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HORIZONTAL VESSEL - GENERAL INSPECTION FORM	
District: Fort Saint John	**Skid No. Area 1**
Facility: Clear Hills Gas Plant	**Location (LSD): 16-11-088-13 W6M**
Vessel Name & Equipment Number: LP Inlet Separator	
Orientation: Horizontal	
Status: In Service	**Regulatory Inspection**

PRESSURE VESSEL NAMEPLATE DATA			
"A" or "G" or "S" (Sask.) or BC Registration Number. **A# 2955267**		CRN Number **V-3213.2**	
Vessel serial number: 93-C2697-3000		Size: 72 in x 30 ft	
Shell thickness: 38.1 mm (1.50")		Shell material: SA-516-70	
Head thickness: 43.6 mm (1.717")		Head material: SA-516-70	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
MAWP	Shell: 700 PSI (4826 kPa)	Operating pressure	Shell: 50 Psi
	Tubes:		Tubes:
Design Temp.	Shell: 100 Deg. F (49 C)	Operating temperature	Shell: 25 Deg. C
	Tubes:		Tubes:
X-ray: RT-1		Heat treatment: HT	
Code parameters: ASME VIII Div.1		Joint efficiency (if on nameplate):	
Manufacturer: Process Industries Inc.		Year built: 1994	
Corrosion allowance: 1.6 mm (.0625")		Manway: Yes (lower man way)	

PRESSURE SAFETY VALVE NAMEPLATE DATA						
Tag Number(s)	Set Pressure PSI	CRN #	Manufacturer /Model / Serial# and Code Stamp	Capacity (Scfm)	Size	Set Date

SERVICE CONDTIONS-INDICATE ALL THAT APPLY				
Sweet	**Sour**	**Oil**	**Gas**	**Water**
Amine	LPG	**Condensate**	Air	Glycol
Other (Describe): **Chemical for pipeline corrosion inhibition program.**				

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. <u>All information</u> is important! Use back of sheets to record additional information or sketch if required.

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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	**Vessel is not insulated on the inner building. Insulation and cladding on outside building portion is in good clean and secure condition with no visible damage.**
External Condition Assess paint condition, areas peeling, record any corrosion, damage, distortion etc (record location, size and depth of corrosion or damage)	X				**Paint in good condition – no exposed metal, no external corrosion observed on inner building portion. – dust and dirt present on shell surface.**
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:** **This vessel saddle is in good clean condition with no buckling or distortion present. No signs of leaks.** **Ground wire firmly attached to building skid.**
Anchor Bolts Hammer tap to ensure secure. Look for corrosion, cracking in threads or signs of deformation.	X				**Anchor bolts are in place and secure.**
Concrete foundation Check for cracks, spalling, etc.				X	
Ladder / Platform Describe general condition, ensure support is secure to vessel, and describe any hazards.				X	**No ladder on equipment.**
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.** **Paint in good condition – no corrosion.** **Nozzles are not gusseted. – Appears to have had MT completed on nozzle attachment welds to shell.**
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				**Pressure gauge is visible, working, no leaks and suitable for operating conditions only.** **Pressure gauge: 0 – 200 Psi (adequate for operating conditions of vessel but under rated for vessel MAWP)** **Temperature gauge – thermo well there but no gauge**
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				**Inlet piping is well supported; all clamps, supports, and shoes are in place.** **No structural overloads or deflections noted.** **Insulation and cladding is in place and in fair to good condition..**
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				**No leaks are visible.** **Valves are properly supported.**
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				**Located on top shell** **Discharge piping is same size as outlet of valve.** **PSV is properly supported off vessel top shell.**
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)				X	**No additional NDE completed at time of inspection.**

Other Observations:
1: Pressure gauge is under rated for the vessel MAWP as the operating pressure is at 50-75 Psi and the vessel MAWP is 700 Psi.
2. Temperature gauge is missing from thermo well at time of inspection.

Inspected By: Jerald Zaderey **Date**: June 2, 2009

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Internal Inspection Items	G	F	P	N/A	Comments
Coating Assess coating. Describe area coated, general condition of coating.				X	**Vessel is not internally coated.**
Anodes. How many, type, condition. % consumed. Are they being replaced?				X	**Vessel is not equipped with any internal anodes.**
Internal Piping 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	**Complete internal access not possible as per LEL's and sludge. Vessel is being cleaned so internal access can be obtained.**
Trays How many? Type of material. Are valves in place. Check for erosion/ corrosion; wear on tray valve legs. Cleanliness?				X	**N/A**
Baffles, deflector plates, etc. If present, describe condition. Look closely at welds attached to vessel wall.			X		**Weir plate was suspected to have had a problem as this was the result of the vessel cleaning and opening. Quick observation noted that the weir plate had been cut out. Vessel will be cleaned so the weir plate can be repaired via a bolt in place weir to the existing plate material or via a weld repair.**
East Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)					
West Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)					
Shell Sections 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.					
Demister pad Is it in place? Is it clean? If any corrosion is apparent in vessel, lift pad and check top head for corrosion.					
Welds Inspect all welds, including attachment welds. Record all service-related damages and if there is any discuss with Chief Inspector before closing.					
Repairs Required. If yes, ensure procedure and copy of AB 40 is on file, and one sent to local ABSA, and Chief Inspector					
NDE Was any NDE done. (MI coordinator to review results)	X				**No additional NDE was completed at time of inspection.**

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)
Other Observations:
Recommendations:
Summary: This vessel was taken out of service to inspect the weir plate an interface could not be obtained. Results show that the weir plate was previously cut out. Vessel will be properly cleaned so the weir can be repaired.
June 04, 2009 the weir was repaired by Bring-It Welding by replacing the cut-out section with new welded plating. The welding performed was on a non-pressure component on the vessel.

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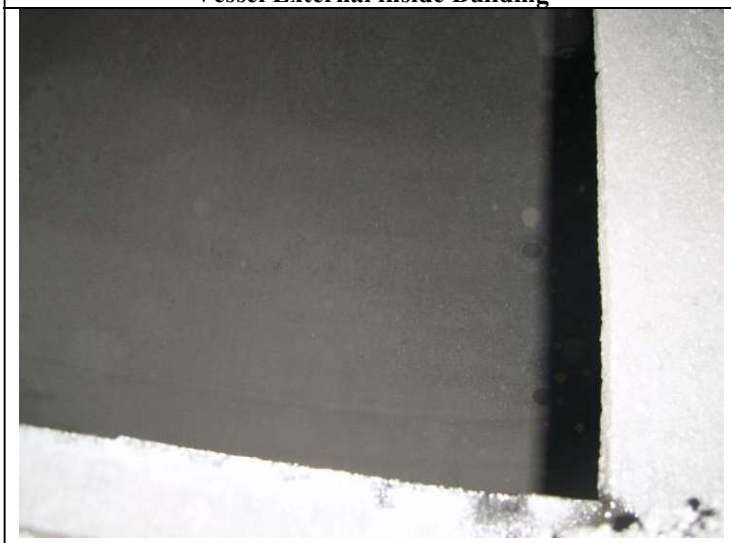
Name Plate

Vessel Overview Outside Building

Vessel External inside Building

Weir Plate Removed



Weir plate removed 2" attachment remaining on shell for bolt on new weir plate

Cut-out section with new welded plating

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