

GENERAL INSPECTION FORM

District: North	Skid No.
Facility: Ladyfern Compressor Station	Location (LSD): 04-30-94-12 W6M
Vessel Name & Equipment Number: Sweetening Tower	
Orientation: Vertical	
Status: In Service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. A 481551	CRN Number P 7904.2
Vessel serial number: 2002 - 011 - 6A	Size: 60 in x 32 ft
Shell thickness: 3.0 in.	Shell material: SA 516 70N
Head thickness: 2.875 in.	Head material: SA 516 70N
Tube wall thickness:	Tube material:
Tube diameter:	Tube length: ...
Channel thickness:	Channel material:
MAWP	Operating pressure
Shell: 1440 PSI	Shell:
Tubes:	Tubes:
Design Temp.	Operating temperature
Shell: 125 deg F	Shell:
Tubes:	Tubes:
X-ray: RT 1	Heat treatment: HT
Code parameters: ASME VIII, Div 1	Joint efficiency (if on nameplate):
Manufacturer: Kanbuilt	Year built: 2002
Corrosion allowance: .125 in.	Manway: Yes

PRESSURE SAFETY VALVE NAMEPLATE DATA

Tag Number(s)	Set Pressure (PSI)	CRN #	Manufacturer /Model / Serial# and Code Stamp	Capacity (Scfm)	Size	Set Date
Shell Side G# 613462	1440		Farris / 26FA13 - 120 / AL / CE 20383 - A10 / UV	5657	1 X 2	

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

Sweet	Sour X	Oil	Gas X	Water
Amine	LPG	Condensate	Air	Glycol
Other (Describe): Sulfatreat				

Inspection Interval 12 months **PSV Service Interval** as per max tank
 (Determined by MIC in conjunction with Chief Inspector following guidelines of ConocoPhillips Canada Owner-User Inspection Program)
 Reports reviewed and accepted by: _____
Mechanical Integrity Coordinator _____ **Date** June/07

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 secure?	X				Good condition, no open or torn cladding - no exposed metal surfaces.
External Condition Assess paint condition, areas peeling, record any corrosion, damage, distortion etc (record location, size and depth of corrosion or damage)	X				Nozzles are painted – no exposed metal.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No leaking detected.
Skirt 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. Is ground wire attached?	X				Good condition, insulated - no obvious distortion. Ground cable attached to skirt.
Anchor Bolts Hammer tap to ensure secure. Look for corrosion, cracking in threads or signs of deformation.	X				Firmly bolted to skid.
Concrete foundation Check for cracks, spalling, etc.				X	
Ladder / Platform Describe general condition, ensure support is secure to vessel, describe any hazards.	X				Firmly attached, no loose or missing sections.
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				No leaking detected – no deflection. Studs fully engaged to nuts. No gussets.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.				X	No gauges on vessel.
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, no exposed metal surfaces.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				Well supported, no leaks.
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 are that they are locked/sealed open.	X				Located on top head – set at MAWP of vessel. Block valve in place – locked in open position. Discharge size larger than inlet size. PSV seal intact.
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)	X				Ultrasonic thickness inspection carried out in 2006 – no metal thickness detected below nominal.
Other Observations:					

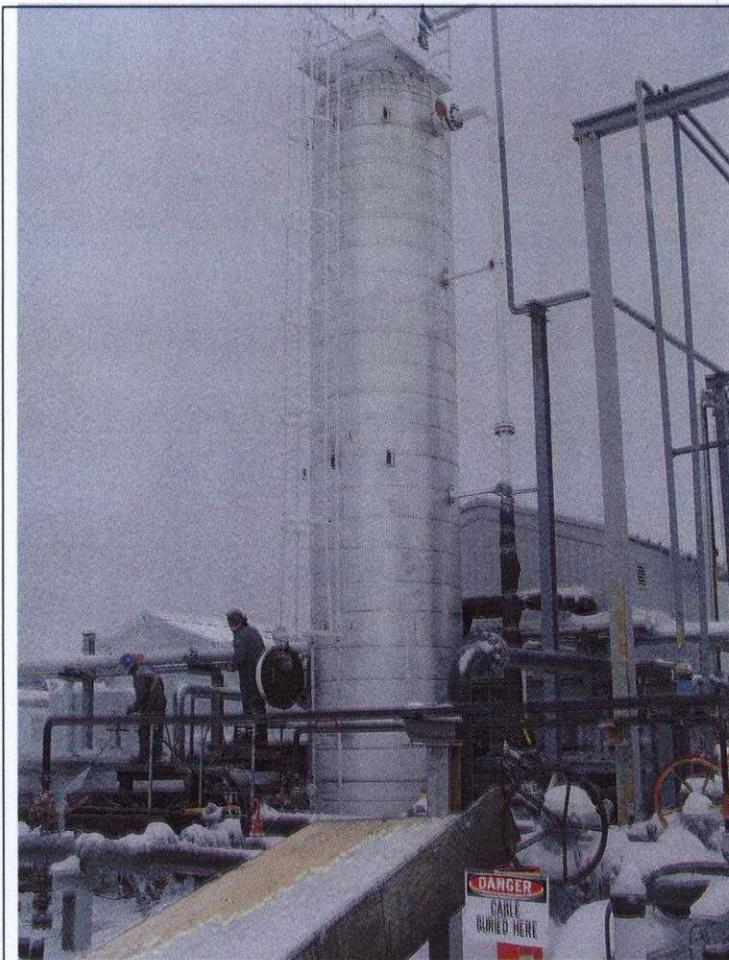
Inspected By: Dellas Wiedman

Date: March 22 – 2007

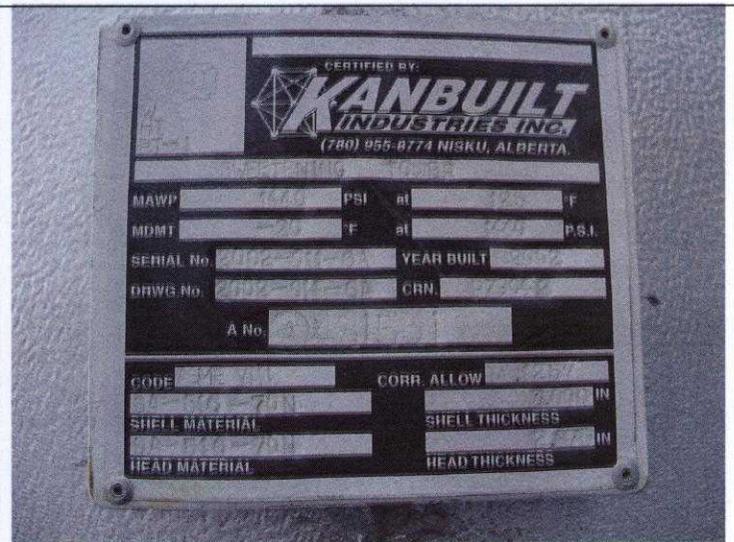
Internal Inspection Items	G	F	P	N/A	Comments
Coating Assess coating. Describe area coated, general condition of coating.			X		Coating has failed to full area of bottom shell course and to 20% of bottom head area.
Anodes. How many, type, condition. % consumed. Are they being replaced?				X	No anodes
Internal 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	No internal piping.
Trays How many? Type of material. Are valves in place. Check for erosion/ corrosion; wear on tray valve legs. Cleanliness?			X		Bottom grating supports – 2 broken “I” beams, and all grating bent, buckled and distorted.
Baffles, deflector plates, etc. If present, describe condition. Look closely at welds attached to vessel wall.				X	No baffles, deflectors etc...
Top Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				Good condition, no failed coating, no previous pitting.
Bottom Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				Good condition, minor coating failures at shell to head weld area – no previous corrosion or pitting.
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.	X				4 can sections – coating failed to lower course – 2 small diameter pits to .020 inches deep – no major concerns.
Demister pad Is it in place? Is it clean? If any corrosion is apparent in vessel, lift pad and check top head for corrosion.				X	No demister.
Welds Inspect all welds, including attachment welds. Record all service-related damages and if there is any discuss with Chief Inspector before closing.	X				Good condition – no previous corrosion or pitting.
Repairs Required. If yes, ensure procedure and copy of AB 40 is on file, and one sent to local ABSA, and Chief Inspector	X				“I” beams to be straightened and re welded. Grating to be straightened and put back into vessel.
NDE Was any NDE done. (MI coordinator to review results)				X	No NDE inspections at this time.
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:					

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Over view of vessel.



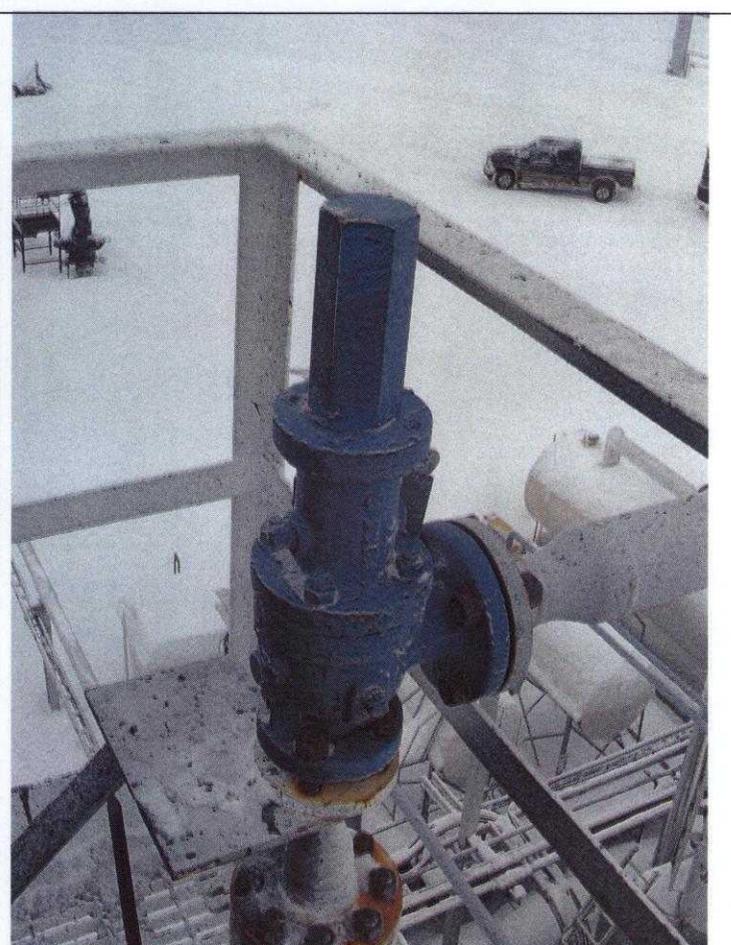
Data plate



Vessel is mounted on skid platform – ground cable attached



Top head – loading nozzle.



Man way cover

PSV – top head



1 support member



Broken support member



Grating – bent and distorted



Support attachment area



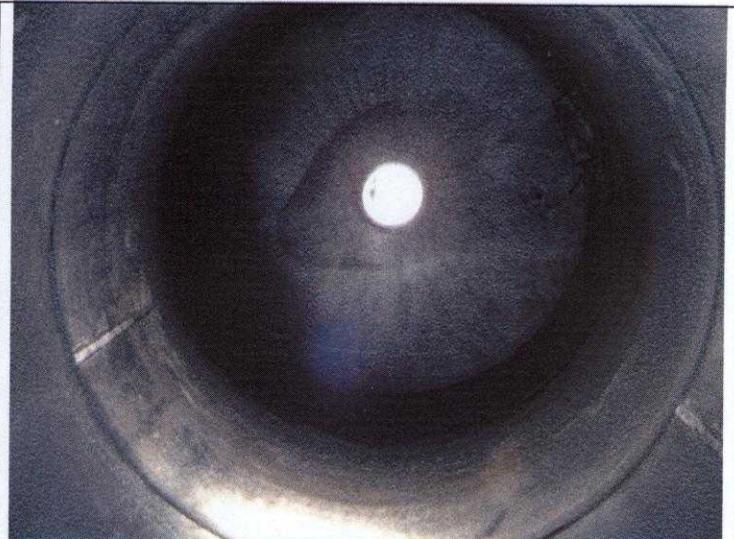
Lower shell – failed coating



Man way access and shell



Upper shell and top head



Top head



1 remaining support



Lower shell – coating failed – 2 small diameter pits to .020 inches Deep.