

## TANK INSPECTION REPORT

Field:	Drayton Valley	Inspection Date:	2017.03.07	Assigned Inspection Interval:	12 mths
Equip Desc:	Storage Tank	Mfr.:	GLM	Mfr. Date:	2001
Owner ID:	T-202	Mfr. S/N:	F-01-129-3	Construction Code	API 650 Modified
Location:	12-28-048-07W5	Tank Type	Cone, Bottom	Configuration	Vertical
Service		Length		Roof Girder System	No
UWI:		Diameter OD	4724.4 mm	Manway	Yes
Operating Status:	In-Service	Height	7315.2 mm	Elevated	
Suitable for continued service	Yes	Volume	625 bbl	Insulated	Yes
				Shell Material	A36 or equivalent
				Shell Nominal Thickness	0.25 – 0.1875
				Roof/Top/Left Material	
				Roof/Top/Left Thickness	
				Floor/Btm/Right Material	
				Floor/Btm/Right Thickness	0.25
				Internal Coated	



# TANK INSPECTION REPORT

Field: Drayton Valley	Inspector: Sam Han, P. Eng.
Equip Desc: Storage Tank	Credentials: API 653
Owner ID: T-202	Assessed By: Wade Stromquist
Location: 12-28-048-07W5	
UWI:	1 = As New      2 = Some Wear – Fit for Service      3 = Measurable Deterioration – Consider Repair      4 = Severe Deterioration – Repair Required      5 = Not fit for Service – Follow-up Required      6 = N/A

Disposition		Comments	Disposition		Comments
<b>Tank Exterior</b>					
Nameplate	2		Platforms	2	
Floor	2		Supports	2	
Shell	2		Manways	2	
Roof	2		PVRs	6	Removed for turnaround
Roof Supports	6		Cathodic Protection	6	
Paint	2		Anchor Bolts	6	
Insulation	2		Foundation	2	
Cladding	3		Grounding	6	Grounding cable not found.
Fireproofing	6		Firetubes	6	
Piping	2		Secondary Containment	2	
Bolting	3	Bolts missing on cone bottom drain valve.			
Ladders	2				

**Comments and Recommendations:**

- Cladding seals at protrusion deteriorating
- Several coating holidays on cone bottom and roof. Coating holidays on shell difficult to identify. Significant coating loss at manway.
- Shell not adequately cleaned, preventing the use of UT crawler to measure shell thickness.
- Evidence of past leakage from cone bottom drain fittings.

Recommend coating repair prior to placing tank back into service.

Measured areas of shell and bottom cone found to be above nominal thickness.

Missing valve flange bolts on discharge line replaced prior to placing tank back into service.

Tank fit for service. Next thorough inspection interval, consisting of both internal and external inspection, of 1 year to fix / repair coating failures.

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Disposition		Comments	Disposition		Comments	
<b>Internal</b>						
Floor	2	Coating failure on ID of thief hatch and manway. Coating holidays on bottom and roof. General pitting found on ID of thief hatch.  Heat Coil appears to have some distortion.	Equipment	2	Coating failure on manway.	
Shell	2		Manways	2		
Roof	2		Ladders	6		
Roof Supports	6		Supports	2		
Coating	3		Other	6		
Piping	2		Interstitial Space	6		
Nozzles	2		<b>Fired Equipment</b>			
Flanges	2		Burner / Pilot Assemblies	6		
Level Controls	2		Flame Arrestor	6		
Gauge Cables	2		Tubes	6		
Cathodic Protection	6	<b>External Controls &amp; Safety Devices</b>				
Heat Coil	2	External Control Devices	6			
Sumps	2					
Drains	2					
Siphons	6					

**Comments and Recommendations:**  
 Complete internal assessment not completed as it was deemed impractical to enter tank due to steep cone angle.

<b>Vessel Owner ID</b> T-202	<b>Vessel Description</b> Storage Tank	<b>Vessel Location</b> 12-28-048-07W5	<b>Survey Date</b> March 7, 2017
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## Tank Inspected Components

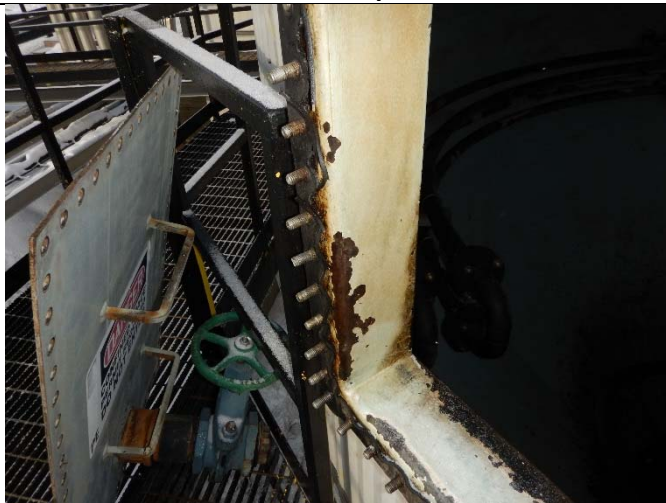
Inspected Component			Design Static Data				Survey Readings			Calculations			
ID	Description	Type	O.D. (mm)	Material Code	Nominal Thickness (mm)	Corrosion Allowance	Date	Reading Ave Inches	Reading Min	Code Tmin	Short Term Corrosion Rate (mm/yr)	Long Term Corrosion Rate (mm/yr)	Calculated Remaining Life
1	Bottom	Cone	4724.4		0.25		2017.03.07	0.258					
2	Bottom	Cone	4724.4		0.25		2017.03.07	0.254					
3	Bottom	Cone	4724.4		0.25		2017.03.07	0.253					
4	Bottom	Cone	4724.4		0.25		2017.03.07	0.257					
5	Bottom	Cone	4724.4		0.25		2017.03.07	0.258					
6	Bottom	Cone	4724.4		0.25		2017.03.07	0.253					
7	Bottom	Cone	4724.4		0.25		2017.03.07	0.255					
8	Bottom	Cone	4724.4		0.25		2017.03.07	0.257					
9	Bottom	Cone	4724.4		0.25		2017.03.07	0.255					
10	Bottom	Cone	4724.4		0.25		2017.03.07	0.255					
	Manway Top						2017.03.07	0.218					
	Manway Side						2017.03.07	0.214					
	Manway Bottom						2017.03.07	0.283					
	Manway Side						2017.03.07	0.217					
1	Nozzle 4 Inch	Piping	101.6				2017.03.07	0.306					
C1	Wall UT 0600	Cylindrical	4724.4	A36 or Eql	0.25 – 0.1875		2017.03.07	0.216					



**Manway**



**Coating Failure on Manway**



**Coating Failure on Manway**



**Coating Failure on Manway**



**Coating Failure on Manway**



**Bottom of Tank Entrance**



**Coating Failure on ID of Thief Hatch**



**Deteriorating Seals on Cladding**



**Tank External Piping**



**Tank External Piping**



**Tank External Piping**



**Missing Bolt on Flange**



**Missing Bolt on Flange**



**Roof Overview**



**Internal Heating Coils**



**Internal Heating Coils**





**Tank Internal Cone**



**Tank Internal Piping**



**Coating Holidays on Cone Bottom**



**Tank Internal Cone**



**External Cone Bottom – Some Evidence of Prior Leaking**



**Tank Bottom Cone Drain**