

GENERAL INSPECTION FORM						
Field: Elmworth			Skid No. : 57135			
Facility: Goodfare Gas Gathering			Location (LSD) Surface: 10-23-72-10 W6M			
Vessel Name & Equipment Number: Horizontal Separator			PSV Only-Installed on piping: <input type="checkbox"/>			
Orientation: Horizontal <input checked="" type="checkbox"/> or Vertical <input type="checkbox"/>			Location (LSD) Downhole:			
Status: In Service <input checked="" type="checkbox"/> or Out of Service (blinded / fully isolated) <input type="checkbox"/>			Com. Inspection <input type="checkbox"/> Shop Inspection <input type="checkbox"/> Reg. Inspection <input checked="" type="checkbox"/>			
PRESSURE VESSEL NAMEPLATE DATA						
"A" or "G" or "S" (Sask.) or BC Registration Number A0584281			CRN Num: L 8645.21			
			Size (diameter x length- estimate if necessary: 48 in x 20 ft			
Vessel serial number: 09-068-001-HS			Shell material: SA 516 70N			
Shell thickness: 44.5 mm			Head material: SA 516 70N			
Head thickness: 44.5 mm			Tube material:			
Tube wall thickness:			Tube length:			
Tube diameter:			Channel material:			
Channel thickness:			X-ray: RT-1			
MAWP Design Temp.	Shell: 9928 kPa (1440 PSI)		Code parameters: ASME VIII Div 1			
	Tubes:		Heat treatment? Yes <input checked="" type="checkbox"/> no <input type="checkbox"/>			
	Shell: 38 deg C (100 deg F)		Joint efficiency (if on nameplate):			
	Tubes:		Manufacturer: Tarpon Energy Services Ltd.			
Man Way: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N			Year built: 2009			
PRESSURE SAFETY VALVE DATA						
PSV set pressure from P&ID _____ KPA _____ PSI <input type="checkbox"/> N/A			Piping PSV P & ID. # _____ <input type="checkbox"/> N/A			
PSV set pressure as per P&ID : <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA			PSV set pressure is ≤ than MAWP of vessel or piping : <input checked="" type="checkbox"/> Y <input type="checkbox"/> N No PSV attached because vessel is vented to atmosphere <input type="checkbox"/> Y			
Tag Number(s)	Set Pressure (psi)	Manufacturer/ Model / Serial #	Capacity (ie:SCFM/ GPM,etc)	Size (Inlet x Outlet)	Service Co & Serv Co ID# or WO#	Set Date (mm/dd/yyyy)
Shell Side G# G 737413	720	Consolidated // 1912GC // B100965X-4-1	7395 SCFM	1.5 x 2.5	Unified Valve	06/17/2013
Tube Side G#						
SERVICE CONDITIONS-INDICATE ALL THAT APPLY						
Sweet <input checked="" type="checkbox"/>	Sour <input type="checkbox"/>	Oil <input type="checkbox"/>	Gas <input checked="" type="checkbox"/>	Water <input checked="" type="checkbox"/>		
Amine <input type="checkbox"/>	LPG <input type="checkbox"/>	Condensate <input checked="" type="checkbox"/>	Air <input type="checkbox"/>	Glycol <input type="checkbox"/>		
Other (Describe):						

PV Inspection Interval 120 months ABSA Grade 1 ☐ 2 ☐ 3 ☒ similar service criteria applied to interval: Yes ☐ Generic ITP ☐
 PSV Service Interval as per PCMS months ABSA Grade 1 ☐ 2 ☐ 3 ☐ similar service criteria applied to interval: Yes ☐ Equipment specific ITP ☒

Shop Inspector _____ Date _____
 Construction/ _____ Print and Initial
 VE Inspector Chris Maxsom ABSA# 0539 Date June 17, 2014
 Contractor Superintendent _____ Date _____
 Inspection reports reviewed/accepted by: _____
 ConocoPhillips A&OI Specialist _____ Date _____

REVIEWED AND ACCEPTED

NEIL JOHNSON
 API 510 # 42665 - ABSA ISPVI # 000680

External Inspection Items	G	F	P	N/A	Comments
Insulation Verify sealed around man ways, nozzles, valves, etc., no damage present, and there is no ingress/egress of moisture. Are straps secured?	X				Vessel is 10% insulated. Good condition. No damage. Wall closure sealed. No egress of moisture.
External Condition Assess paint condition, areas peeling, record any corrosion, (check roof interface for corrosion), damage, distortion, etc. (record location, size and depth of corrosion or damage)	X				Paint chipped on top shell to <5% exposed metal with minor surface corrosion. No damage. No distortion.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				None.
Skirt/ 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. Is ground wire attached? Adequate access for UT inspection? Note: For horizontal vessels mounted on saddles ensure anchor bolting loose on one end to allow for expansion/contraction after installation.	X				Vessel saddle is bolted to skid structure. No evidence of corrosion at shell to skirt weld – no leaks. Paint in good condition – no exposed metal. Skid is welded to pilings above ground level Vessel has ground wire attached.
Anchor Bolts Hammer tap to ensure secure. Look for corrosion, cracking in threads or signs of deformation.	X				Anchor bolts are secure.
Concrete foundation Check for cracks, spalling, etc.				X	Steel
Ladder / Platform Describe general condition, ensure support is secure to vessel, describe any hazards.				X	No ladder or platform attached.
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				Paint in good condition – No exposed metal. Studs are fully engaged to nuts – no short bolts. Threads are fully engaged. No damage or deflections. No leaks. No gussets.
Gauges Ensure gauges/gauge glass(es) are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				Pressure gauge: 0 to 10300 kPa. Within range of MAWP. Temperature gauge: -20 to 120°C. Within range of MAWP. Liquid level attached. All gauges clean and clear. No leaks.
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				Paint in good condition – no exposed metal. No overload or deflection. All clamps in place.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				Well supported. No leaks.
NDE methods Was UT/ MPI done on vessel	X				Ultrasonic thickness survey carried out. No metal thickness detected below nominal minus corrosion allowance.
Piping Installation Items	Y	N	N/A		Comments
Are all flange connections free from tape/wrap which may have been used for leak testing?	X				All tape / wrap removed
Is the soil-air interface for the piping wrapped properly?			X		
Is there potential to create future mechanical damage from contact with grating, loose tubing etc.?		X			None visible.
Note: refer to piping inspection form for in-service inspection of pressure piping (Form 2113)					
Observations:					

Construction/

VE Inspector: Chris Maxsom ABSA# 0539

(Please Print)

Date June 17, 2014

PSV Configuration Items	Y	N	N/A	Comments
Is PSV Inlet/Discharge free of obstruction? Check for contaminants (if possible) and verify full pipe diameter from PSV inlet/discharge to point of connection. Not leaking?	X			Discharge piping is the same size as valve outlet. No leaks observed.
Flexible hoses present on inlet/outlet piping?			X	None
If yes, flexible hose size > diameter than piping by 1 nominal pipe size (ie: 1" piping, 1 1/2" flexible hose). Flexible hose free of misalignment?			X	None
Are all block valves in PSV relief path full port and locked/car sealed in the open position?			X	None
Is the PSV inlet/discharge braced/supported by piping, brackets etc?	X			Valve is properly supported and routed.
Are threaded PSV's, mounted to prevent turning to the left or right if PSV opened (i.e. if an elbow is used below PSV, PSV should point in line with the inlet piping to the elbow)?	X			PSV is securely anchored.
Are the PSV's mounted vertically?	X			Yes
For PSV's vented to atmosphere, do PSV's have a tail pipe that is braced and protected from rain/snow ingress (ie: rain cap)? Low point drain if pointed upwards? Shipping plugs removed?	X			Yes
Does PSV discharge orient away from areas that may be occupied by personnel (minimum 7' above ground/walkway), and away from other units, especially air intakes, non-classified buildings, and burner inlets/exhaust stacks?	X			PSV is discharged to a safe location.
Does discharge line have pocketed sections? If yes, are pocketed sections protected from freezing? Are these sections drained periodically?			X	None.
Do pop lines terminate into upper third of pop tank and are lines secured and self draining?			X	None
Is there a rupture disc and if so is it at the proper pressure rating?			X	None
Does the rupture Disc have a pressure bleed off point?			X	None
Are all PSV <u>seal</u> wires intact?	X			PSV seal is intact.
Have all transit wires been removed from lift lever?			X	None
If this is a bellows style PSV, is the bonnet vented to a safe location?			X	

Observations:

Construction/

VE Inspector: Chris Maxsom ABSA# 0539

Date: June 17, 2014

(Please Print)

Internal Inspection Items	G	F	P	N/A	Comments
Coating Assess coating. Describe area coated, general condition of coating. Look at nozzles, coupling, and areas of most severe corrosion to ensure coating is intact. If coating is in poor condition make decision <u>now</u> if re-coating necessary? If so, when?				X	Internal is not coated.
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	No trays inside this vessel.
Baffles, deflector plates, etc. If present, describe condition. Look closely at welds attached to vessel wall.	X				Sure weir in place (24 inches in height) – firmly welded in place.
North Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				Man way head: Thin scale in upper vapor space area – no corrosion or pitting detected.
South Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				Good condition – thin scale – no corrosion or pitting detected.
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				2 Shell sections: Good condition, light scale in upper phase – no pitting.
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			Demister pad was heavily soiled – not cleaned during this outage.
Nozzles check all nozzles for corrosion, cracks, coating loss, build up of scales or products, pay special attention to dead leg nozzles that are blinded.	X				Nozzles were unobstructed – no corrosion or pitting. Thermal well is intact and in place.
Welds Inspect all welds, including attachment welds. Record all service-related damages and if there is any discuss with Chief Inspector before closing.	X				All welds are in same condition as shell and heads – no corrosion or pitting detected.
Repairs Required. If yes, ensure procedure and copy of AB-40 is on file, and one sent to local ABSA Inspector				X	No repairs required.
Fire tube check for corrosion on fire tube, flange and fire tube nozzle, burner impingement inside fire tube. MPI welds. Check burner and flame arrestor for damage/ cleanliness.				X	No fire tube.
NDE Was any NDE done.	X				Magnetic particle inspection carried out on lower nozzles – no cracking detected.
Observations The internal of the vessel had a large amount of soil inside prior to cleaning out – demister was left soiled in place.					

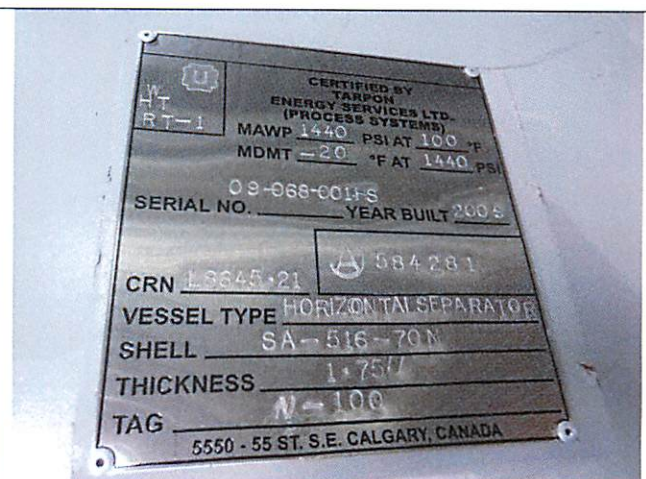
VI Inspector: Carey Menzies

(Please Print)

Date: July 21, 2014



LSD



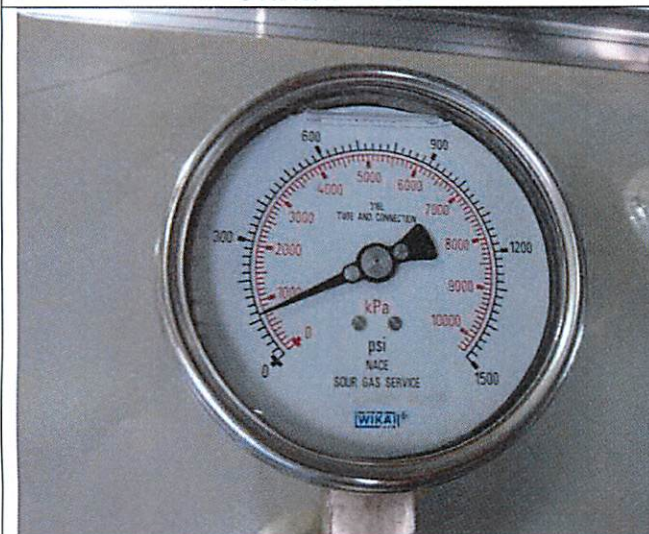
Data plate



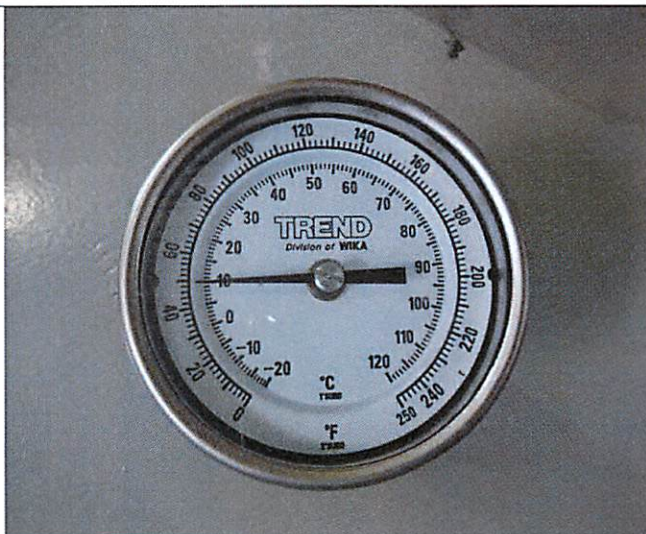
Overview - Vessel



Overview - Skid



Pressure gauge



Temperature gauge



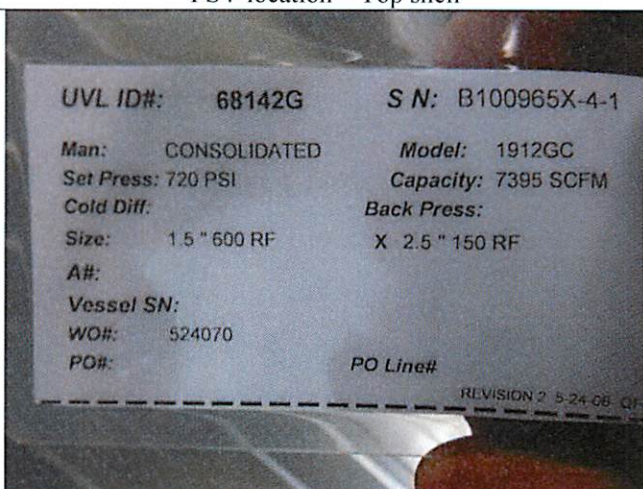
Saddle support



PSV location – Top shell



PSV service tag



PSV service tag



Man way head



Demister - soiled

