Canadian Natural Resources Limited
GENERAL PRESSURE VESSEL INFORMATION **Job 10.180192**

District: **Fort St. John, BC.**	Skid No.
Facility: **Thunder Creek Compressor Station**	Location (LSD): **d-31-H/93-I-15**
Vessel Name & Equipment Number: **Line Heater**	
Orientation: **Vertical**	
Status: **Operating**	**Regulatory Inspection**

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. **A0528515**		CRN Number P 9412.132	
Vessel serial number: BW 336.003		Size: 48 in. OD x 15 ft. S/S	
Shell thickness: 9.5 mm		Shell material: SA 36	
Head thickness: 9.5 mm		Head material: SA 36	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 4651 kPa	Operating pressure	Shell:
	Tubes:		Tubes:
Design Temp.	Shell: 38°C	Operating temperature	Shell:
	Tubes:		Tubes:
X-ray: RT 1		Heat treatment: Nil	
Code parameters: ASME B 31.3		Coated: No	
Manufacturer: Brooks Welding		Year built: 2005	
Corrosion allowance: 1.6 mm		Manway: No	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacturer /Model / Serial number	Set Pressure (PSI / kPa)	Capacity (Scfm/ usgpm)	Size	Block Valve	Location	Serv by / Date
TCCS 020/ 21767G	Mercer/8142251T23 NS /140256	4964 kPa	5816 scfm	2 X 2	No	Outlet Piping	Unified 06/23/2016

SERVICE CONDTIONS-INDICATE ALL THAT APPLY

Sweet X	Sour	Oil	Gas X	Water X
Amine	LPG	Condensate X	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. <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 man ways, nozzles, no damage present, and there is no egress of moisture.	X				**Vessel is fully insulated – no open or torn sections. No evidence of wet insulation – no stains.**
External Condition: Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage)	X				**Paint in good condition – no exposed metal.**
Leakage: Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				**No leaks detected.**
Saddle: Assess condition of paint, fire protection, 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: This line heater is mounted on pilings and supports – no distortion to saddle – no evidence of leaking at saddle to shell area.** **Skid is grounded.**
Anchor Bolts: Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				**Firmly bolted to skid deck.**
Concrete foundation: Check for cracks, spalling, etc.				X	
Ladder / Platform: Describe general condition, ensure support is secure to vessel, 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?	X				**All studs fully engaged to nuts – no short bolts.** **No deflection, no leaking detected.** **No gussets.**
Gauges: Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				**Pressure gauge: 0 to 200 kPa.** **Pressure gauge: 0 to 1000 kPa.**
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				**Well supported, no deflection, all clamps in place.** **Paint is in god condition – no corrosion.**
Valving: Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				**Firmly supported – no leaks.**
PSV: Ensure PSV is set at pressure at or below that of vessel.			X		**Located on Discharge Piping, set above MAWP of gas coil.** **Seal is intact. No block valve.** **Discharge piping is same size as outlet orifice.**
NDE methods: Was UT/ MPI done on vessel (MI coordinator to review results)	X				**Ultrasonic thickness survey carried out – no metal thickness detected below nominal minus corrosion allowance.**

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: Reset PSV at or below MAWP of gas coil.
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: Dellas Wiedman **Date:** July 24th, 2018
API 20981 / IBPV 275

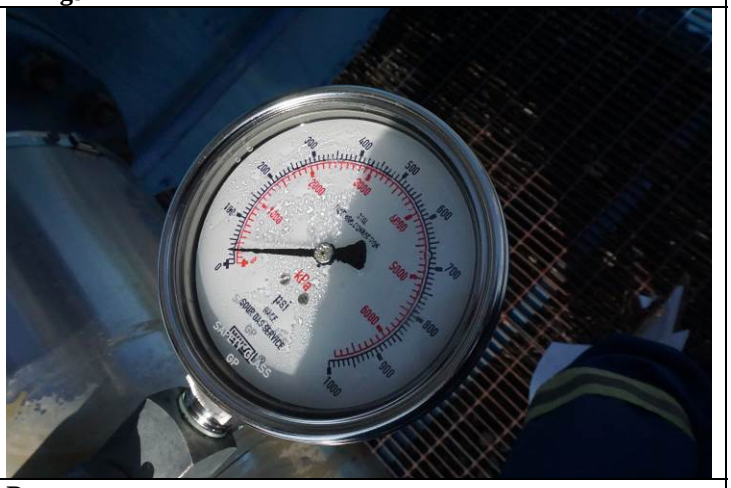
LSD

Vessel overview

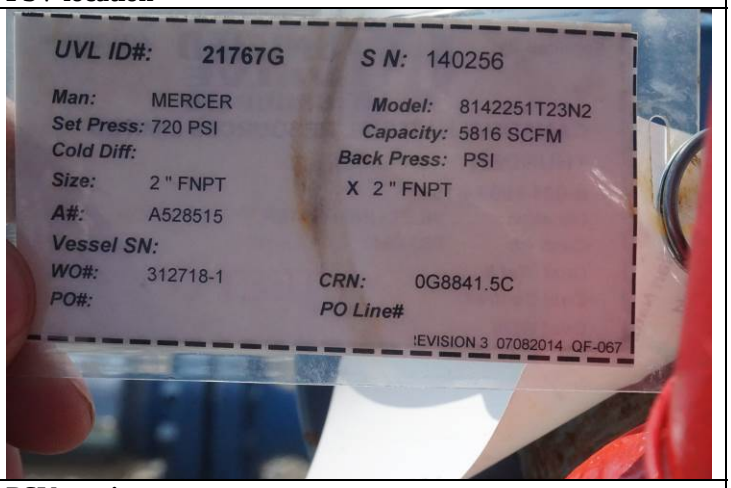
Data plate

Pilings

Pressure gauge



Pressure gauge

	
Saddle support	**PSV location**
	
PSV service tag	**PSV service tag**