

# PRESSURE VESSEL VISUAL INSPECTION REPORT

<b>Client:</b> Apache Canada Ltd.		<b>Client Contact:</b> Lorne Lowdermilk	
<b>Area:</b> Zama	<b>Plant Location:</b> 09-28-117-04 W6M		<b>Client WO/Ref #:</b> CF532501
<b>Inspector:</b> Will Rettman		<b>Inspect Date:</b> 06/10/2007	<b>SEI Ref #:</b>
<b>STATIC DATA</b>			
<b>Equipment Inspected:</b> Treater			
<b>Vessel</b> <input checked="" type="checkbox"/>		<b>Exchanger</b> <input type="checkbox"/>	
		<b>Furnace</b> <input type="checkbox"/>	
		<b>Other</b> <input type="checkbox"/>	
<b>Manufacturer:</b> Natco Canada		<b>Mfr. Date:</b> 03/2002	<b>Equip. #:</b>
<b>Serial #:</b> L-8-340		<b>PRN #:</b> A 2781543	<b>CRN #:</b> K-6455.2
<b>MAWP (Shell):</b> 75 psi	<b>MAWT:</b> 250 °F	<b>Process (Shell Side):</b> Sour	<b>RT:</b> 1
<b>MAWP (Tube):</b>	<b>MAWT:</b>	<b>Process (Tube Side):</b>	
<b>Stress Relieved:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		<b>Insulated:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Shell Thick:</b> 0.500"	<b>Material:</b> SA-516-70N		<b>CA:</b> 0.125"
<b>Head Thick:</b> 0.740/0.615"	<b>Material:</b> SA-516-70N		<b>CA:</b> 0.125"
<b>Length:</b>	<b>Diameter:</b>	<b>Internal Coating:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
		<b>Type / Brand:</b>	
<b>OVERALL EQUIPMENT CONDITION SUMMARY</b>			
<b>Suitable For Continued Service:</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> In Accordance With API			
<b>Repair Req'd</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	<b>Post Repair Inspect Req'd:</b> Y <input type="checkbox"/> N <input type="checkbox"/>		
<b>Re-Inspect</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	<b>Recommended Inspect Date:</b> 2011		
<b>Inspect Type Req'd:</b> Internal Visual <input checked="" type="checkbox"/> External Visual <input checked="" type="checkbox"/> UT <input type="checkbox"/> Other <input type="checkbox"/>			
<b>Report Is:</b> Partial <input type="checkbox"/> Preliminary <input type="checkbox"/> Final <input checked="" type="checkbox"/>			
<b>Prepared By:</b> Will Rettman		<b>Approved By:</b> Ian Scully	
<b>Issued To:</b>		<b>Date:</b>	
<b>Comments / Recommendations:</b> Internal coating is blistered and spalling on shell and internal components; no repairs were carried out. Check coating next shutdown and have a coating company on standby if repairs are required. The south side inlet deflector plate had 2 missing clamps on the east inspection door, remove all internal doors next shut down and replace missing clamps. The west fire tube was leaking while online; refurbished fire tubes were installed this shut down. The west flame arrested burner pilot is damaged; recommend repairing or replacing pilot. The east flame arrested burner had cracks on the directional fins on the thimble; monitor next inspection. PSV was sent out for servicing.			

**CODE:** API 510 / 570: Results are an interpretation of the inspection method, not a guarantee.

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INTERNAL SHELL					
ITEM	SEVERITY				LOCATION / COMMENTS
	NA	1	2	3	
Bolting / Piping	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Channel Covers / Heads	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Coating	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Demister	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Distributor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Nozzles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pass Partition Plates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Refractory	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Scale / Deposits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shell	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Trays	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vortex Breaker	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weldments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EXTERNAL SHELL					
Cathodic Protection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Coating / Paint	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fireproofing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Flange / Gasket Face	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ground Cable	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Insulation / Cladding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Manways	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Nameplate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Nozzles / Repads	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PSV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sent out for servicing
Shell / Skirt	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BUNDLE					
Baffles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fins	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Plugs / Ferrules	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tie Rods	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tubes ID and OD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tubesheets	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FIRED EQUIPMENT					
Burner / Pilot Assemblies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	West burner pilot damaged and needs repair/replacement
Flame Arrestor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal Coating	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Blistering and spalling in numerous locations on shell
Tubes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	West fire tube leaking; both replaced with refurbished tubes
ATTACHMENTS					
Anchor Bolts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dikes / Berm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Foundation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Gaskets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grating	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Handrails / Ladders	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Supports / Saddle	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

NA: Not Applicable      1: Requires No Attention      2: Requires Monitoring      3: Requires Repair

**Consider:**      *Pitting, erosion, corrosion, mechanical damage, distortion, scale, deposits, leaks, blisters, bulges, tight, loose, missing, spalling, plugged, weeping*

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**INSPECTION NOTES AND PHOTOGRAPHS**

For notes: type in

For photos: give photo number or ID and type in title

All inspection notes and pictures go into the work-order in spectrel

THIS IS NOT ISSUED AS A DOC – this will transferred into spectrel format.