

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

RTD 10.116029

District: Fort St. John, BC		Skid No.					
Facility: Flatrock Compressor Station		Location (LSD): 15-20-85-17 W6M					
Vessel Name & Equipment Number: HP Flare Knockout							
Orientation: Horizontal							
Status: In Service		Regulatory Inspection					
PRESSURE VESSEL NAMEPLATE DATA							
"A" or "G" or "S" (Sask.) or BC Registration Number. C 73501 (No Data Plate)		CRN Number Non Code					
Vessel serial number:		Size: 30 in x 7 ft					
Shell thickness:		Shell material:					
Head thickness:		Head material:					
Tube wall thickness:		Tube material:					
Tube diameter:		Tube length:					
Channel thickness:		Channel material:					
MAWP	Shell:	Operating pressure	Shell:				
	Tubes:		Tubes:				
Design Temp.	Shell:	Operating temperature	Shell:				
	Tubes:		Tubes:				
X-ray:		Heat treatment:					
Code parameters: ASME Section VIII Div 1		Joint efficiency (if on nameplate):					
Manufacturer: Tornado Flare Systems		Year built:					
Corrosion allowance:		Manway: No					
PRESSURE SAFETY VALVE NAMEPLATE DATA							
Tag Number(s)	Manufacturer /Model / Serial# and Code Stamp	Set Pressure (PSI)	Capacity (Scfm)	Size	Block Valve	Location	Serv by / Date
No PSV							
SERVICE CONDITONS-INDICATE ALL THAT APPLY							
Sweet	Sour X	Oil		Gas X		Water X	
Amine	LPG	Condensate		Air		Glycol	
Other (Describe):							

Inspection Interval _____ **PSV Service Interval** _____

(Determined by MIC in conjunction with Chief Inspector following guidelines of Canadian Natural Resources Limited 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
Insulation Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture. Are straps secured?				X	
External Condition Assess paint condition, areas peeling, record any corrosion, damage, distortion etc (record location, size and depth of corrosion or damage)	X				Paint is in good condition. Surface corrosion present on bottom shell, no pitting.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No leaks observed.
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. Is ground wire attached?	X				Saddle: Paint is in overall good condition. Surface corrosion present on base of saddle. No pitting. No sign of leakage at attachment weld. Ground wire attached to skid.
Anchor Bolts Hammer tap to ensure secure. Look for corrosion, cracking in threads or signs of deformation.	X				Vessel is firmly welded to skid.
Concrete foundation Check for cracks, spalling, etc.				X	
Ladder / Platform Describe general condition, ensure support is secure to vessel, and describe any hazards.				X	
Nozzle Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted? Inspect gussets for cracking.	X				Stud threads are fully engaged to nuts – no short bolts. No damage or deflections observed – no leaks. No gussets.
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				All piping is well supported; all clamps in place. No structural overloads or deflections noted. Paint is in good condition. Minor surface corrosion present. No pitting.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				Well supported – no leaking.
PSV Ensure PSV is set at pressure at or below that of vessel. Discharge piping is same size as valve outlet and is properly supported and routed. Are psv seals in place? Ensure no block valves between psv and vessel, or if there is that they are locked/sealed open.				X	No PSV.
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)	X				UT thickness survey carried out – no metal thickness detected below nominal minus corrosion allowance.
<p>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)</p> <p>Recommendations: Grit blast and repaint bottom shell and piping where corrosion present.</p> <p>Summary: Vessel is in overall good condition, visual external inspection and ultrasonic corrosion survey performed - no metal thickness detected below nominal minus corrosion allowance.</p> <p>Corrosion rate based on greatest thickness loss – no corrosion rate to assess.</p> <p>Vessel is fit for service.</p>					

API 20981

Inspected By: Dellas Wiedman // Justin Smith

Date: April 01, 2015

Photo Table



LSD Sign



Vessel C#



Vessel Overview



Vessel Overview



Saddle



Corrosion on piping



Overview