



4810-93 Street, Edmonton, Alberta T6E 5M4
 Phone: (780) 469-2401 Fax: (780) 468-2422

Tank: RAET28487

Client	Tervita Corporation			Client Tank No.	Feed Tank #900		
Province/LSD	AB 02-18-052-11W5			Inspection Date	Jun 4, 2012		
Location	Granada			Inspection Type	VI / VE / UT / MFL		
Service				Interim Insp'n			
Manufacturer	Argo Sales Ltd.			Interim Type			
Serial Number	8315			Next Inspection	2017		
Type				Next Type	VI / VE / UT / MFL		
Foundation	Raised gravel pad			Ext.Cathodic	No		
Ext. Coating	White coating			Anodes	No		
Int. Lining	Devoe 253			Status			
Insulation	None			Volume	1000 bbl		
Manway	2'x3' rectangular manway			Diameter	17.3 ft		
Vapour Rec.	None			Height	24 ft		
MAWP				Year Built	2004		
MAWV				RAE Job #	2878		
Max. Temp				D55	No		
Min. Temp							
Fill Height							
Secondary Containment	Rectangular - Concrete	Height	1.5 ft	Width	55 ft	Length	250 ft
History Log							

Component	Shell course 1	Material		Mat. Thick.	0.188 in	Corr. Allow.	
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Component	Shell course 2	Material		Mat. Thick.	0.188 in	Corr. Allow.	
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Component	Shell course 3	Material		Mat. Thick.	0.188 in	Corr. Allow.	
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Component	Shell course 4	Material		Mat. Thick.	0.188 in	Corr. Allow.	
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Component	Floor	Material		Mat. Thick.	0.25 in	Corr. Allow.	
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Component	Deck	Material		Mat. Thick.	0.25 in	Corr. Allow.	
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Comments

The inspection was performed using the RAE Tank Inspection procedure 604B rev. 8

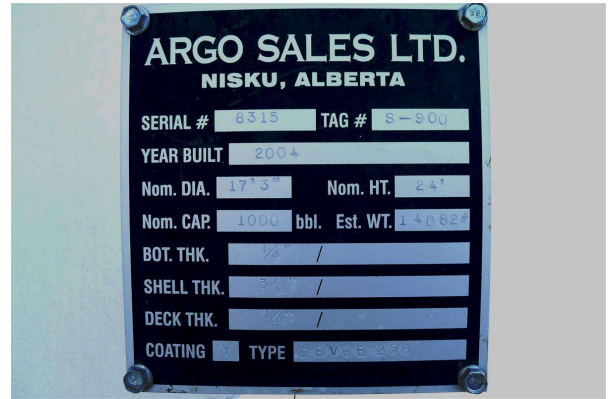
This was one of nine tanks on the Granada site. All tanks were sharing the same secondary containment. This tank was labeled as "Feed Tank #900" and was located in the NE section of the containment.

Figure: 1



Plant Lease Sign

Figure: 2



Nameplate

Containment

The secondary containment was composed of concrete walls. The containment was shared between nine tanks of various sizes.

Piping Observations

Some of the piping was insulated and metal clad.

The nozzles in this tank were not reinforced. According to API 650/653, all nozzles greater than NPS 2 in size must be equipped with repads.

The piping connections to the tank were equipped with bellows.



Figure: 3



Piping - note removed bellows

Figure: 4



Close up of nozzles - note lack of repairs

Pressure Protection Observations

The thief hatch on the roof was not designed for pressure relief.

A pressure and vacuum relief valve was installed on the roof beside the thief hatch.

There was a gooseneck nozzle in the centre of the roof, making the tank open to atmospheric pressure.

Figure: 5



Thief hatch, PVRV and gooseneck

Figure: 6



Top of thief hatch (unfastened)



External Observations

The tank was un-insulated and was coated white. The external coating was mostly in good condition. A few large scrapes in the coating were found on the first and second course on the NW side of the shell.

There was a small dent in the lower shell on the NW side of the tank.

The tank was sitting on a raised gravel pad. The gravel pad was contained by a metal ring. Some vegetation was found growing in the gravel around the tank. The outer lip of the tank floor was covered by gravel. Leak detection tubes were in place beneath the tank floor.

The level gauge was in good condition.

The ladder was in good condition.

Figure: 7



Overall view

Figure: 8



Lower tank - note ladder, level gauge, and labeling

Figure: 9



External roof

Figure: 10



Manway and door



Figure: 11



NW shell - note dent and scrapes in coating

Figure: 12



Lower shell - note leak detection and vegetation

Internal Observations

The floor and the bottom ~4' of the shell was coated with light blue epoxy. The coating was mostly in good condition. A few isolated blisters and patches of blisters were found on the floor and shell. The coating had been patched with black coating in a few places. The coating patches were in good condition.

Very little corrosion was visible on the uncoated surfaces of the tank.

There were two level floats installed in the tank. One float was black and the other was bare metal. The black float appeared to be the active level float as it was the only one attached to a level gauge board on the outside of the tank.

Figure: 13



Internal roof

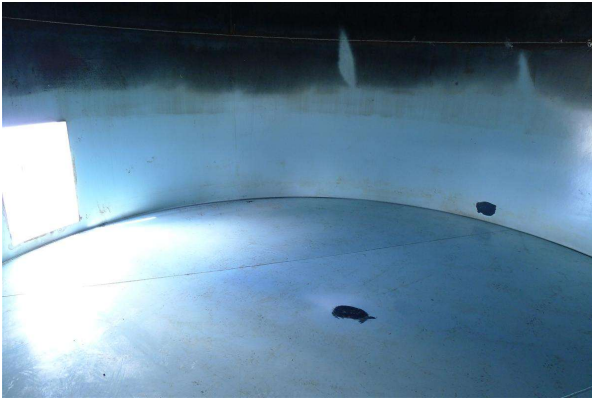
Figure: 14



Internal shell - note lack of corrosion



Figure: 15



Internal shell/floor - note coating and coating patches

Figure: 16



Internal shell/floor - note level floats

NDE

Ultrasonic Testing:
(all measurements in inches)

Floor

Front plate: 0.241, 0.248, 0.251, 0.247, 0.249
Middle plate: 0.250, 0.250, 0.250, 0.249, 0.250
Back plate: 0.247, 0.248, 0.249, 0.248, 0.248
(plate location in relation to manway)

Shell

First course: 0.186, 0.187, 0.187, 0.187, 0.187
Second course: 0.189, 0.188, 0.188, 0.189, 0.188

Floor Scan

As the tank was sitting directly on gravel, a magnetic flux leakage (MFL) floor scan was performed to check for bottom-side corrosion. No indications were found.

Recommendations

1. Clear gravel off of the outer floor lip (chime area)
2. Remove inactive level float
3. Clear vegetation away from tank



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Inspector: Brent Drader

Reviewed By: Brent Drader