

STATEWIDE
AQUASTORE, Inc.

Premium Water and Wastewater Storage Tanks



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April 28, 2015

Torrington Water Company
277 Norfolk Road
Torrington, CT 06790

Attention: Steve Cerruto

Subject: Aquastore Tank Inspection Report
New Hartford, CT
Model 5033 MIP 8900015

Dear Steve,

On April 15, 2015, an inspection of both the interior and exterior of the above referenced tank was performed. We found the tank to be in good condition.

The glass coating on the tank interior and exterior is in good condition. The sealer on the tank interior and exterior is in fair condition.

Please find enclosed a copy of the written report of the inspection for your records. It is our opinion that overall the tank is in good condition throughout. Please refer to the enclosed inspection report for any recommendations.

If I can be of any additional assistance, or if you have any questions in the future, please do not hesitate to contact me.

Respectfully,

Charlie Gage
Construction Manager
Statewide Aquastore, Inc.

New Hartford, CT
Aquastore Water Storage Tank Inspection
Dry Inspection – 4/15/15
Model 5033; 491,000 Gallons; MIP - 8900015



New Hartford, CT
Aquastore Water Storage Tank Inspection
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Scope:

On 4/15/15, Statewide Aquastore, Inc conducted an interior and exterior inspection of the 491,000 gallon Aquastore® water storage tank noted above. This inspection is to provide information regarding the overall condition of the tank. The tank has been in service for approximately 25 years. It was installed and put in service in 1990.

Exterior Inspection:

The exterior of the tank, and all appurtenances were inspected. This inspection included the sidewall sheets with glass coating, web truss rings, visible part of the tank foundation/curb, area immediately adjacent to the tank (grade elevations, drainage, fencing, trees, etc.), bottom manway, ladder, safety cage, manway platform, overflow, roof, roof hatch, vent (on the roof), walkway, safety decals, nametag and sealant fillets.

EXTERIOR SIDEWALL SHEETS

Sealant:

- Manus sealant was used in the construction of this tank. The sheet edges are starting to show and some sidewall streaking is taking place. We recommend that the sheet edges be cleaned and resealed.

Sidewall Sheets:

- Sidewall sheets, sheet edges, fillets, joints, hardware, etc. are in good condition.
- Some algae growth was visible on the sidewalls. This is not a structural concern, but should be cleaned off.

Sidewall Fasteners:

- Protective caps utilized on the tank are in good condition.

Vertical Expansion:

- No vertical seam expansion is visible and appears to be non-existent.

Vandalism & Safety Decals:

- No signs of vandalism are present.
- All safety decals and nametags are in their proper places and are in fair condition.

Other Comments: The exterior sheet edges are exposed and are beginning to corrode. The edges should be resealed. By installing a new sealer fillet, you are providing a layer of protection against the elements and enhancing both the aesthetics and longevity of the tank.

WEB-TRUSSES

- The tank was constructed with (2) three inch galvanized web-truss rings securely bolted in place. These appear to be in good condition.

FOUNDATION**Curb:**

- Minor radial cracking is present in the curb area. These cracks pose no structural concern and no repairs are necessary at this time.
- Minor weathering is exhibited on the concrete surface.

Perimeter Seal:

- There is no perimeter seal between the sidewall and the concrete curb. We recommend that one be installed.

Drainage:

- Drainage around the tank is good.

SIDE ACCESS MANWAY (HEAVY DUTY COVER/DAVIT ARM ASSEMBLY)

- The tank was constructed with (1) 24" bottom manway.
- The manway is in good condition with all fasteners in place and no signs of leakage present.
- The manway davit arm is secure and in good condition.
- The reinforcing plate is in good condition.

Other Comments: New manway hardware was installed in both of the manways at the time of the inspection.

LADDER & CAGE

- The entire ladder, step off platform, safety cage, etc. is in good condition and securely bolted to the tank.
- A ladder blocking device is present and secured with a Water Department padlock.
- The ladder starts at the top of the first ring.

Other Comments: No step off was installed on this tank.

ROOF, VENT, TOP MANWAY, SAFETY CAGE (CATWALK)

Roof:

- The entire roof and appurtenances were inspected and overall are in good condition.
- The battens and dome panels are in good condition.

Roof Vent/Top Manway:

- The roof vent is clean and clear with all screens in place.
- The roof manway is in good condition.
- A SWA or water department padlock is missing from the roof manway and should be replaced.

Other Comments: There was no step off installed on this tank. Also, there is no non-skid walkway on the roof or handrail to the center.

OVERFLOW

- The overflow pipe is 12 inches in diameter.
- It is constructed of PVC with flanges, brackets, and a bottom 45 degree elbow.
- The overflow pipe assembly is in good condition.
- There is a screen on the overflow pipe.
- The overflow empties approximately 12" to 24" inches above the floor level to daylight and into a drainage system.

Other Comments: No weir box is installed on this tank. The overflow pipe attached to the tank with a 90 degree elbow.

PERIMETER / SITE SECURITY

- The tank is surrounded with a secure fence.
- There is a locked gate on the road that leads to the tank site.

CATHODIC PROTECTION SYSTEM (EXTERNAL PORTION)

- All connections are in proper order.

MISCELLANEOUS CABLES / ANTENNAS / BEACON

- There is lightning protection on this tank.

POTENTIAL HAZARDS

- The tank is positioned where a vehicle could possibly cause damage.

Interior Inspection:

The interior of this glass coated tank and all appurtenances were evaluated. This evaluation included the sidewall sheets with glass coating, floor, sediment accumulations, piping/sumps, interior of the manway, overflow sidewall penetration, roof with its appurtenances, and sacrificial anodes.

- The tank was empty at the time of inspection.

INTERIOR SIDEWALL SHEETS

Sealant:

- The sealer has deteriorated and has exposed some of the sheet edges. There is some corrosion present.

Sidewall Sheets:

- The bottom rings of the tank that were accessible by ladder were closely inspected.
- The sidewall sheets are in good condition except for some that are showing signs of corrosion and loss of material.
- The vertical bolt seams and fasteners are in good condition.
- The horizontal bolt seams and fasteners are also in good condition.

Sediment Accumulations:

- SWA cleaned about ½ inches of sediment from the floor.

FLOOR

Concrete:

- There are no visible cracks in the floor and it appears to be in good condition.
- The concrete floor appears to be in excellent condition.

Other Comments: No internal bottom seal was installed on this tank. During an internal reseal, a bottom seal would be applied.

Piping:

- A 12 inch DI inlet/outlet pipe is present in the floor of this tank.
- Minor corrosion is present on the exposed edge of the pipes.

Manway:

- Some minor corrosion on the bottom manway was seen.
- The "R" plates show some sign of corrosion. It is possible that loss of material is occurring.
- The neck weldment shows some signs of corrosion.

Roof, Vent, Manway, Overflow Penetration:

- The roof and appurtenances as viewed from the inside by optical means are found to be in good condition.
- Corrosion is present in the vapor zone.
- The vent screening on the 20" diameter vent is clean and clear.
- The roof manway is in good condition.
- The overflow is clean and clear.

Cathodic Protection System:

- A passive Magnesium Cathodic Protection System is installed in the tank.
- The original system consisted of 6 Magnesium anodes, 6 primary and 0 secondary.
- After reinstallation of a new system, it should be checked periodically following the manufacturers recommendations.

Other Comments: A Cathodic Protection (CP) System was installed in this tank during the inspection. The system consists of 6 magnesium sacrificial anodes. The system should be tested every 3 years to ensure it is providing the correct amount of protection to the wetted surfaces of the tank.

Mixer, Ancillary Equipment:

- There is no ancillary equipment installed in this tank.

Conclusion:

- It is the opinion of SWA that, at the time of this inspection, this tank is in good condition overall.
- It is the opinion of SWA that the following repairs should be made.
 - Reseal the interior sidewall sheet edges.
 - Reseal the exterior sidewall sheet edges.
- We recommend periodic monitoring of the tank and the Cathodic Protection System.
- It is our conclusion that this tank is performing well within the manufacturers parameters.
- We recommend this tank adhere to a standard inspection schedule.
- AWWA D103 recommends that all potable storage tanks be inspected every 3-5 years. SWA encourages that this recommendation be adhered to.

Notes:

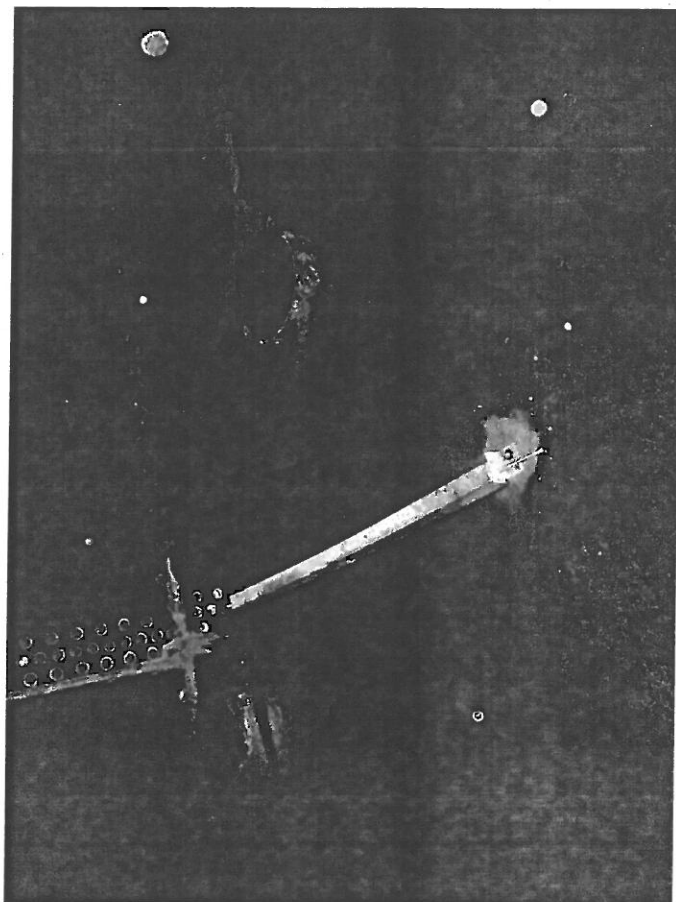
- Present at this inspection were Justin Fitch and David Dygert of Statewide Aquastore, Inc. and Jakob Derwitsch from Torrington Water Company.
- Security - It is the owners' responsibility to close the tank back up to his/her requirements, including sanitizing, and to secure the tank and the area.
- A quote will be provided to the Torrington Water Company for the above mentioned repairs upon request.

Other Comments: The tank was found to be in good condition overall. However, the exterior and interior sheet edges are exposed (not protected by a sealer fillet). The external edges are showing corrosion. The interior edges are also showing corrosion and loss of sheet material. The steel and glass have begun to recede towards the bolt heads in some areas. An internal and external reseal is recommended. By having this work performed, you will be adding an important layer of protection to the sheet edges against both the exterior elements and the water held inside the tank.

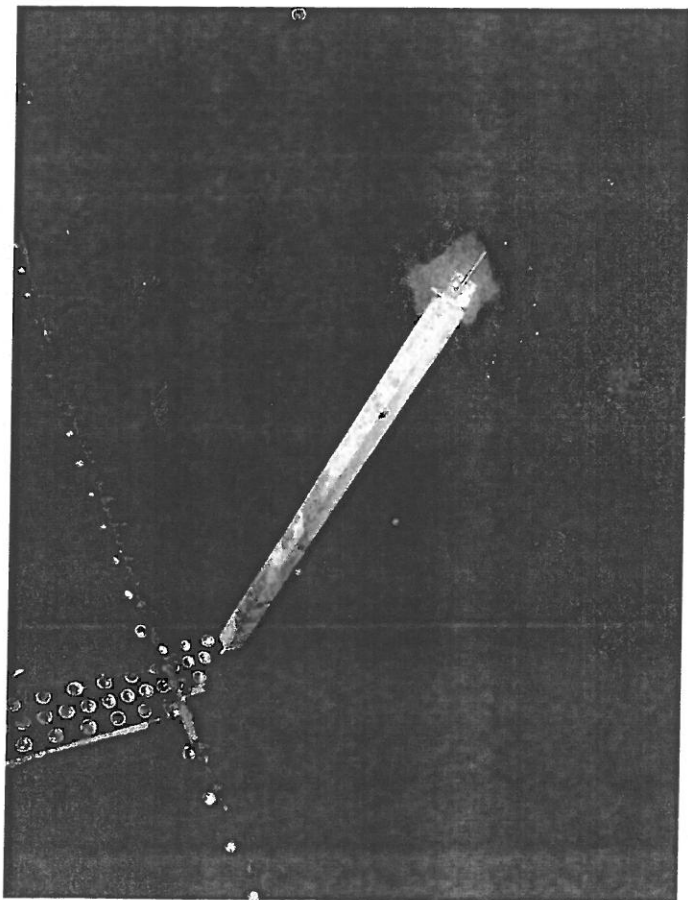
While onsite, three existing overflow pipe brackets were relocated and four new pipe brackets were added. Two patch plates were installed inside the tank at the points where two of the old brackets were mounted. A pipe plug was also removed from the sidewall of the tank and a structure bolt inserted to provide a permanent fix to a prior leak. The interior sidewalls and floor were pressure washed. The sediment was removed and disposed of on site.



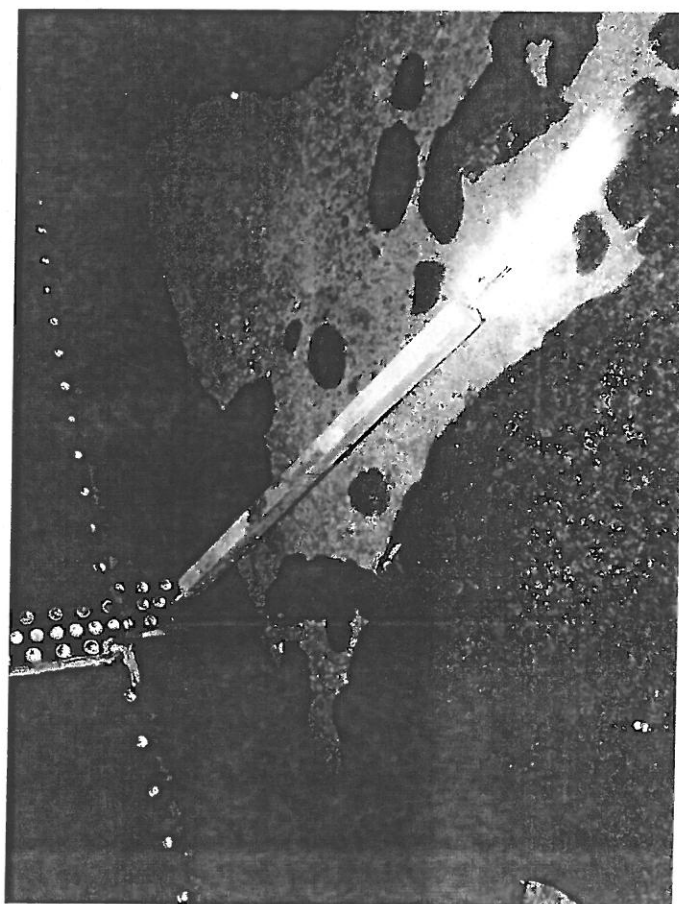
Clean Floor



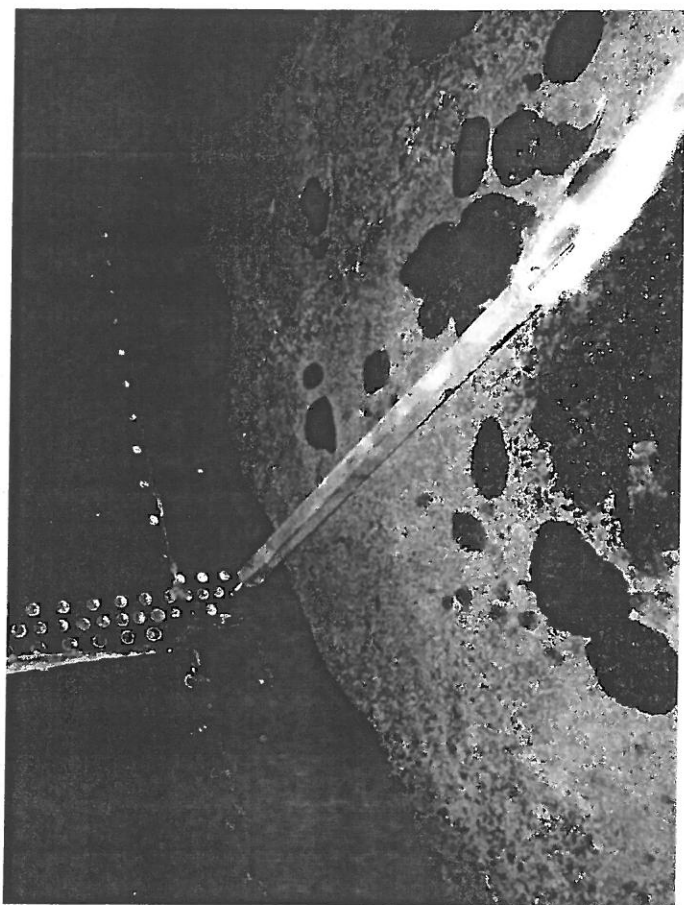
CP Anode 1



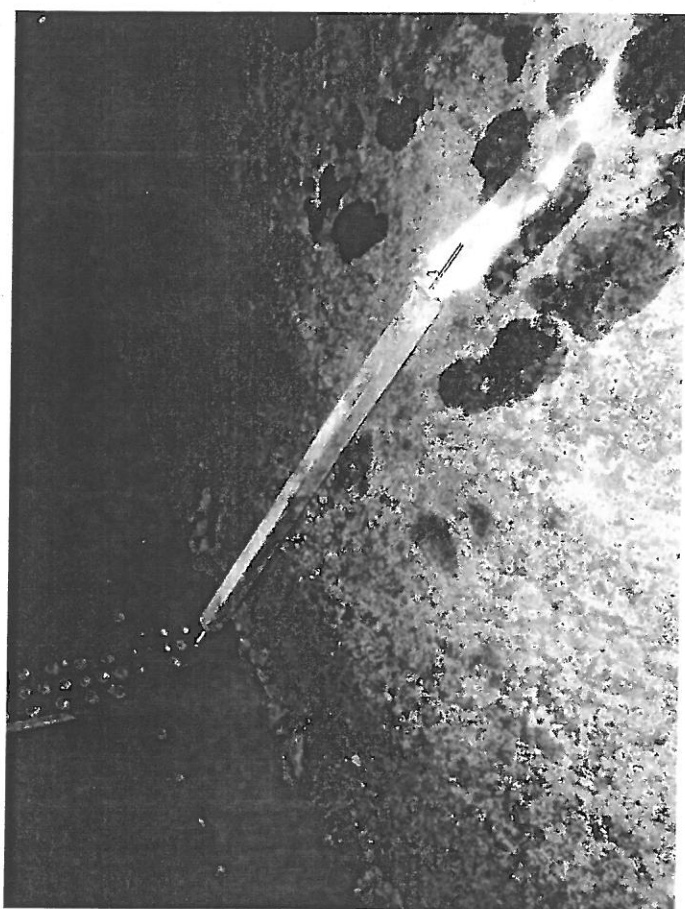
CP Anode 2



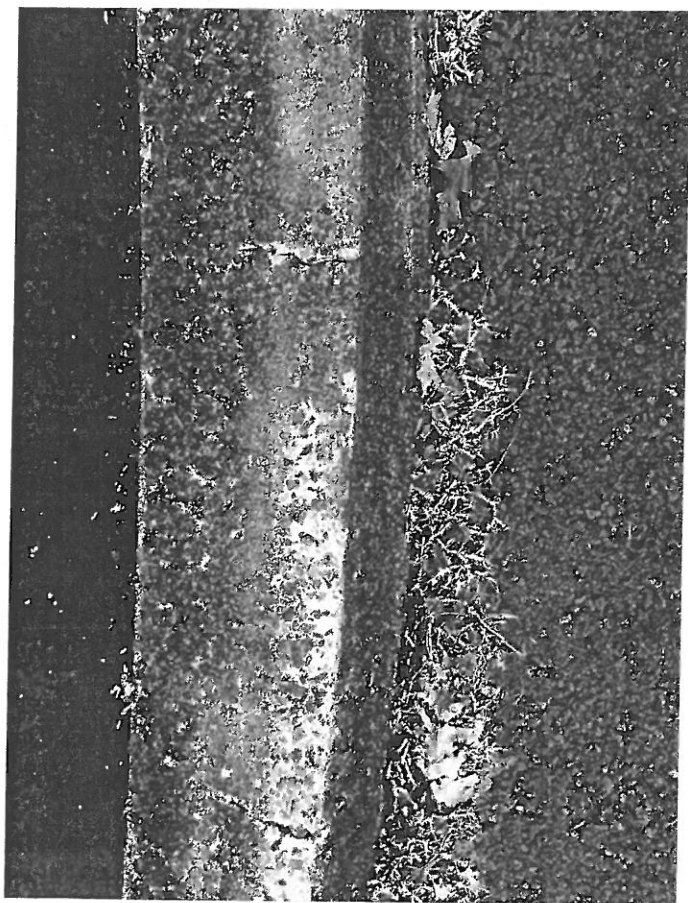
CP Anode 3



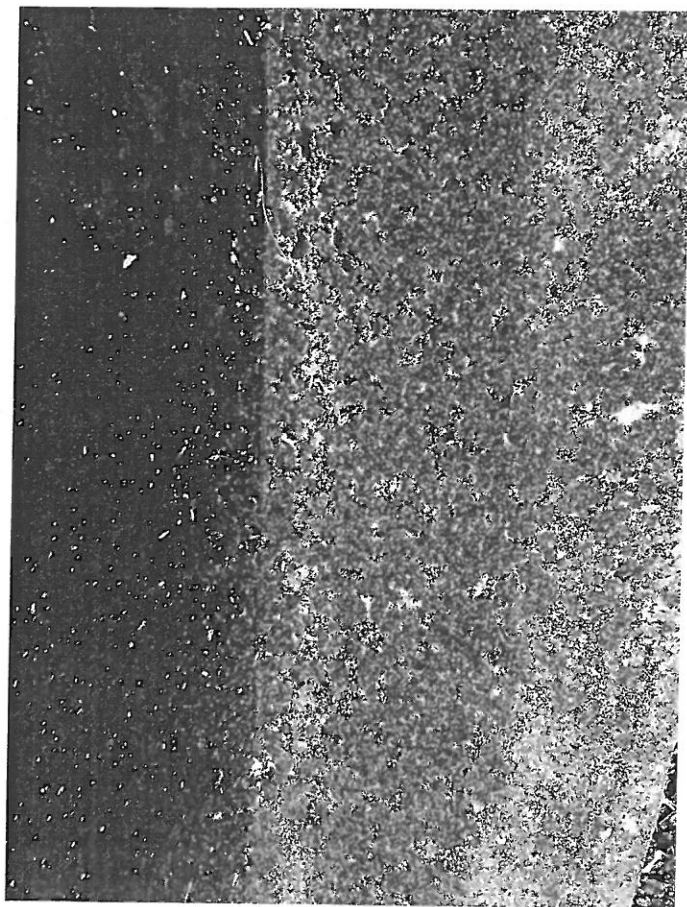
CP Anode 4



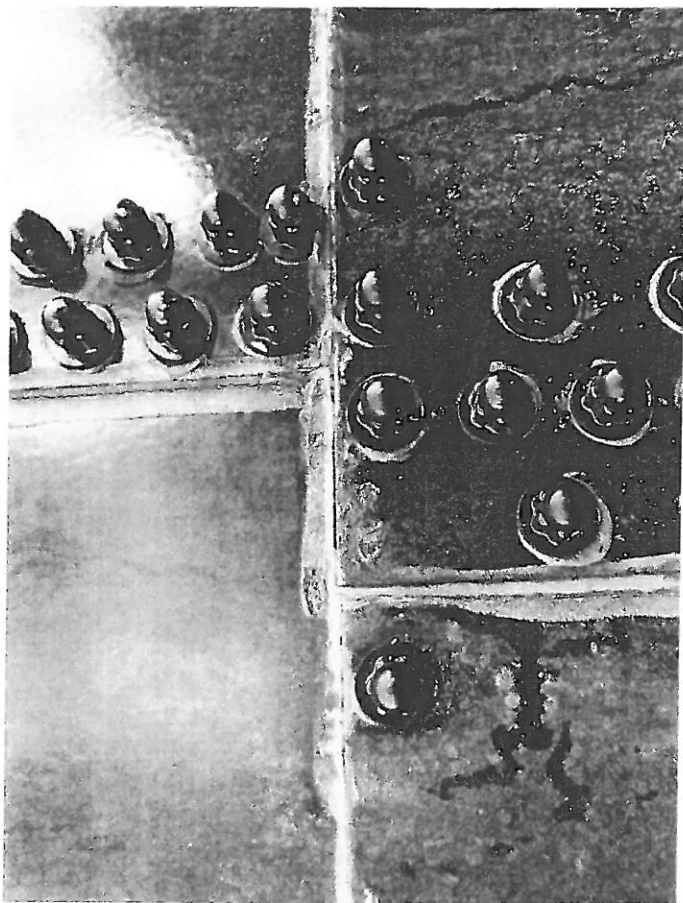
CP Anode 5



Curb



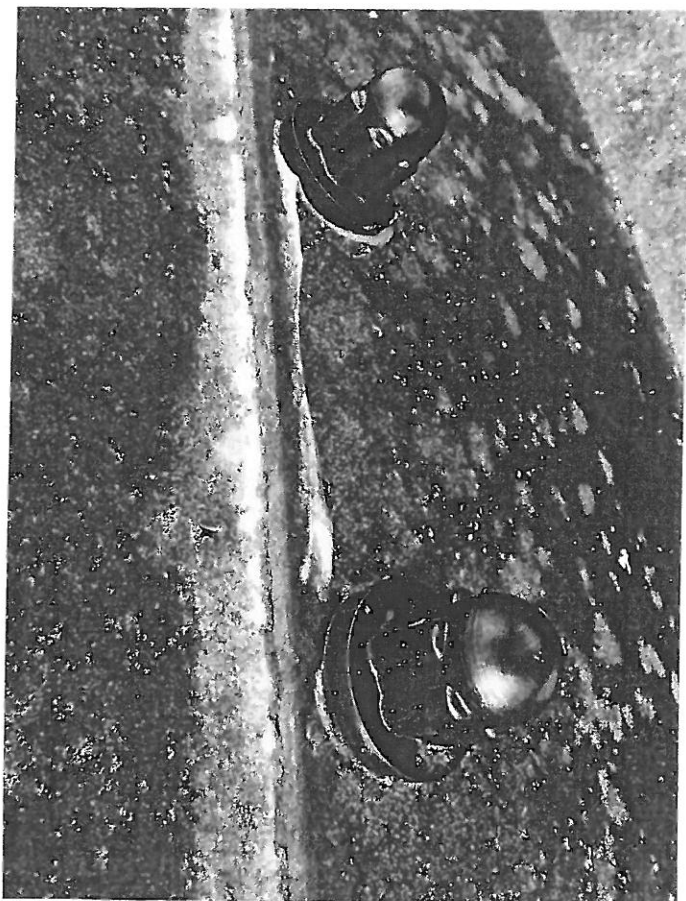
Exterior Bottom Seal



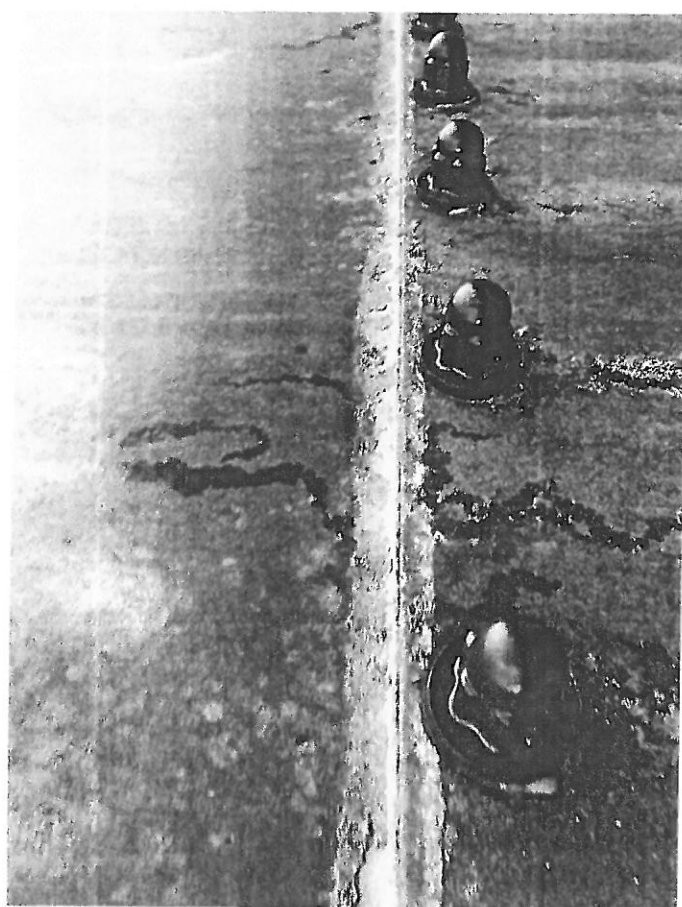
Exterior Exposed Seam 1



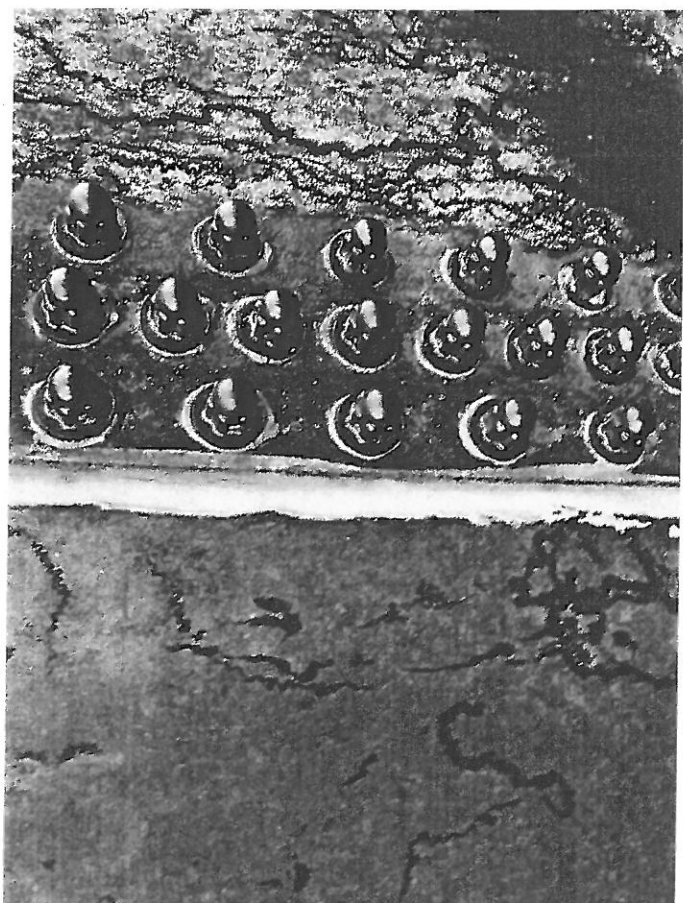
Exterior Exposed Seam 2



Exterior Exposed Seam 3



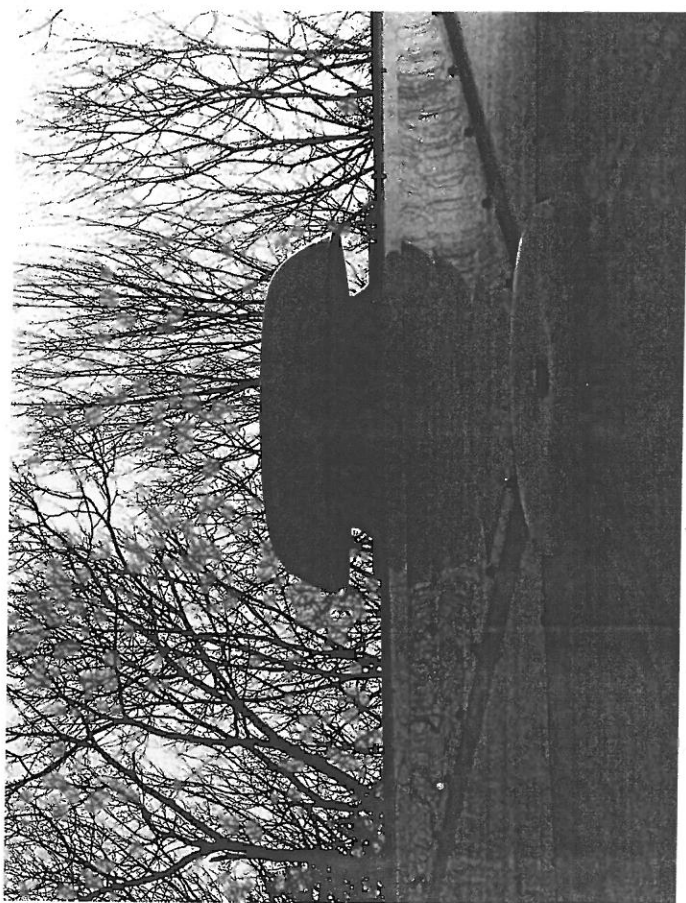
Exterior Horizontal Seam



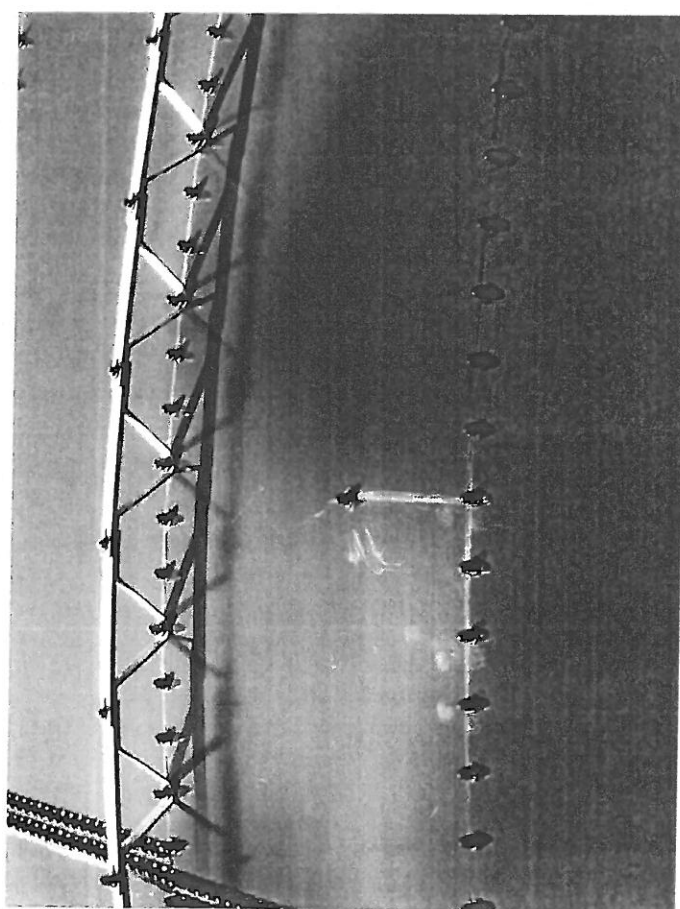
Exterior Vertical Seam



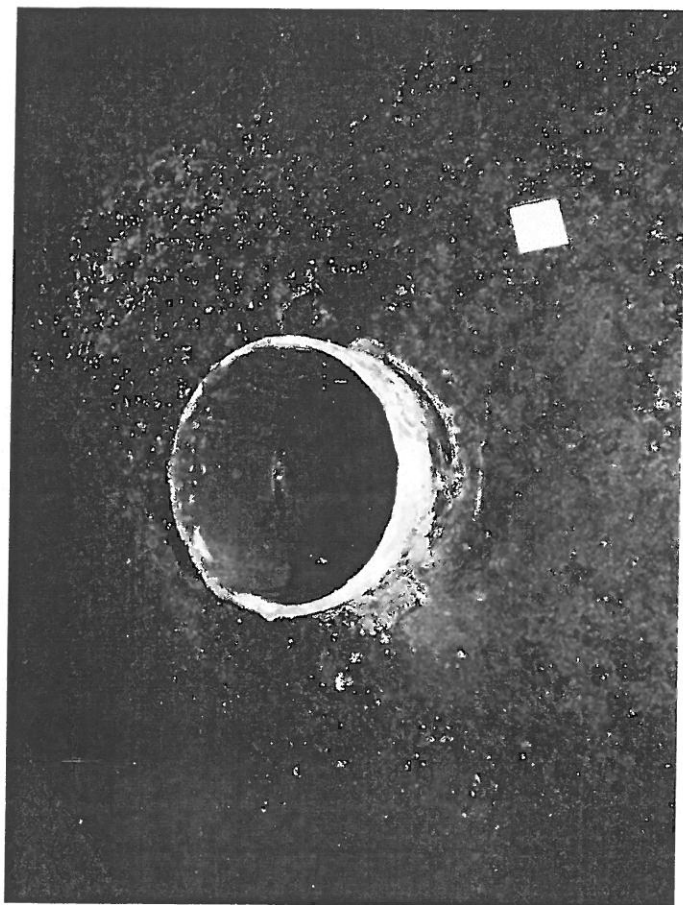
Grade



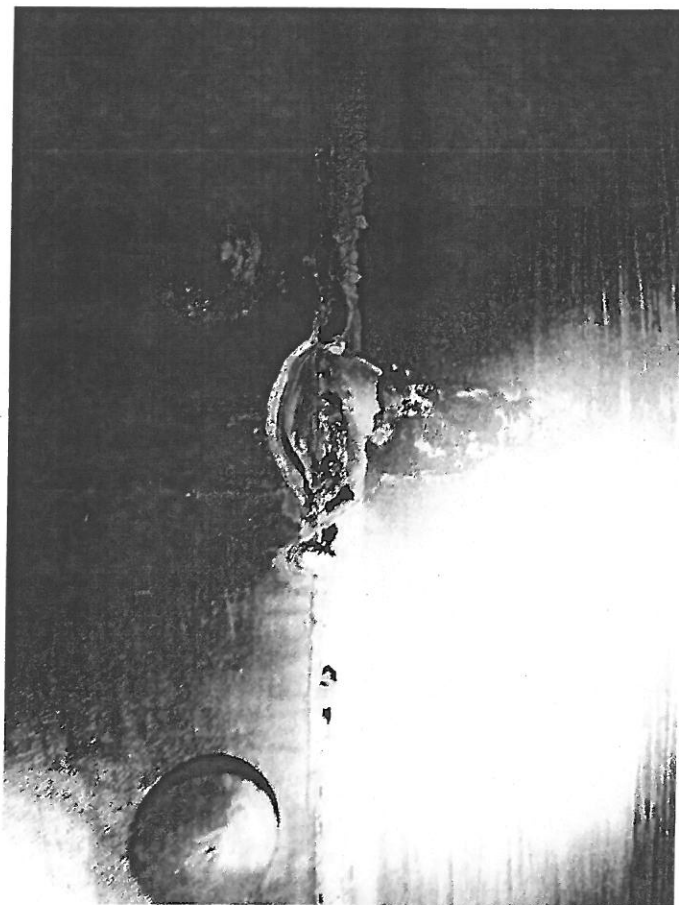
Gravity Vent



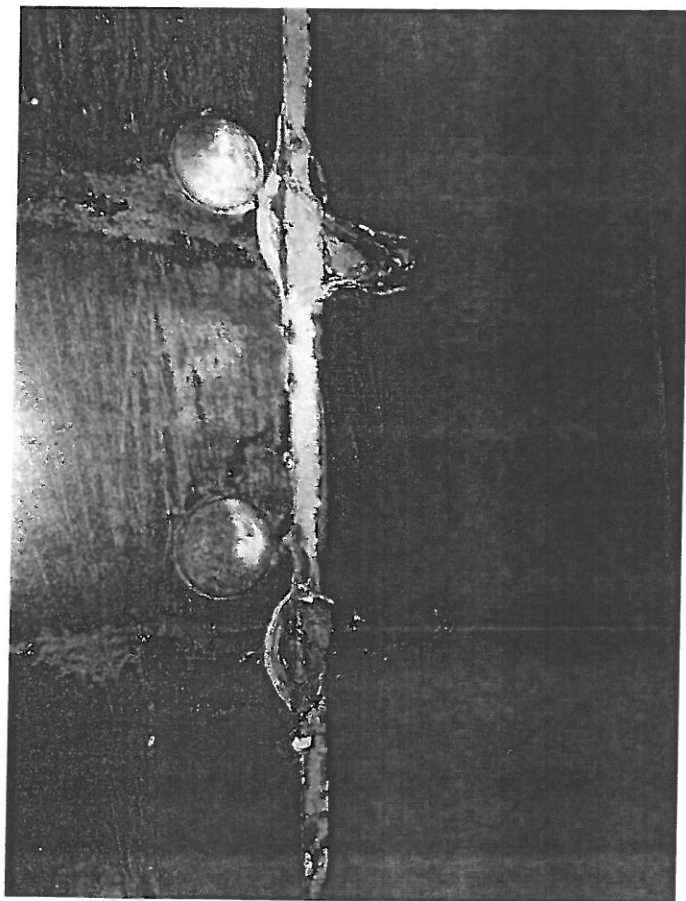
Hole Repair



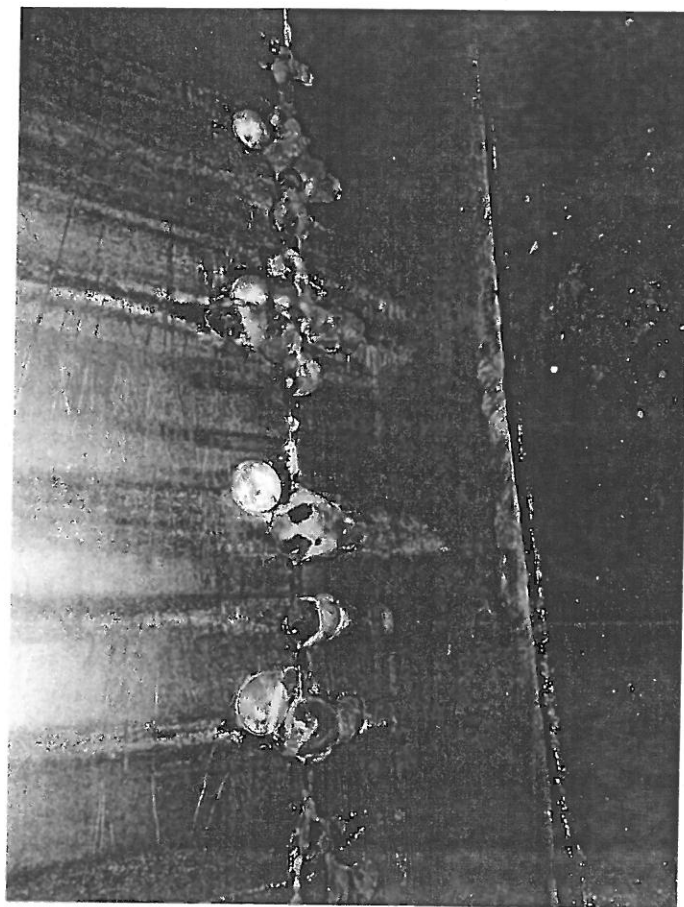
Inlet-Outlet Pipe



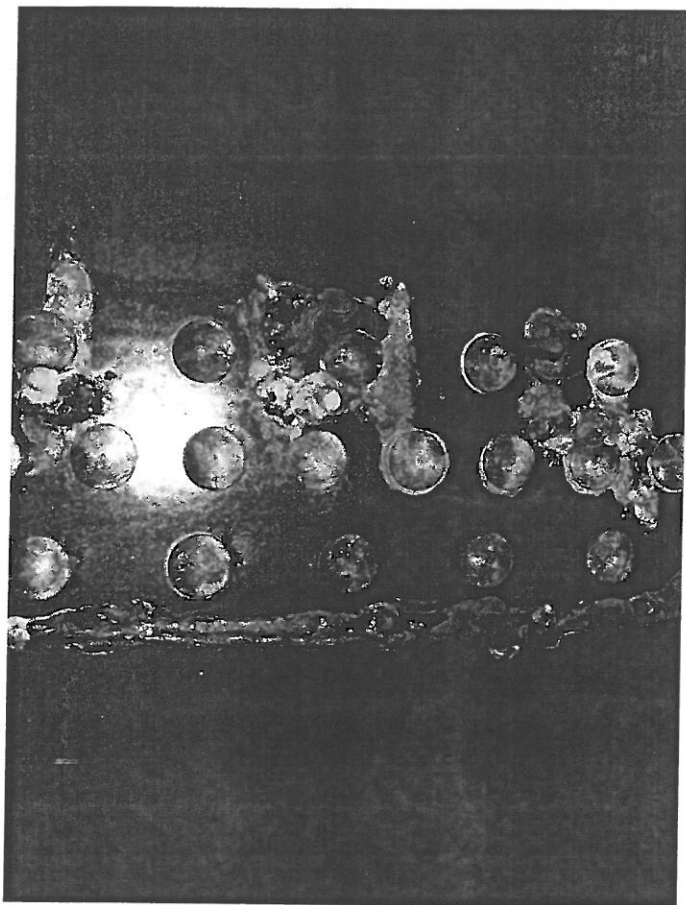
Interior Corrosion 1



Interior Corrosion 2



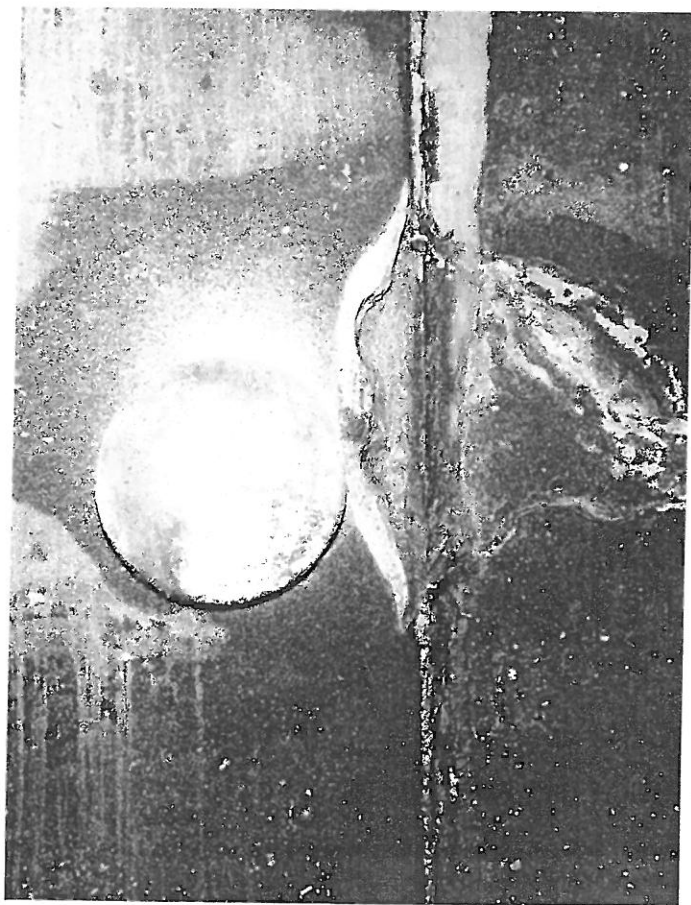
Interior Corrosion 3



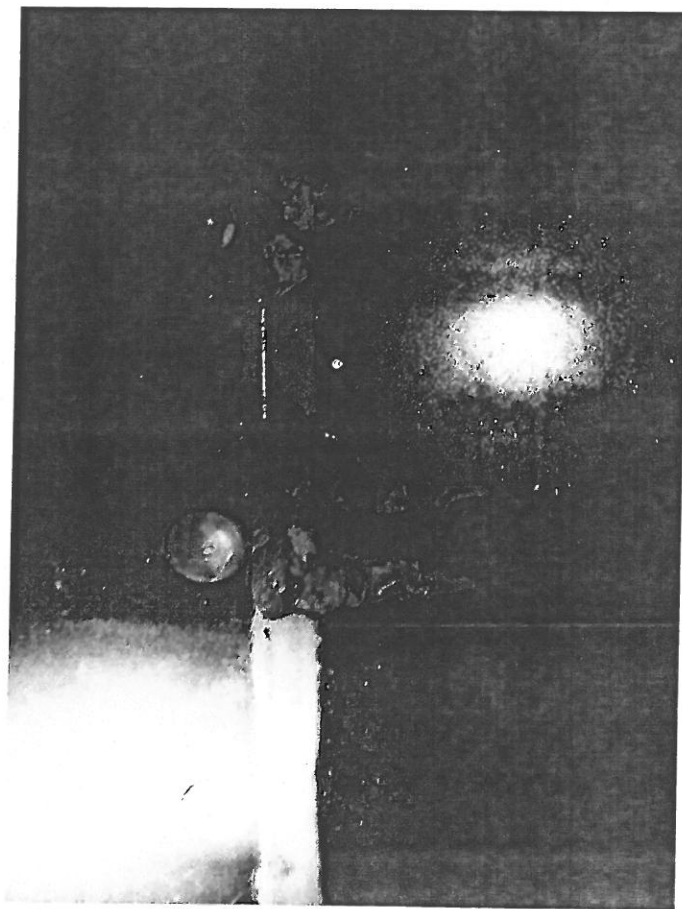
Interior Corrosion 4



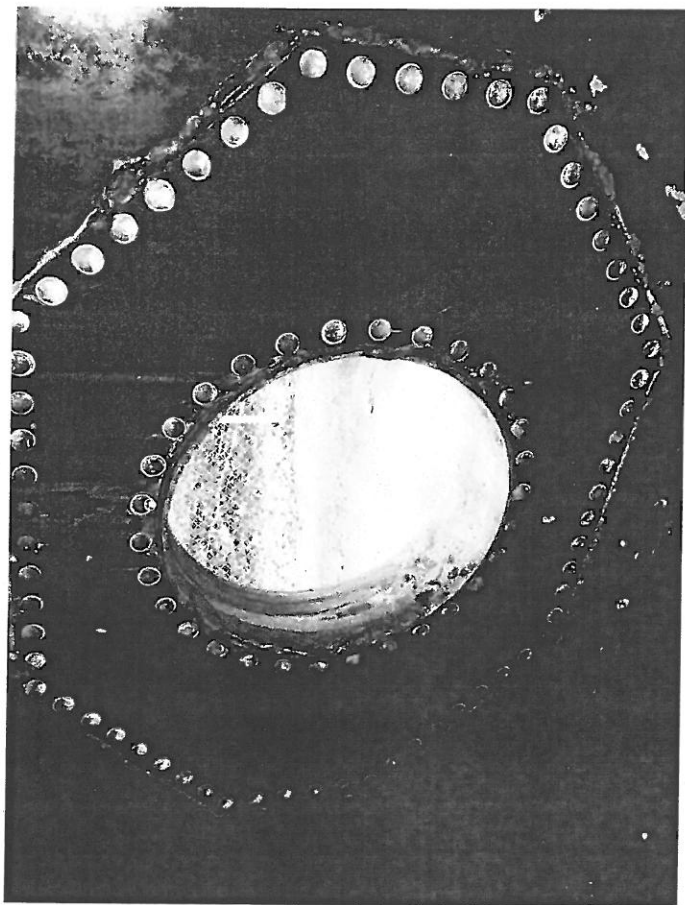
Interior Corrosion 5



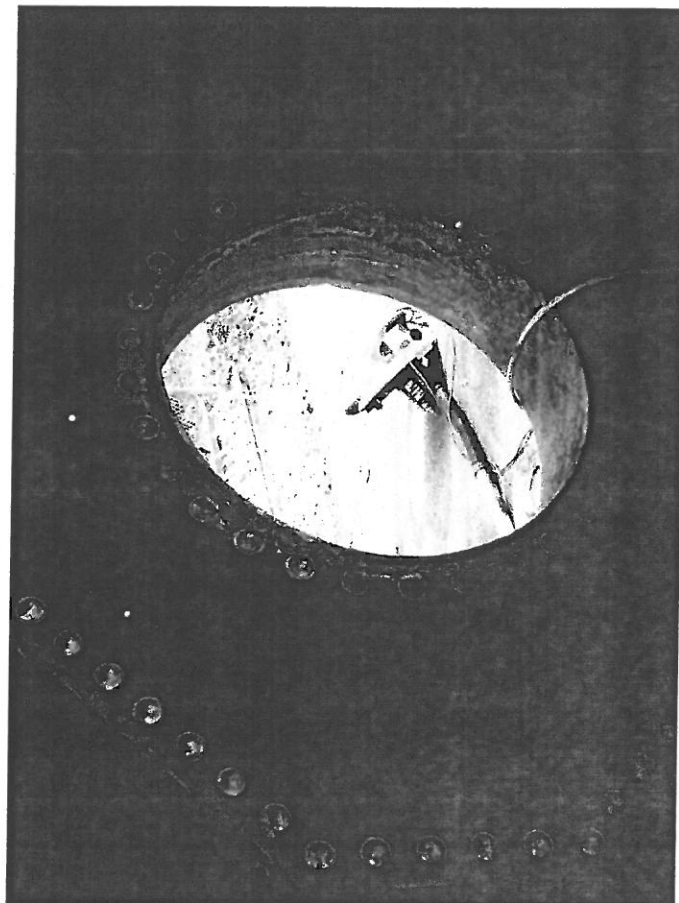
Interior Corrosion 6



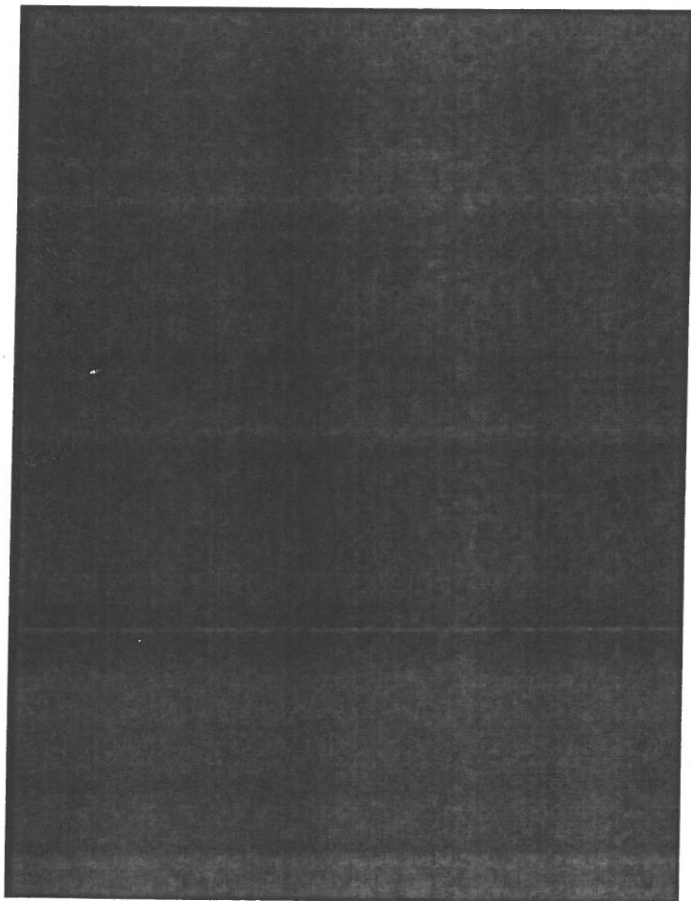
Interior Exposed Seam



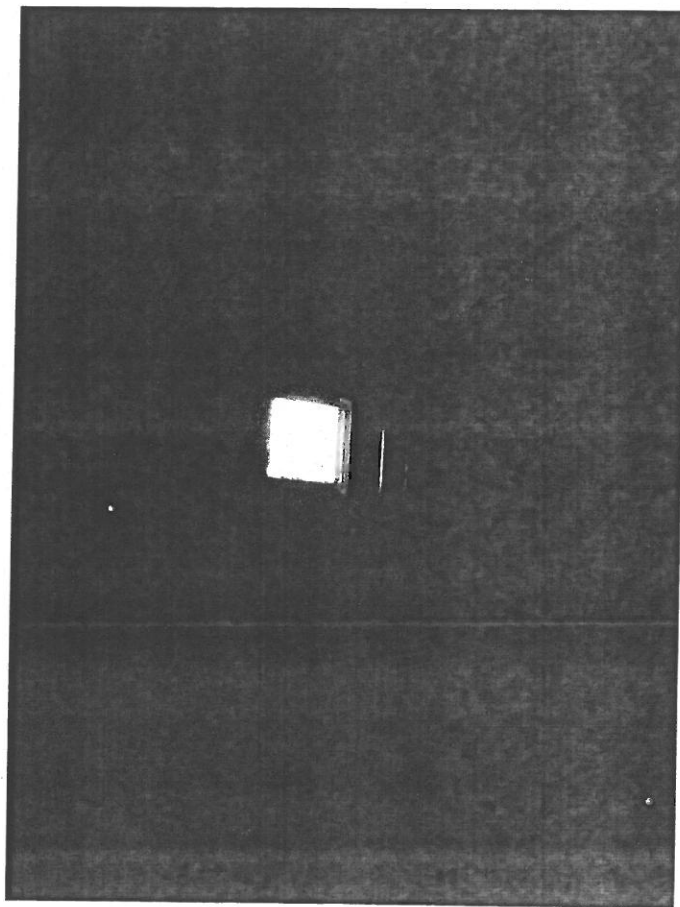
Interior of Manway 1



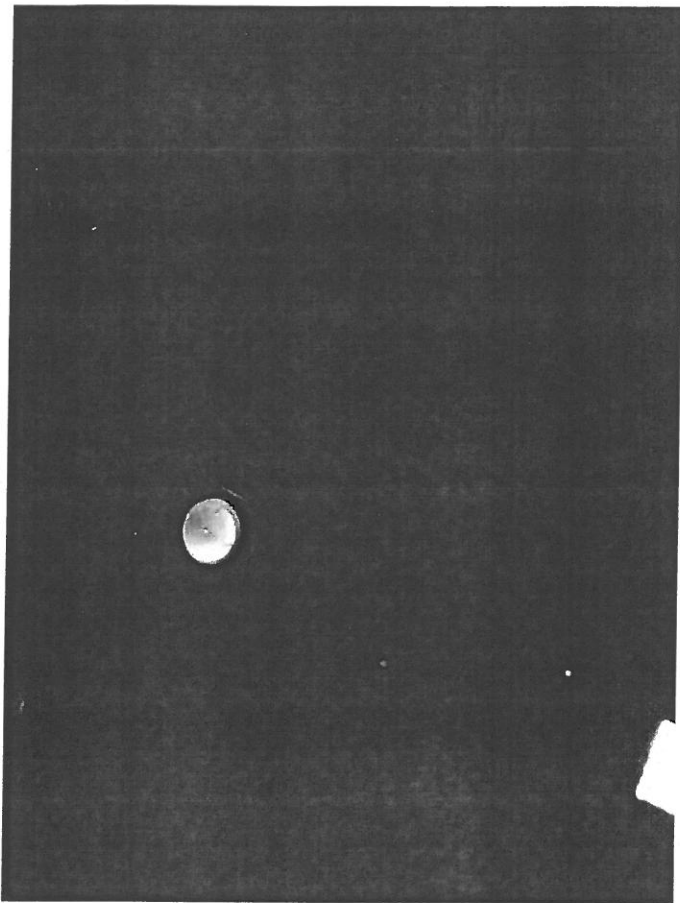
Interior of Manway 2



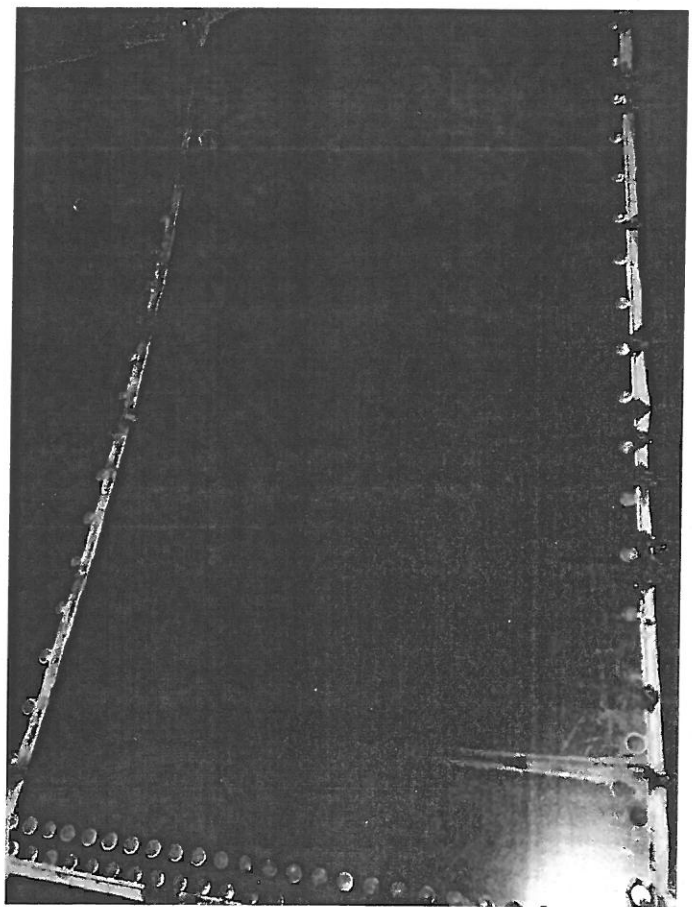
Interior of Overflow



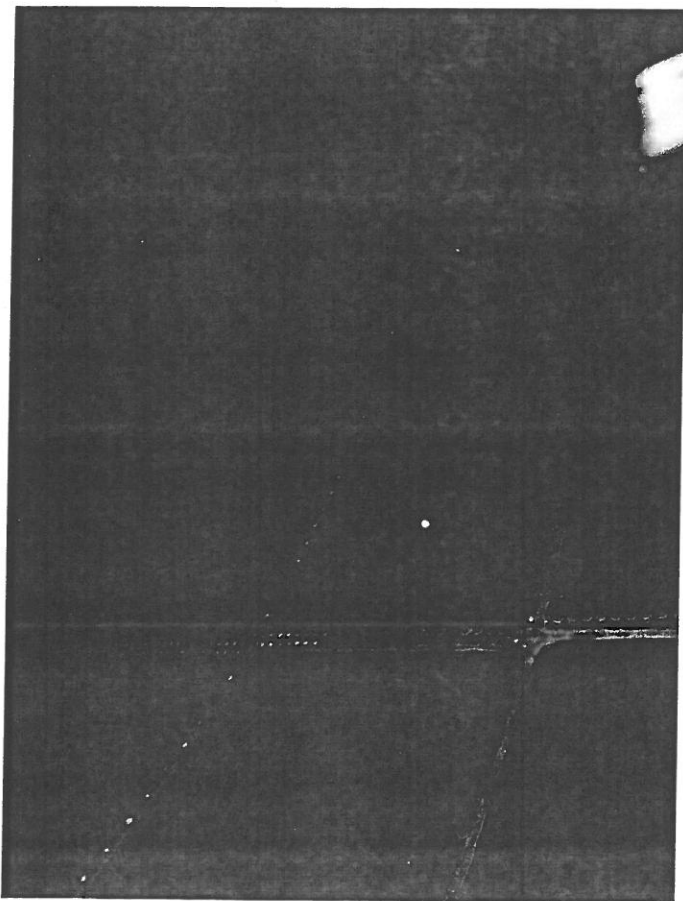
Interior of Roof Hatch



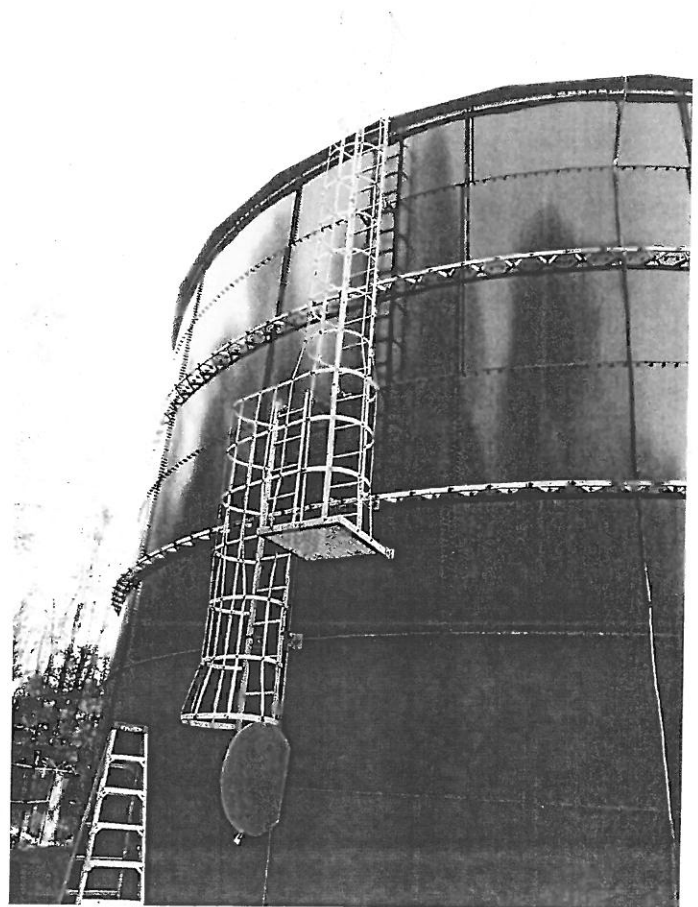
Interior of Roof



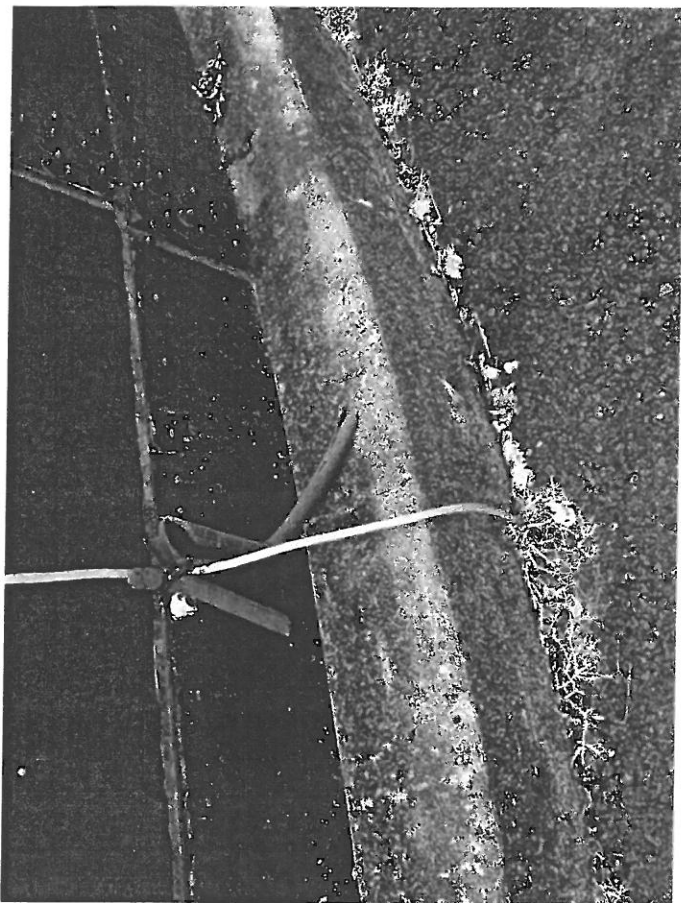
Interior Sheet



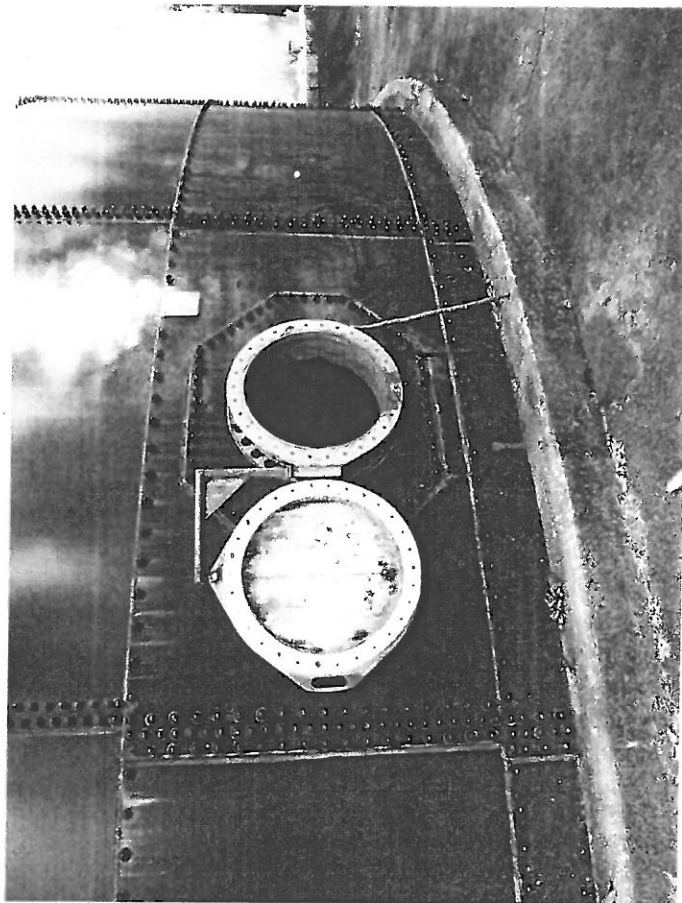
Interior Sidewalls



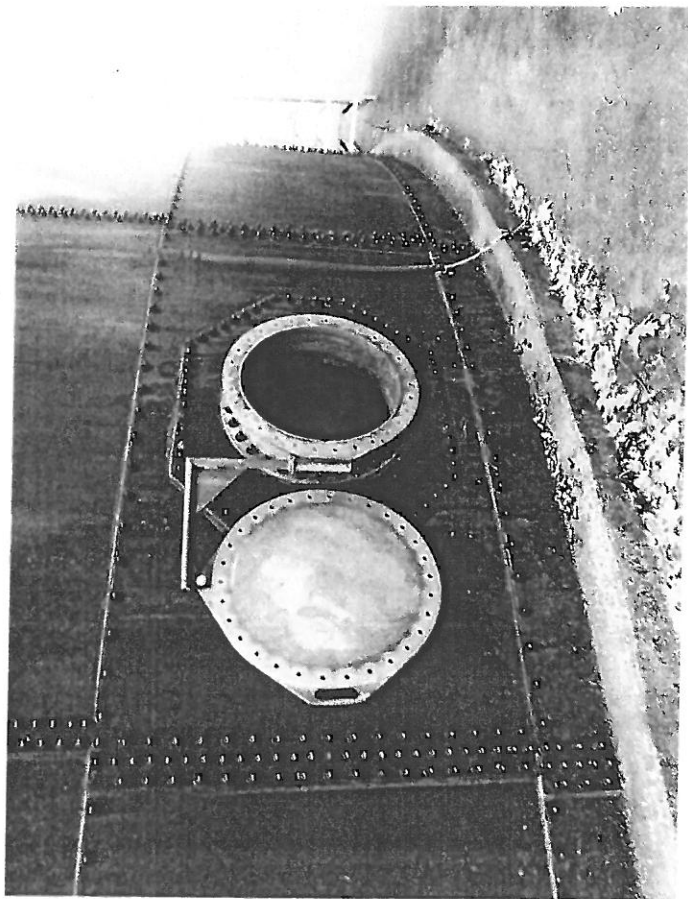
Ladder System



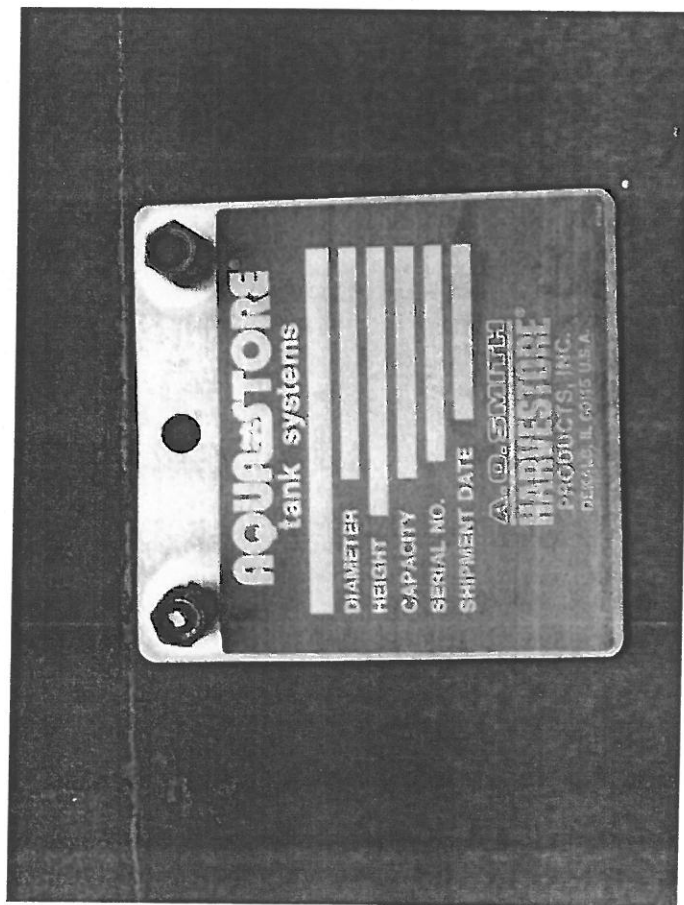
Lightning Protection



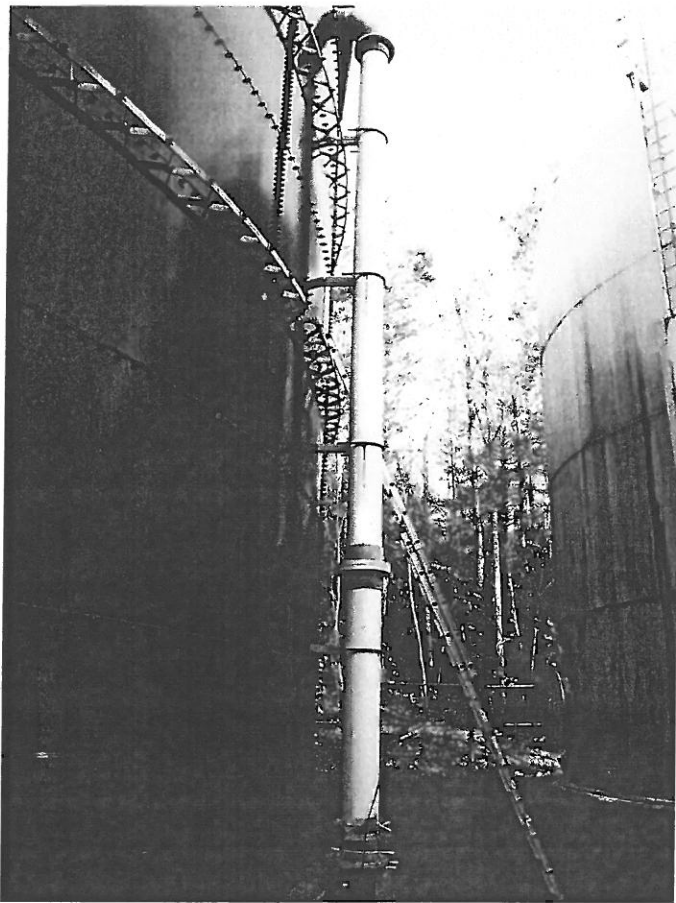
Manway 1



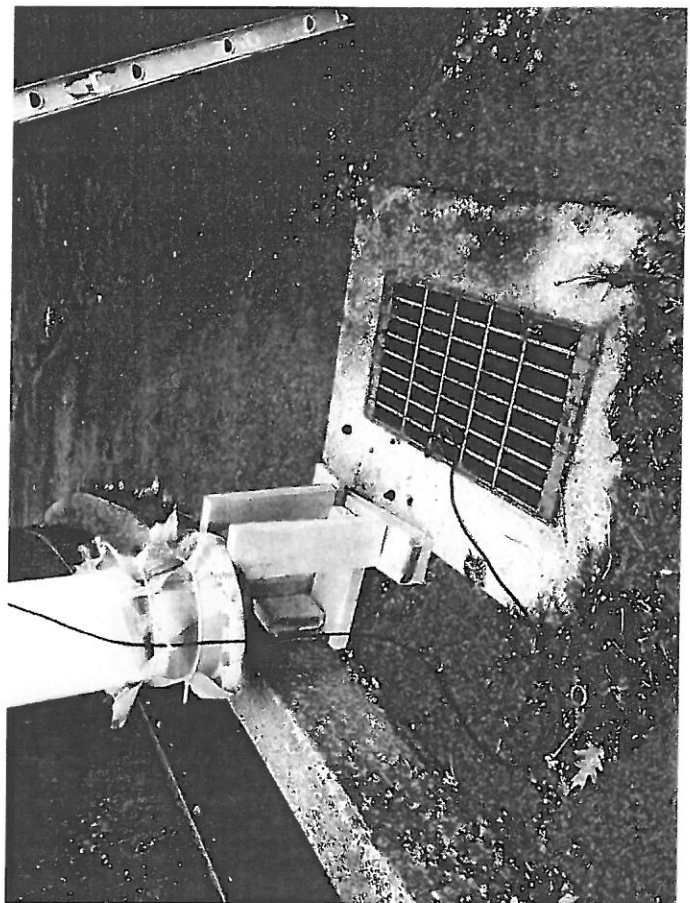
Manway 2



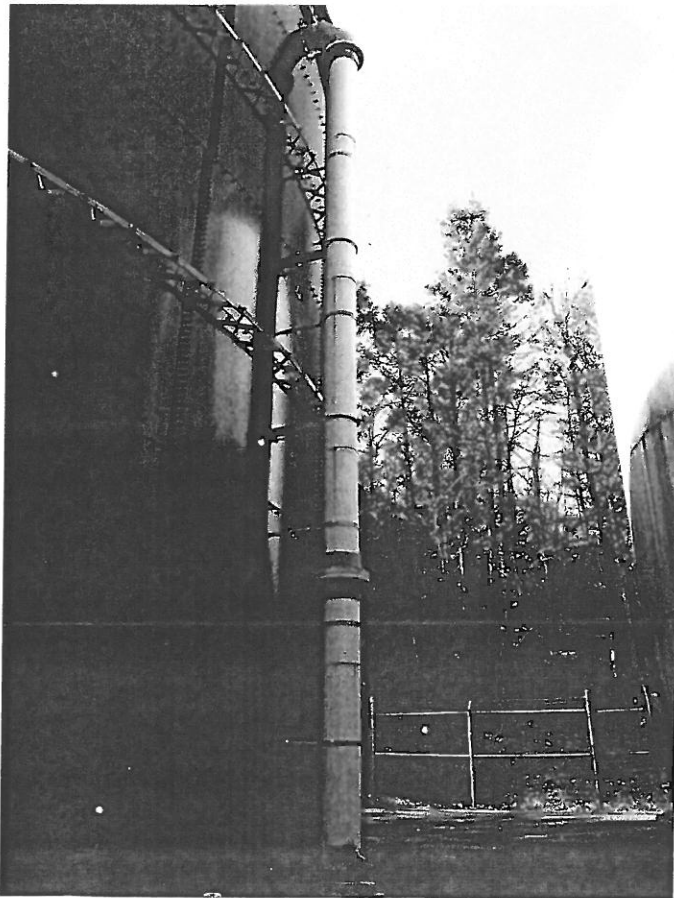
Name Plate



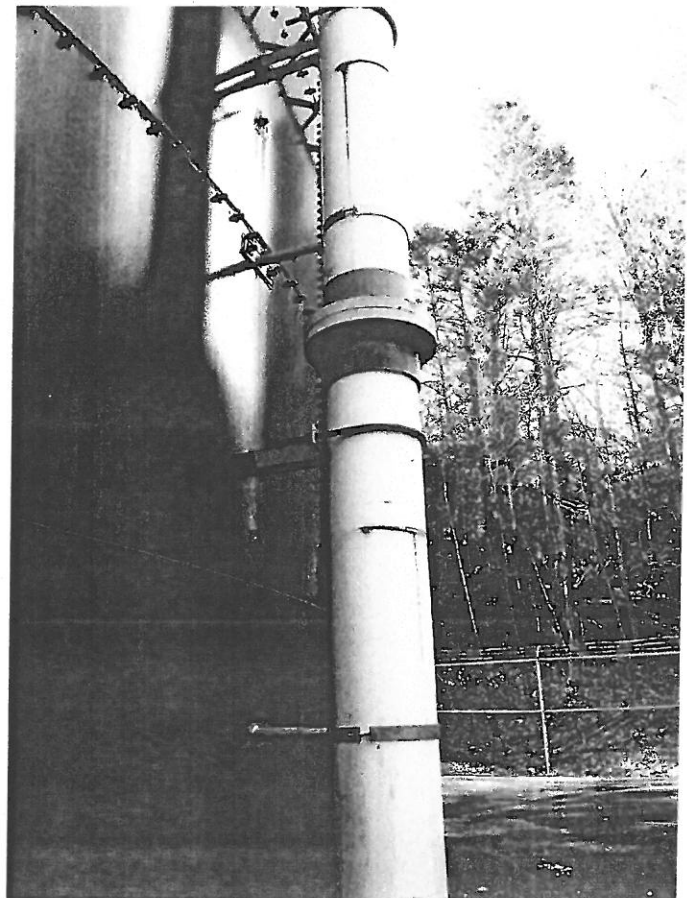
Overflow Before Repair



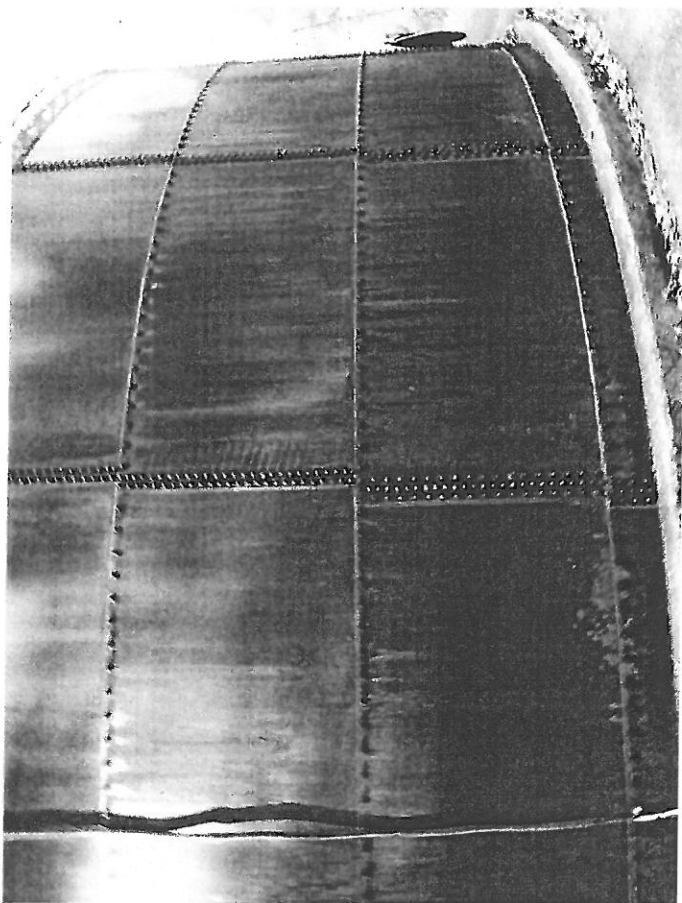
Overflow Drain



Overflow Repair 1



Overflow Repair 2



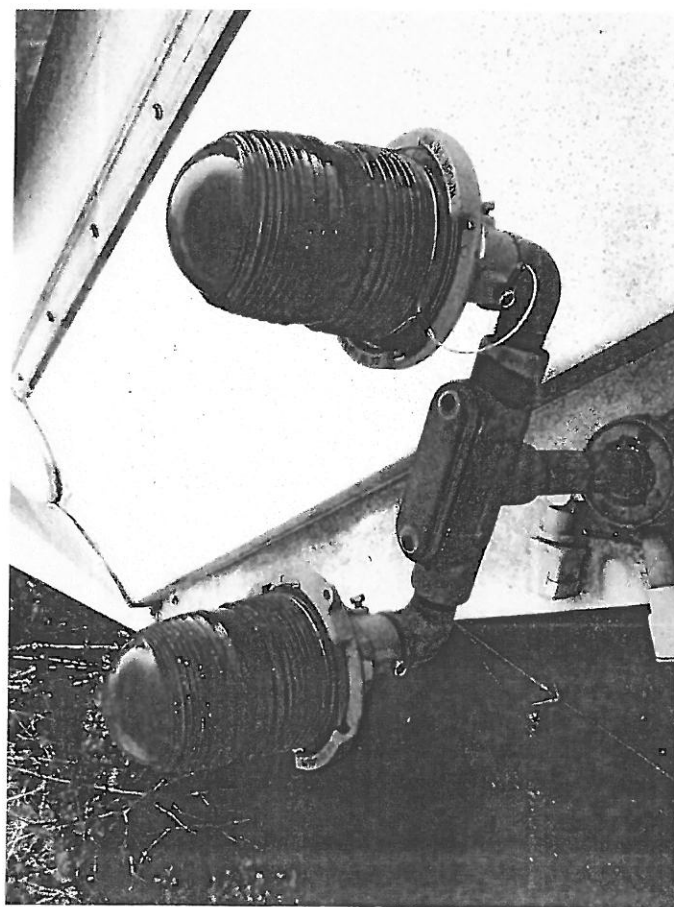
Pollen - Algae Accumulation



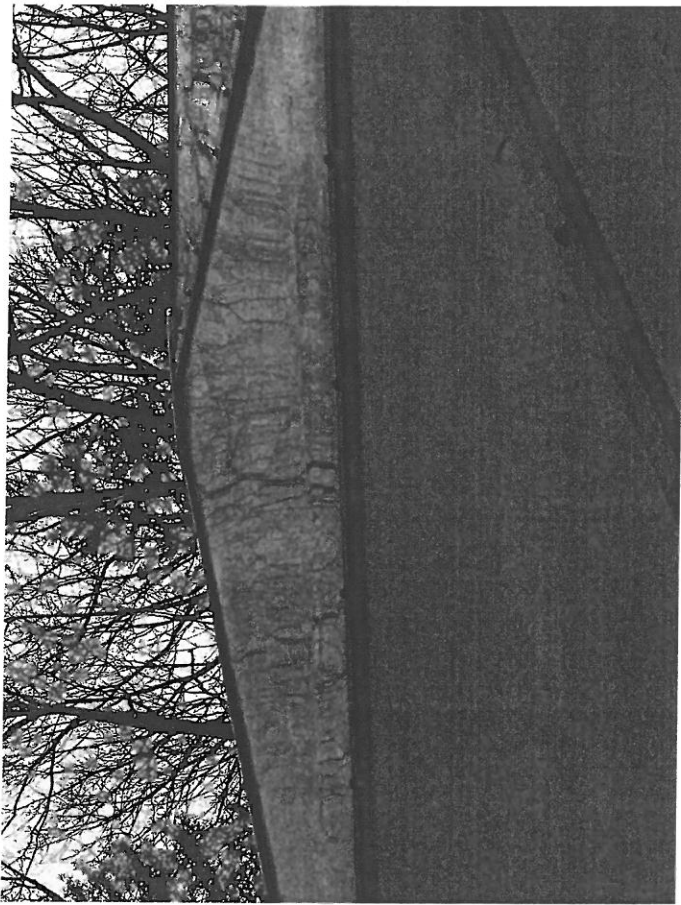
Roof Flashing and Gussets



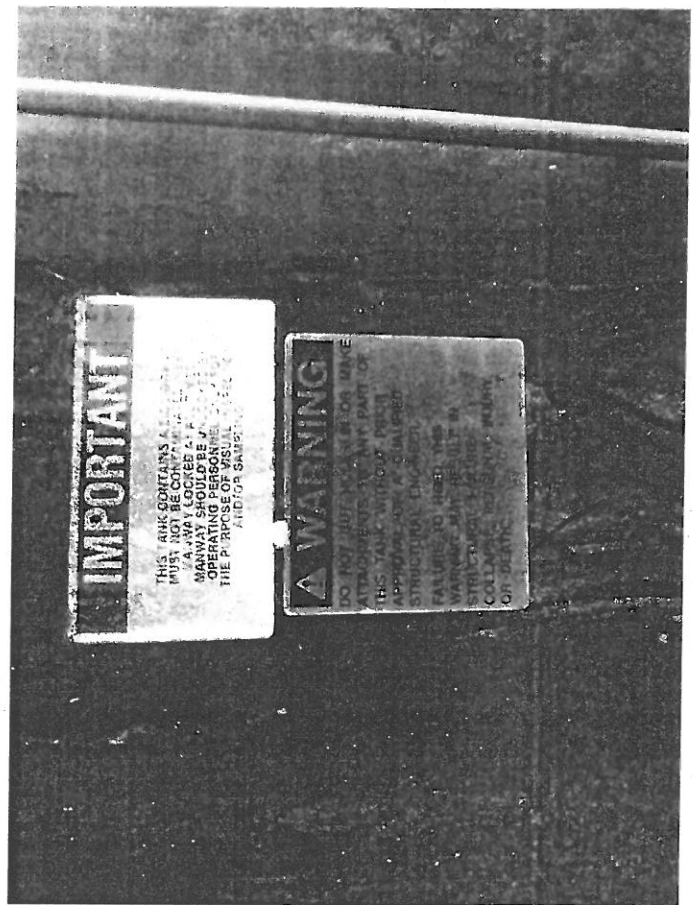
Roof Hatch



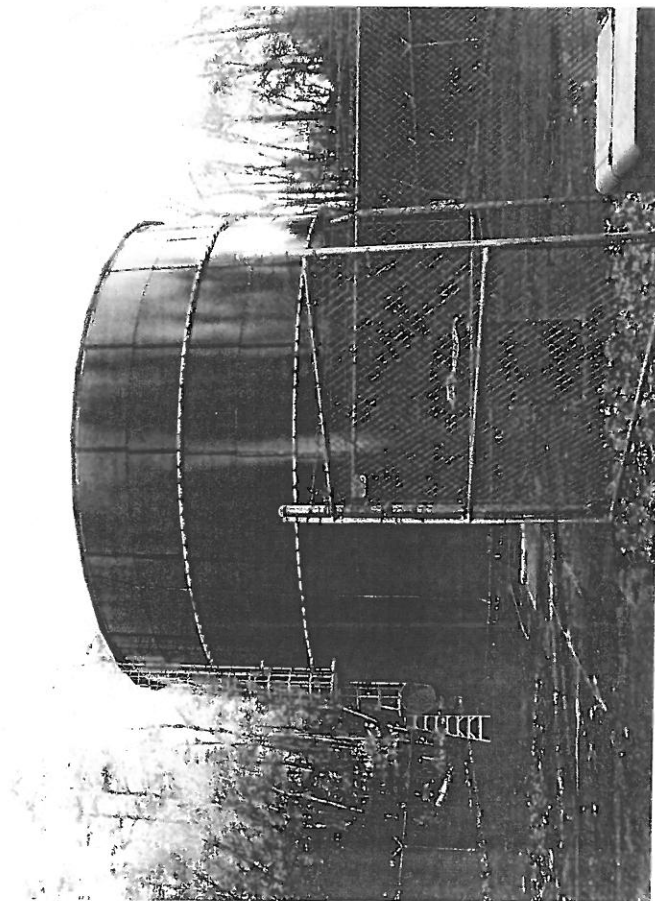
Roof Lights



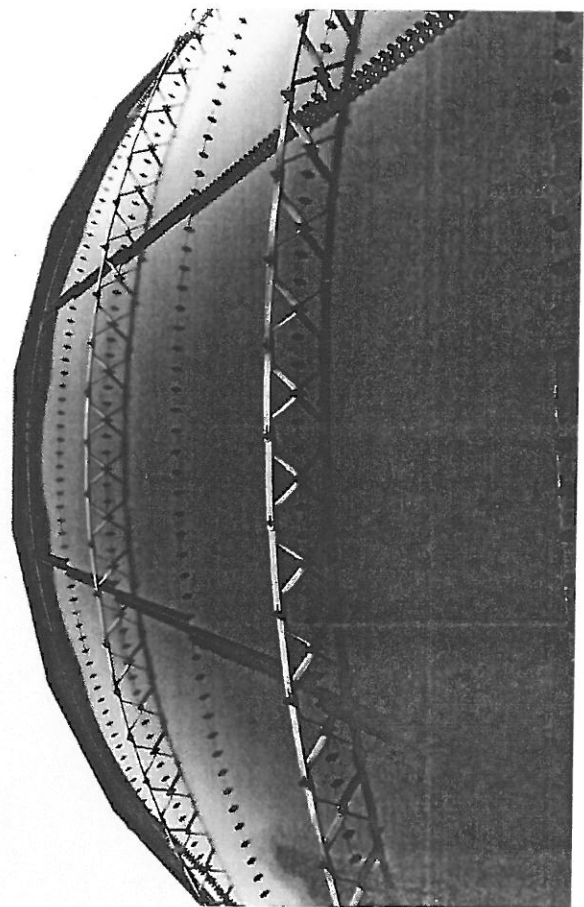
Roof Panels



Safety Decal



Tank



Web Trusses