

Inspection Report for
Odd Fellow Sierra Recreation Association
Long Barn, CA



43 KG Steel on Grade Tank

Date Completed: July 4th, 2010

Commercial Dive Team:

Diver – Tom Romel
Dive controller – Ian Stephens
Tender – Brett Taake

Scope of Work:

Our team completed sediment removal from the tank floor using underwater vacuum equipment. Sediment depth ranging from 2 to 3 inches (manganese) was removed from tank floor. When the cleaning process was finished, a full visual inspection was performed of the tank interior and all interior fixtures. The team also performed a full visual inspection of the tank exterior and all attached fixtures. The details of the inspection findings are included in the report below.

Summary of the Inspection:

Exterior Inspection

1. There was limited access to the tank. (In a gated area)
2. The ladder was found secure, OSHA approved and in good condition with corrosion and de-lamination noted.
3. The hatch was found locked with no gasket present and in excellent condition.
4. The overflow and vent were found in excellent condition with screens in place
5. The roof, walls and foundation were found in excellent to good condition.

Interior Inspection

1. The inlet, outlet and manway were found in good condition with corrosion, pitting and noduling noted.
2. The overflow was found in good condition with corrosion, pitting and de-alloying noted.
3. The interior walls were found in good to fair condition with corrosion noted on the brackets and bolts on the seams. (The heavy staining makes it difficult to tell if there is corrosion present on the walls).
4. The support column was found in good condition with corrosion and staining noted.
5. The floor was found in good condition with corrosion and noduling noted on the nuts and bolts on the seams.

Recommendations:

1. Install a gasket on the access hatch.
2. Install cathodic protection.
3. Repair corrosion on exterior ladder.
4. Schedule time for epoxy repairs to the brackets and bolts on the interior of the tank.
5. Schedule time to have the interior walls cleaned.
6. Clean and inspect every 3-5 years per AWWA recommendations.

Key

Excellent – Like new, no repairs needed

Good – Cosmetic problems, repair if utility wants

Fair – Minor problems, repairs needed

Poor – Major problems, fix now



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Exterior Inspection Report



Access Ladder Condition

Ladder Type: Steel
 Coating Condition: Good
 Corrosion Present? Y N
 Seams/Welds Condition: Good
 Oxidation Present? Y N
 De-lamination Present? Y N
 Stand Off Supports Condition: Excellent
 Safety Climb Type: Cage
 Safety Climb Condition: Excellent
 Is top of tank easily accessible? Y N
 Is the ladder and Safety Climb OSHA approved? Y N

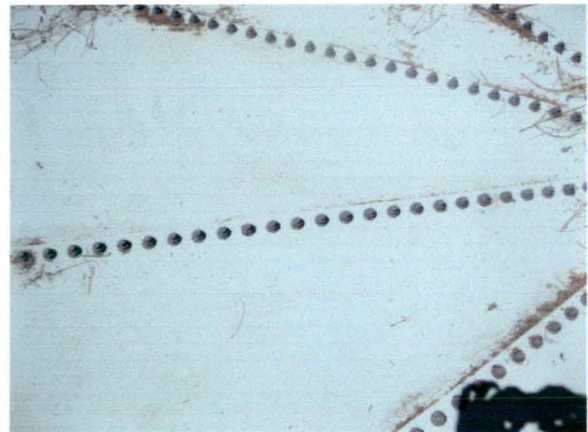
Summary: The ladder was found secure, OSHA approved and in good condition with corrosion and de-lamination noted. Recommend repairing the corrosion spots.



Roof Condition

Coating Condition: Good
 Corrosion Present? Y N
 Percentage: N/A
 Seams/Welds Condition: Excellent
 Oxidation Present? Y N
 De-lamination Present? Y N
 Low Spots Present? Y N
 Holes in Roof? Y N
 Cathodic Protection Plates Present? Y N
 Sealed Edges: Y N NA
 Loose Plates? Y N NA
 Missing Plates? Y N NA

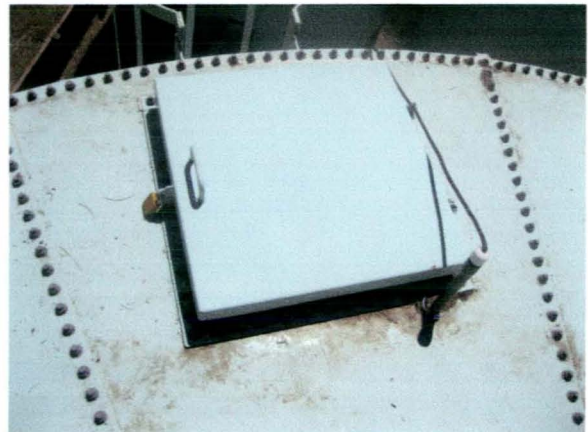
Summary: The roof was found in good condition.



Access Hatch Condition

Coating Condition: Excellent/Good
 Corrosion Present: Y N
 Seams/Welds Condition: Excellent
 Oxidation Present? Y N
 De-lamination Present? Y N
 Hatch Size: 2 foot square
 Hatch Locked? Y N
 Hinge Condition: Excellent
 Gasket Present? Y N
 Intact? Y N NA
 Insects, dirt or debris present under hatch? Y N

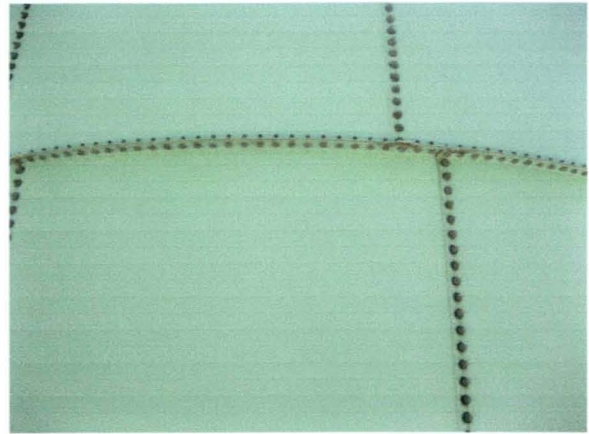
Summary: The hatch was found locked with no gasket present and in excellent condition. Recommend installing a gasket.



Wall Panel Condition

Coating Condition: Excellent/Good
 Corrosion Present? Y N
 Percentage: N/A
 Seams/Welds Condition: Excellent
 Oxidation Present? Y N
 De-lamination Present? Y N
 Dents Present? Y N
 Holes Present? Y N

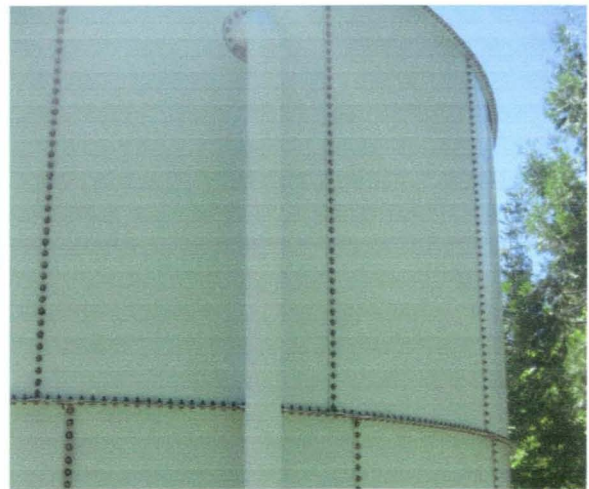
Summary: The walls were found in excellent condition.



Overflow Structure Condition

Coating Condition: Excellent
 Corrosion Present? Y N
 Percentage: N/A
 Seams/Welds Condition: Excellent
 Oxidation Present? Y N
 De-lamination Present? Y N
 Stand Off Supports Condition: Excellent
 End Cap Present? Y N
 Hinge and Cap Condition: N/A
 Screen Present? Y N
 Condition: Excellent

Summary: The overflow was found in excellent condition with a screen in place.



Vent Condition

Coating Condition: Excellent
 Corrosion Present: Y N
 Percentage: N/A
 Seams/Welds Condition: Excellent
 Oxidation Present? Y N
 De-lamination Present? Y N

 Screen in Place? Y N
 Condition: Good
 All Openings sealed? Y N
 Cap Condition: Excellent

Summary: The vent was found in excellent condition with a screen in place.

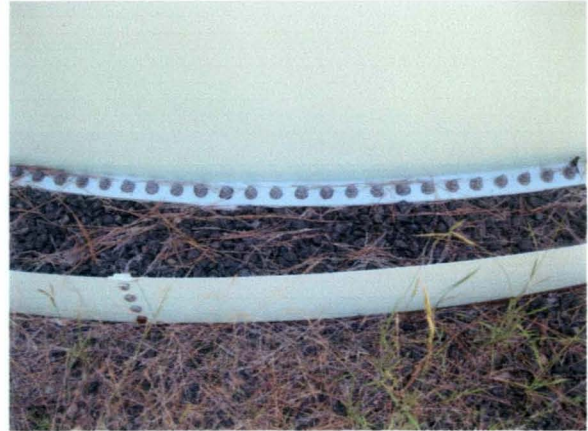


Foundation Condition

Foundation Exposed? Y N
Anchor Bolts Present? Y N
Corrosion on Anchor Bolts Present? Y N NA
Anchor Bolts Loose? Y N NA

Cracking Noted in Foundation? Y N NA
Spalling Noted? Y N NA

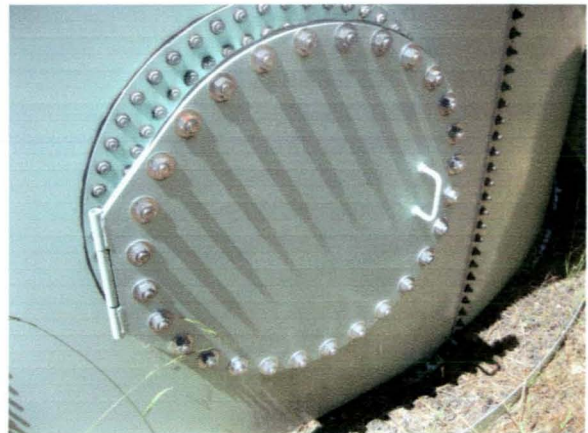
Summary: The foundation was found in excellent condition.



Manway Condition

Manway Location: 10:30 o'clock
Coating Condition: Excellent
Weld/Seam Condition: Excellent
Corrosion Present? Y N
Percentage: N/A
Pitting noted in metal? Y N
Depth: N/A

Summary: The manway was found secure and in excellent condition.





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Interior Inspection Report



Inlet and Outlet Condition

Common Inlet/Outlet? Y N Location: N/A

If No:

Outlet location: 1 o'clock

Inlet Location: 1 o'clock

Coating Condition: Good

Weld/Seam Condition: Fair

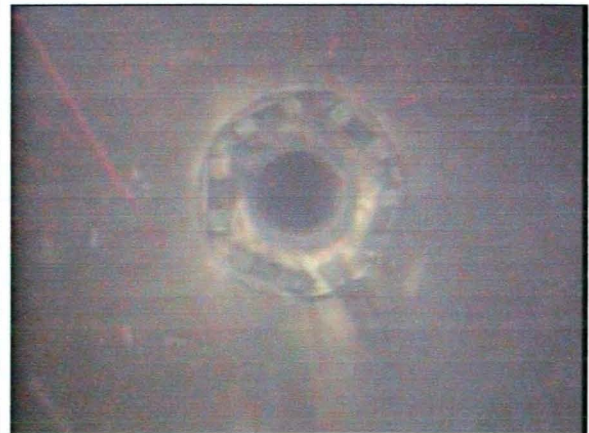
Corrosion Present? Y N

Percentage: 5%

Pitting noted in metal? Y N

Depth: Unknown

Summary: The inlet and outlet were found in good condition with corrosion, pitting and noduling noted on the brackets and hardware.



Manway Condition

Coating Condition: Good

Weld/Seam Condition: Excellent

Corrosion Present? Y N

Percentage: 10%

Pitting noted in metal? Y N

Depth: Unknown

Summary: The manway was found in good condition with corrosion, pitting and noduling noted on the brackets and bolts.



Overflow Condition

Overflow Location: 8 o'clock
Coating Condition: Good
Weld/Seam Condition: Good
Corrosion Present? Y N
Percentage: 10%
Pitting noted in metal? Y N
Depth: Unknown

Summary: The overflow was found in good condition with uniform surface corrosion, pitting and 2% de-alloying noted.



Wall Panel Condition

Coating Condition: See notes
Welds/seam condition: Good/Fair
Corrosion Present on panel? Y N
Percentage: N/A
Pitting noted in metal? Y N
Depth: N/A

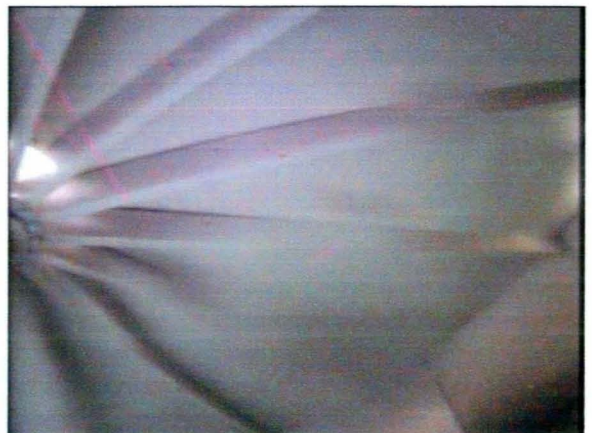
Summary: The walls were found in good to fair condition with corrosion present on brackets and bolts at the seams. Heavy staining on the walls made it difficult to determine if corrosion was present.



Roof Condition

Coating Condition: Good
Welds/seam condition: Good
Corrosion Present on panels? Y N
Percentage: 5%
Metal De-alloying noted? Y N
Percentage: N/A

Summary: The roof was found in good condition with corrosion noted on the support beams.



Support Column Condition

Coating Condition: Good
Welds/seam condition: Excellent
Corrosion Present? Y N
Percent: 5%
Pitting noted in metal? Y N
Depth: N/A

Summary: The support column was found secure and in good condition with corrosion and staining noted. There is also uniform surface corrosion on the bolts at the base of the column.



Floor Condition

Coating Condition: Excellent
Welds/seam condition: Fair
Corrosion Present? Y N
Percentage: 5%
Pitting noted in metal? Y N
Depth: Unknown

Summary: The floor was found in good condition with uniform surface corrosion and noduling present on the nuts and bolts at the seams of the panels. Between 2 and 3 inches of manganese sediment was removed.



Tank Layout

