Canadian Natural Resources Limited
GENERAL PRESSURE VESSEL INFORMATION **Job 10.112837**

District: **Fort St. John North**	Skid No.
Facility: **Chowade Gas Gathering**	Location (LSD): b-48-L/94-B-09
Vessel Name Equipment Number: **Flare Knock Out Drum**	
Orientation: **Horizontal**	
Status: **In Service**	**Regulatory Inspection**

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. **C34778**		CRN Number: **None code**	
Vessel serial number: PV-96-376-1		Size: 96 in x 120 in	
Shell thickness: 6.4 mm		Shell material: SA 36	
Head thickness: 6.4 mm		Head material: SA 36	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 14.9 PSI	Operating pressure	Shell:
	Tubes:		Tubes:
Design Temp.	Shell: 650 F	Operating temperature	Shell:
	Tubes:		Tubes:
X-ray: RT 3		Heat treatment: No	
Code parameters: ASME VIII, Div 1		Coated: Yes	
Manufacturer: GLM Tanks		Year built: 1996	
Corrosion allowance: Nil		Manway: Yes	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacture / Model / Serial	Set Pressure (PSI / kPa)	Capacity (scfm)	Size	Block Valve	Location	Service by Date
2981G	Farris / 26LA10-120 / CE42987-1-A10	14.9 PSI	1550	3 x 4	No	Shell	Unified 09/2010

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

Sweet	Sour X	Oil	Gas	Water X
Amine	LPG	Condensate X	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. <u>All information</u> 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

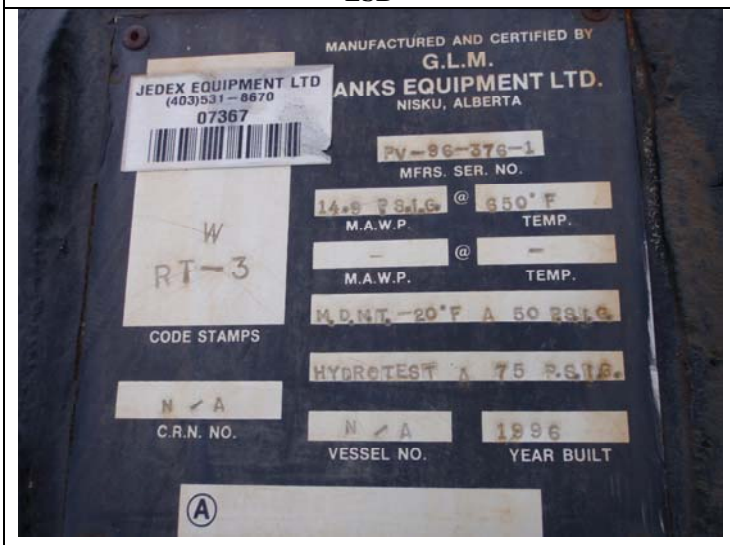
External Inspection Items	G	F	P	N/A	Comments
Insulation Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture.		**X**			**Tar over foam insulation in fair overall condition – multiple small tares along top shell – no exposed metal –no egress of moisture**
External Condition Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage)	**X**				**Limited access to underbelly – paint in good overall condition – no corrosion – no damage or 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, 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**				**Saddle in good overall condition: bolted directly to skid frame – no buckling or dents – no corrosion or leaks at attachment welds – skid sits on wood blocks – ground wire attached to pilings**
Anchor Bolts Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	**X**				**Vessel is securely welded to skid frame – no sign of deformation**
Concrete foundation Check for cracks, spalling, etc.				**X**	**None**
Ladder / Platform Describe general condition, ensure support is secure to vessel, and describe any hazards.				**X**	**None**
Nozzle Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted?	**X**				**Nozzle paint in good condition – all stud threads fully engaged – no leaks – no damage or deflection – nozzles are not gusseted**
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.				**X**	**No gauges**
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 – all clamps in place – no evidence of structural overload – no deflection – paint in good condition – no corrosion**
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	**X**				**Valves properly supported – no sign of leaking**
PSV Ensure PSV is set at pressure at or below that of vessel.	**X**				**PSV is set at MAWP – seal intact – no block valve – PSV vents to atmosphere – Discharge piping does not reduce**
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)	**X**				**Ultrasonic corrosion survey carried out - metal thickness detected below nominal minus corrosion allowance. – corrosion pitting found in head**
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:
Summary: This vessel is in good condition, visual external and ultrasonic thickness inspection carried out – no metal thickness detected below nominal minus corrosion allowance.
Vessel is fit for service.

Inspected By: Andrew Neis / D. Wiedman **Date:** March 7, 2013

LSD

Overview



Data Plate

PSV

PSV tag

Multiple tears in insulation along top shell

	
	Underbelly paint in good condition