



Blue Locker

Commercial Diving Services LLC

T.M.W.A.



Community College Reservoir

05-19-2017

ATTN: Chris Struffert
Client: Truckee Meadows Water Authority
ADDRESS: 1355 Capital Blvd, Reno, NV 89502
Phone: (775) 834-8080

Tank: Above grade, welded steel
Height: NA
Diameter: NA
Year Built: NA
Water Appearance - Good
Capacity - NA
Number of Rings - 3
Coating Type - Epoxy
(No Plaque Available)

Approximate Measurement for all Penetrations:

- Roof Vent - 24"
- Access Hatch - 24" x 30"
- Inlet/Outlet - 10"
- Overflow - 10"
- Drain - 4"
- Manways - 2 @ 24"
- Capped Penetration - 1"

Date: 05/19/2017

Community College Reservoir

On May, 19th, 2017 Blue Locker Commercial Diving Services, L.L.C. performed an inspection of the Community College reservoir for Truckee Meadows Water Authority. This report, along with the provided video, documents the findings of the inspection. All observations are observed strictly for your own considerations.

The tank is inspected and mapped using clock coordinates with the access hatch at 12:00. Appurtenance locations are described using their location on the clock. General areas of the tank are divided into quadrants starting with Quadrant A covering 12:00 to 3:00.

Section 1: Shell

- **Coating - Poor condition.**
- Alligator cracking in top 2 rings with rust seeping thru all around tank.
- Rust spots in bottom ring due to holidays in the coating.
- No blisters observed.
- Coating is failing in isolated areas in all 4 rings.
- Recommendations:
 - This tank is a good candidate for a blast and recoat in the near future.

Section 2: Floor

- **Coating - Fair/Poor condition.**
- No cracking, peeling or blisters observed.
- Rust spots on floor due to holidays in the coating.
- Floor has several areas where pitting in the steel can be observed through the rust. (Near transducer & floor penetrations).
- Recommendations:
 - Consider having divers do 3-4 hours of epoxy repair utilizing an NSF approved epoxy to help remedy some of the rust issues on the floor. (Until blast and recoat can be performed).
 - Blast and recoat recommended in the near future.

Section 3: Ceiling

- **Coating - Good condition.**
- No peeling or blisters observed.
- Surface rust on ceiling panels may indicate alligator cracking similar to upper half of shell.
- Rust and rust staining in crevices at beams.
- Recommendations:
 - See shell.

Section 4: Columns/Support Poles

- **1 Center support pole is structurally sound with coating in Poor condition.**
- Alligator cracking on upper ½ of pole with rust seeping thru.
- Isolated rust spots on lower ½ of pole due to holidays in the coating.
- Rust in crevices where base meets floor.
- Recommendations:
 - See shell.

Section 5: Water Level Indicators

- **W.L.I. Transducer appears functional.**
- Transducer is touching floor.
- **Water level sensor at 12:00 position in ceiling appears functional.**
- **Mechanical W.L.I. has been abandoned with no float in reservoir & guide wires broken.**
- Recommendations:
 - None.

Section 6: Roof Vent

- **24" diameter - Roof vent - Good condition with screen intact and secure.**
- Recommendations:
 - Ensure screen mesh is 22-24 mesh per NAC 445A.6708.5

Section 7: Exterior Ladder

- **Exterior ladder - Good condition.**
- Exterior ladder is structurally sound and secure to shell.
- Surface rust and rust spots on rungs, runners and cage.
- Safety climbing device, none present.
- Recommendations:
 - See shell.

Section 8: Interior Ladder

- **Interior Ladder is structurally sound and secure to shell.**
- Alligator cracking on upper half of ladder.
- Isolated rust nodules on lower ½ of ladder on rungs and runners.
- Safety climbing device, none present.
- Recommendations:
 - Exercise caution when entering and exiting reservoir on ladder.
 - See shell.

Section 9: Access Hatch

- **24" x 30" Access hatch - Good condition.**
- Rust spots observed on opening edge.
- Surface rust observed on face of hatch cover.
- No gasket observed.
- Recommendations:
 - Repair gasket to remain in compliance with NAC445A.6708
 - Touch up coating face of hatch cover and opening edge to improve sanitary conditions of the hatch.

Section 10: Inlet/Outlet

- **10" diameter penetration opening with 8" tall Mudguard - Good condition.**
- Structurally sound and unobstructed.
- Rust on opening edge and at weld seam between Mudguard and floor.
- Sediment observed in interior of pipe.
- Recommendations:
 - See shell.

Section 11: Overflow

- **10” diameter Overflow - Good condition.**
- No flaws observed on interior overflow box or exterior pipe.
- Recommendations:
 - None.

Section 12: Drain

- **12” diameter Drain without Mudguard - Good condition.**
- Penetration is structurally sound and unobstructed.
- No flaws observed.
- Recommendations:
 - None.

Section 13: Manways

- **2 @ 24” diameter Manways - Good condition.**
- Seals are intact on both Manways.
- Rust nodules forming on opening edges of both Manways.
- Recommendations:
 - See shell.

Section 14: Miscellaneous Penetrations

- **1” capped penetration - Good condition.**
- Rust in opening.
- No other flaws observed.
- Recommendations:
 - None.

Section 15: Cathodic Protection:

- **None observed.**
- Recommendations:
 - Consider installing a passive cathodic protection system.
 - This will help cut down the amount of rust build up in reservoirs over time and extend the life of the coating between blast and recoats.

General Notes:

- **Keep up with regularly scheduled maintenance & cleanings on a 3-5 year rotation.**
- **Overall the tank condition is structurally sound but the coating is in poor condition. The floor has areas of pitting through the steel, which may cause issues with the structural integrity in the near future.**
- **Leaks may begin to show up especially with the change of the seasons and change in water temperatures.**
- **This tank is a strong candidate for a blast and recoat.**
- **We can apply an NSF epoxy to the floor and shell to try and prevent leaks from occurring in the near future while funding is prepared for a blast and recoat.**
- **2-4 hours of epoxy repair utilizing an NSF approved epoxy would be necessary.**

**Sincerely,
Kelan Gondrezick**

Blue Locker Commercial Diving Services, L.L.C.



Blue Locker Diving - Photo Documentation

Members - AWWA & NvRWA

**TMWA
Community College Reservoir
05/19/2017**

1. Community College Reservoir



2. Exterior Shell



3. Exterior Shell at Chine - (Seismic)



4. Exterior Shell



5. Roof Edge - (Seismic)



6. Roof - (Seismic)



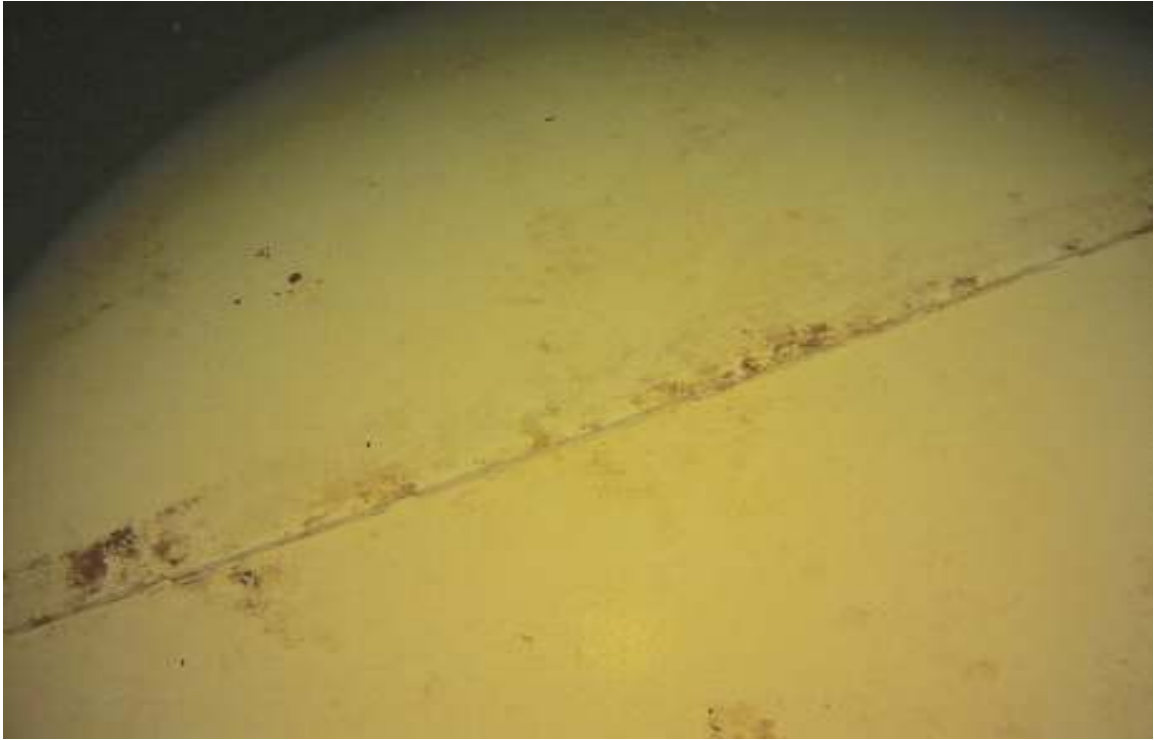
7. Floor



8. Floor



9. Floor



10. Floor



11. Floor



12. Floor



13. Floor at Shell



14. Shell at Floor



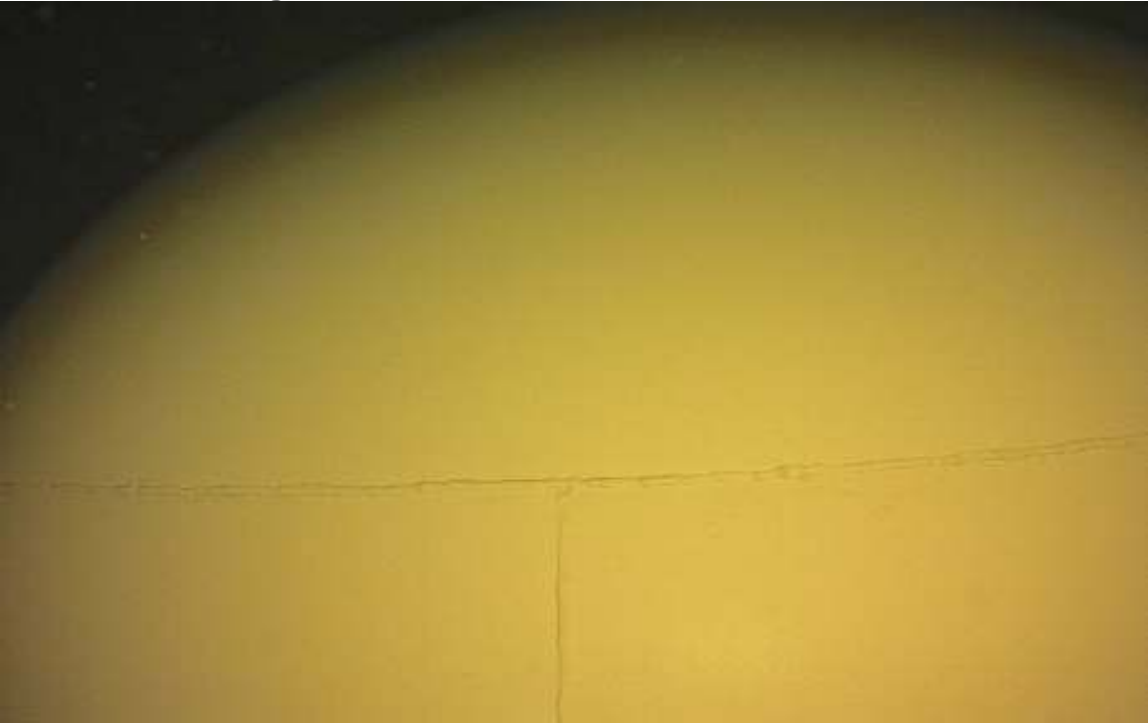
15. Shell at Floor



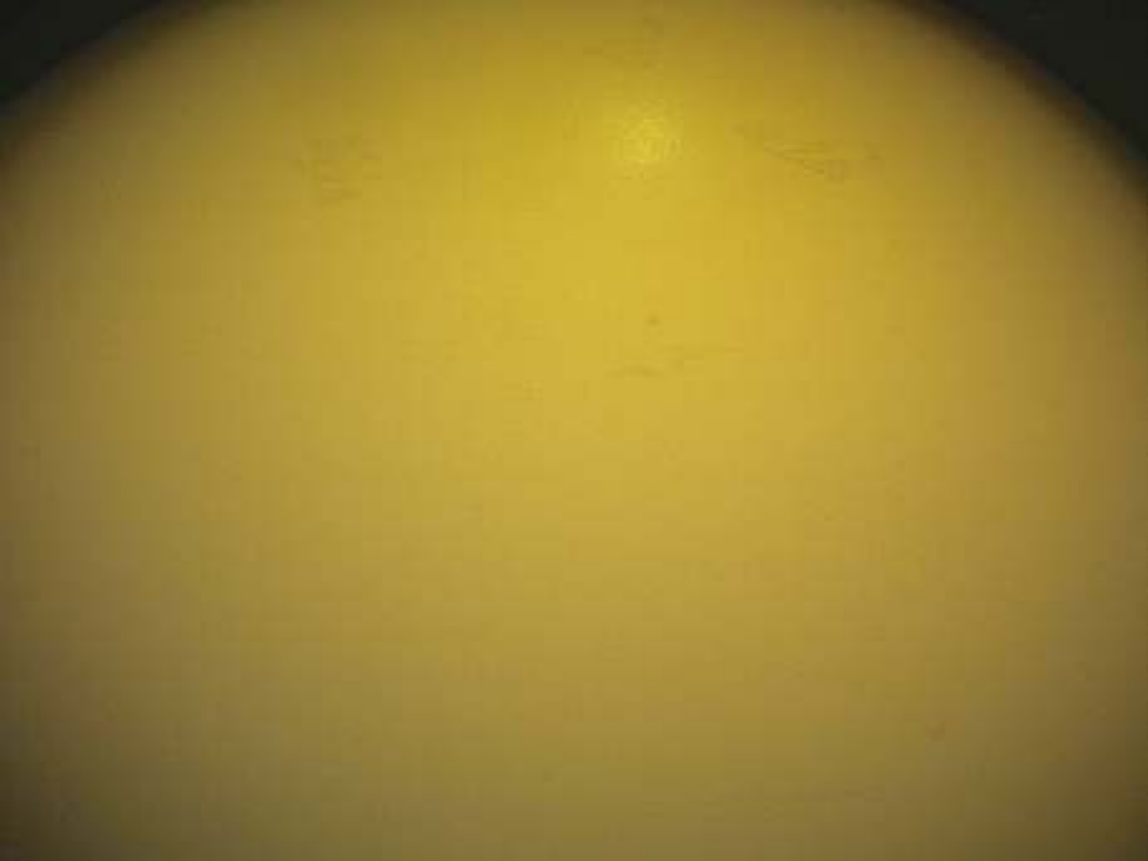
16. Shell Ring #1



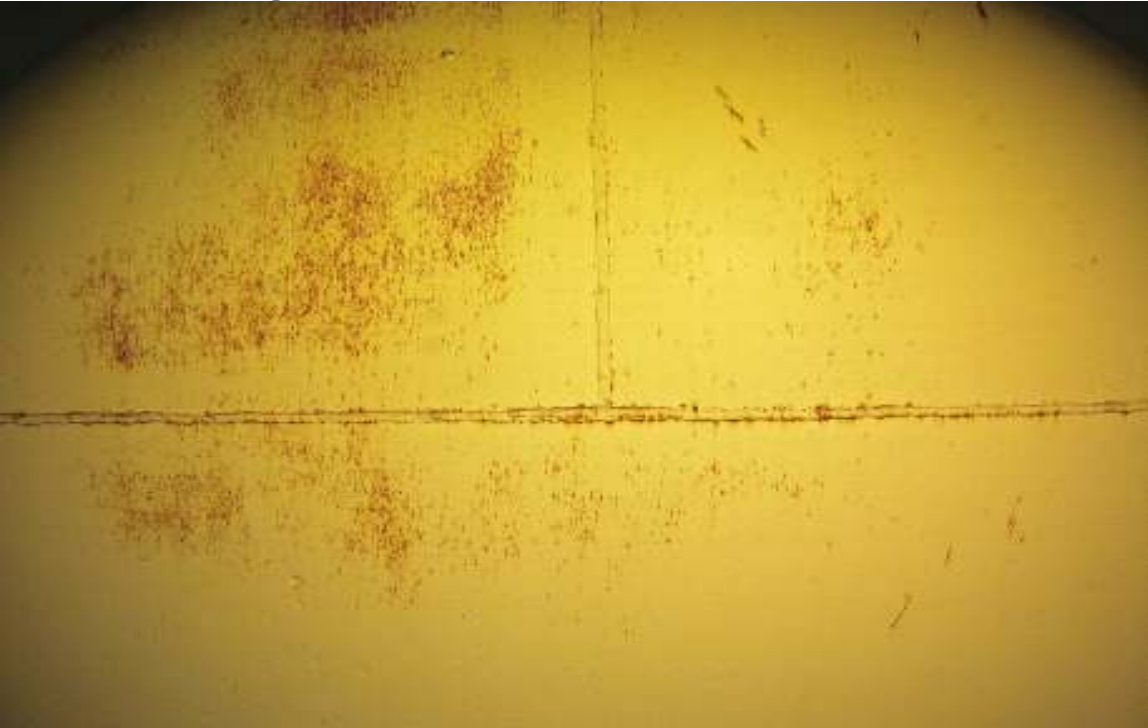
17. Shell Seam Rings #1 - #2



18. Shell Ring #2



19. Shell Seam Rings #2 - #3



20. Shell Ring #3



21. Shell Seam Rings #3 - #4



22. Shell Ring #4



23. Shell at Ceiling



24. Shell at Ceiling



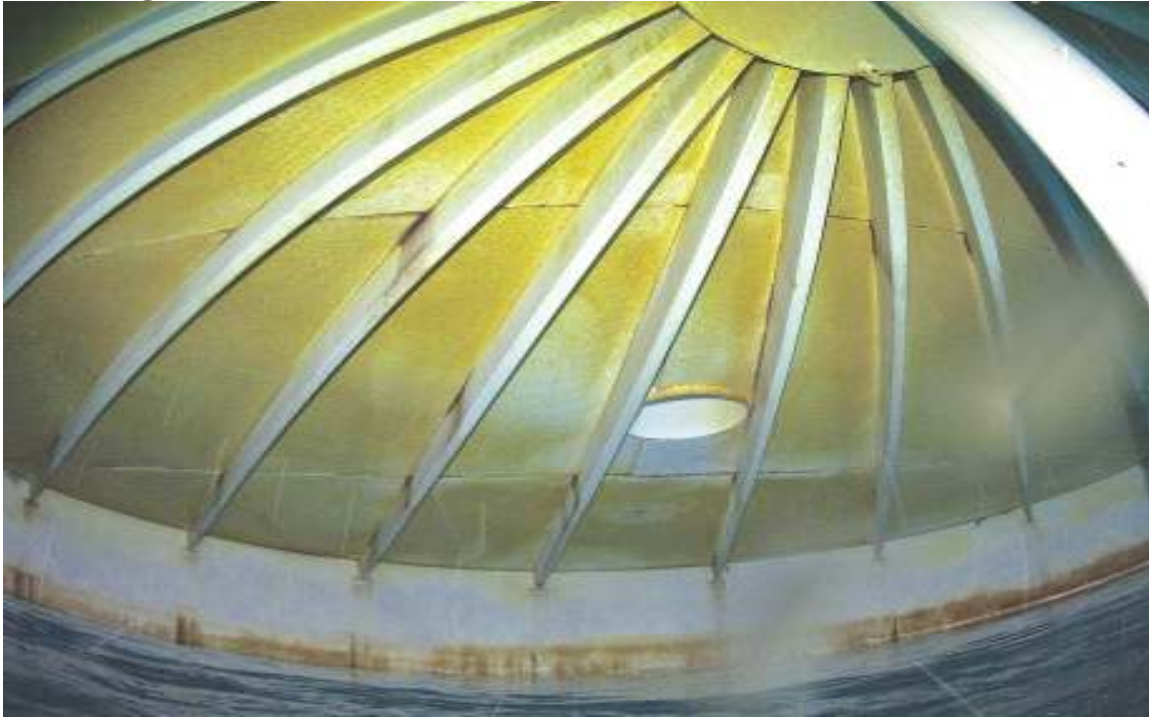
25. Shell at Ceiling



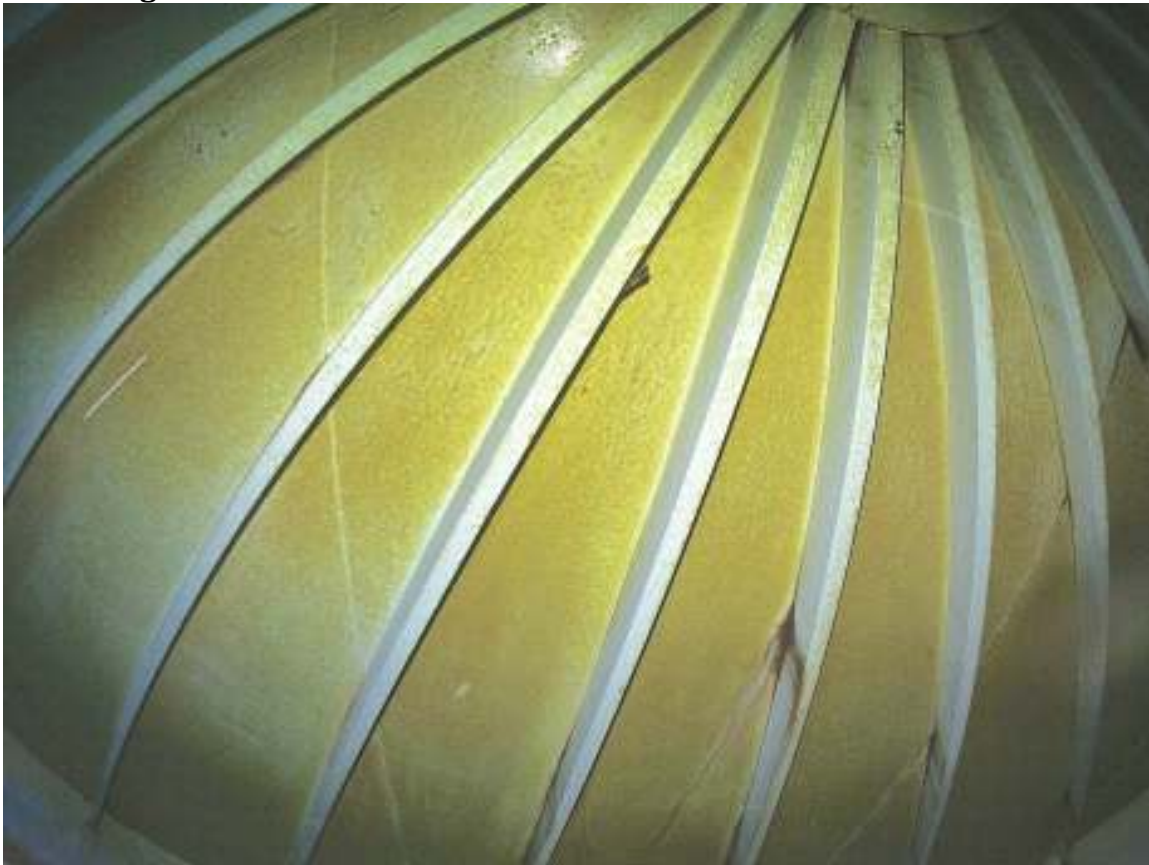
26. Ceiling - (Seismic)



27. Ceiling with Roof Vent



28. Ceiling



29. Ceiling



30. Ceiling



31. Center Support Pole - Base



32. Center Support Pole - Middle



33. Center Support Pole - Top



34. W.L.I. Transducer



35. Water Level Sensor



36. Mechanical W.L.I. - Abandoned



37. Roof Vent



38. Exterior Ladder



39. Access Hatch



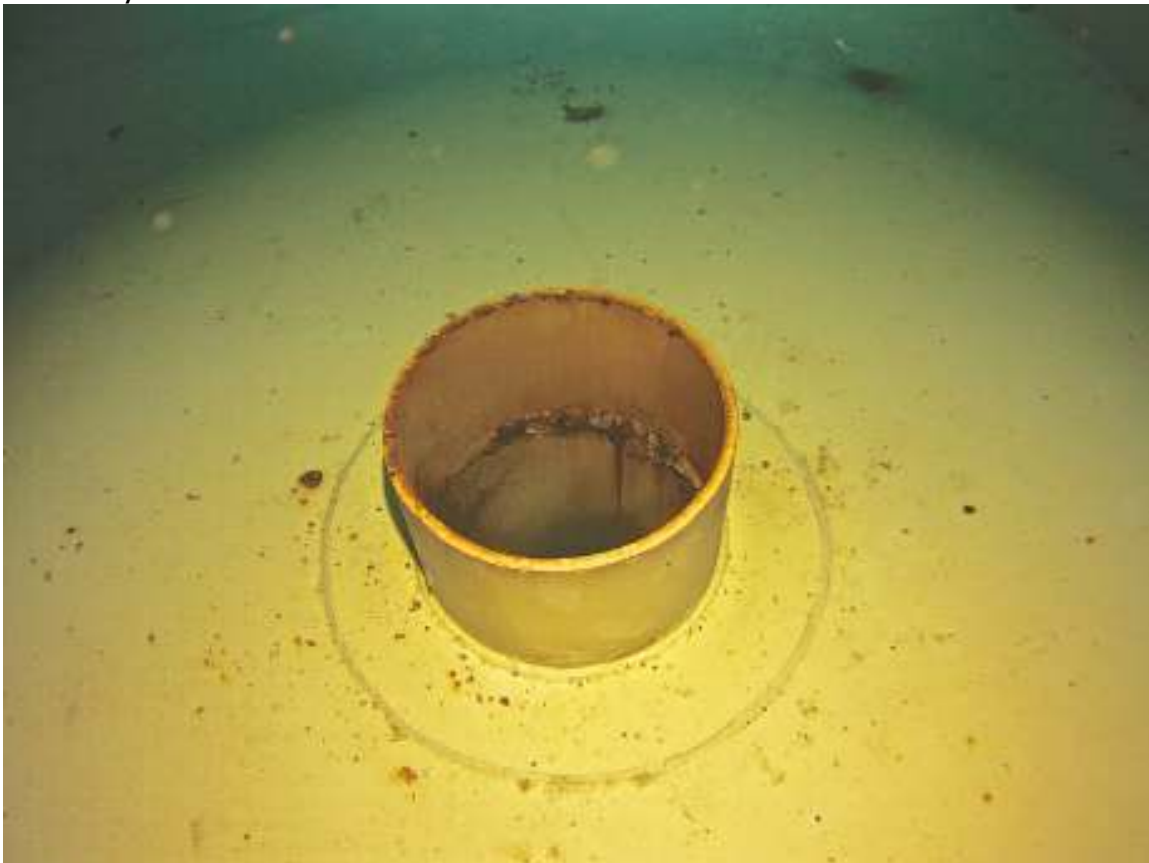
40. Interior Ladder - Middle



41. Interior Ladder - Bottom



42. Inlet/Outlet



43. Drain



44. Overflow - Bottom



45. Overflow - Near Top



46. Overflow Box



47. Manway #1



48. Manway #1



49. Manway #2



50. Manway #2

