



866-789-3483



City of Grand Junction Field Report

25-Sep-24

Underwater Cleaning & Inspection
4,000,000 Gallon
South Tank
Potable Water Storage Tank

Submitted To:

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EXTERIOR ROOF

Safety Rail					
Satisfactory	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	
Coating		Fair condition			
Welds		Good condition			
Corrosion	1%	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>
Coating					
Satisfactory		Fair	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>
Oxidized	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Pitting	Y	<input type="checkbox"/>	N	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Delamination	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Corrosion	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Seams/Welds		Good-fair condition			
Low Spots	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Cathodic Protection Plates	None				



Conclusion/Discrepancies: Roof coating is slightly oxidized. There are numerous areas of low spots along the roof panel weld seams. Roof has low spots allowing water to pool causing delamination of the coating in a few areas. Recommend touching up these areas before the delamination becomes worse.

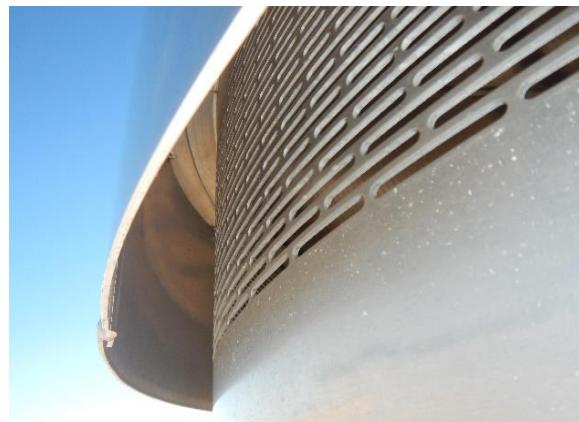
ACCESS HATCH

Satisfactory	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	
Coating					
Corrosion	Y	<input type="checkbox"/>	N	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proper Design	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Locked	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Gasket	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Hinge					
Hatch Size	3	FT	X	3	FT
Conclusion/Discrepancies	Both the access hatch and gasket are in good condition.				



VENTS

Satisfactory	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	
Coating	Aluminum				
Corrosion	%	Y	<input type="checkbox"/>	N	<input checked="" type="checkbox"/>
Proper Design	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Screens	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Sealed Edges & Seams	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Cap/Cover	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	<input type="checkbox"/>
Conclusion/Discrepancies	Both the vent and screen are in good condition.				



EXTERIOR SHELL

Rings	
Chime	Good condition
2nd Weld Ring	Good condition
3rd Weld Ring	Good condition
4th Weld Ring	
5th Weld Ring	
Ring(s)	4 in all
Wall to Roof Seam	Good condition
Coating	
Satisfactory	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Oxidized	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Pitting	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>
Delamination	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>
Corrosion	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>
Conclusion/Discrepancies	Shell coating is slightly oxidized no other issues noted.



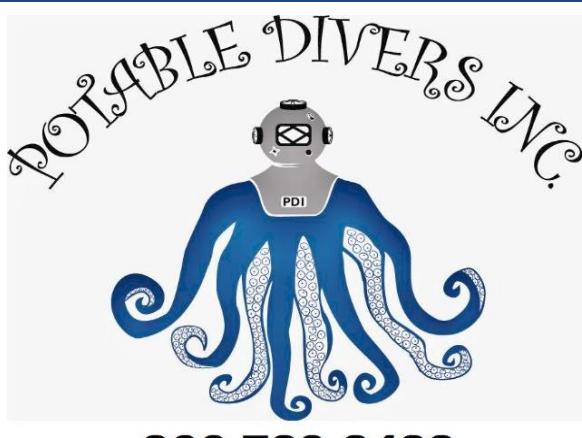
EXTERIOR LADDER

Construction	Coated steel
Satisfactory	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Coating	
Satisfactory	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Oxidized	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Pitting	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>
Delamination	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>
Corrosion	% Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>
Welds/Joints	Good condition
Supports	Good condition
Safety Cage/Climb	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Conclusion/Discrepancies	Slight oxidation was noted. Ladder is in good condition and safe for use.



OVERFLOW STRUCTURE

Coating	
Satisfactory	Y <input type="checkbox"/> N <input type="checkbox"/>
Oxidized	Y <input type="checkbox"/> N <input type="checkbox"/>
Pitting	Y <input type="checkbox"/> N <input type="checkbox"/>
Delamination	Y <input type="checkbox"/> N <input type="checkbox"/>
Corrosion	% Y <input type="checkbox"/> N <input type="checkbox"/>
Welds/Joints	
Supports	
Screens	Y <input type="checkbox"/> N <input type="checkbox"/>
Attachments	
Foundation	
Conclusion/Discrepancies	Internal



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FOUNDATION

Concrete Slab/Ring Retention

Satisfactory	Y	X	N	
Cracking	Y	X	N	
Spalling	Y		N	X
Exposed Aggregate	Y		N	X
Erosion Undermining	Y		N	X



Seismic Restraints

Corrosion	Y		N	
Tight	Y		N	

Conclusion/Discrepancies Concrete retention ring has superficial cosmetic cracks.

MANWAY ENTRIES

Coating

Satisfactory	Fair	X	N	
Oxidized	Y	X	N	
Pitting	Y		N	X
Delamination	Y		N	X
Corrosion	1%	Y	X	N

Welds/Joints Good condition

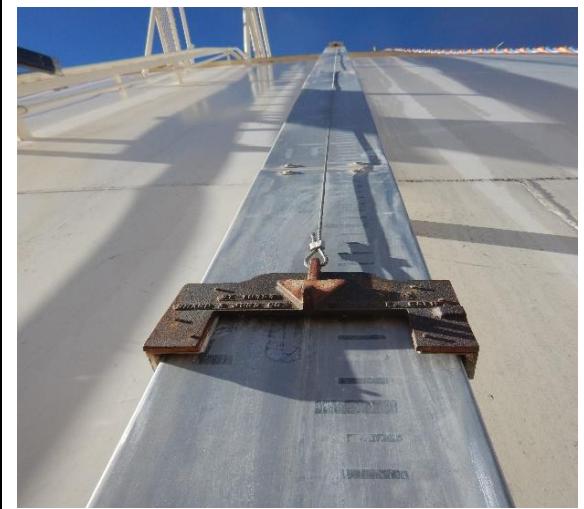
Conclusion/Discrepancies Minor surface corrosion was noted. Slight oxidation of the coating was noted.



MANUAL LEVEL INDICATOR

Target in place	Y	X	N	
Staff Gauge Readable	Y	X	N	
Accurate	Y	X	N	
Cable / Hardware	Y	X	N	
Corrosion	%	Y	N	X
Operation	Y	X	N	

Conclusion/Discrepancies: No issues noted.



INTERIOR ROOF

Coating			
Satisfactory	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Blistering	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Cracking	Y	<input checked="" type="checkbox"/>	N <input type="checkbox"/>
Peeling	Y	<input checked="" type="checkbox"/>	N <input type="checkbox"/>
Holidays	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Corrosion	5%	<input checked="" type="checkbox"/>	N <input type="checkbox"/>
Seams/Welds	Good-fair condition		
Trusses	Coating delamination		
Gussets	Good-fair condition		
Coating			
Blistering	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Cracking	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Peeling	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Holidays	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Corrosion	5%	<input checked="" type="checkbox"/>	N <input type="checkbox"/>
Vent Penetration	Good-fair condition		
Roof Hatch	Good-fair condition		



Conclusion/Discrepancies: Corrosion was noted where the roof panels rest on top of the trusses
 Coating is delaminating from the roof panels exposing the undercoat.

INTERIOR SHELL

Coating			
Satisfactory	Y	<input checked="" type="checkbox"/>	N <input type="checkbox"/>
Blistering	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Cracking	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Peeling	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Holidays	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Pitting	Y	<input type="checkbox"/>	N <input checked="" type="checkbox"/>
Corrosion	5%	<input checked="" type="checkbox"/>	N <input type="checkbox"/>
Seams/Welds	Good-fair condition		
Rings			
Chime	Good condition		
2nd Weld Ring	Good condition		
3rd Weld Ring	Good condition		
4th Weld Ring			
5th Weld Ring			
Ring(s)	4 in all		
Wall to Roof Seam	Good-fair condition		
Baffle/Support Walls	None		
Conclusion/Discrepancies:	Minor corrosion where the shell and roof meet in the corner weld.		



SUPPORT COLUMNS

Coating

Satisfactory	Y		N	X
Blistering	Y		N	X
Cracking	Y	X	N	
Peeling	Y	X	N	
Holidays	Y		N	X
Pitting	Y		N	X
Corrosion	5%	Y	X	N

Seams/Welds Good condition

Floor/Base Plates Good condition

Construction Coated steel

Conclusion/Discrepancies: A few of the columns have extensive cracking and delamination of the coating.



FLOOR

Coating

Satisfactory	Y	X	N	
Blistering	Y		N	X
Cracking	Y		N	X
Peeling	Y		N	X
Holidays	Y		N	X
Pitting	Y		N	X
Corrosion	%	Y		N

Seams/Welds Good condition

Conclusion/Discrepancies: Floor and coating are in good condition. No issues noted.



Sediment Depth

1/16"

MANWAY ENTRIES

Coating

Satisfactory	Y	X	N	
Blistering	Y		N	X
Cracking	Y		N	X
Peeling	Y		N	X
Holidays	Y		N	X
Pitting	Y		N	X
Corrosion	Y		N	X

Seams/Welds Good condition

Conclusion/Discrepancies: No issues noted.



LADDER

Construction	Coated steel			
Satisfactory	Y	X	N	
Coating				
Satisfactory	Y	X	N	
Blistering	Y		N	X
Cracking	Y		N	X
Peeling	Y		N	X
Holidays	Y		N	X
Pitting	Y		N	X
Corrosion	% Y		N	X
Seams/Welds	Good condition			
Safety Cage/Climb	Y		N	X



Conclusion/Discrepancies: Ladder is in good condition and safe for use.

OVERFLOW

Location	8 o'clock			
Coating				
Satisfactory	Y	X	N	
Blistering	Y		N	X
Cracking	Y		N	X
Peeling	Y		N	X
Holidays	Y		N	X
Pitting	Y		N	X
Corrosion	Y		N	X
Seams/Welds	Good condition			
Conclusion/Discrepancies:	No issues noted.			



MANUAL LEVEL INDICATOR

Float	Y	X	N		
Guide Wires	Y	X	N		
Guide Wire Anchors	Y	X	N		
Cable / Hardware	Y	X	N		
Corrosion	1%	Y	X	N	
Operation	Y	X	N		



Conclusion/Discrepancies: Minor corrosion on the hardware.

APPURTEANCES

Influent

Coating

Satisfactory	Y	X	N	
Blistering	Y		N	X
Cracking	Y		N	X
Peeling	Y		N	X
Holidays	Y		N	X
Pitting	Y		N	X
Corrosion	1%	Y	X	N
Seams/Welds			Good condition	

Conclusion/Discrepancies: Minor surface

corrosion on the exterior lip of the pipe.

Effluent

Coating

Satisfactory	Y	X	N	
Blistering	Y		N	X
Cracking	Y		N	X
Peeling	Y		N	X
Holidays	Y		N	X
Pitting	Y		N	X
Corrosion	1%	Y	X	N
Seams/Welds			Good-fair condition	

Conclusion/Discrepancies: Minor corrosion on the

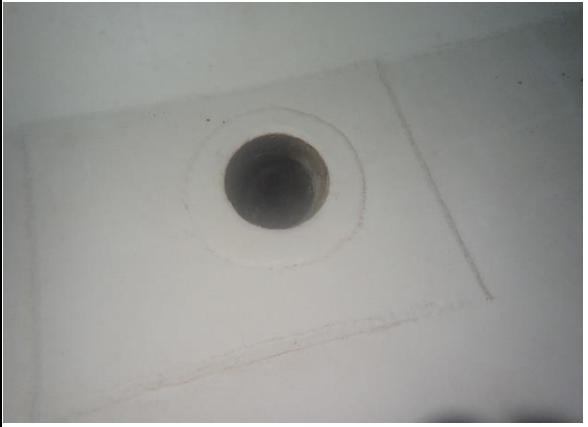
exterior lip of the pipe.

Drain

Coating

Satisfactory	Y	X	N	
Blistering	Y		N	X
Cracking	Y		N	X
Peeling	Y		N	X
Holidays	Y		N	X
Pitting	Y		N	X
Corrosion	1%	Y	X	N
Seams/Welds			Good condition	

Conclusion/Discrepancies: Minor corrosion in
interior of the drain pipe.



Conclusion

Based on the results of this underwater inspection and the cleaning which took place, it appears this tank is in full operational condition and should continue to provide a reliable water storage capacity for potable water use with proper maintenance.

Recommendations

PDI concurs with the recommendations of AWWA that all potable water reservoirs or storage tanks be cleaned and inspected at least every five years and in some cases, depending upon source waters, type and quantities of sediment, and presence (or lack thereof) of cathodic protection systems, more frequently.

The following recommendations are made to provide continued, uninterrupted service of your water storage tank:

- 1 Your tank should be inspected and cleaned every five years, as suggested by the AWWA. Routine inspections and cleanings provide ample time to perform remedial repairs to abnormalities discovered before having a chance to become problematic.
- 2 Exterior roof has numerous low areas a few of the low areas are allowing water to pool causing the coating to delaminate recommend touching up these areas to prevent additional corrosion and possible pitting of the steel.
- 3 Interior roof coating is cracking and large areas of coating delamination was noted corrosion is starting to set in recommend recoating the interior roof.