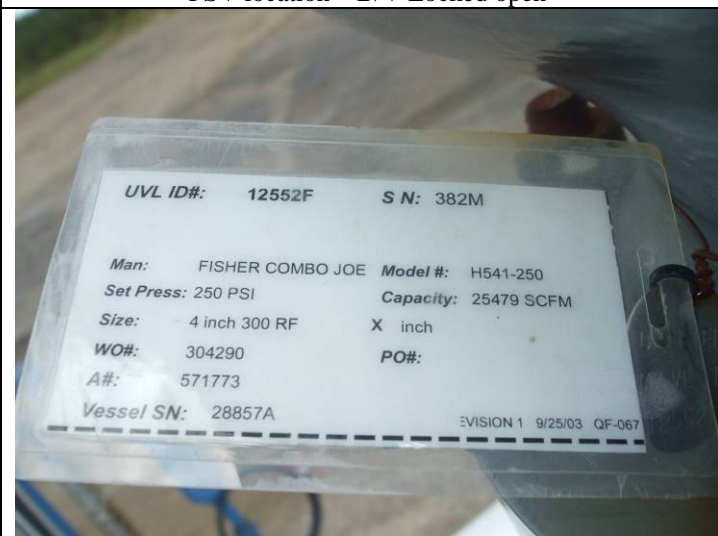
Overview



PSV location – B/V Locked open



Grounded – Skirt & Piling



PSV service tag – last service 11-2007