

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

**Job # 10.110421**

<b>District:</b> Ft. St. John B.C.	Skid No.
<b>Facility:</b> Rigel Compressor Station	<b>Location (LSD):</b> d-75-A/94-A-15 W6M
<b>Vessel Name Equipment Number:</b> Inlet Separator	
<b>Orientation:</b> Vertical	
<b>Status:</b> In Service	<b>Regulatory Inspection</b>

**PRESSURE VESSEL NAMEPLATE DATA**

"A" or "G" or "S" (Sask.) or BC Registration Number. <b>A0487531</b>		CRN Number: <b>N 0715.213</b>	
Vessel serial number: VS-11359		Size: 36.0 in. X 9.0 ft.	
Shell thickness: 41.2mm		Shell material: not stated	
Head thickness: 39.7mm		Head material: not stated	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 1440 PSI	Operating pressure	Shell:
	Tubes:		Tubes:
Design Temp.	Shell: 100 F	Operating temperature	Shell:
	Tubes:		Tubes:
X-ray: RT 1		Heat treatment: HT	
Code parameters: ASME VIII, Div 1		Coated: no	
Manufacturer: Argo Sales Ltd.		Year built: 2003	
Corrosion allowance: 3.2mm.		Man way: Yes	

**PRESSURE SAFETY VALVE NAMEPLATE DATA**

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure (KPa)	Capacity (scfm)	Service Date
	<b>Farris</b>	<b>26HA13-120/S7</b>	<b>449517-1-A10</b>	<b>1440 PSI</b>	<b>21951</b>	<b>No Tag</b>
CRN #	Service By	Block Valve	Location	Size	Code Stamp	
<b>OG2369.5C</b>	<b>No tag</b>	<b>No</b>	<b>Top head</b>	<b>2 x 3</b>	<b>UV/NB</b>	

**SERVICE CONDITIONS-INDICATE ALL THAT APPLY**

Sweet	Sour X	Oil	Gas X	Water
Amine	LPG	Condensate X	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** \_\_\_\_\_

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	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 is blistered with corrosion. No signs of damage or distortion.
<b>Leakage</b> Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No signs of leaking.
<b>Saddle/skirt</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				Skirt is welded to lower head. No signs of cracking or leaking at welds. No signs of buckling  Vessel grounded through the skid package.
<b>Anchor Bolts</b> Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				Secured.
<b>Concrete foundation</b> Check for cracks, spalling, etc.				X	None.
<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			Studs are fully engaged. Threaded fittings are secure. Paint is blistered with surface corrosion.
<b>Gauges</b> Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/Temp.	X				Liquid level gauge is clear and working.
<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			Paint is blistered with surface corrosion. Well supported. No signs of deflection. No leaks.
<b>Valving</b> Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				Well supported – no leaks.
<b>PSV</b> Ensure PSV is set at pressure at or below that of vessel. Discharge piping is same size as inlet to valve and is properly supported and routed. Ensure no block valves between PSV and vessel or if there are they are locked open.		X			Located on top head. Set pressure is below MAWP. Seal intact. No block valve.
<b>NDE methods</b> Was UT/ MPI done on vessel (MI coordinator to review results)	X				Ultrasonic corrosion survey carried out – no metal thickness detected below nominal minus corrosion allowance.
<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)</p> <p><b>Recommendations:</b> 1. Remove corrosion and paint.</p> <p><b>Summary:</b> This vessel is in good condition, visual external and ultrasonic thickness inspection carried out – no metal thickness detected below nominal minus corrosion allowance.</p> <p><b>Long term corrosion rate based on greatest thickness loss – no corrosion rate to assess.</b></p> <p><b>Vessel is fit for service.</b></p>					

Inspected By: Mike Dutcher

Date: August 07, 2011



LSD



Overview



Overview



Data Plate



PSV



PSV Data Plate



Inlet piping – Surface corrosion



Outlet piping – Surface corrosion



Roof seal broken



Shell surface corrosion