Canadian Natural Resources Limited GENERAL PRESSURE VESSEL INFORMATION Job 10.112837										
District: Fort S	Skid No.									
Facility: Chowa	Location (LSD): c-29-L/94-B-09									
•	uipment Number: Test Sepa	rator		I.	, ,					
Orientation: Ver	rtical									
Status: In S	Service		Regulatory Inspection							
	I	PRESSURE VES	SEL N	AME	PLATE DATA					
"A" or "G	CRN Number: H 8699.2									
Vessel serial nun	Size: 24 in. x 9 ft.									
Shell thickness:	Shell material: SA 516 70N									
Head thickness:	Head material: SA 516 70N									
Tube wall thickn	Tube material:									
Tube diameter:	Tube length:									
Channel thickness	Ch	Channel material:								
Design pressure	Shell: 1440 PSI Tubes:			Operating pressure			Shell:			
							Tubes:			
Design Temp.	Shell: 100 °F	Operating temperature		ure	Shell:					
	Tubes:			Tubes						
X-ray: RT 1	Heat treatment: Yes									
Code parameters	Coated: No									
Manufacturer: I	Year built: 2001									
Corrosion allowa	Manway: No									
	PRE	SSURE SAFETY	VALV	E NA	MEPLATE DA	ATA				
PSV Tag #	Manufacture / Model / Serial	Set Pressure (PSI / kPa)	Capa (scfi	•	Size	Block Valve		Location	Service by Date	
	Consolidated / 1912- 00HC-1-CC-MS / TP71464	1440 PSI	22898		2 x 3	No		Upper Shell	KINGS 07/2010	
	SERVIC	CE CONDITION	S-INDI	CAT	E ALL THAT	APPL	Y			
Sweet	Sour X Oil						Gas X		Water X	
Amine	LPG Con				densate X			Air		
Other (Describe)	:									
Reports reviewed an	C in conjunction with Chief Inspecto	or following guideline	es of CNR		Service Intervolution	n Prograi	n) Pate			

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

<b>External Inspection Items</b>	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	Vessel not insulated
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 overall condition – bottom head missing paint with oxidized surface to $100\%$ - no corrosion pitting – no damage -
<b>Leakage</b> Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No leaks observed
<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 in good overall condition – no missing paint – no corrosion – no buckling or dents – no sign of leaks at attachment welds – ground wire attached to skid
Anchor Bolts Hammer tap to ensure secure.  Look for cracking in treads or signs of deformation.	X				Vessel is securely welded to skid floor – 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
<b>Nozzle</b> 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			Pressure gauge is clean and functional – not within range for service: $0-1000\ PSI$
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
<b>PSV</b> Ensure PSV is set at pressure at or below that of vessel.	X				PSV is set at MAWP – seal intact – no block valve – outlet piping does not reduce form PSV discharge orifice size – PSV vents to atmosphere – rupture disc in place on discharge piping – disc manufacture date 2008
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results) Other	X				Ultrasonic corrosion 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:**

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: February 28, 2013





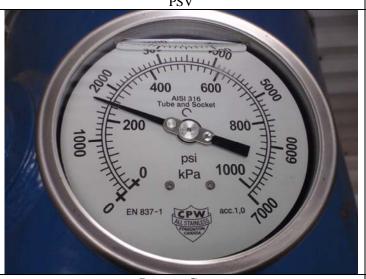
LSD Overview





Data Plate PSV





PSV Tag Pressure Gauge

