

GENERAL INSPECTION FORM						
District: <b>Ft St John, B.C.</b>			Skid No.			
Facility: <b>South Buick Battery</b>			Location (LSD): <b>d-78-I / 94-A-11</b>			
Vessel Name & Equipment Number: <b>Group Separator</b>						
Orientation: <b>Horizontal</b>						
Status: <b>In Service</b>			Regulatory Inspection			
PRESSURE VESSEL NAMEPLATE DATA						
"A" or "G" or "S" (Sask.) or BC Registration Number.  <b>CN 96122</b>			CRN Number  <b>M 9977.231</b>			
Vessel serial number: <b>95 – 8021 – 0</b>			Size: <b>96 in. X 20 ft</b>			
Shell thickness: <b>21.5 mm</b>			Shell material: <b>SA-516-70</b>			
Head thickness: <b>22.2 mm</b>			Head material: <b>SA-516-70</b>			
Tube wall thickness: <b>N/A</b>			Tube material: <b>N/A</b>			
Tube diameter: <b>N/A</b>			Tube length: <b>N/A</b>			
Channel thickness: <b>N/A</b>			Channel material: <b>N/A</b>			
MAWP	Shell: <b>250 PSI</b>		Operating pressure	Shell: <b>0-60 PSI Not in operation</b>		
	Tubes:			Tubes: <b>During Inspection</b>		
Design Temp.	Shell: <b>150 Deg. F</b>		Operating temperature	Shell: <b>0-120 Deg. C Not in operation during Inspection</b>		
	Tubes:			Tubes:		
X-ray: <b>RT-1</b>			Heat treatment: <b>HT</b>			
Code parameters: <b>ASME VIII Div.1</b>			Joint efficiency (if on nameplate): <b>N/S</b>			
Manufacturer: <b>Wells Hall Fab</b>			Year built: <b>1996</b>			
Corrosion allowance: <b>1.6 mm</b>			Manway: <b>Yes</b>			
PRESSURE SAFETY VALVE NAMEPLATE DATA						
Tag Number(s)	Set Pressure PSI	CRN #	Manufacturer /Model / Serial# and Code Stamp	Capacity (Scfm)	Size	Set Date
<b>Shell Side 2338 F</b>	<b>125 PSI</b>	<b>N/S</b>	<b>Crosby/ JLT-JOS-15/A / ser# SE12602-1 / UV/NB</b>	<b>5010</b>	<b>3"x 4"</b>	<b>06 / 07</b>
SERVICE CONDITIONS-INDICATE ALL THAT APPLY						
Sweet	Sour <b>X</b>		Oil <b>X</b>	Gas <b>X</b>		Water <b>X</b>
Amine	LPG		Condensate <b>X</b>	Air		Glycol
Other (Describe):						

Inspection Interval \_\_\_\_\_ PSV Service Interval \_\_\_\_\_  
 (Determined by MIC in conjunction with Chief Inspector following guidelines of CNRLs Canada 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.

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<b>External Inspection Items</b>	<b>G</b>	<b>F</b>	<b>P</b>	<b>N/A</b>	<b>Comments</b>
<b>Insulation</b> Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture. Are straps secured?	X				<b>No damage to Insulation, no sign of moisture egress. No straps to support cladding. Secured with screws.</b>
<b>External Condition</b> Assess paint condition, areas peeling, record any corrosion, damage, distortion etc (record location, size and depth of corrosion or damage)	X				<b>Paint in good condition, West head No external corrosion observed.</b>
<b>Leakage</b> Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				<b>No leaks observed.</b>
<b>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. Is ground wire attached?	X				<b>Saddle: No distortion to saddles – no leaks detected at shell to saddle welds. Ground wire firmly attached to skid.</b>
<b>Anchor Bolts</b> Hammer tap to ensure secure. Look for corrosion, cracking in threads or signs of deformation.	X				<b>Anchor bolts are firmly secured No deformation noted.</b>
<b>Concrete foundation</b> Check for cracks, spalling, etc.				X	<b>None</b>
<b>Ladder / Platform</b> Describe general condition, ensure support is secure to vessel, and describe any hazards.				X	<b>None</b>
<b>Nozzle</b> 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				<b>Stud threads are fully engaged to nuts. No damage or deflections observed – no leaks. Paint in good condition – no corrosion. Nozzles are not gusseted.</b>
<b>Gauges</b> Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/Temp.	X				<b>Gauges are visible, working, no leaks and suitable for range of Temperature. Temp gauge 0 – 120 Deg. C Press gauge 0-400Kpa.</b>
<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				<b>Piping is well supported, all clamps, supports, and shoes are in place. No structural overloads or deflections noted. Paint in good condition – no corrosion.</b>
<b>Valuing</b> Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				<b>No leaks are visible. Valves are properly supported.</b>
<b>PSV</b> 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				<b>Located on top shell - set below MAWP of vessel. Discharge piping is same size as outlet of valve. PSV seal in place. Block valve located on outlet of PSV. PSV is properly supported.</b>
<b>NDE methods</b> Was UT/ MPI done on vessel (MI coordinator to review results)	X				<b>Ultrasonic thickness inspection carried out on piping – no metal thickness detected below nominal minus corrosion allowance.</b>
<b>Other Observations:</b>					

**Inspected By:** Dellas Wiedman

**Date:** June 25, 2007

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<b>Internal Inspection Items</b>	<b>G</b>	<b>F</b>	<b>P</b>	<b>N/A</b>	<b>Comments</b>
<b>Coating</b> Assess coating. Describe area coated, general condition of coating.	X				<b>Good condition, no holidays or lifted coating – 2 small diameter chips I man way access.</b>
<b>Anodes.</b> How many, type, condition. % consumed. Are they being replaced?	X				<b>2 Anodes were found and consumed to less than – 5% max. Will not be replaced. Ground cable on East anode was broken, needs to be repaired.</b>
<b>Internal Piping</b> Is there any? If so, carbon or stainless steel. Describe condition, dents, corrosion, erosion, etc. Ensure supports are secure and any bolts are suitable for future use.				X	<b>No internal piping.</b>
<b>Level indicator / Float:</b> Intact? Free Movement?	X				<b>Good condition, no obstructions – free movement.</b>
<b>Thermal Well:</b> Intact, in place?	X				<b>Intact and in place.</b>
<b>Trays</b> How many? Type of material. Are valves in place. Check for erosion/ corrosion; wear on tray valve legs. Cleanliness?				X	
<b>Baffles, deflector plates, etc.</b> If present, describe condition. Look closely at welds attached to vessel wall.	X				<b>Weir in place no exposed metal or previous corrosion.</b>
<b>East Head</b> Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				<b>Good condition, no exposed metal – no previous corrosion.</b>
<b>West Head</b> Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				<b>Good condition, no exposed metal – no previous corrosion.</b>
<b>Shell Sections</b> Record number of shell sections. Record location, size and depth of all erosion, corrosion or mechanical damage. Describe general condition. If any corrosion greater than corrosion allowance is observed in either shell or head, discuss with Chief Inspector before closing vessel.	X				<b>Two shell sections were found to form this vessel. The shell was coated and in good condition – no failed areas.</b>
<b>Demister pad</b> Is it in place? Is it clean? If any corrosion is apparent in vessel, lift pad and check top head for corrosion.	X				<b>Demister pad in gas boot – some calcium in screens – not soiled.</b>
<b>Nozzles:</b> Unobstructed? Identify and corrosion, pitting – quantify.	X				<b>Coated – no failed areas.</b>
<b>Welds</b> Inspect all welds, including attachment welds. Record all service-related damages and if there is any discuss with Chief Inspector before closing.	X				<b>Good condition, no exposed metal – no previous corrosion.</b>
<b>Repairs Required. If yes, ensure procedure and copy of AB 40 is on file, and one sent to local ABSA, and Chief Inspector</b>				X	<b>No repairs required.</b>
<b>NDE Was any NDE done. ( MI coordinator to review results)</b>				X	<b>No internal NDE performed at this time.</b>
<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)  <b>Recommendation: 1.</b> Hand patch coating chips in man way access.  <b>Summary:</b> This vessel is in good overall condition, visual internal, external carried out – 2 small diameter chips in coating – no previous corrosion.  <b>Vessel fit for service.</b></p>					

Internal Inspection Pictures



Data Plate



Over view



Ground cable



Man way access



Over view



Coating



Gas boot



Demister pad in gas boot



Over view of weir



Man way head



Inlet nozzle diffuser



Thermal well



**Specific gravity controller**



**Weir and inlet diffuser**