

SECTION 13900
CURING AND DISINFECTING

PART 1: GENERAL

1.01 SCOPE OF WORK

The Contractor shall disinfect the interior of the water chamber after the interior blasting and painting operations are completed and after a solvent rub test has been performed to determine an acceptable state of cure. The tank is not to be disinfected until the interior coatings are fully cured.

1.02 OWNER RESPONSIBILITY

The Owner will furnish water for flushing and disinfecting tank. The Owner will provide water for one (1) tank filling upon completion of all work. The Owner will also perform all bacteriological, VOC and heterotrophic plate count testing. If the water in the tank fails to pass the required bacteriological, VOC and heterotrophic plate count testing due to the work performed by the Contractor, the Contractor will be responsible for any and all additional water required to fill the tank.

1.03 PROTECTION

Due to the toxic nature of chlorine fumes, personnel performing work under this Section should be equipped with gas masks and should be attended by other personnel who are in the vicinity where work is to be performed.

PART 2: PRODUCTS

2.01 MATERIALS AND EQUIPMENT

Furnish calcium hypochlorite (HTH), or sodium hypochlorite as needed to complete the disinfection of the tank as outlined in ANSI/AWWA C652. Please note that ANSI/AWWA C652 references ANSI/AWWA B300 and ANSI/AWWA B301 the chlorine used for disinfection shall be NSF 60 certified for potable water use and shall be labeled accordingly.

Furnish pumps, hose, nozzle and other equipment for spraying and washing the interiors of the tank.

PART 3: EXECUTION

3.01 PREPARATION

All interior painting shall be completed prior to final cleaning and disinfection of the tank. The interior coatings are also to be fully cured as determined by a solvent rub test.

The water chamber is to remain empty for the duration of the project with all manholes, hatches, drains and plugs, etc., open to allow for proper ventilation during the curing process.

The following equipment would be helpful for cleaning and/or disinfecting the tank and is listed here for informational purposes only:

- A. A pump of sufficient capacity to supply enough water for spray rinsing.
- B. A length of fire hose and a nozzle for spraying. On elevated tank the hose should extend up through the riser to the tank.
- C. Sufficient water supply thoroughly rinse all interior surfaces. In some cases, tank trucks may be necessary to provide the water.

3.02 APPLICATION OF DISINFECTANT

Application of disinfectant shall be performed in accordance with Sec 4.3.2, Chlorination method 2, as set forth in the current AWWA C652-02 Disinfection of Water Storage Facilities or latest revision thereof.

3.03 TESTING

Bacteriological and VOC tests will be made by the Owner. The tank will not be accepted and placed into service until the results of the bacteriological and VOC tests are acceptable to the Owner in accordance with current New York DOH Regulations.

After final flushing and before the new potable water storage tank is placed into service, two (2) consecutive sets of acceptable samples taken at least 24 hours apart, shall be collected from the rehabilitated potable water storage tank and analyzed for coliform organisms. Additionally, 2 (two) consecutive sets of samples taken at least 24 hours apart, shall be analyzed for heterotrophic plate count (HPC). A single sample to be analyzed for volatile organic compounds (VOC's) shall also be taken.

Should the initial treatment prove to be ineffective, in the opinion of the Owner, the Contractor shall repeat the chlorination procedure until satisfactory results are obtained.

3.04 GASKETS

New gaskets, conforming to the original thickness and design, will be supplied and installed by the Contractor at the completion of the painting operations.

END OF SECTION

SECTION 14906
ONGOING TANK ASSET MANAGEMENT AND TANK MAINTENANCE

PART 1: GENERAL

1.01 SCOPE OF WORK

The Contractor shall perform services related to asset management and asset maintenance of the tank. These services are defined as Tank Scope Summary by Year in Appendix B. These services include scheduled visual inspections, ROV inspections (when necessary), cleaning of the interior water chamber through washout disinfections, touch up painting, emergency services, condition assessment reports, and coordination of cellular reviews. The specifications for some of the services comprising tank asset management are included elsewhere in other specification sections of this document.

1.02 OWNER RESPONSIBILITIES

The Owner will grant access to the tank for the performance of the tank asset management and maintenance scopes of work, furnish written approvals when necessary, enforce cellular leases held by the Owner, as well as general coordination and communication related to the ongoing tank asset management and tank maintenance.

PART 2: SERVICES

2.01 PAINTING AND OTHER SERVICES

All products related to washout services will be done in accordance with the above referenced sections of this specification:

SECTION 09850 STEEL TANK PAINTING

SECTION 09960 EXTERIOR TANK PAINTING

SECTION 09950 INTERIOR WATER CHAMBER PAINTING

SECTION 13900 CURING AND DISINFECTING

SECTION 13910 INTERIOR WASHOUT DISINFECTION

2.02 INSPECTION SERVICES

All inspections services will be overseen by a certified Association for Materials Protection and Performance (AMPP) Inspector. Annual visual condition assessment are part of the asset management program per Appendix B, Inspection and Maintenance Scope of Work. During the any Washout the Contractor shall also perform a visual condition assessment and subsequent written report which shall be overseen by the AMPP inspector.

Condition assessment related to the pre-construction and post-construction (or any changes thereof) of cellular equipment on the tanks, as well as construction drawing reviews will be conducted by the Contractor and will be the financial responsibility of the cellular equipment company. The Owner will act as a liaison and will direct cellular equipment providers to the designated contact of the Contractor for reviews, inspections, and repairs.

PART 3: EXECUTION

3.01 Contractor shall have, at minimum, an annual correspondence with the Owner regarding the Scope of Work to be completed that year, any recommendations from the previous condition assessment, and work to be completed

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APPENDIX A

NEW YORK STATE WAGE RATES

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APPENDIX B

INSPECTION AND MAINTENANCE MINIMUM SCOPE SUMMARY

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APPENDIX B
INSPECTION AND MAINTENANCE
MINIMUM SCOPE OF WORK

YEAR 1 (2024)

Tank Maintenance / Renovations

1. Exterior renovation of tank including full blasting, containment, and painting as outlined under SECTION 09960 Exterior Tank Painting.
2. Supply and install active mixing system with PAX PWM150 mixer.
3. Install 24" frost proof vent.
4. Modify overflow to provide air gap and screen to NY DEC/EPA compliance.
5. Interior renovation of tank including full blasting and painting as outlined under SECTION 09950 Interior Water Chamber Painting.
6. Add 36" shell manway for compliant access.
7. Caulk and seal tank base at foundation and shell junction.
8. Install ladder gate and safety climb system.
9. Installation of tank corral, per drawing on Appendix C

YEAR 2 (2025)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 3 (2026)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 4 (2027)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 5 (2028)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure Tank complies with all federal and state regulations.

YEAR 6 (2029)

Inspection Service, Washout, and Touchup

1. Washout, sediment removal, disinfect, and inspect the tank.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 7 (2030)**Inspection Service**

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure Tank complies with all federal and state regulations.

YEAR 8 (2031)**Inspection Service**

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 9 (2032)**Inspection Service**

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure Tank complies with all federal and state regulations.

YEAR 10 (2033)**Inspection Service**

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure Tank complies with all federal and state regulations.

YEAR 11 (2034)**Inspection Service, Washout, and Touchup**

1. Washout, sediment removal, disinfect, and inspect the tank.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 12 (2035)**Inspection Service**

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 13 (2036)**Exterior Renovation and Interior Touch-Up**

1. All exterior surfaces must be pressure washed with a minimum of 4,000 P.S.I. washer to remove any surface contamination.
2. All rusted areas must be Hand/Power tool cleaned per SSPC-SP2, SP3 cleaning methods.
3. All rusted or bare areas must be spot primed with a rust inhibitive metal primer.
4. One (1) full intermediate coat of a Tnemec compatible Series coating shall be applied to complete exterior surfaces (100%).
5. One (1) full finish coat of a Tnemec compatible Series coating shall be applied to complete exterior surfaces (100%).

6. Touch Up Interior Coatings as needed.

YEAR 14 (2037)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 15 (2038)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 16 (2039)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 17 (2040)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 18 (2041)

Inspection Service, Washout, and Touchup

1. Washout, sediment removal, disinfect, and inspect the tank.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 19 (2042)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.

YEAR 20 (2043)

Inspection Service

1. Engineering inspection and preventive maintenance.
2. Any needed repairs/touchup.
3. Provide emergency repair service.
4. Ensure tank complies with all federal and state regulations.
5. Maintain as per the Asset Management Program.
6. Evaluate interior condition and develop plan for future coating as needed

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APPENDIX C

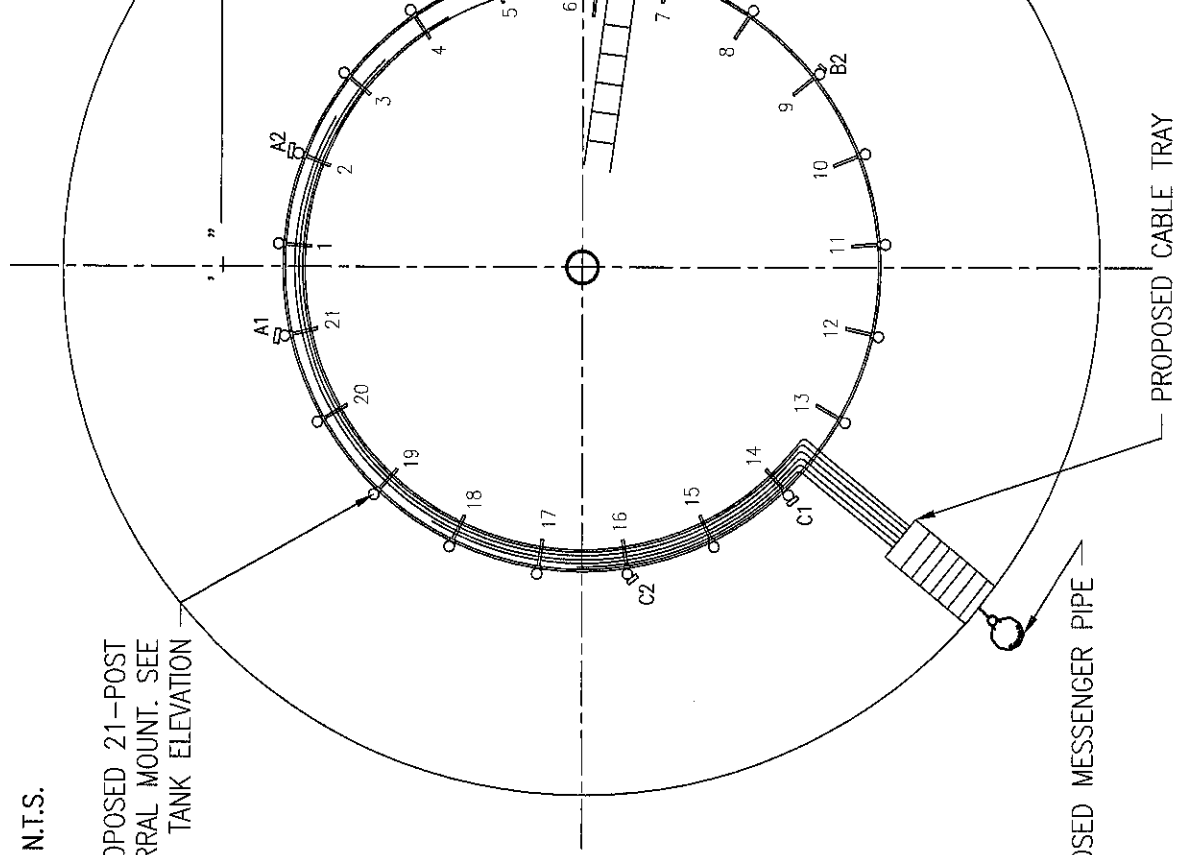
COMMUNICATIONS CORRAL SKETCH PLAN

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PLAN VIEW

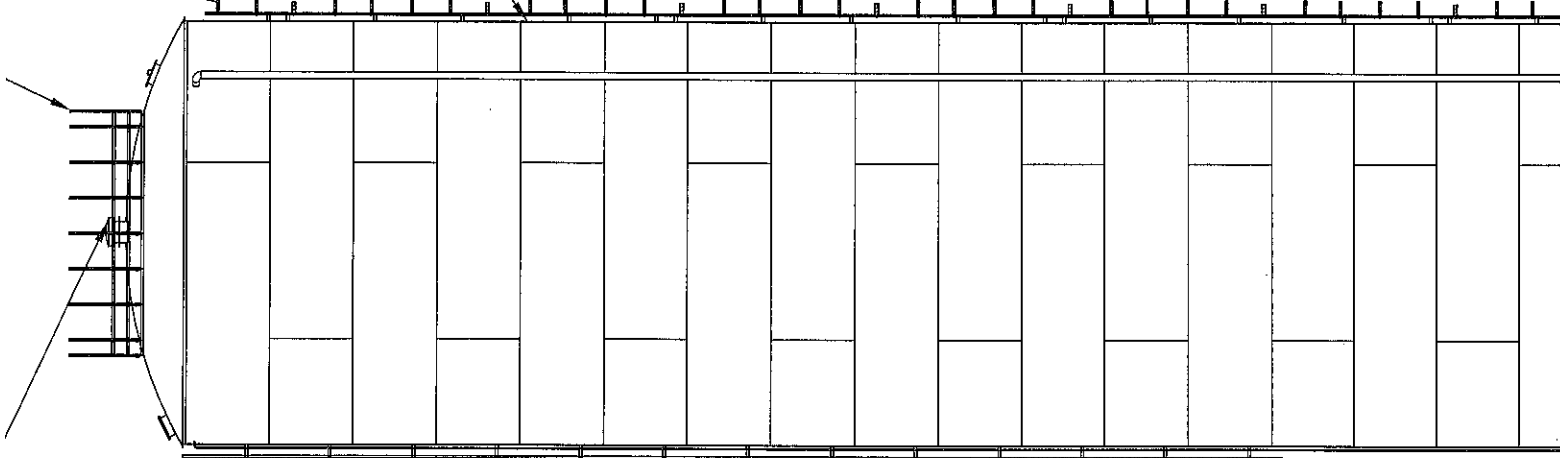
SCALE: N.T.S.

PROPOSED 21-POST
CORRAL MOUNT. SEE
TANK ELEVATION

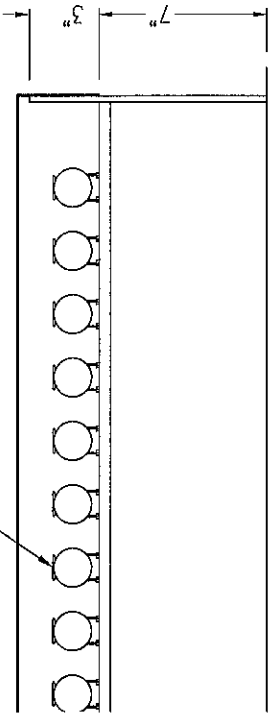


PROPOSED COAX
CABLE LAYOUT
SEE DETAIL (1/S4)

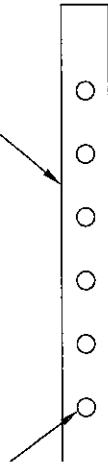
TANK SHELL



COAX CABLES ATTACHED WITH SNAP-IN HANGERS



CHANNEL

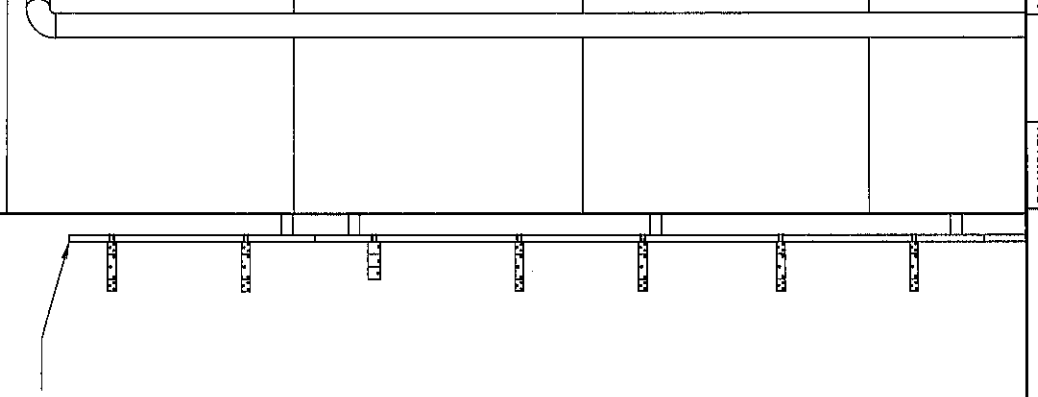
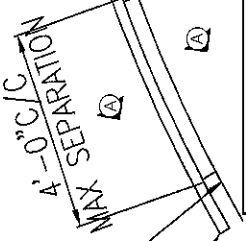


3'-0"

(2)-PROPOSED SELF-DRILLING, SELF-TAPPING SHEET METAL SCREWS AT CONNECTIONS

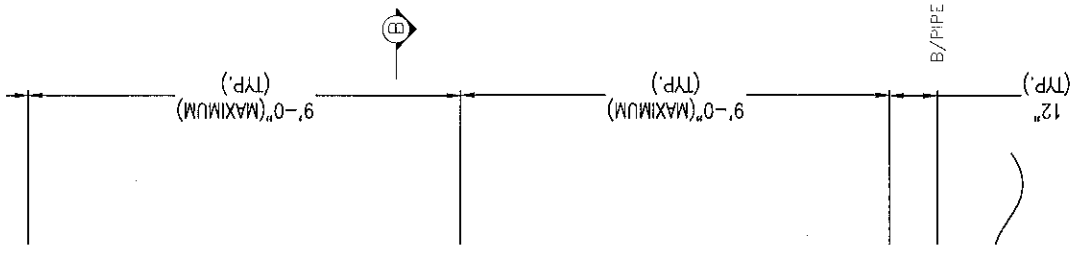
PROPOSED COAX CABLE TRAY. SEE DETAIL SHROUD COVER

PROPOSED MESSENGER PIPE HOISTING BRACKET

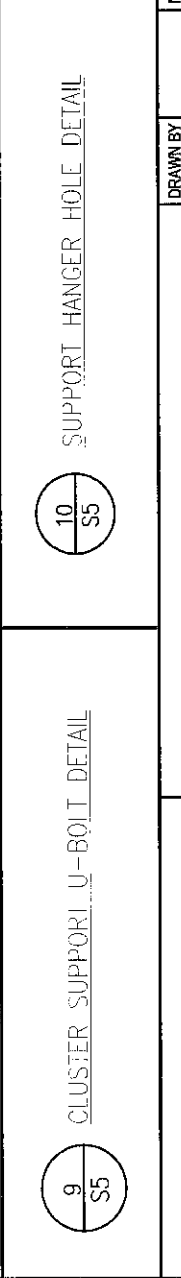
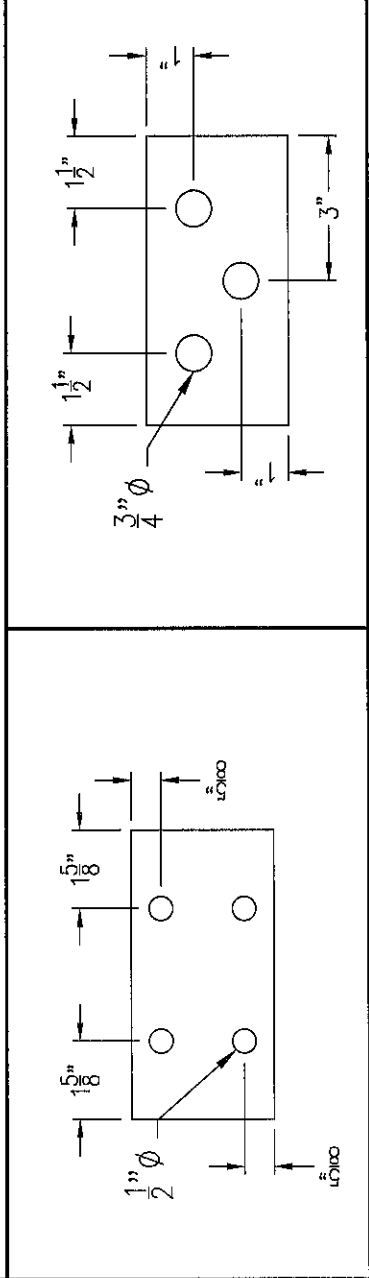
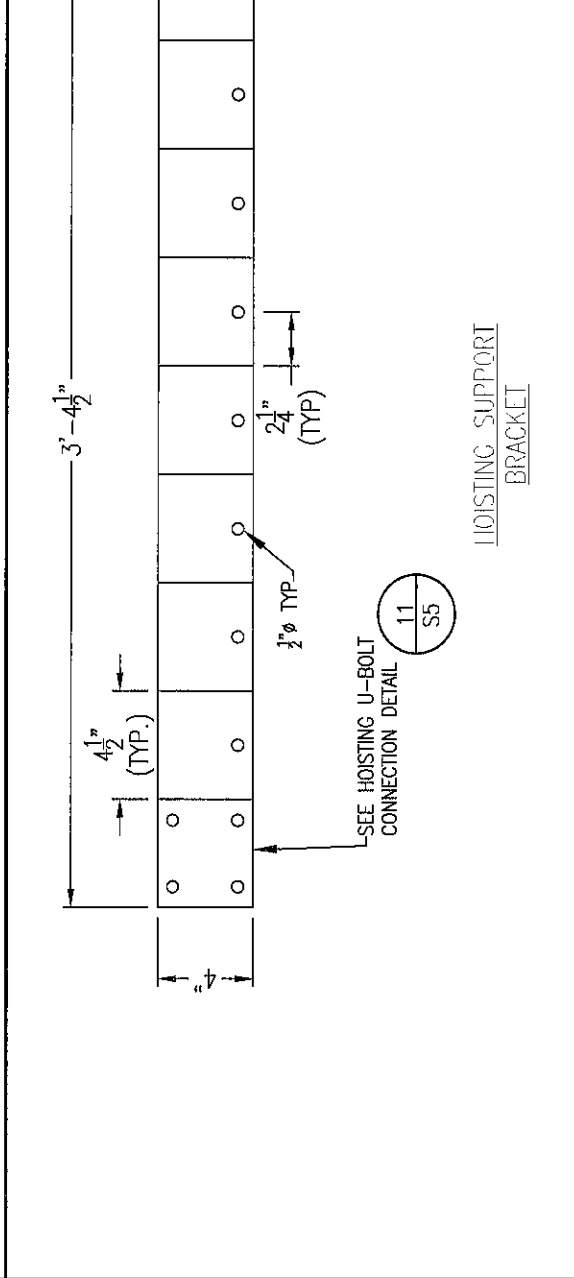
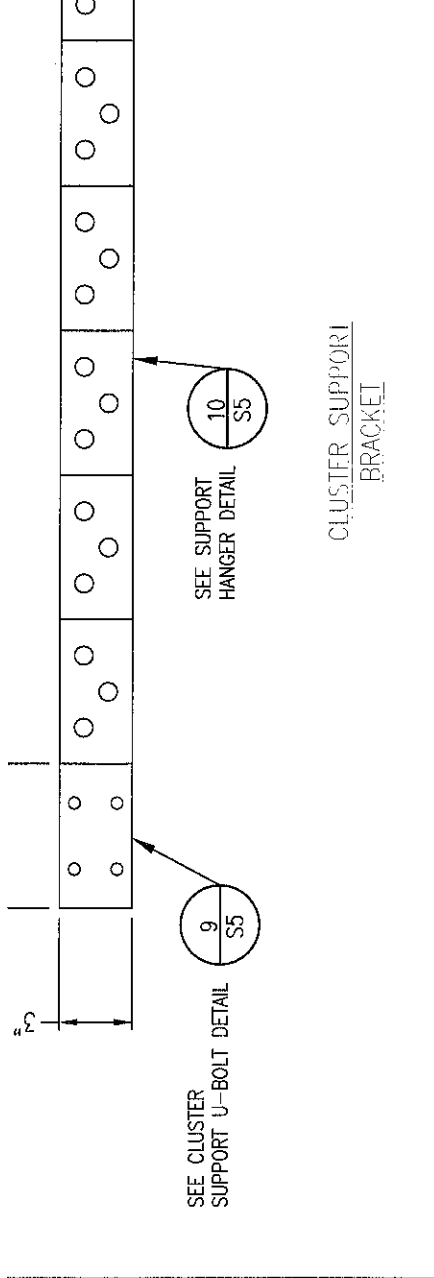


SIDE VIEW WITH COAX CABLE TRAY





COAX CABLE TANK SIDE
SUPPORT ELEVATION



APPENDIX D
TANK INSPECTION REPORTS

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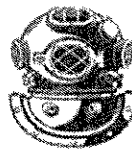
Village of Ballston Spa

The Johns Street Tank

750,000 Gallon Welded Steel

Date August 1, 2022

Prepared By:



Atlantic Underwater Services Inc.
2538 State Route 8
Lake Pleasant, NY 12108
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ROV And Drained AWWA Potable Water Storage Tank,
NFPA Fire Water Storage Tank, & Pipeline Inspections

Declaration

This report was composed from the visual observations made during an inspection of this water storage facility. Portions of this report may also contain material or other information obtained from conversations with the utility personnel, the tank information plate, drawings, reports, etc. The information contained herein is believed to be as true and accurate as could be obtained from these observations and the information and material supplied to us. No other assurance or warranty is expressed or implied. We assume no responsibility for any errors or omissions in this report.

The time frames stated in the recommendations are estimates based on our years of experience with other storage facilities and paint installations, and discussions with corrosion engineers, paint manufacturer's representatives, tank constructors, painting contractors, etc. Although these estimates can be considered to be fairly reliable, many different factors affect the condition of the water storage facility over time and we can not be held responsible for the accuracy of these estimates. Since the condition of the storage facility will change over time, the accuracy of the condition of the storage facility described in this report will decrease according to the amount of time that has elapsed since the date of the inspection. Should three (3) or more years have elapsed since this inspection, this report should be considered to be null and void and the storage facility should be reinspected to determine the current condition.

By:

Timothy L. Smith

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Tank Information

The height to overflow is about:	90'
The tank height is about:	94'
The diameter of this tank is about:	37'
This tank was constructed at the present location in:	1979
Tank has interior columns:	NO
Tank has a cathodic protection system installed:	NO
Latest interior recoat was done in:	?
Latest exterior recoat was done in:	?
This tank was previously inspected:	NO

AWWA D100 Standard

IMPORTANT NOTE ABOUT AWWA STANDARDS:

Except in the states that have adopted these Standards as law, there is no regulatory or enforceable requirement that any or all of the AWWA Standards be followed or adhered to. Therefore, these Standards are to be used as a guideline only and are not to be construed or interpreted as a requirement and abiding by any of the requirements of these Standards are voluntary and not mandatory.

Item	Description	Yes	No	N/A
1.	This tank has two shell manholes located in the first ring, one of which is at least 24" in diameter:	X		
2.	An additional upper access hatch or the center vent is installed near the center of the tank roof which has a at least a 4" high tank riser and a door plate with flanged edges so that a ventilation fan can be installed:	X		
3.	The existing upper access hatch has at least a 4" high tank riser and a door plate with edges that extends down over the riser at least 2" and is at least 24" in diameter:	X		

OSHA Regulations

Item	Description	Yes	No	N/A
1.	Interior ladder has safety equipment that meets current OSHA standards:			X
2.	Interior ladders (if existing) meet 16" width requirement:			X
3.	Exterior ladder has protective cage safety equipment that is longer than 20' has balcony platforms with railings at maximum 20' intervals or has other safety equipment installed that meets current OSHA standards:		X	
4.	Exterior ladder meets 16" width requirement:	X		
5.	Tank has a sloped/domed roof with an existing ladder that extends from the sidewall/roof junction to near the center vent that has safety equipment that meets current OSHA standards:			X
6.	Cable fall protection systems installed on all ladders have a large enough diameter to meet current standards and use currently available cable climb devices:			
7.	The top edge height of all top rails, or equivalent guardrail system members, are 42 inches plus or minus 3 inches above the walking/working level, or when conditions warrant, the height of the top edge exceeds the 45-inch height, provided the guardrail system meets all other criteria of this paragraph as required by Section 1926.502(b)(1):	X		
8.	Utility owns and uses full body personal fall arrest systems and has eliminated the use of body belts after January 1, 1998 as per Section 1926.502(d):			X
9.	On tanks with sloped or domed roofs, the roof access hatch is installed in close proximity to the roof access ladder that this hatch can be safely accessed:	X		

OSHA Regulations (Cont.)

Item	Description	Yes	No	N/A
10.	Midrails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members are installed between the top edge of the guardrail system and the walking/working surface when there is no wall or parapet wall at least 21 inches high. Midrails, if used, are installed at a height midway between the top edge of the guardrail system and the walking/working level. Screens and mesh, if used, extend from the top rail to the walking/working level and along the entire opening between top rail supports. Intermediate members such as balusters, additional midrails, or architectural panels, if used between posts, are installed such that there are no openings in the guardrail system that are more than 19 inches wide:	X		
11.	On tanks with a fall protection system installed, it is possible to remain connected, or to transfer between ladders or onto the roof with the use of a lanyard and safely access all parts of this tank:	X		
12.	On tanks with sloped or domed roofs which previously had a movable ladder which is supported by a bar or bracket that encircles the center vent and is not otherwise fastened to the roof by standoffs, which was unsafe and that this ladder could come loose and fall to the ground at any time, this ladder has been replaced or modified by being permanently fastened to the tank roof with standoffs:			X
13.	Saf-T-Climb bars initially installed on the ladders have been replaced with safety cables due to the multiple recalls of these climbing brackets and the hazards of using these devices:		X	

Water Stratification

The display on the bottom left of the inspection video and interior photos displays the water temperature. Water stratification is the difference in water temperature throughout your tank and can affect the water quality.

Warmer water rises and colder water sinks. Therefore, in warmer weather if you input colder water from your pumps, this new water will stay on the bottom and be withdrawn when the pumps stop and not mix with the warmer water already in the tank. As the disinfectant level in the older water drops to nothing over time it is susceptible to bacteriological contamination. Also, as the water sits in your tank without being withdrawn, the existing disinfectant can form an amount of byproducts that exceed EPA standards, putting your system in violation.

Description	Yes	No
The temperature of the water throughout the tank was close to being the same temperature with a few degrees or less in difference:	X	

If this answer is “No”, there is a problem with water stratification and water quality in your tank that should be addressed to prevent your system from having water contamination or being in violation of disinfectant byproduct levels.

Structural Condition

Component	Description	O.K.	Problem	N/A
Concrete Base	Concrete base or ring supporting sidewalls is not excessively deteriorated:	X		
Seal Between Concrete Base & Tank Bottom	Seal between base and tank bottom is adequate:		X	
Concrete Base	The concrete base or ring of groundlevel tank or standpipe extends at least 6" above the ground:	X		
Steel Ring	Steel ring to hold gravel base is not displaced:			X
Erosion/Settling	Ground at foundation or ring is not eroded or settled:	X		
Anchor Bolts	These bolts are not excessively corroded, all nuts are tight and not missing, and the structural integrity is not affected:	X		
Exterior Ladders	Structurally sound, safe for use, not excessively bent, dented, twisted, damaged, or excessively corroded:	X		
Ladder Guards	The lowermost exterior ladder has a ladder guard installed to prevent access to the tank roof and tank interior:		X	
Air Vent	Not excessively damaged, corroded, or deteriorated:	X		
Overflow Pipe	Structurally sound, not bent, twisted, deformed, otherwise damaged, excessively corroded:	X		
Leaks	No indications of leakage observed:	X		

Structural Condition (Cont.)

Component	Description	O.K.	Problem	N/A
Level Indicator	Functional, float not flooded, guide wires not broken, wire to flag not broken, bottom bracket not excessive corroded or loose, float and flag move freely and are not binding:			X
Handrails, Balconies	Balcony catwalk and all railings structurally sound and safe for use, not excessively corroded, level, smooth, not excessively bent, dented, twisted, or otherwise damaged:	X		
Interior Ladder	Not excessively bent, dented, twisted, damaged, corroded:			X
Cathodic Protection System	System components are in proper position and configuration and system is functional and adequately protecting the submerged metal from corrosion:			X
Interior Sidewall Welds	Interior welds not excessively corroded, deteriorated:			X
Interior Sidewall Plate Surfaces	Interior plate surfaces not excessively corroded or deteriorated:		X	
Bottom Welds	Bottom welds not excessively corroded, deteriorated:	X		
Bottom Plate Surfaces	Bottom plate surfaces not excessively corroded or deteriorated:	X		
Bottom Plate Deflection	Bottom plates have not deflected or depressed 4" or more:	X		
Roof Interior Plates	Interior plate surfaces not excessively corroded or deteriorated:	X		
Roof Support Beams or Angles	Beams, angles, spider rods, not excessively bent or twisted not excessively corroded:			X

Structural Condition (Cont.)

Component	Description	O.K.	Problem	N/A
Roof Support Beams or Angles	Beams have not been welded to roof plates and plates are free to move across beams:			X
Roof Support Beams or Angles	Beams have not been caulked to roof plates and plates are free to move across beams:			X
Exterior Sidewall Welds	Exterior welds not excessively corroded, deteriorated:	X		
Exterior Sidewall Plate Surfaces	Exterior plate surfaces not excessively corroded or deteriorated:		X	
Roof Exterior Plates	Exterior plate surfaces not excessively corroded or deteriorated:	X		
Interior Support Column	Surfaces not excessively corroded or deteriorated:			X
Interior Support Column	Constructed out of pipe sections which have not been perforated by corrosion or damage and the pipe is not flooded:			X
Interior Support Column	Not bent, deformed, or damaged.			X
Interior Support Column	Bottom of column is not fastened to the floor and has angles or floor standoffs to prevent the bottom of the column from horizontal movement:			X
Roof Railings	Railings are installed along the tank edge that extend at least 6' in both directions from the top of the exterior ladder or stairs to prevent falls from the tank roof:	X		
Roof Railings	Railings are installed along the tank roof near or toward the edge that extend completely around the roof circumference to prevent falls from the tank roof:			X

Sanitary Condition

Component	Description	O.K.	Problem	N/A
Perimeter Fence	Has barbed wire on the top, fence and barbed wire are not damaged or deteriorated, has adequate number of "No Trespassing" signs:		X	
Gates	Are not damaged and can be opened:	X		
Locks	Perimeter gate have locks:	X		
Overflow screen, flap, size	Is adequately screened or flap opens and closes and pipe is large enough:		X	
Vent Screen Material	Screen is metal, not damaged, not excessively corroded, or missing:	X		
Access hatch	Has no excessive corrosion, is not deteriorated or bent, structurally sound:	X		
Access Hatch Lock	Upper access hatch adequately locked:	X		
Evidence of Foreign Matter	No debris laying on tank bottom:	X		
Vandalism	No graffiti, litter, trash, or damage:	X		
Silt Stop	Silt stop is not missing or displaced	X		
Water Visibility	Visibility in water is at least 10':	X		

Sediment:

Average Sediment Depth:	Less than ½"	Less than 1":	1" to 5"	5" to 10" or more
	X			

Tank Coating Condition

Component	Description			
Interior Steel Coating Condition	Material appears to be:	epoxy		
	Coating failure & corrosion:	< 1-5%		
	Bubbling of coating:	< 1%		

Component	Description			
Exterior Steel Coating Condition	Material appears to be:	epoxy		
	Coating failure & corrosion:	< 1-5%		

Exterior Paint Adhesion Test

If there is no insulation on the tank exterior, and there is some question as to whether or not the existing tank exterior paint system will adhere well enough to have another paint system applied on top of it, which would also encapsulate a previous paint system with lead primer material, an exterior protective coating adhesion test by a Tape Adhesion Test meeting the requirements of ASTM D 3359-87 (Method A, Method B, or both) was done as part of this inspection and the result of this test is indicated below. If the coating is still in good enough condition that the result would have been 5A, and no test was taken, then the result would be listed as 5A.

If the paint thickness was under 5 mils, a 2 mm cross hatch test was done that meets the requirements of Method B. If the paint thickness was 5 mils or thicker, a cross cut test was done that meets the requirements of Method A. If the tank contained sections of protective coating that were thicker than 5 mils, and other sections that were under 5 mils in thickness, then both tests may have been done.

The result of the adhesion test was:	5A
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Ultrasonic Metal Thickness Measurements

If there is no insulation on the tank exterior, several ultrasonic metal thickness readings of the roof and sidewall steel plate thickness were taken. Because of the difficulty of locating sections that are not corroded to determine the actual original thickness, and the difficulty of locating the very bottom of the pits in the seriously corroded sections to determine the actual minimal thickness, the accuracy of these readings are subject to some question and interpretation.

The sidewall metal thickness measurements range from 0.512” to 0.498”.

Exterior Paint Thickness Measurements

If there is no insulation on the tank exterior, several measurements of the exterior protective coating dry film thickness were included with this inspection which were taken at various places around the tank exterior.

The measurements range from 3.2 mils to 17.2 mils.

Recommendations

General Recommendations

Item	Description	Yes	No	N/A
1.	Reinspect tank interior in 5 years:	X		
2.	Recoat the tank interior:	X		
3.	Recoat the tank exterior:	X		
4.	Reseal the junction of the exterior tank bottom or legs and riser pipe and concrete base:	X		
5.	Replace existing ladders:		X	
6.	Modify or add safety equipment to exterior ladder(s):		X	
7.	Modify or add safety equipment to interior ladder(s):			X
8.	Repair or replace roof vent:		X	
9.	Install, repair, or modify access control fence:	X		
10.	Modify drainage to expose 6" of base(s) and slope away from tank:	X		
11.	Modify or repair damaged or distorted balcony railing(s) or to meet current OSHA regulations:		X	

Note:	<p>Due to the excessive cost of installation, and maintenance, and yearly inspection fees, of cathodic protection systems, and that these systems do not protect the unsubmerged portion of the tank interior which is the first area of protective coating to fail, and that they only protect up to 20% of protective coating failure when they are functioning at their peak performance, and the limited functionality of these systems, it is recommended that a cathodic system not be installed in this tank. If a cathodic system exists, it should not be reinstalled or replaced whenever this tank is recoated.</p>
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Recommendations (Cont.)

Recommendations Unique and Specific To This Tank

Item	Description
1.	The items listed as NO in the AWWA Section, NO in the OSHA Section, PROBLEM in the STRUCTURAL and SANITARY Sections and listed as YES in the GENERAL RECOMMENDATIONS should be installed, modified, or repaired as indicated.
2.	The perimeter fence has been damaged and needs to have the barbed wire tightened across the top.
3.	The foundation should be pressure washed the remove weeds and dirt, and then the base should be resealed to prevent water damage under the tank.
4.	The exterior of the tank has significate rust spots forming. On the interior of the tank the upper 15-20' have significant rust caused from Ice and the installation of antennas. Budgeting for repainting of the tank should be considered within the next several years.
5.	The overflow pipe should have a 2' air gap. Currently the overflow goes into the ground with holes drilled into the pipe.
6.	The exterior of the tank should be pressure washed with a bleach water solution to remove dirt and algae.
7.	
8.	
9.	

Please contact us if you have any questions about our inspection or the recommendations or conclusions of this inspection report.

Photo Identification

Note: If you chose this option, you received a photo disc with digital copies of all the interior and exterior photos taken during the inspection, an electronic copy of this complete report including photos as an Adobe Portable Document File (.pdf) document, and the interior video as a Windows Media File (.wmv) that you can copy to and play on your computer. The photos printed in this report are a representative sample of all of the photos taken and you should review the entire collection on this disc.

PAGE NUMBER	DESCRIPTION
17-25	Lower Tank Exterior
26-29	Roof Exterior & Views From The Roof
30-36	Interior Sidewalls and Ceiling
37-38	Shell Manhole
39	Water Inlet / Outlet
40-41	Floor
42	Perimeter Fence

Cathodic Protection System

Pictures



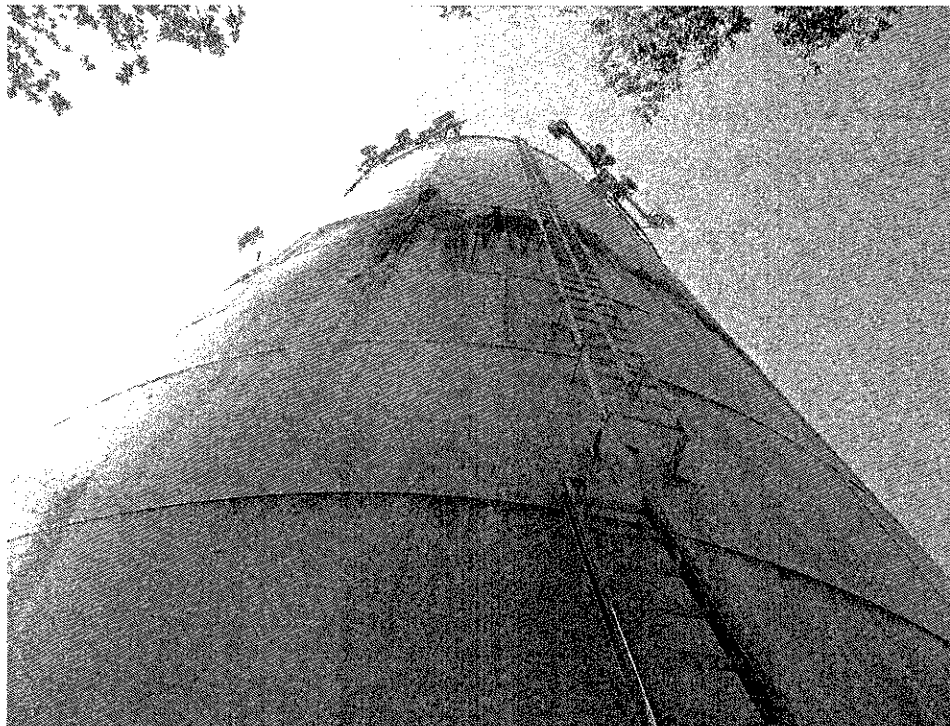
Pictures (Cont.)



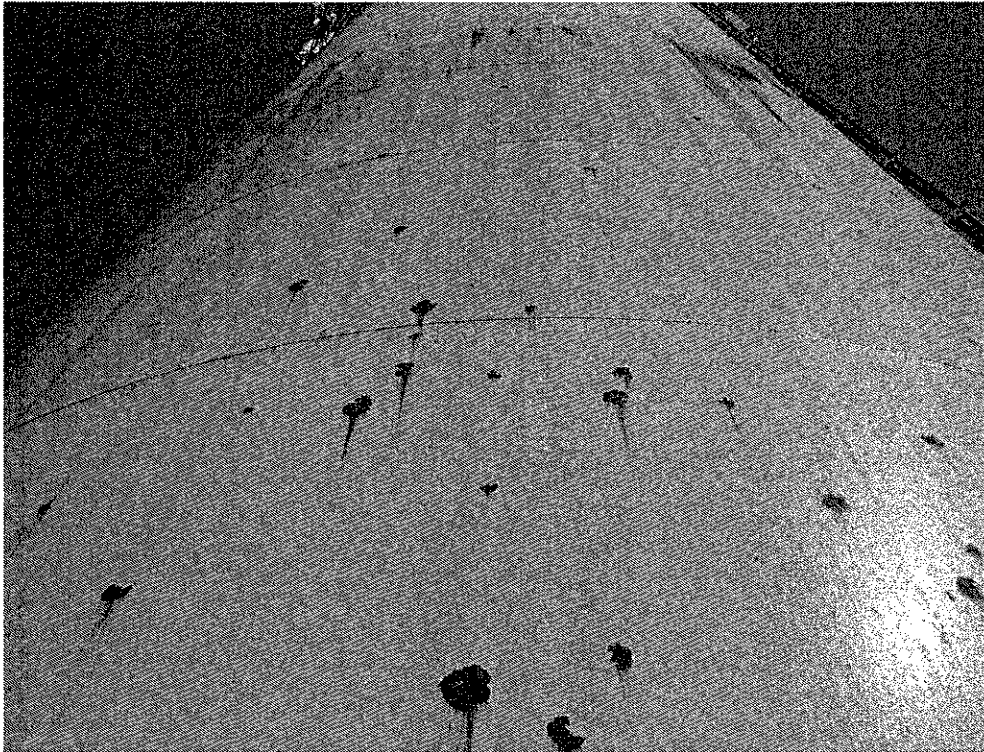
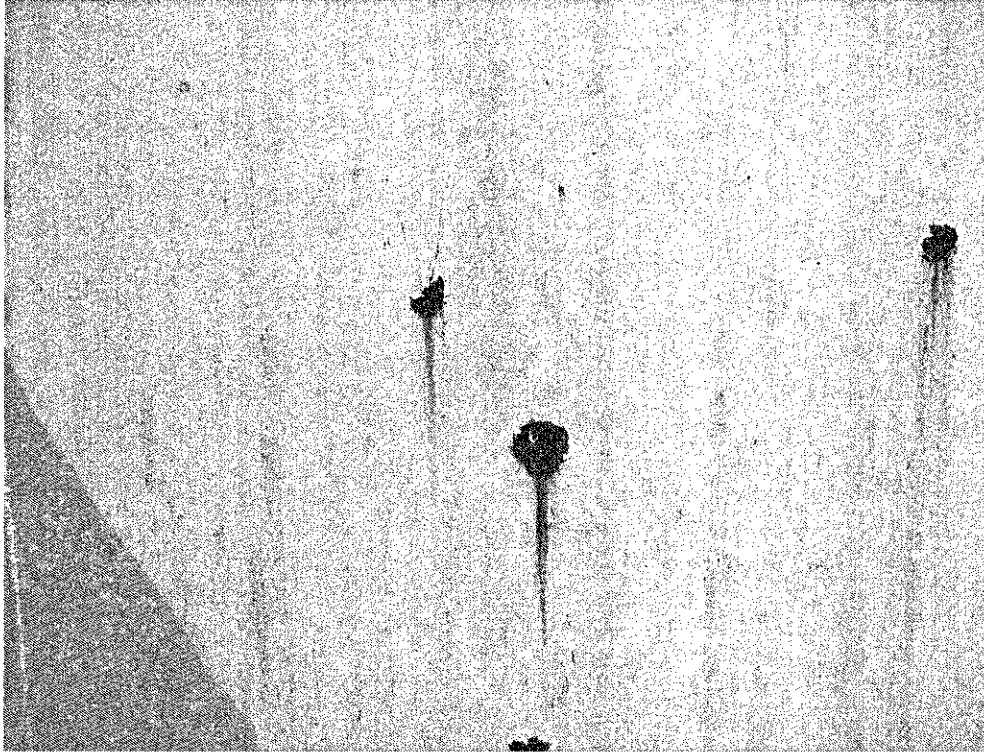
Pictures (Cont.)



Exterior Ladder

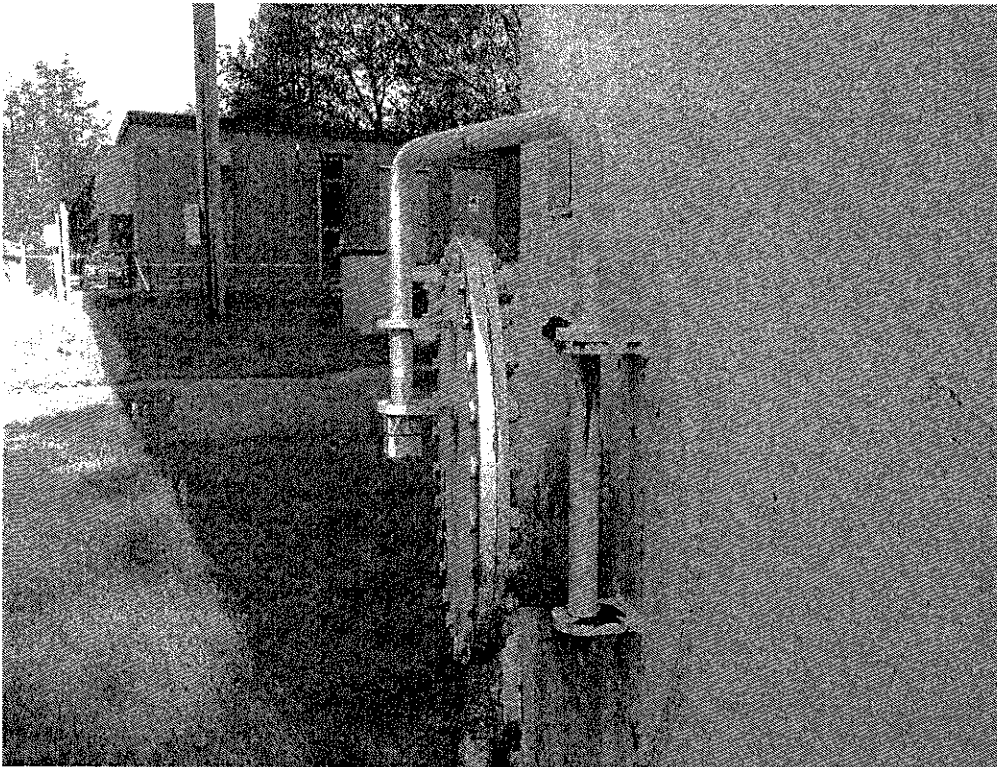
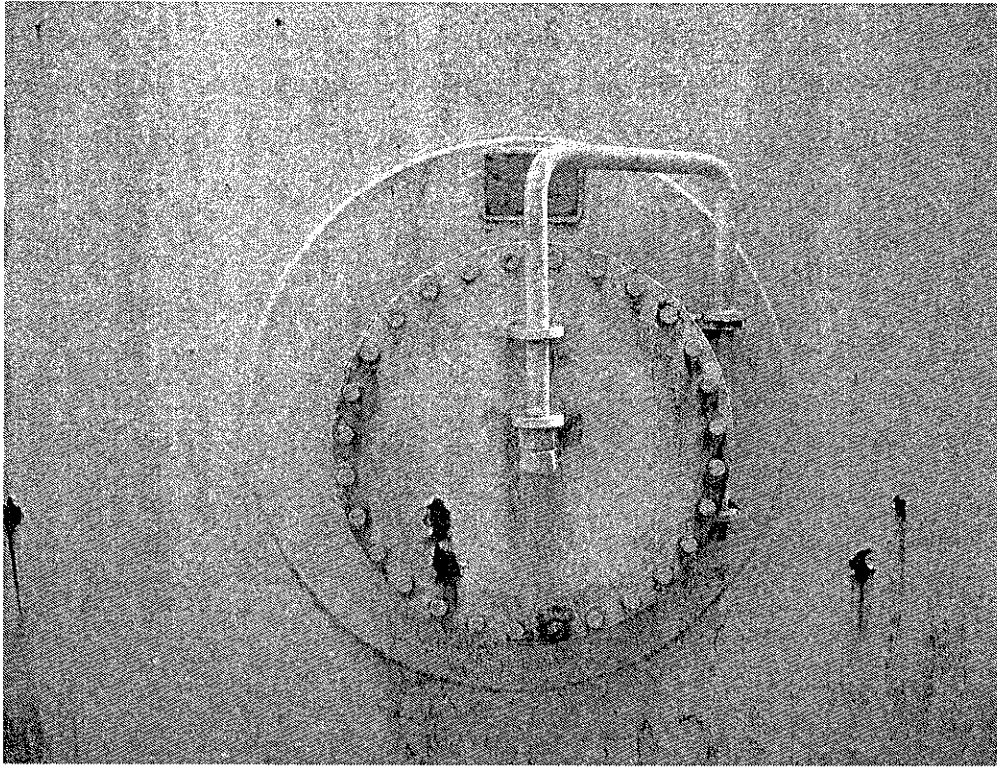


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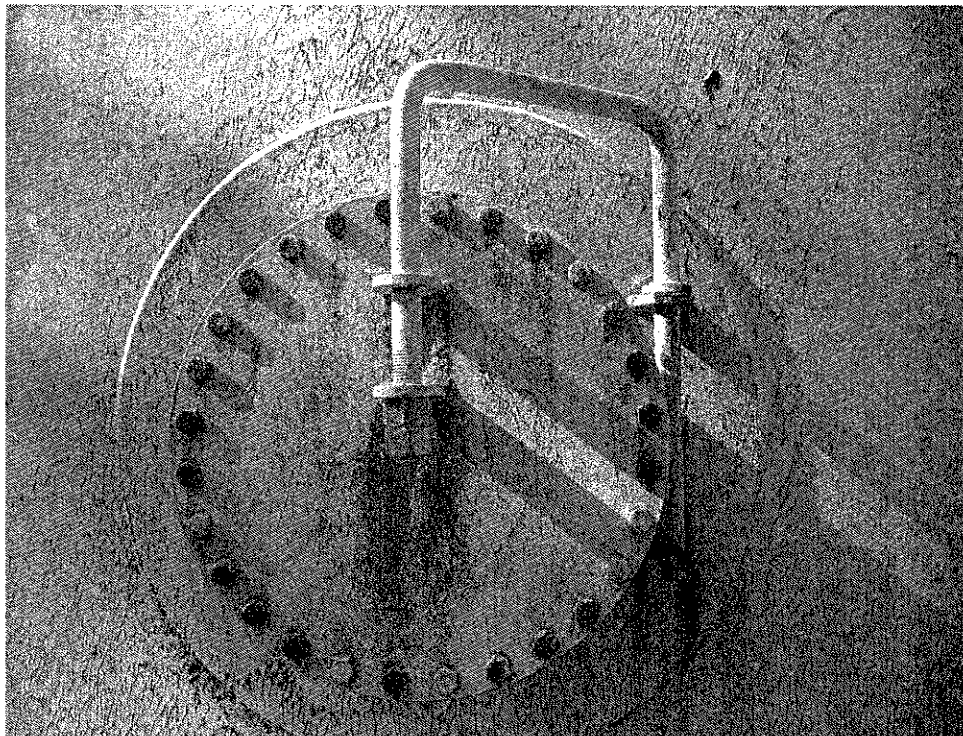
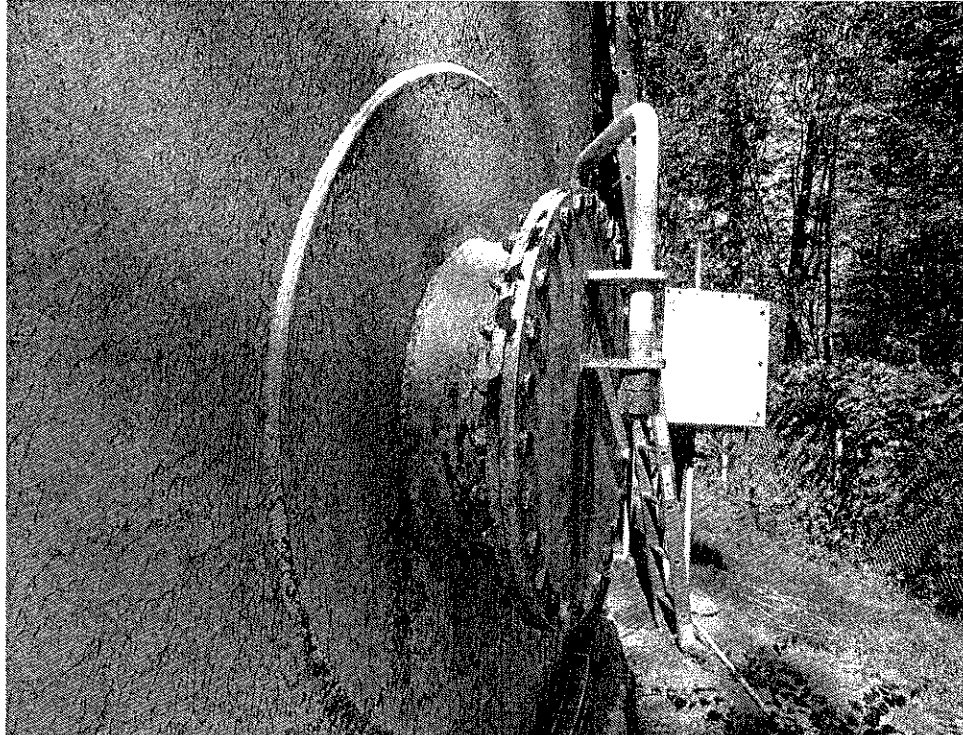


Pictures (Cont.)

Sideshell Access

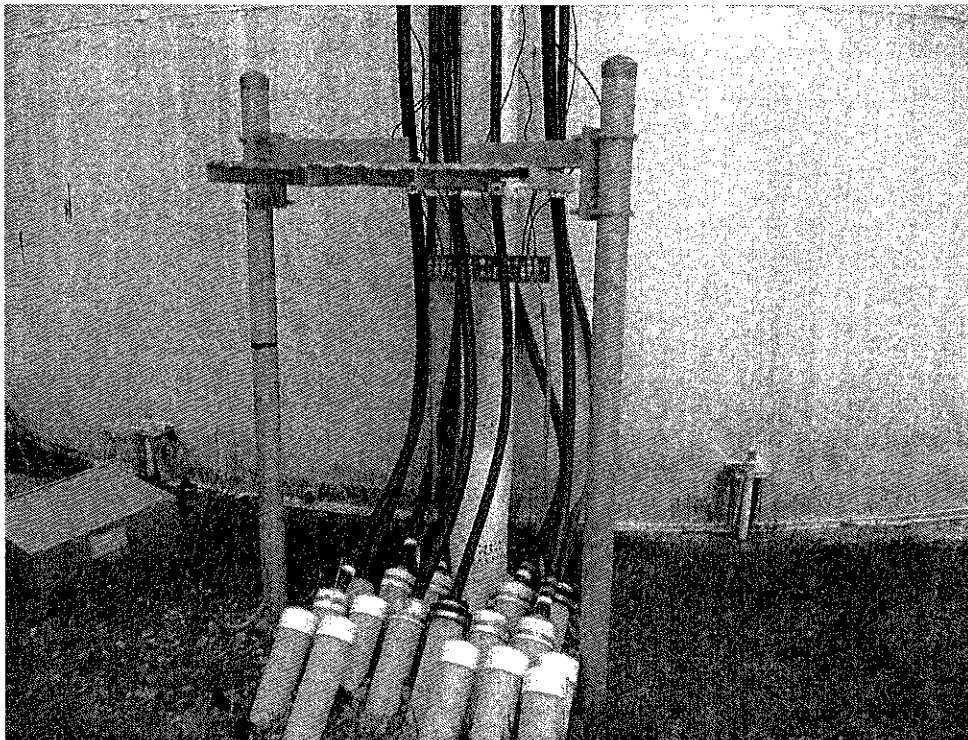


Pictures (Cont.)

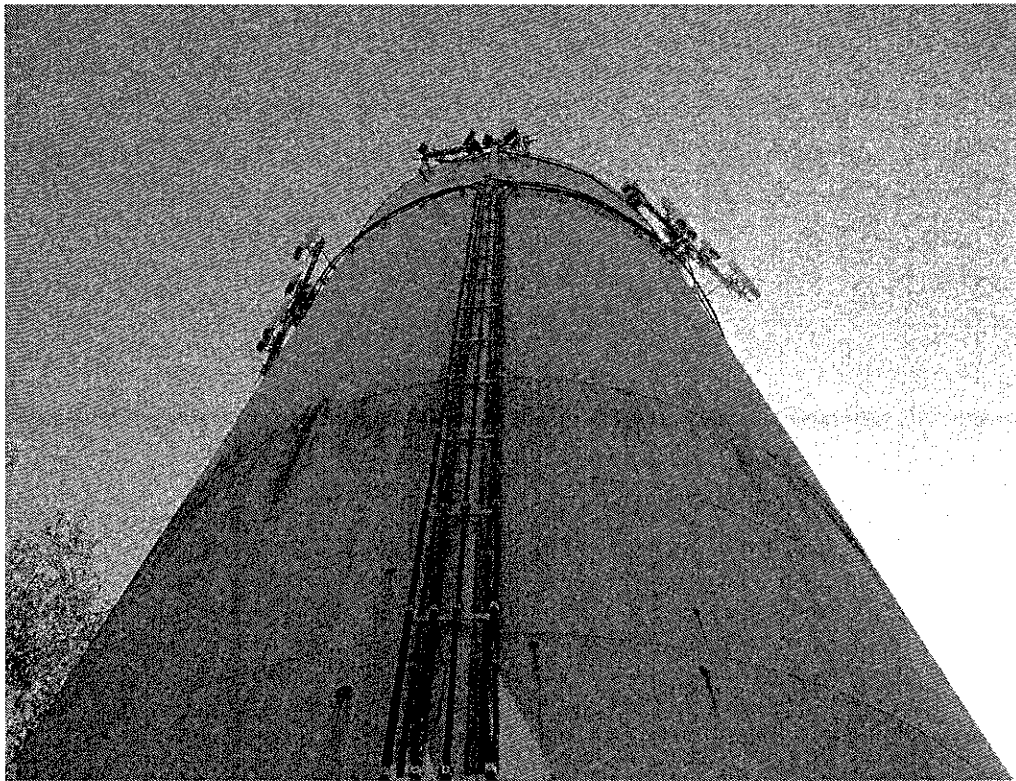
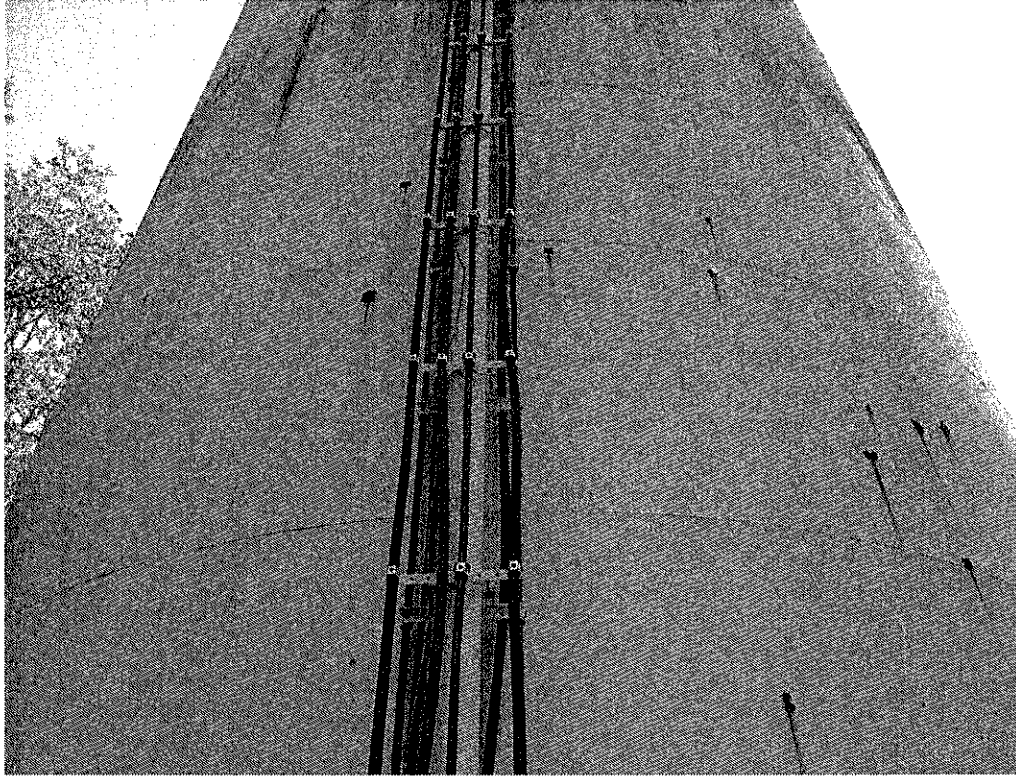


Pictures (Cont.)

Cable Tray

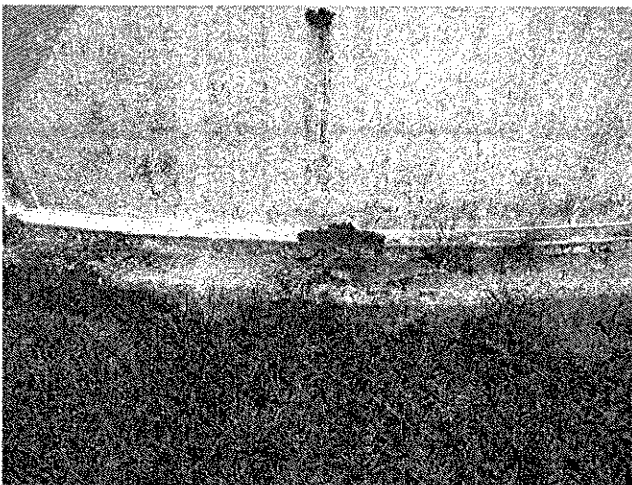
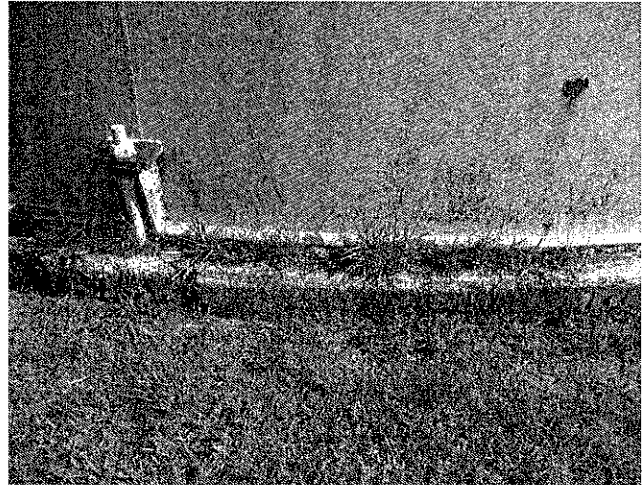
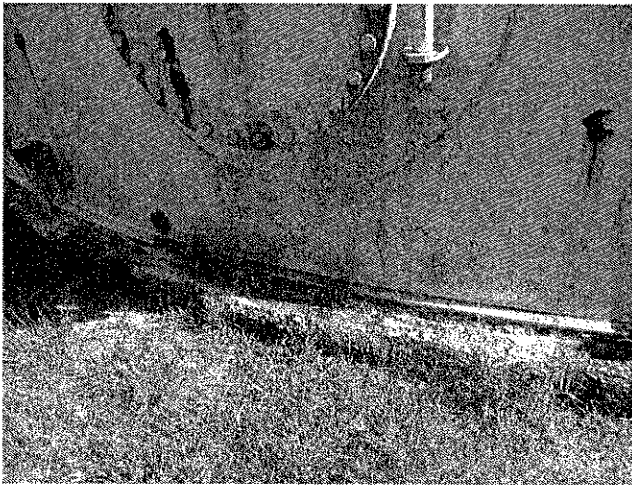
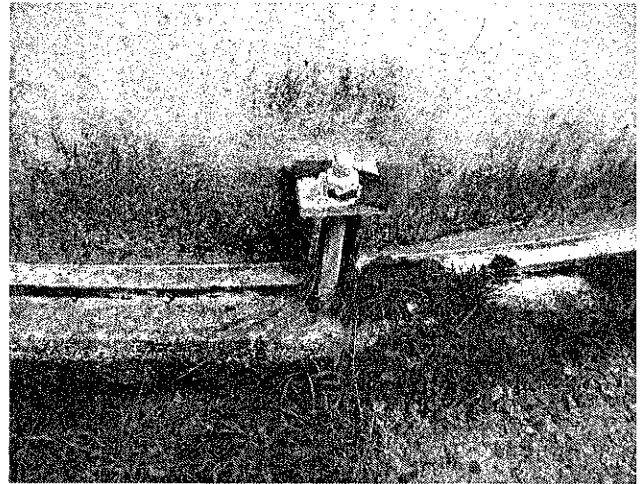
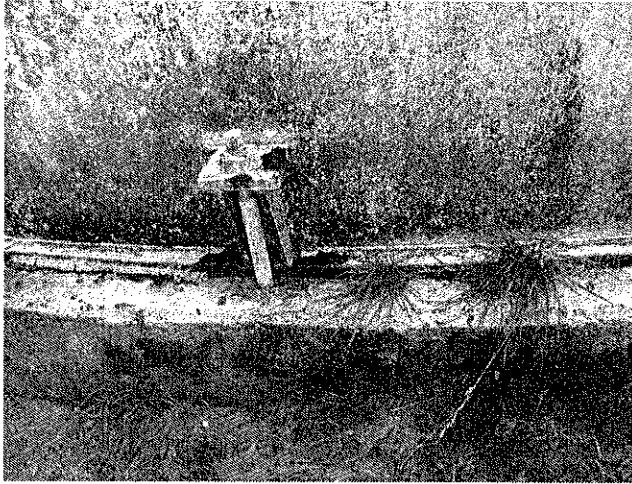


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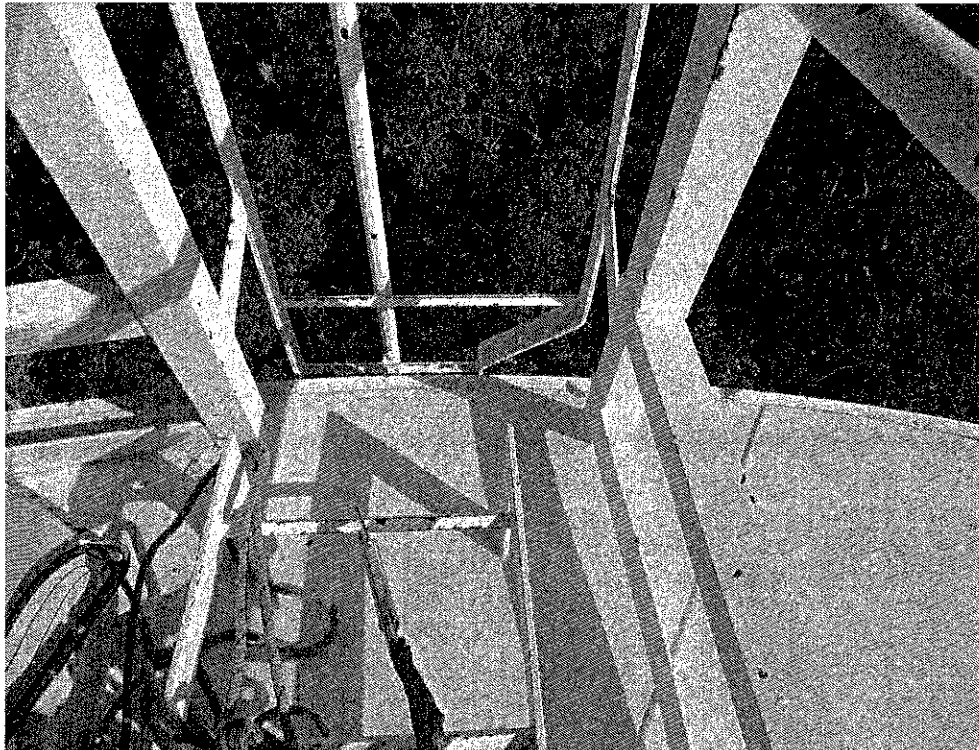


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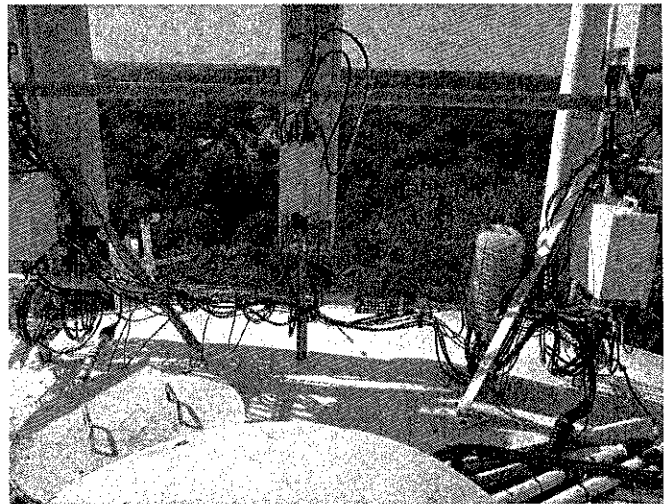
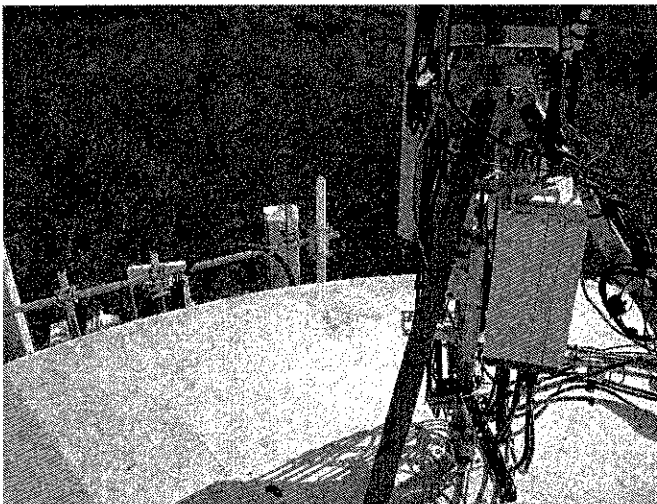
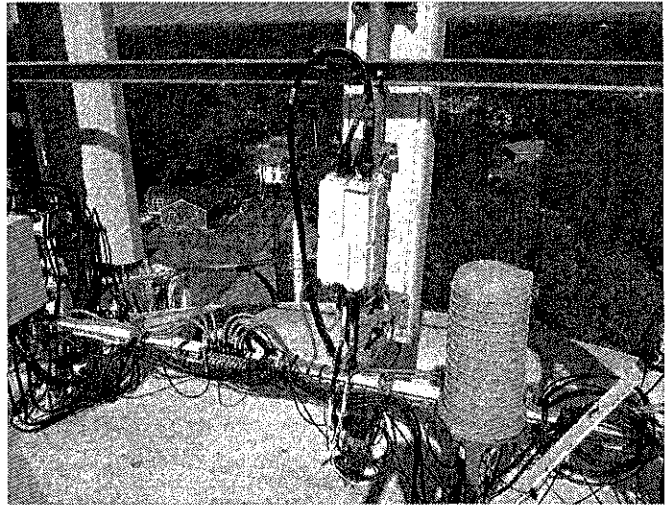
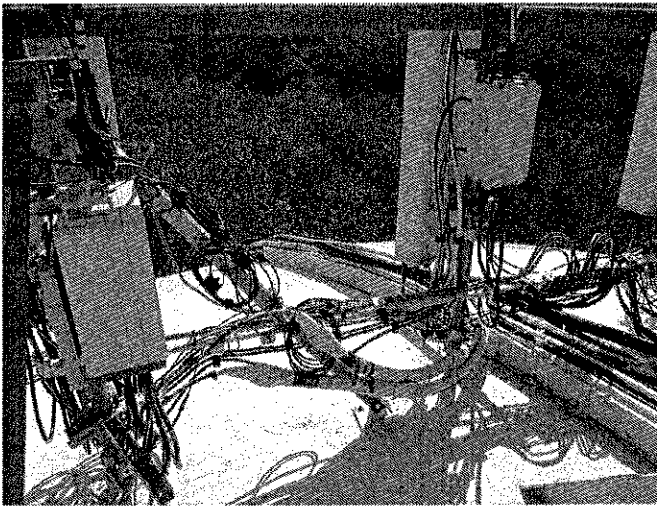
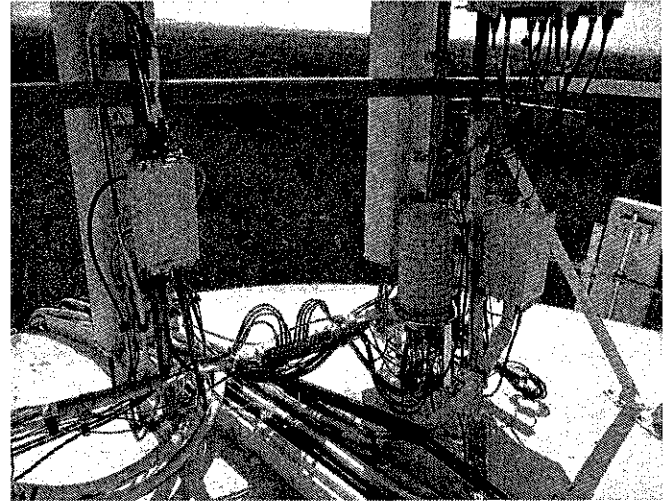
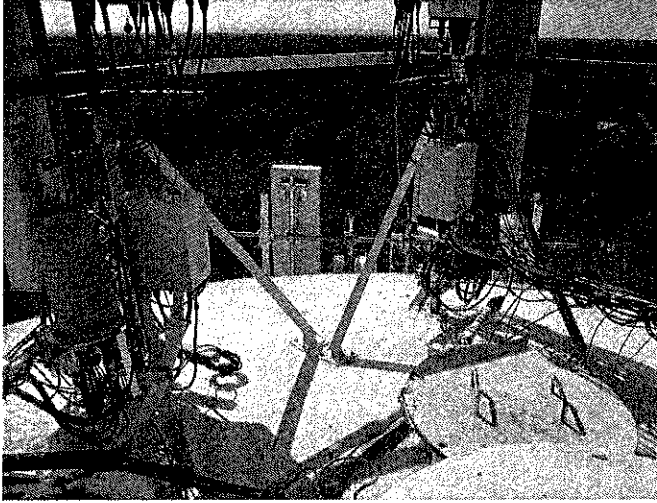
Foundation and Anchor Bolts



Pictures (Cont.)

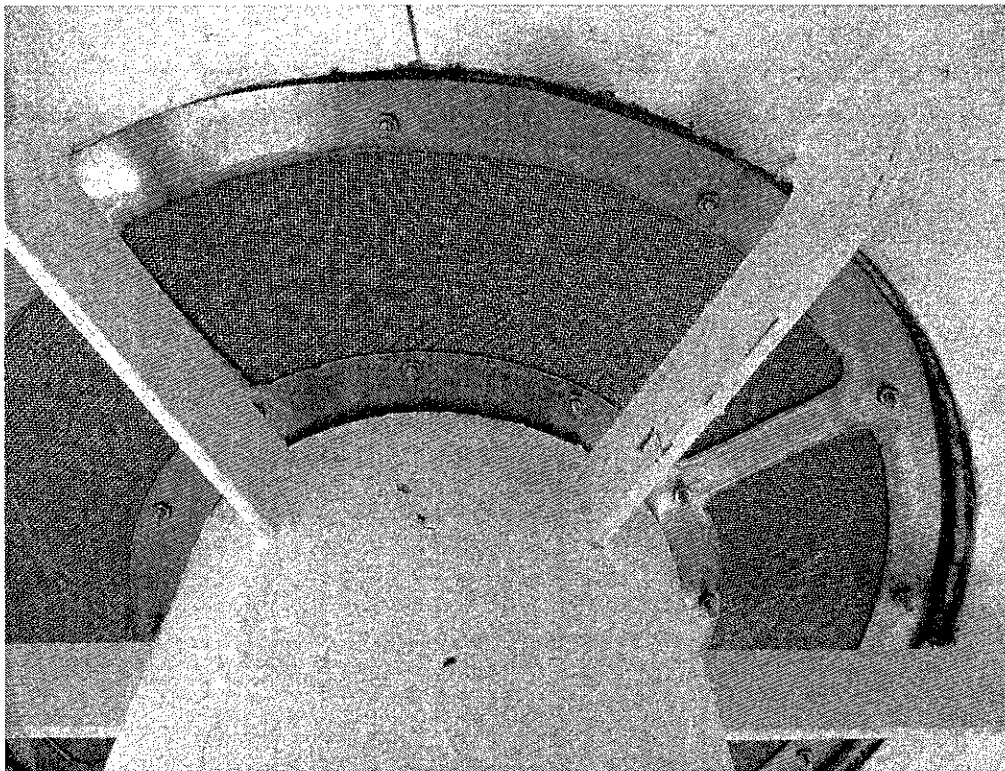
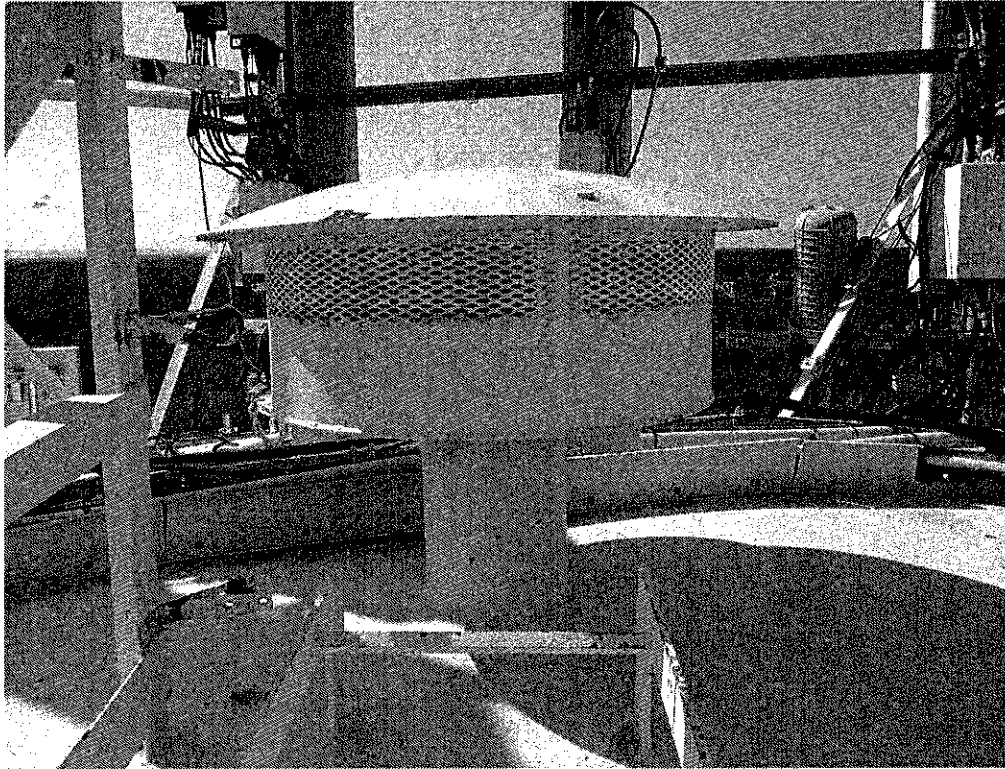


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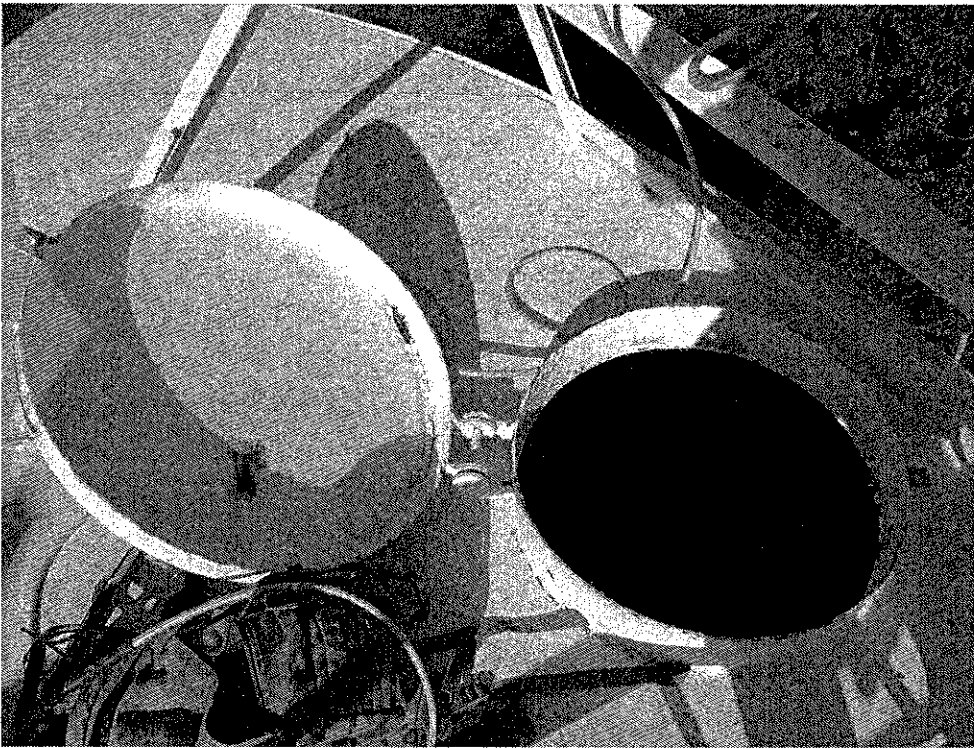
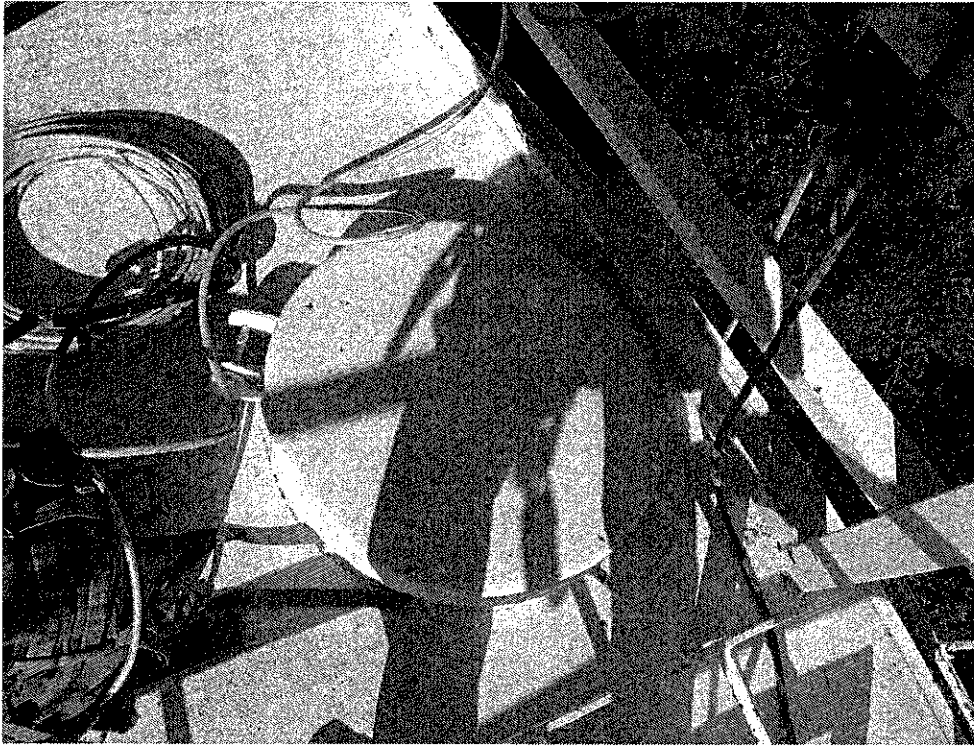
Pictures (Cont.)

Center Vent

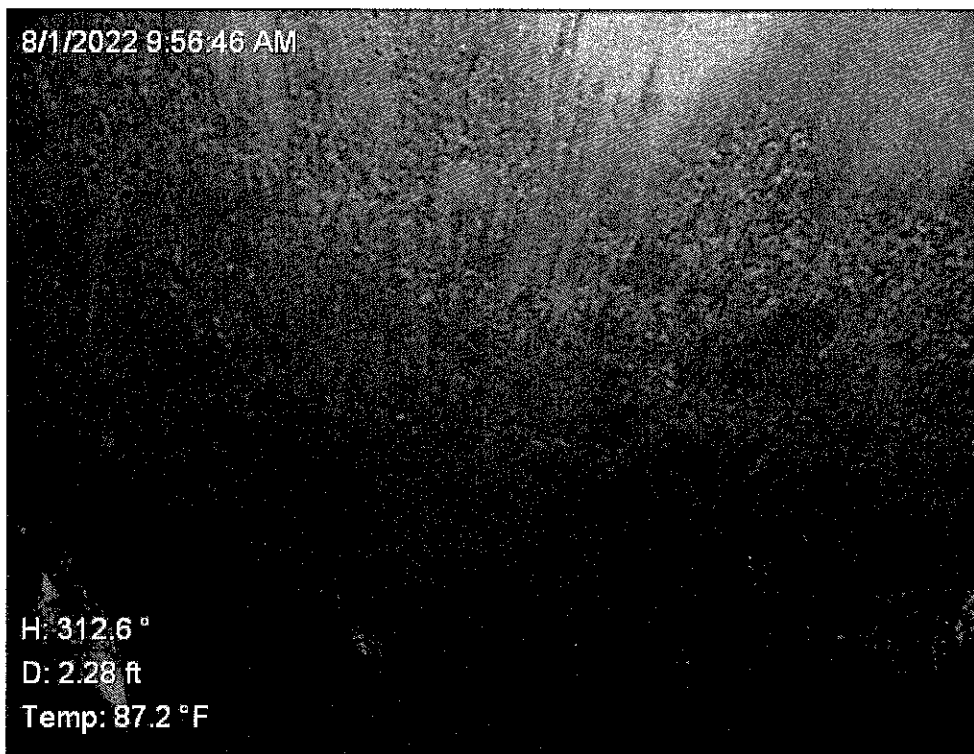


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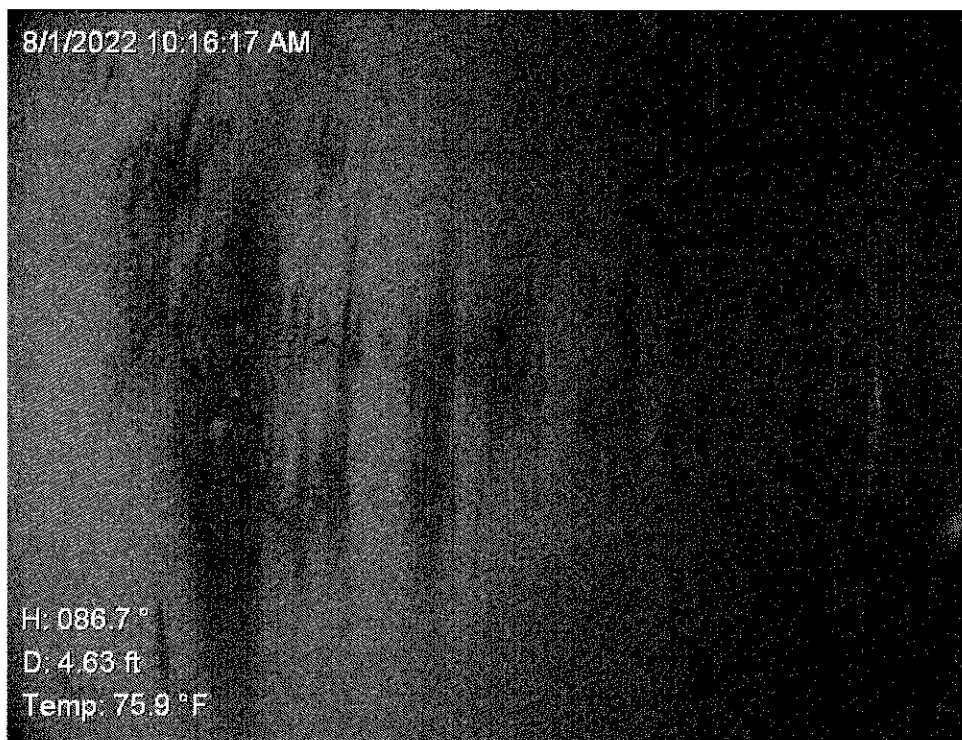
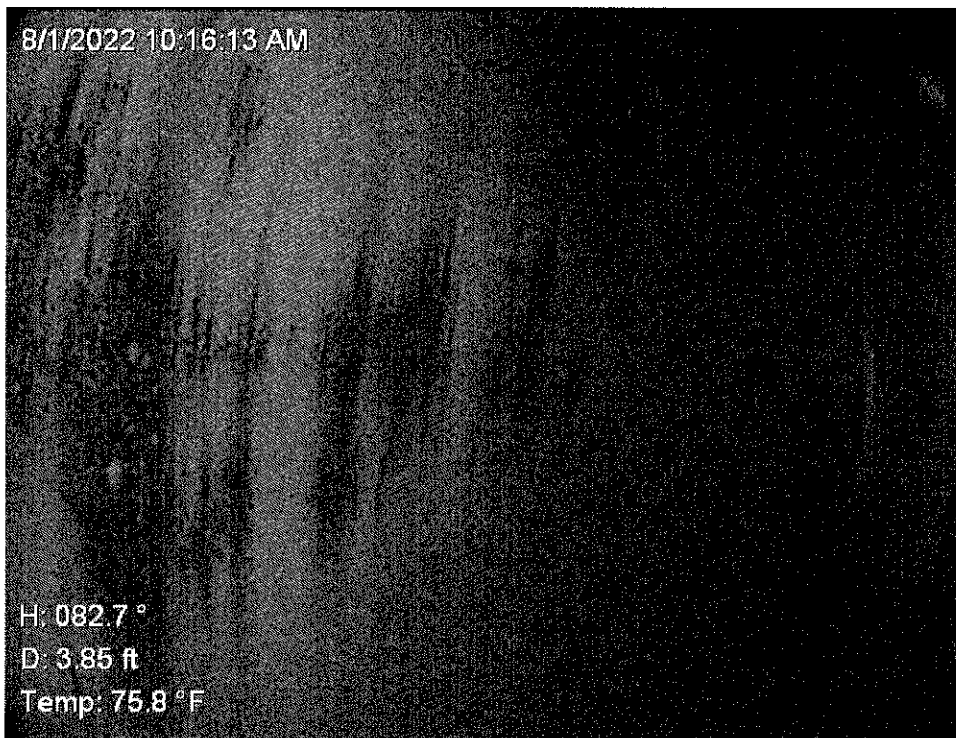
Access Hatch



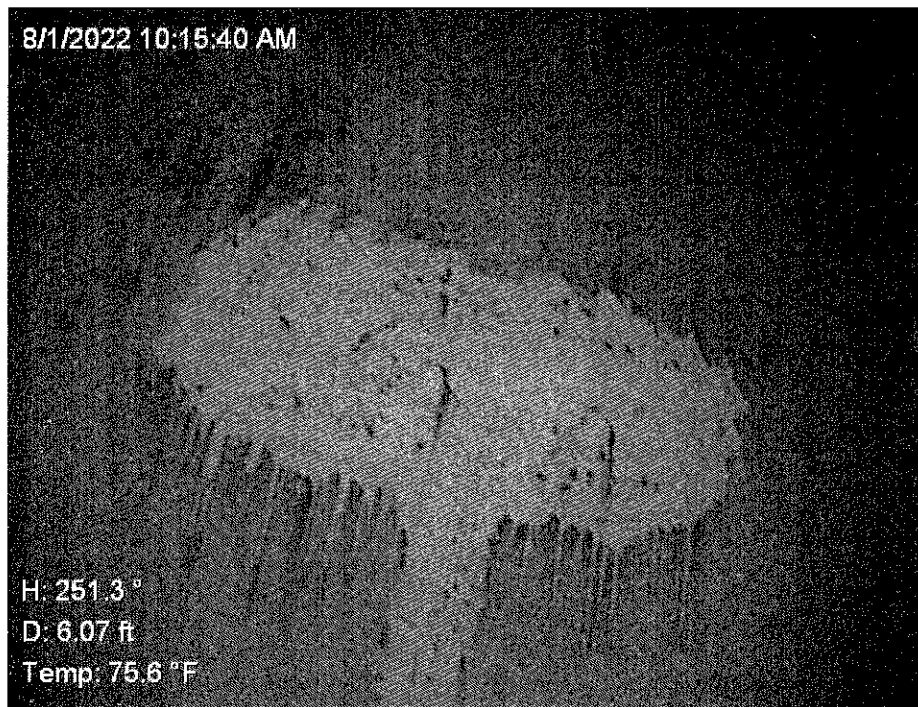
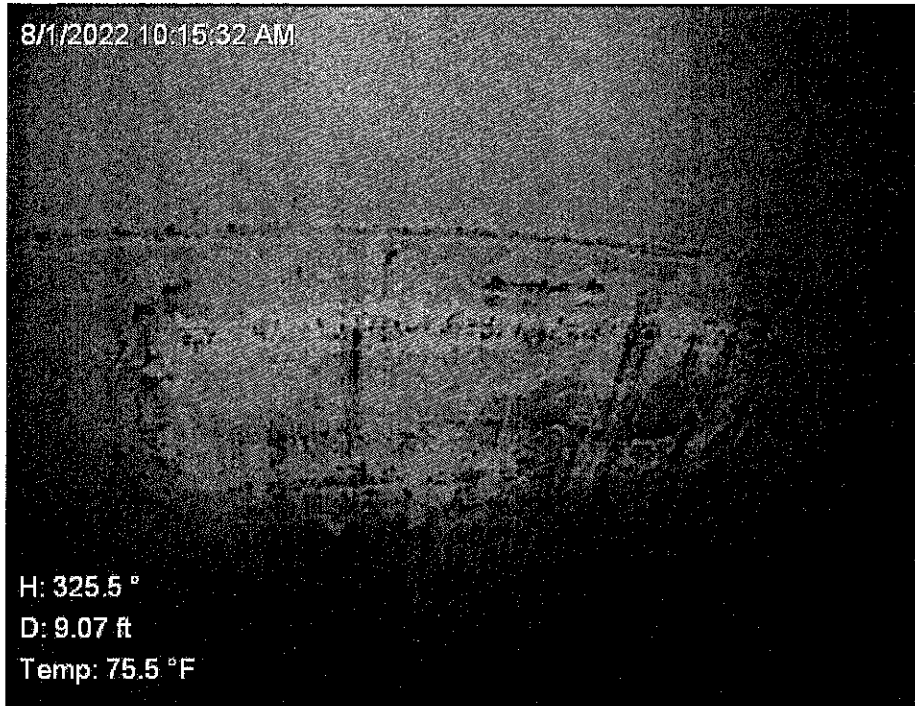
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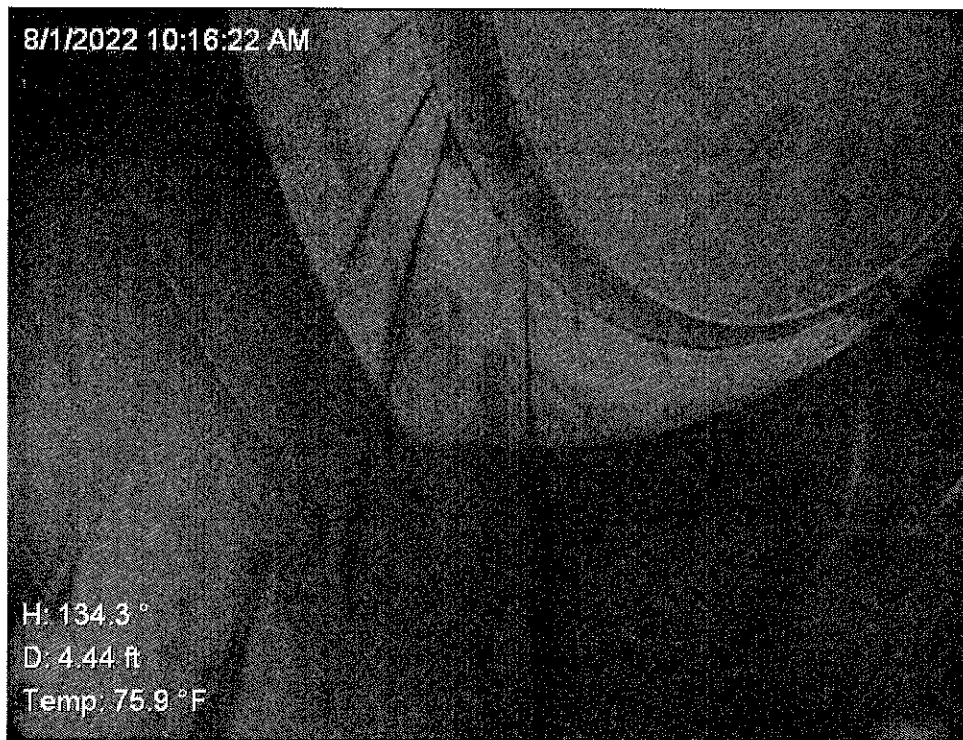
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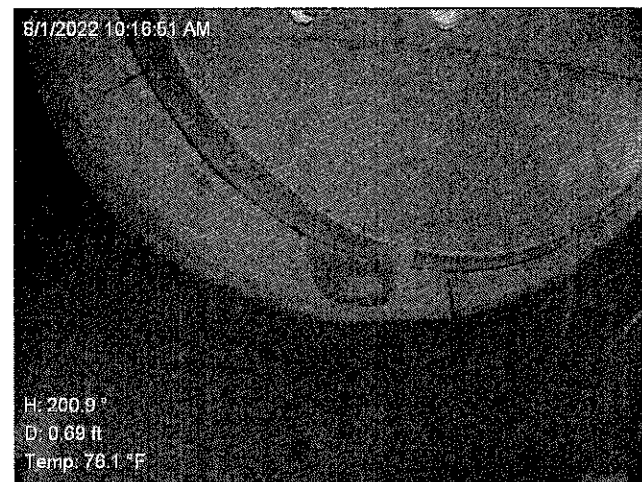
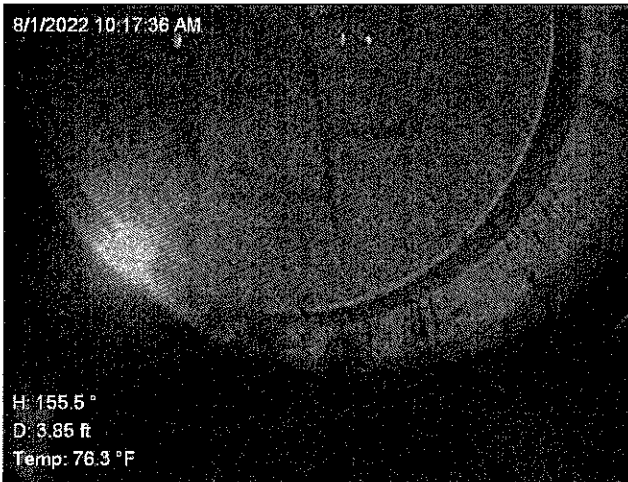
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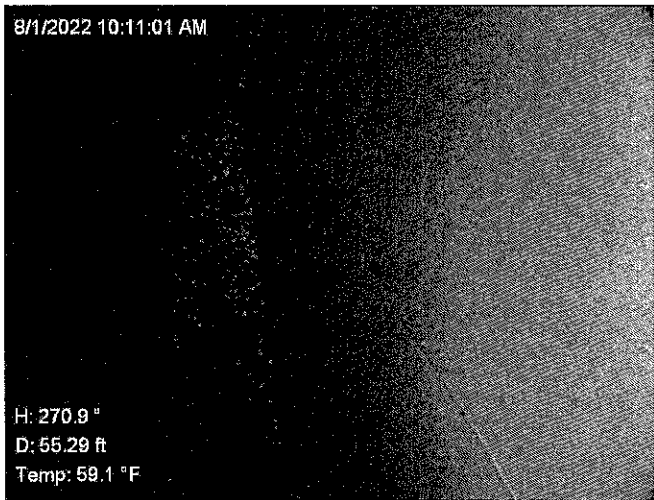
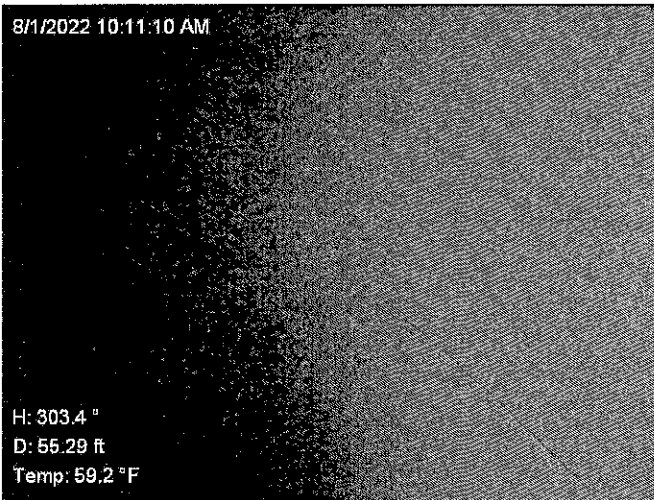
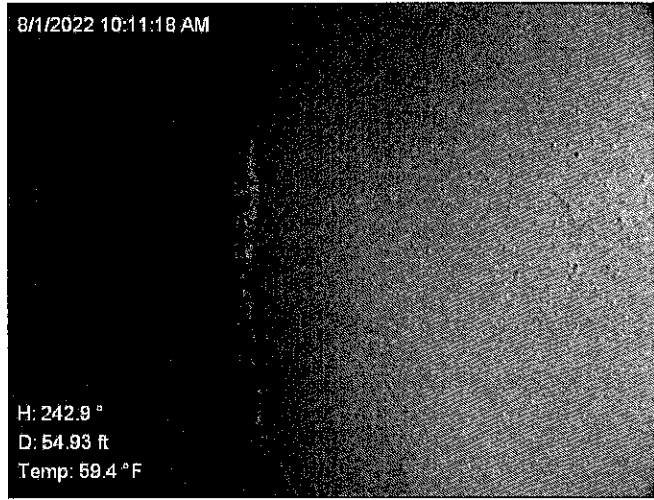
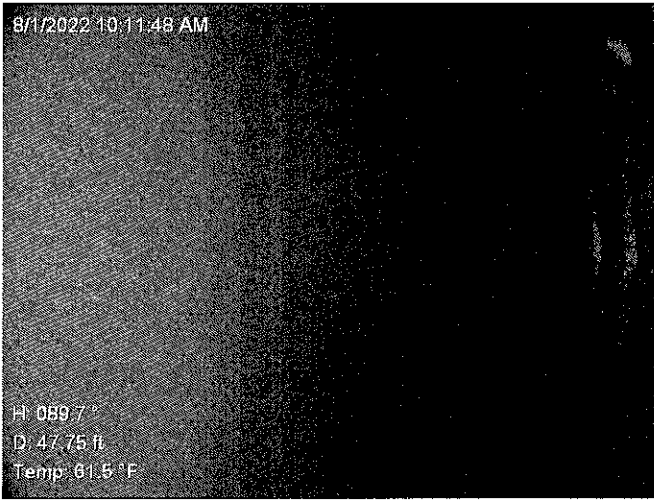
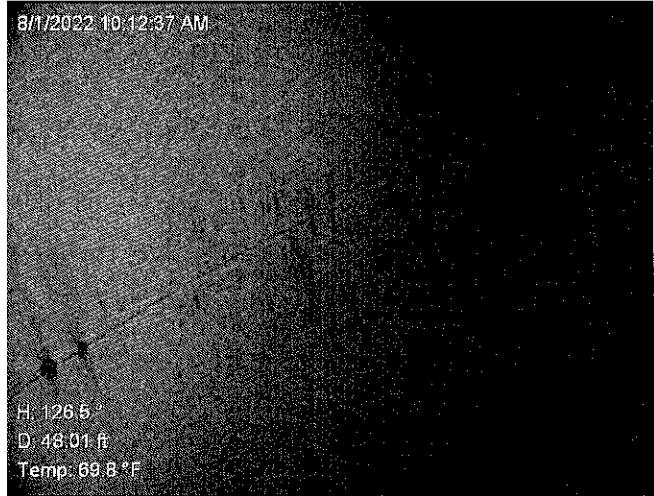
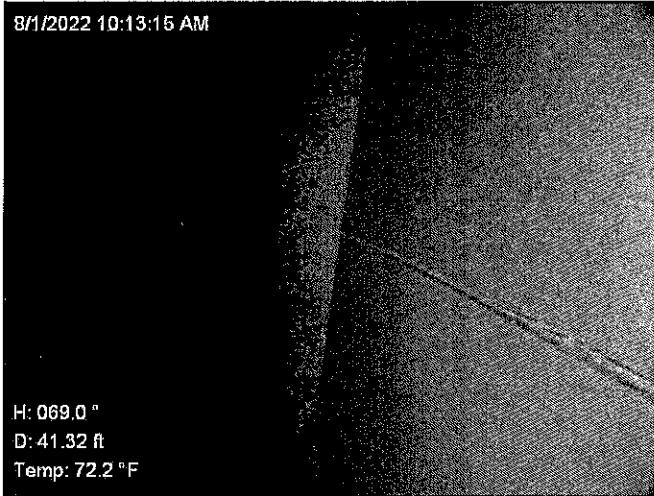
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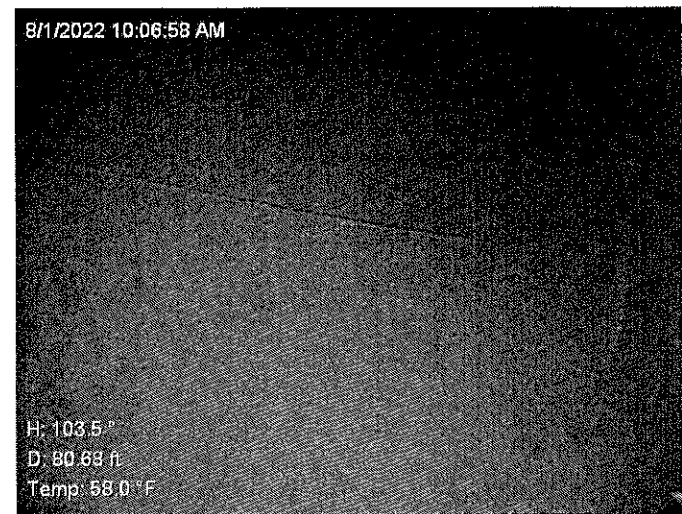
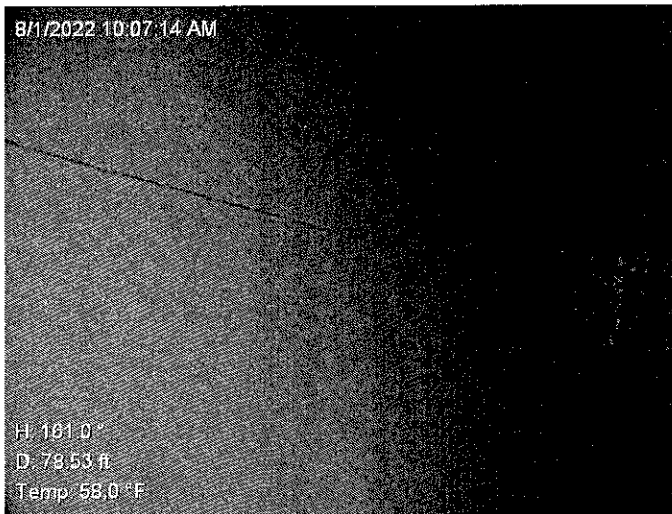
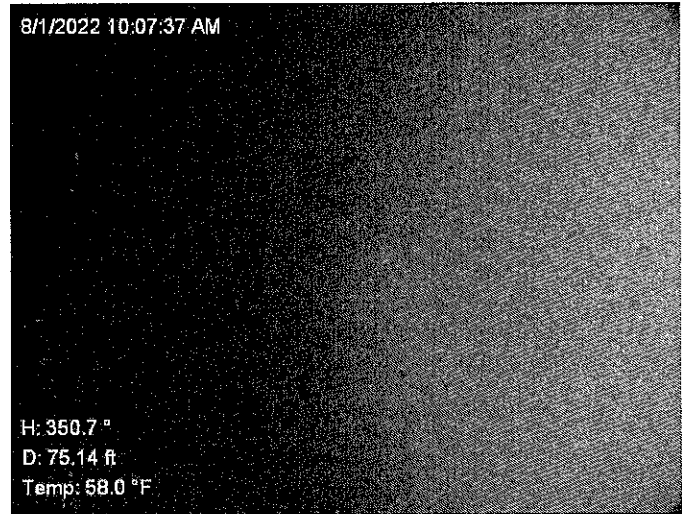
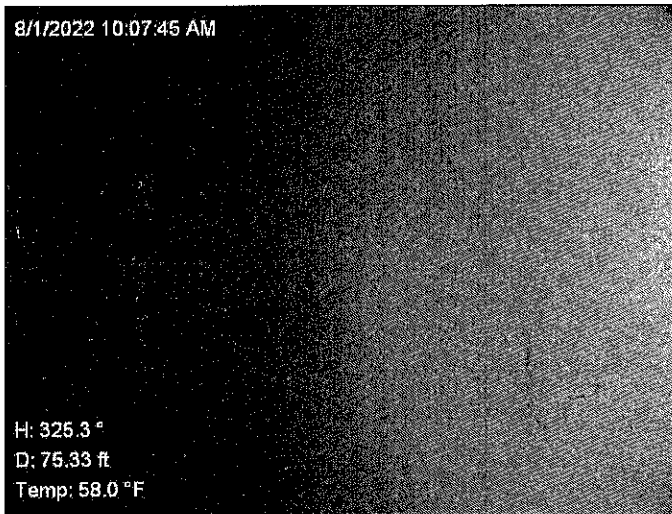
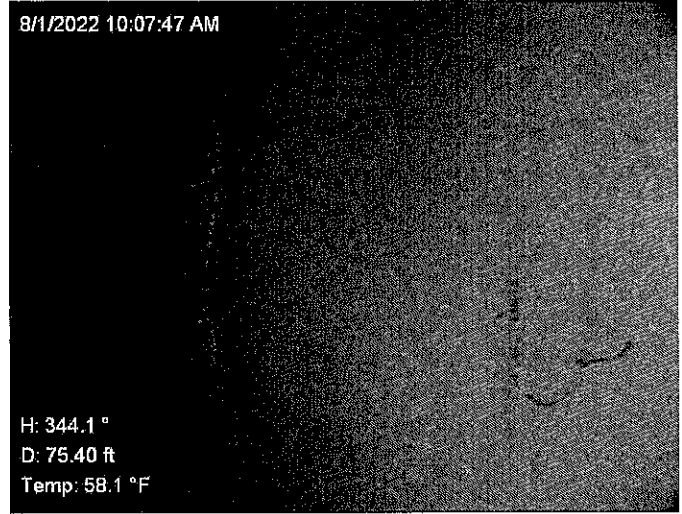
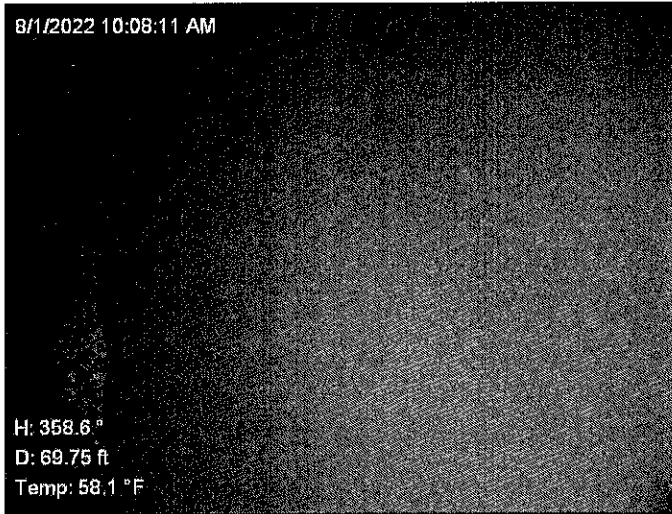
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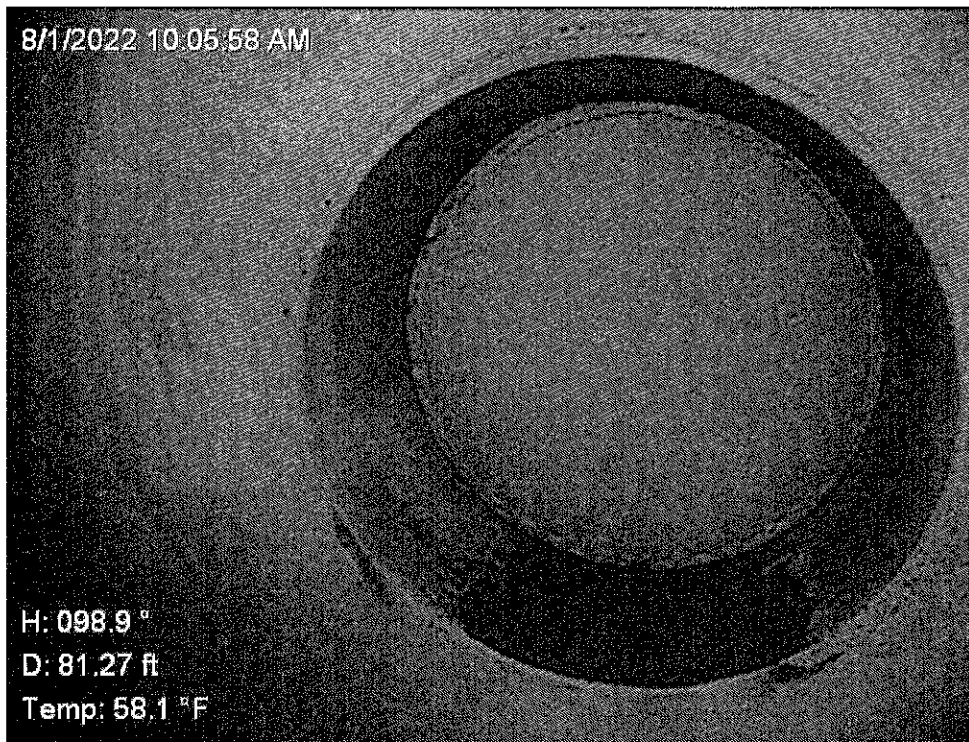
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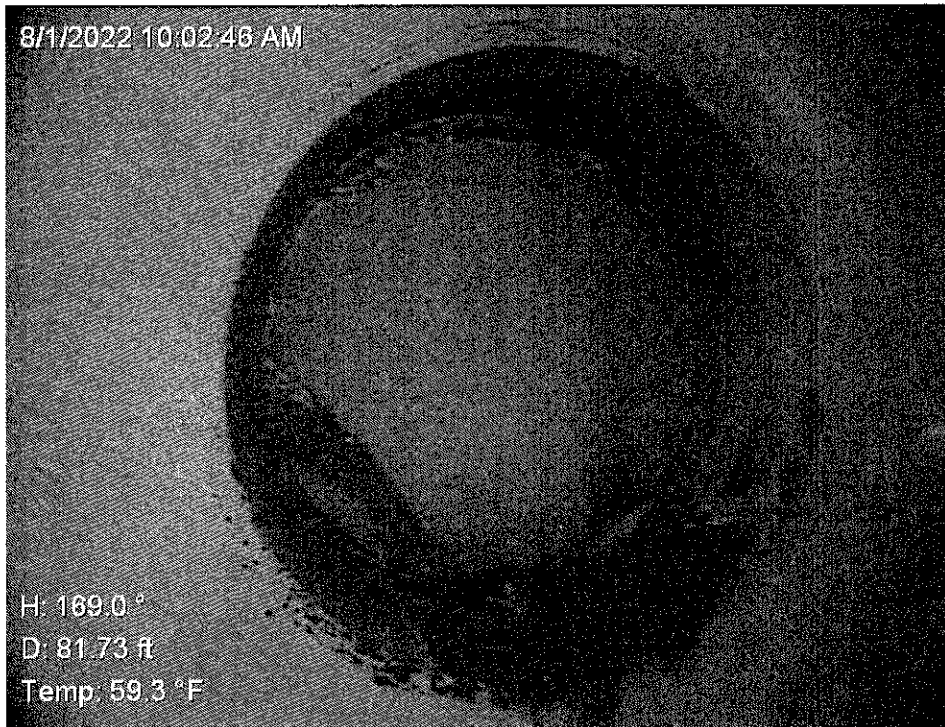
Pictures (Cont.)



Pictures (Cont.)

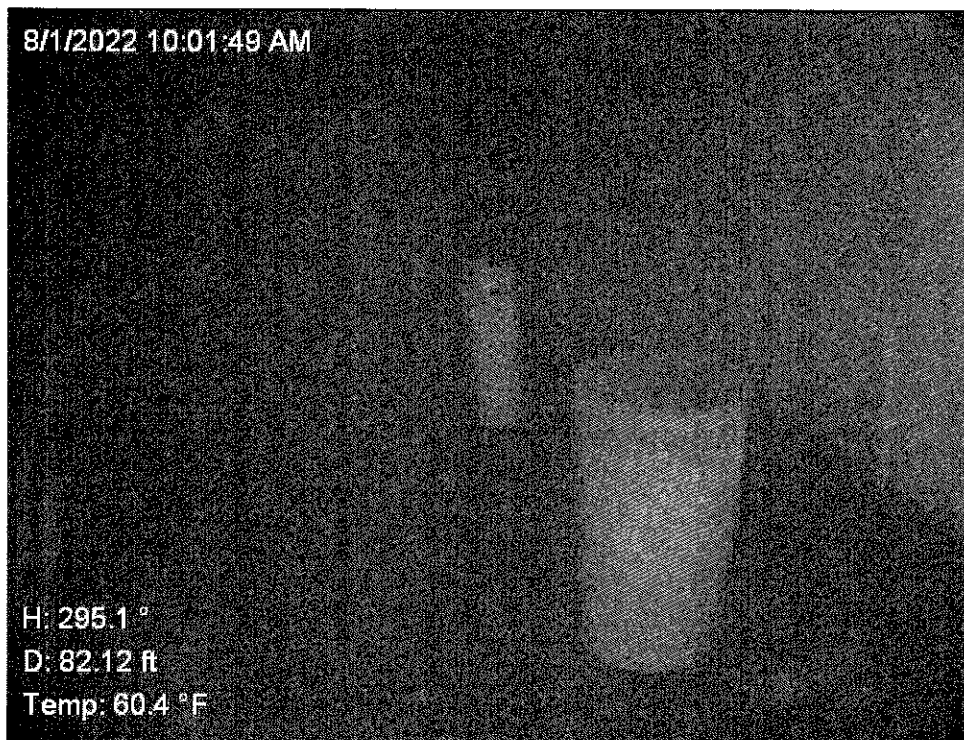


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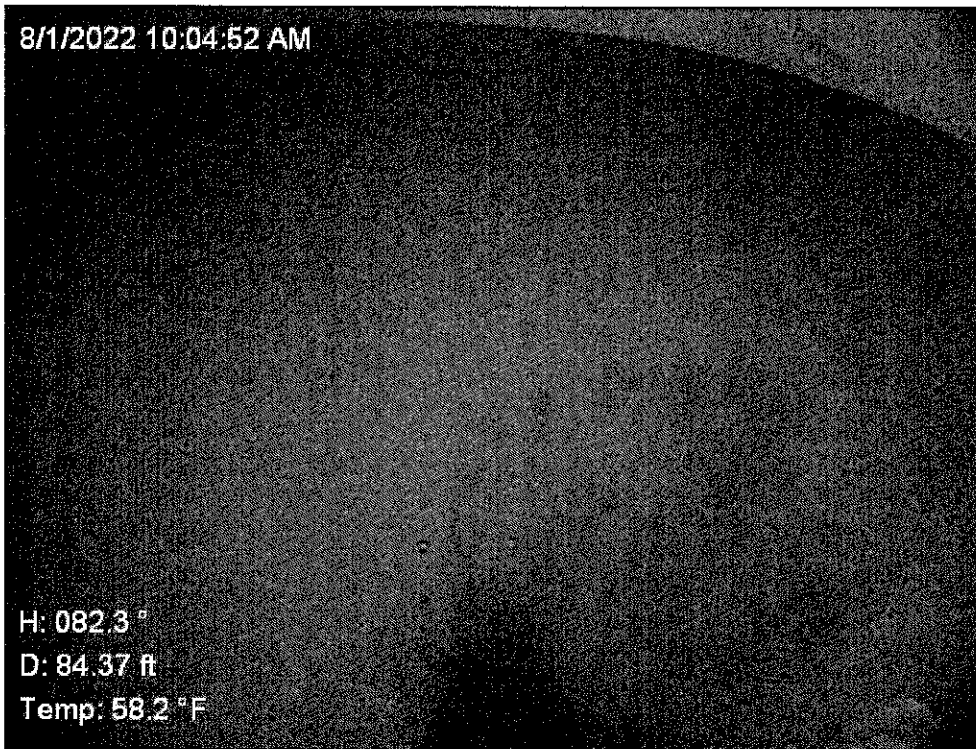
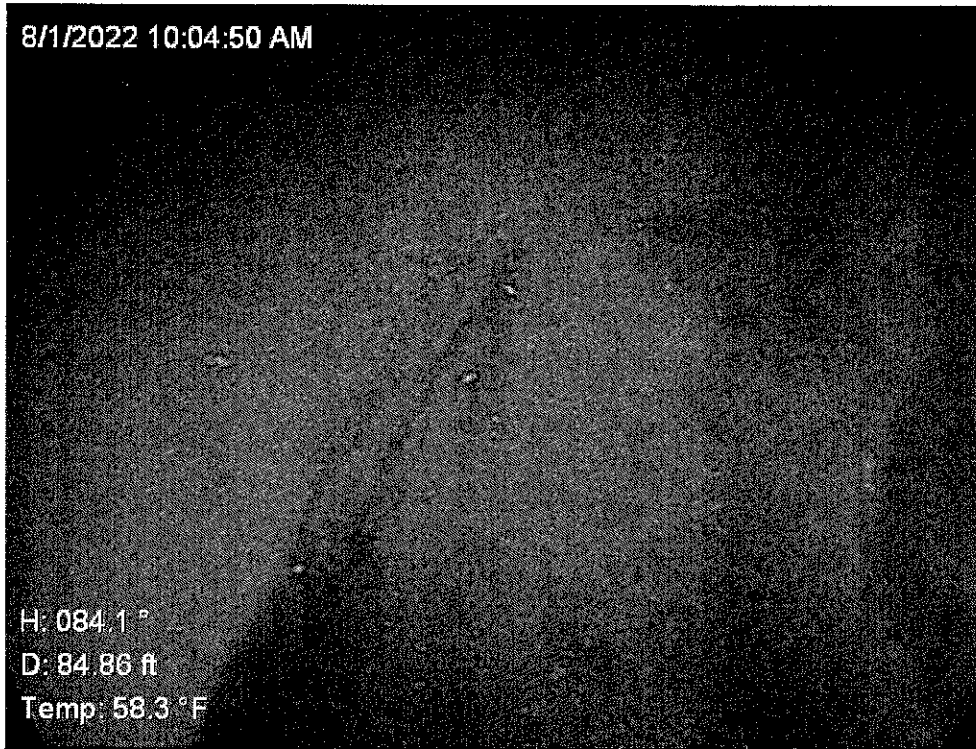


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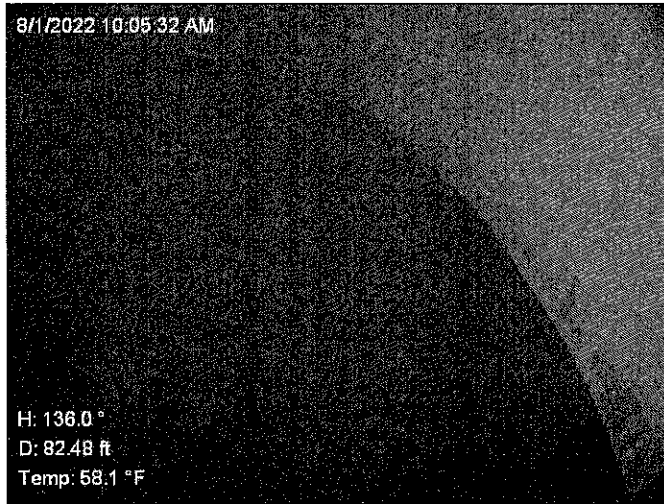
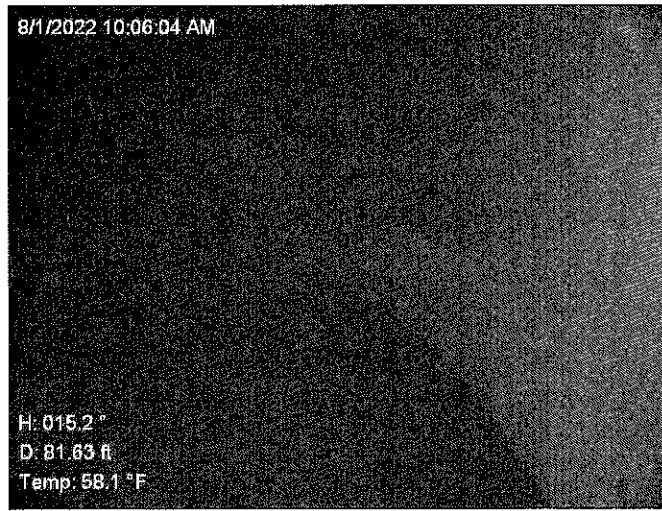
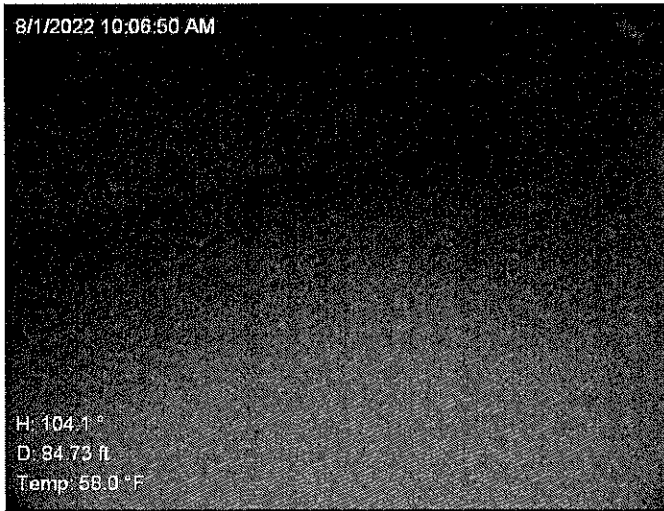
Inlet outlet Pipe



Pictures (Cont.)



Pictures (Cont.)



Pictures (Cont.)

Perimeter Fence





USG WATER
SOLUTIONS

Condition Assessment

18307668486

GENERAL INFORMATION

Salesforce Info

VIP Opportunity Number(SFID)
Salesforce Oracle Site ID #

75749
184179

Client

Client Name
Street address of client office
City of client address
Zip code of client address
State
County
Account Opportunity

VILLAGE OF BALLSTON SPA, NY
66 FRONT STREET
BALLSTON SPA
12020
NY
SARATOGA
TANK MP - BALLSTON SPA - JOHN ST TANK

INSPECTION INFORMATION

Inspection Staffing and Information

Inspection Date
Inspection Type
Inspection Task
Region
Water System Consultant
WSC Phone Number
WSC Email

May 2, 2023
Full condition assessment
Visual
North
Nick Rapagnani
1-973-462-7381
nick.rapagnani@usgwater.com

Inspector
Chris Patterson
Certification
NACE CIP Level 2
Inspector email
Christopher.patterson@veolia.com

GENERAL TANK INFORMATION

Current exterior color (include multi-color description)

Blue
JOHN ST TANK
Standpipe
No
JOHN STREET
BALLSTON SPA
SARATOGA
NY
12020
30 John St, Ballston Spa, NY 12020, USA
latitude: 43.01421984308608 altitude:
longitude: -73.85067746094852 [viewMap]

Asset Name

Tank type

Dry Riser Present

Street address of tank

City where tank is located

County where tank is located

State where tank is located

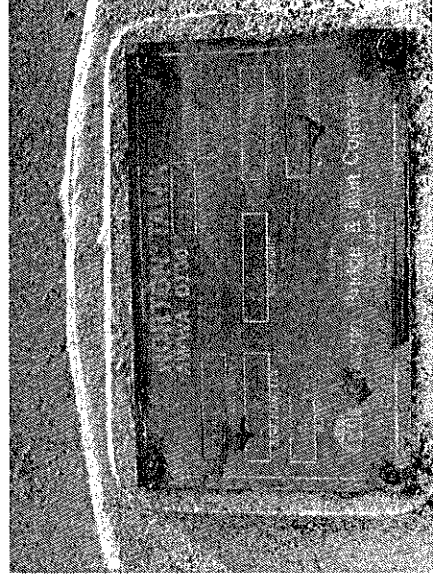
Zip code of tank

Lat/Long location of asset

Tank construction material

Connection type

Tank fabricator ID plate Photo



Tank built (YR)

Tank capacity

Height of tank

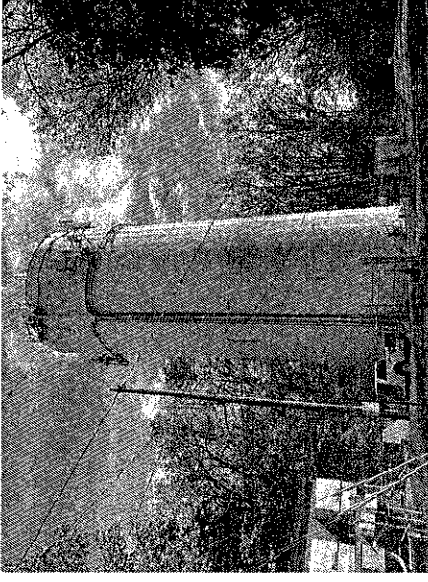
1979
750000
94

Height measured to

Top of tank

SITE INFORMATION

Tank Profile Photo



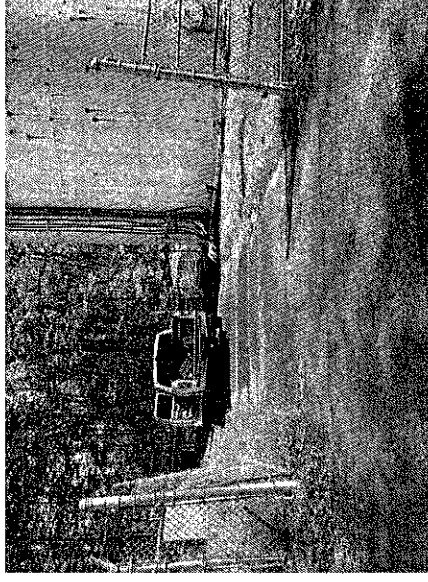
Road/drive accessible to needed renovation equipment

Yes

Site security

Fenced with locked gates

Site gates Photo



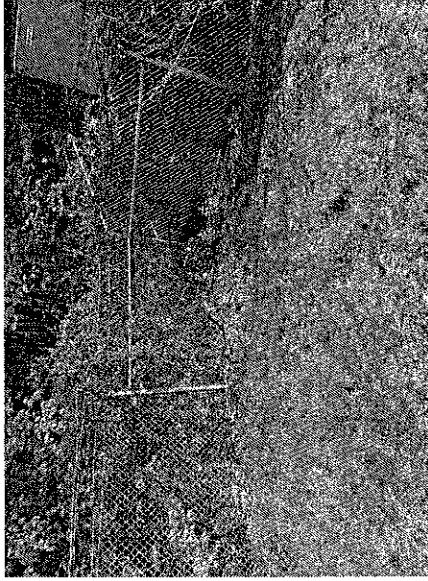
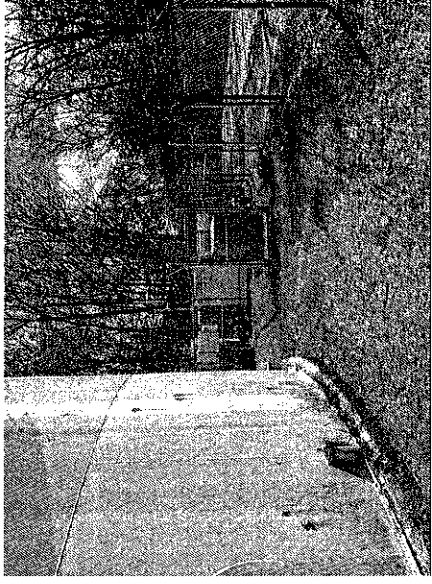
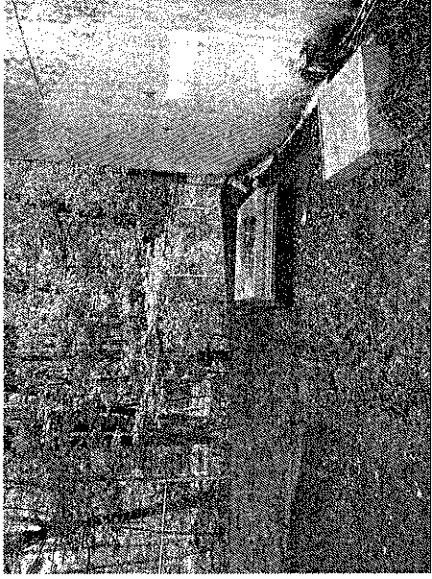
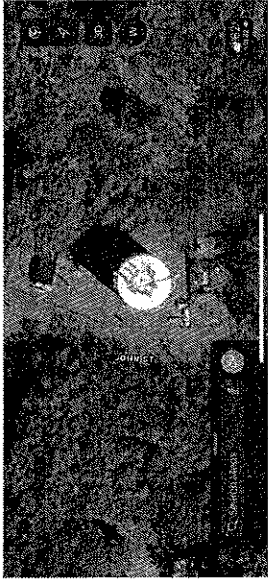
Site fence gate width less than 10'

No

Damage to site fence

No

Site overview Photo



Staging area available for needed renovation equipment

Graffiti Present on Tank

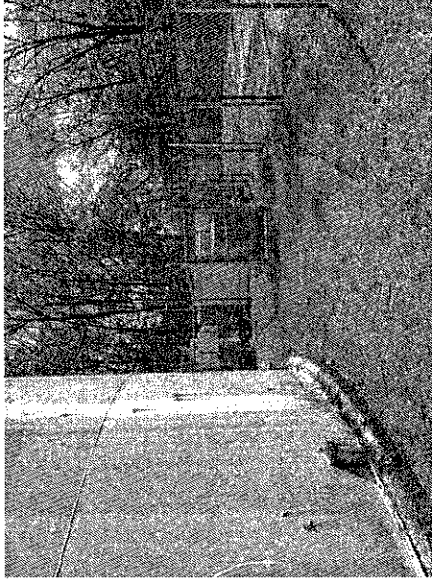
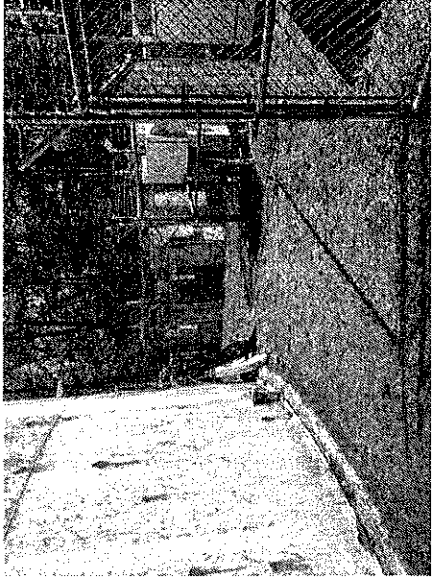
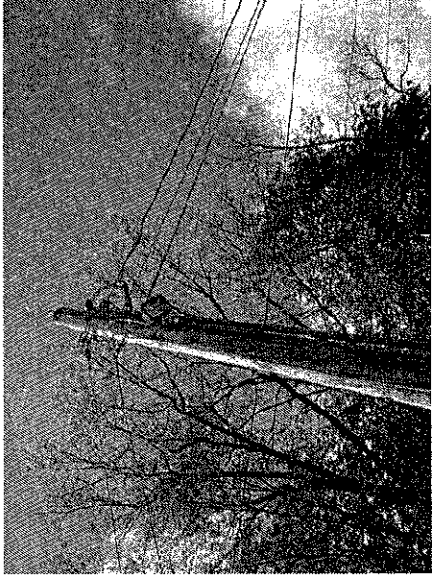
Obstructions by tank

Obstructions by tank Photo

Yes

No

Power lines (3/4 height of tank away)
Cell equipment is within 10ft off the tank



Type of overhead power line

Overhead powerline distance from tank (ft)

Site within 40 miles of saltwater coast

SCADA/Telemetry/Antennas

Cathodic protection system present

Neighboring houses/building sensitive receptors/liabilities

↳ Describe

Neighboring Houses/Sensitive Receptor Photo

Power pole

10

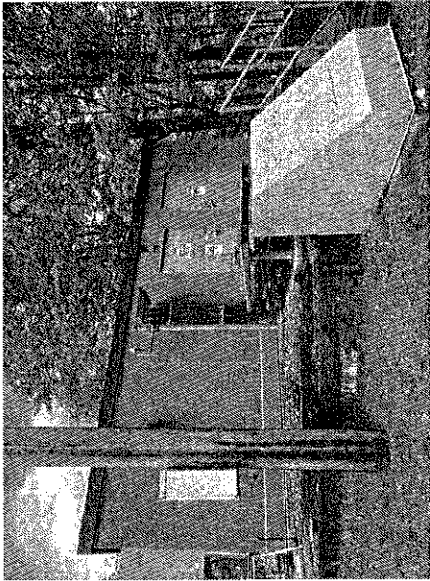
No

Antennas on or around tank

No

Yes

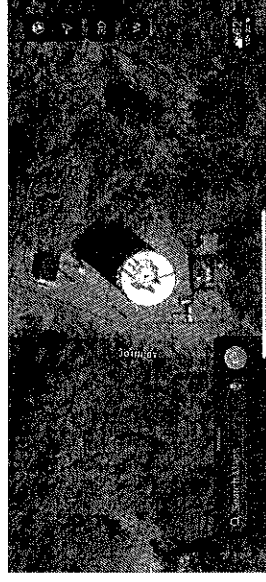
↳ Building in the fenced in area roughly 20ft from the tank.



Distance (FT) to closest sensitive receptor/liability
Pond/lake/stream/body of water within 500' of tank
Site UAV Drone/Satellite Photo

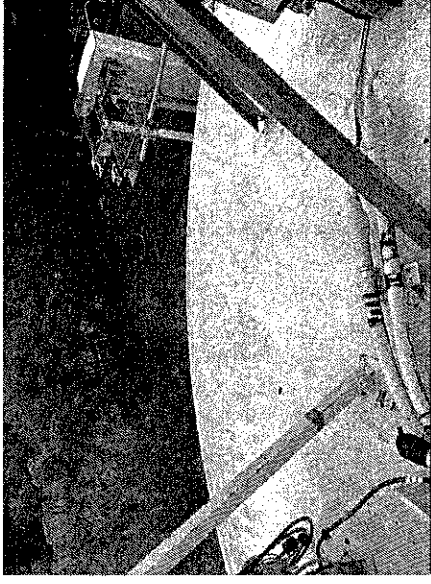
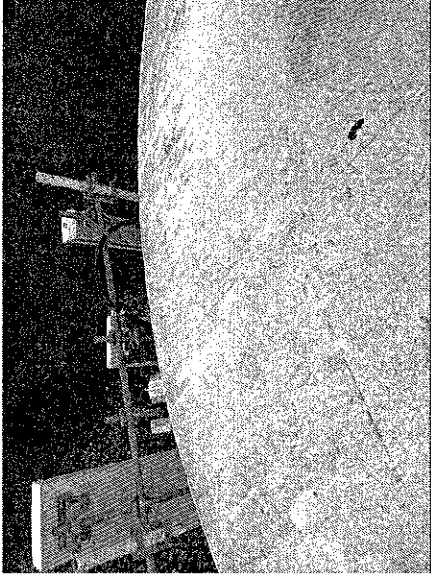
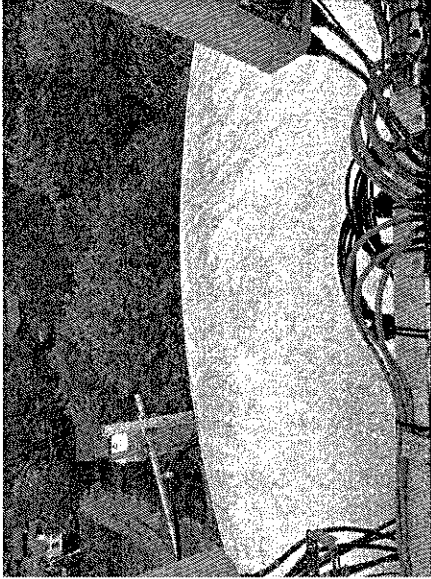
10ft

No



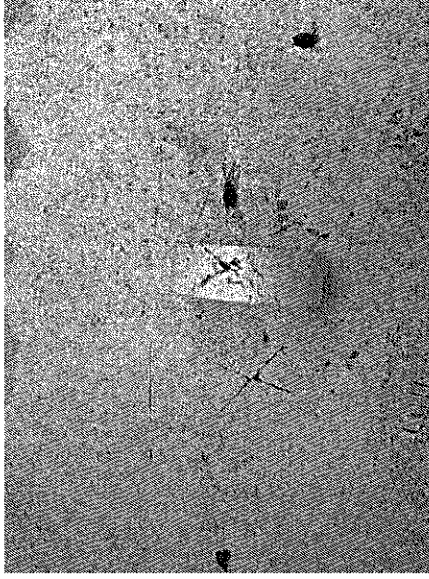
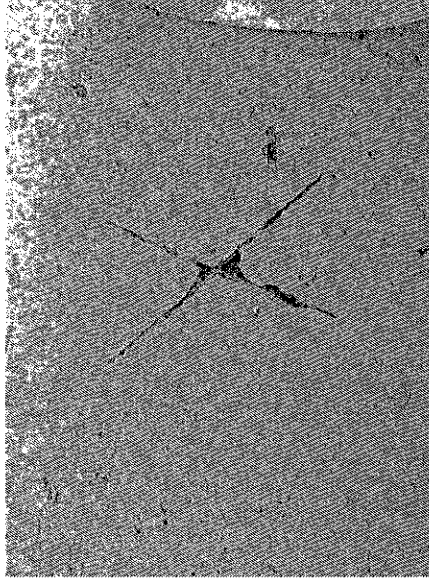
EXTERIOR ROOF

Exterior Roof Photo



Type
 Construction Material
 QTY of Exterior Rafters
 Average DFT
 Adhesion Test Photo

Dome
 Steel
 0
 11.5

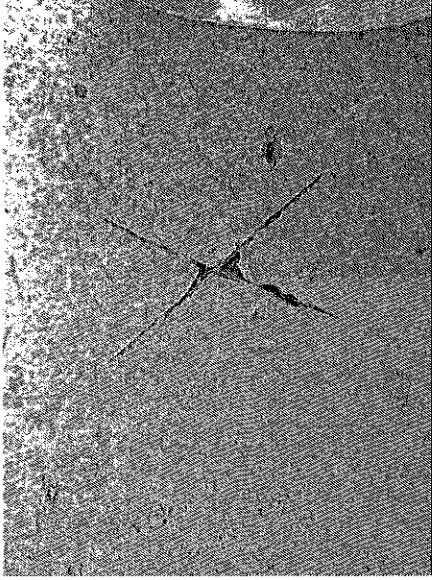
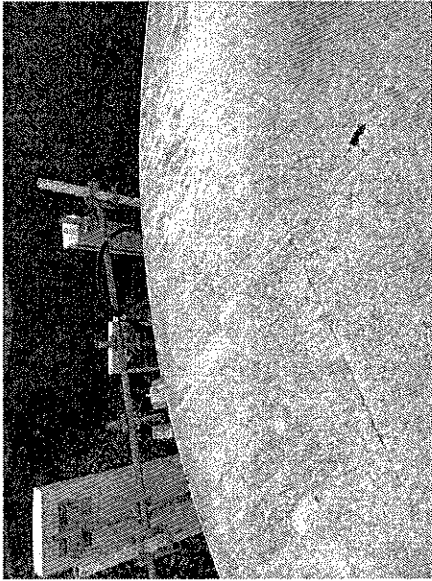


Adhesion - a = "X" test greater 5 mils, b = "cross hatch" test less than 5 mils

Adhesion Test or observation - Location of Coatings Failure
 Coating Condition

1a - Most of area removed along X under tape
 Adhesion Failure - Multiple Coats above and below Failure
 Fading or Chalking Present
 Cracking, Blistering, or Peeling Present
 Bio-Growth Present

Exterior Roof - Coating failure or issues Photo



Glossy sheen or clear coat

No

Fading or Chalking

Moderate

% total surface area of Cracking, Blistering, or Peeling

5

% total surface area of Bio-Growth

60

Type of corrosion present

Flash

% total surface area of Flash Rust

1

Existing Rigging Couplings/Covers/Bolts

None

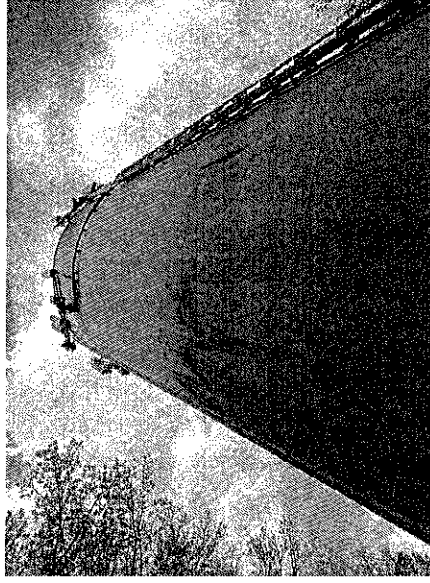
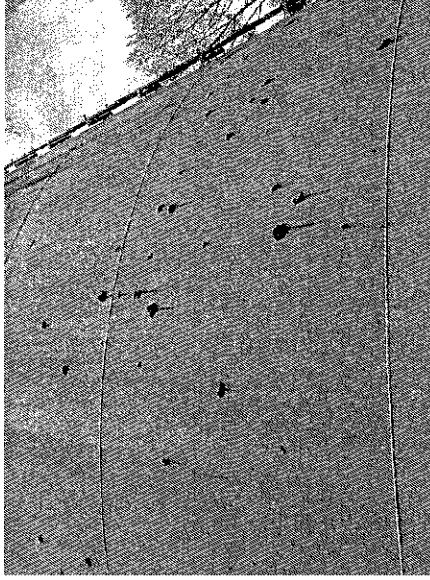
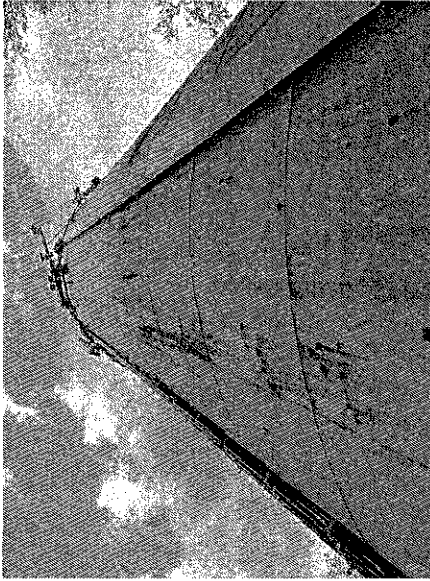
Holes present or Removal of Cathodic Protection Cover Plates Needed

No

EXTERIOR SHELL

Exterior Shell Surfaces

Exterior Shell Photo



Shell circumference (FT)

Shell diameter (FT)

Pilasters present

Is a Logo Present

Shell Average DFT

Adhesion Test Photo

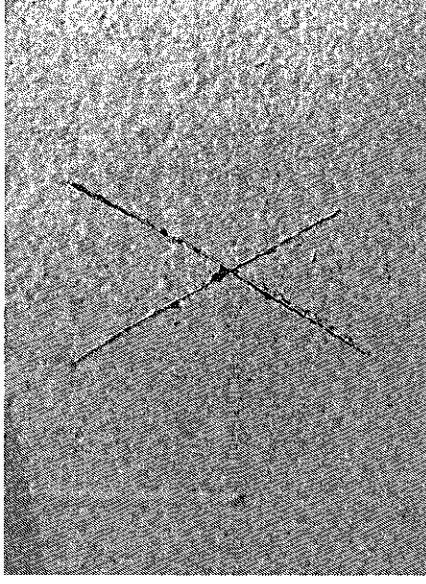
104

33

No

None Present

11.5



Adhesion - a = "X" test greater 5 mils, b = "cross hatch" test less than 5 mils

Adhesion Test or observation - Location of Coatings Failure

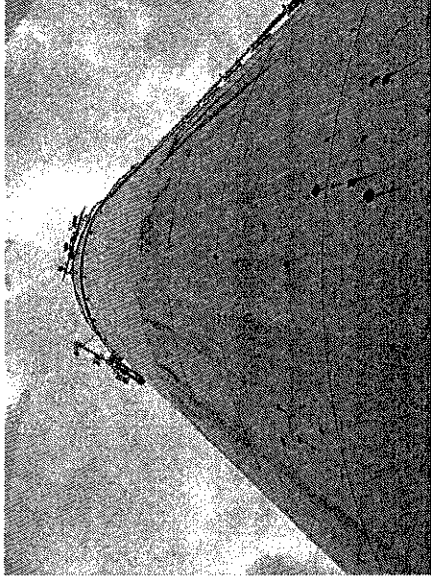
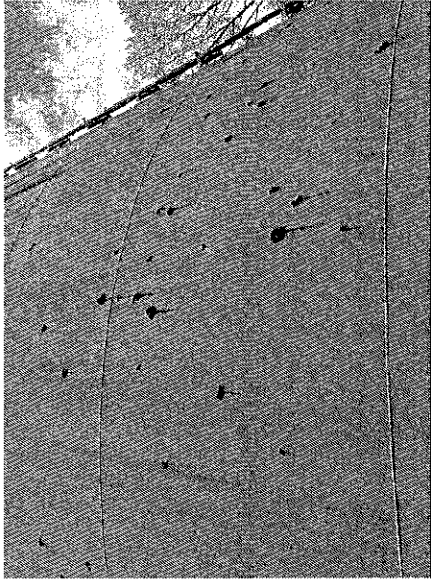
Shell - Coatings Condition

Exterior Shell - Coating failures or issues Photo

2a - Jagged removal up to 1/8" on either side

Adhesion Failure - Multiple Coats above and below Failure

Fading or Chalking Present



Glossy sheen or clear coat

Fading or Chalking

% of Bio-Growth

Shell - type of corrosion present

% of Flash Rust

No

Moderate

40

Flash

10

EXTERIOR SOW

Exterior Recommended Surface Preparation and Coatings

Is Containment Needed

↳ SOW

Ext - Type of Surface Preparation

Ext - Coating System

Yes

↳ I recommend a full abrasive blast.

SP6 Commercial Blast

Full Prime

Intermediate Stripe Coat

Full Intermediate

Full Finish

Exterior Steel Repairs

QTY of new 2 1/2" rigging couplings to be installed

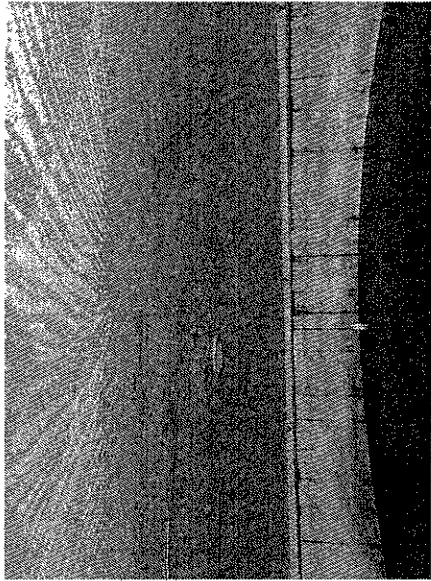
Roof Repair or Replacement Needed

8

None identified

WATER CHAMBER ROOF AND RAFTERS

Water Chamber Roof Photo



Support Type

Self Supporting
Overlapped Plate - Stitch Welded
Painters Rail Present

Construction Type

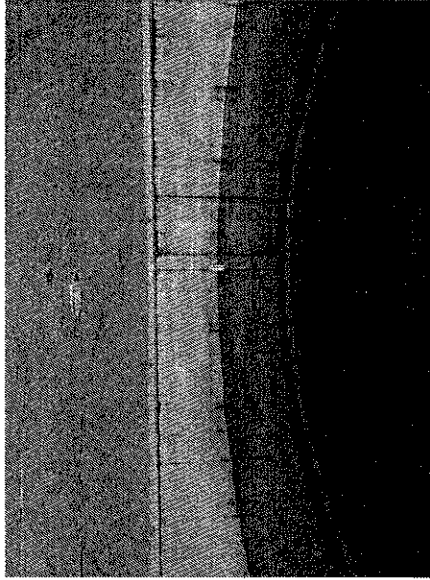
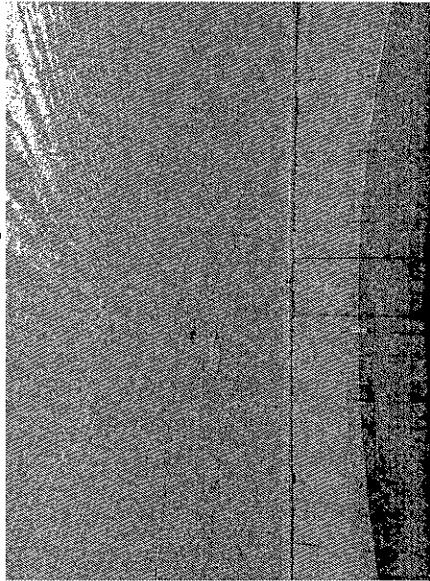
Topcoat color

White

Roof Average DFT

24

Water Chamber Roof - Coating failures or issues Photo



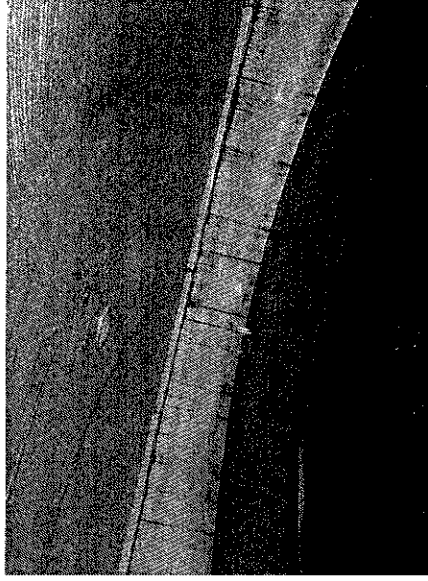
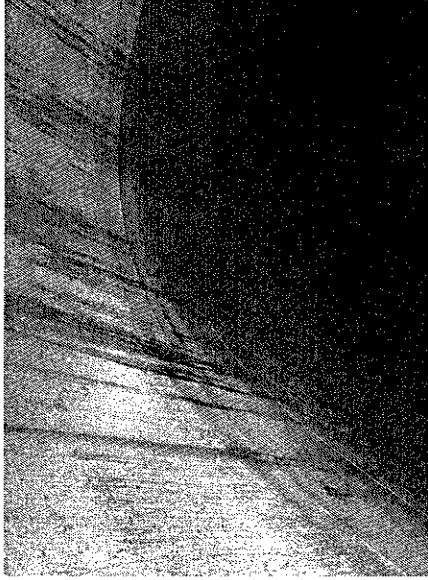
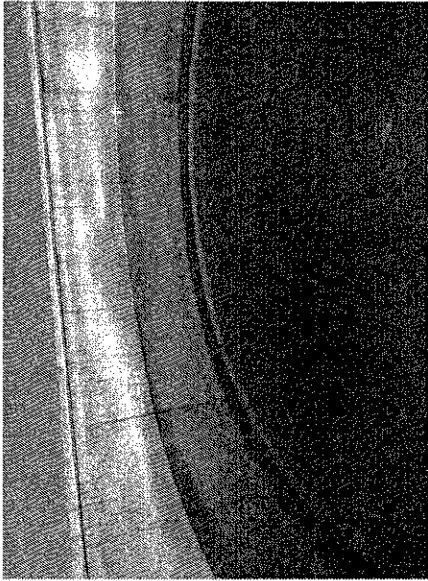
Water Chamber Roof - type of corrosion present
% of Flash Rust

Flash
20

WATER CHAMBER SHELL/BOWL/FLOOR

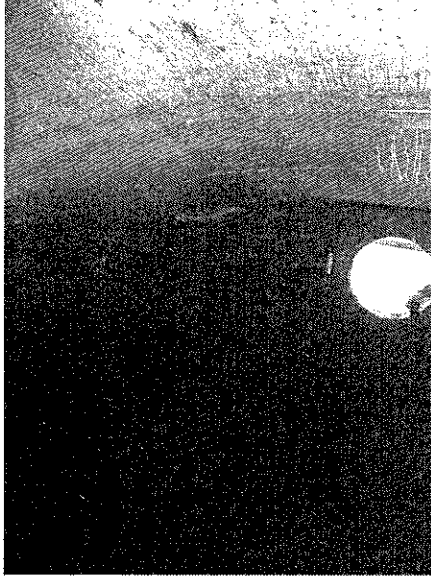
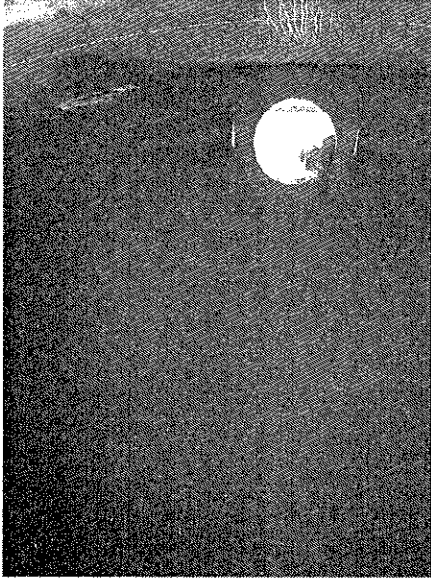
Water Chamber Shell/Bowl/Floor Surfaces

Water Chamber Shell/Bowl Photo

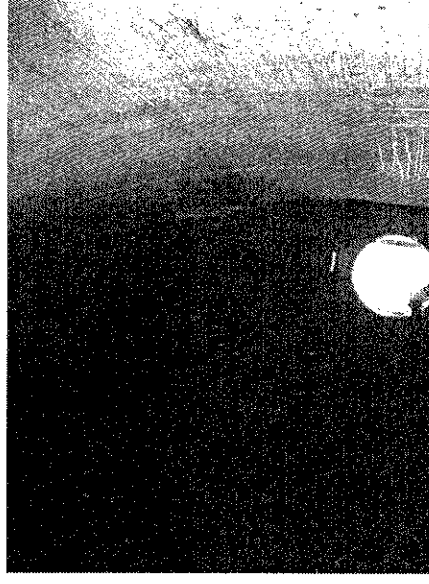


Water Chamber Floor Photo





Sediment Photo



Depth of sediment
 Baffle wall(s)/curtain(s) present
 Water Chamber Shell/Bowl/Floor Coating Condition
 Water Chamber Shell/Bowl/Floor - type of corrosion present
 % of Flash Rust

Floor is not visible
 No
 Sediment present - Floor not visible
 Flash
 50

WATER CHAMBER SOW

Water Chamber Recommended Surface Preparation and Coating

WC - Is Dust Collection Needed

Yes

↳ SOW

WC - Type of Surface Preparation
WC - Coating System

↳ I recommend a full interior abrasive blast
SP10 Near White Blast
Full Prime
Intermediate Stripe Coat
100% Solids Epoxy Full Interior Finish Coat

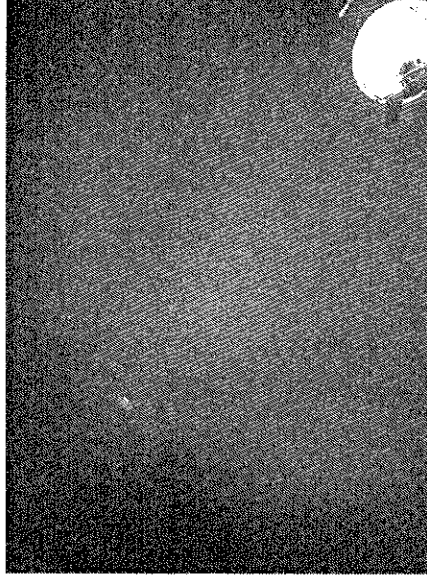
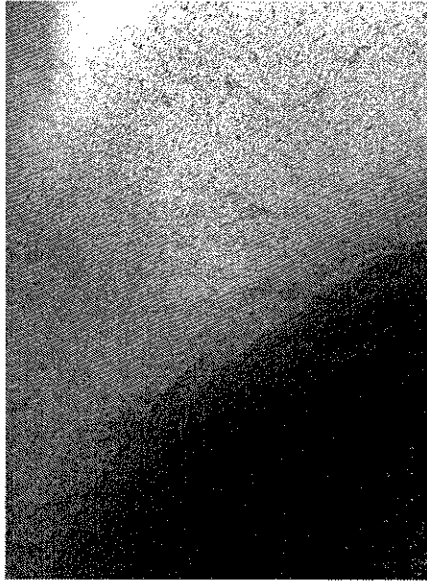
WATER QUALITY

Water quality items present

None present

Water Quality Repair/Install Recommended

Water Quality Issue Photo



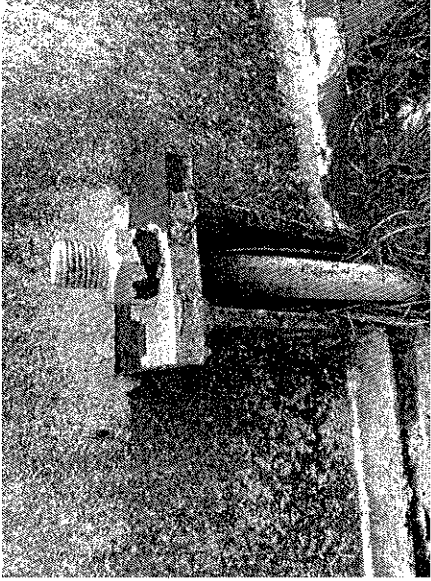
Water Quality Issues Present
Recommended Water Quality Repair/Install

Heavy sediment buildup
Washout cleaning

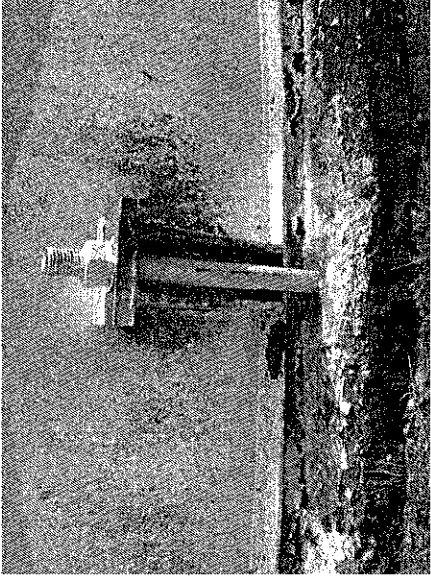
FOUNDATION/BASE

Anchor bolts

Anchor bolt(s) Photo



Anchor bolts structure condition
Anchor bolt size
Anchor Bolt = Repair or replacement needed



No deficiencies visible
1 5/8
No repair/replacement needed

Concrete foundation

Foundation Photo





Foundation = Condition/Issues

Cracks present
Surface erosion
Spalling

Foundation - Cracks

Vertical cracking
Horizontal cracking

Foundation - Surface erosion severity

Moderate-aggregate showing

Foundation - SQFT of Spalling with exposed rebar

0

Foundation - Probable cause of undermining

Water erosion-improper water runoff

Foundation = Repairs needed

Yes

↳ SOW

↳ Repair cracks and spalling on the tank base. Mortar should be sufficient enough. The concrete around the pit should be formed and concrete should be poured over.

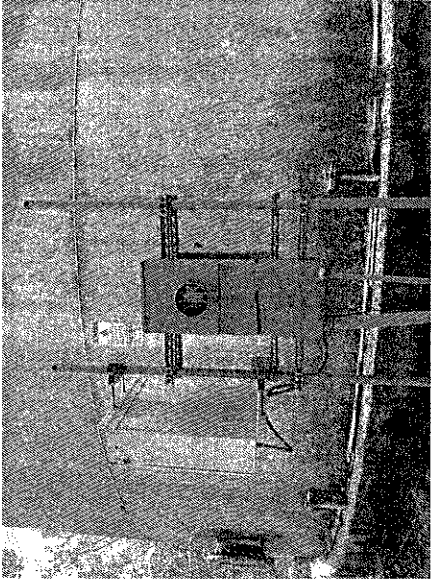
ADDITIONAL APPURTENANCES

Lighting and Electrical

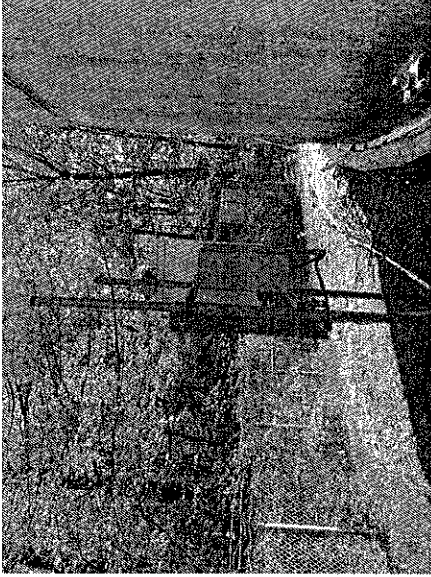
LIGHTING AND ELECTRICAL

1 OF 1

Lighting and Electrical Photo



Lighting Electrical Location
Lighting/electrical type
Light mounting location
Conduit type
Lighting/Electrical Repair/Replace/Install
↳ SOW

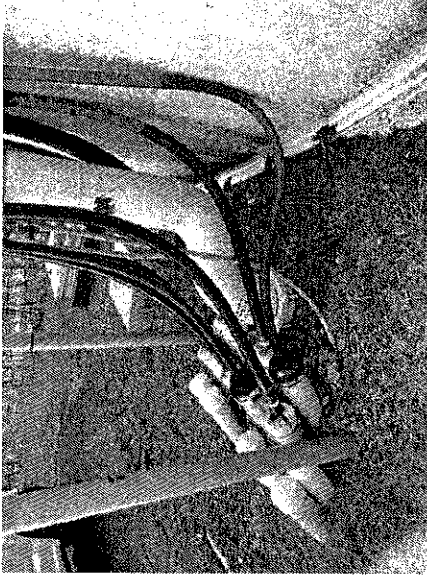


Around tank base
Power to tank accessories
Post mount
Flexible
Replace
↳ I would advise this electrical system be removed because it seems to be inactive. It is also right below that ladder making it a hazard to climb.

PIPING

Overflow

Overflow Photo



Overflow pipe material

Weir box location

Overflow location

Overflow OD (in)

Overflow termination type

Overflow sanitary compliance

Overflow Repair/Replace/Install

↳ SOW

Steel

Water chamber

Completely external

9

Piped directly into the ground

Required air gap NOT present - piped directly into ground

Screen - mesh NOT sufficient

Replace

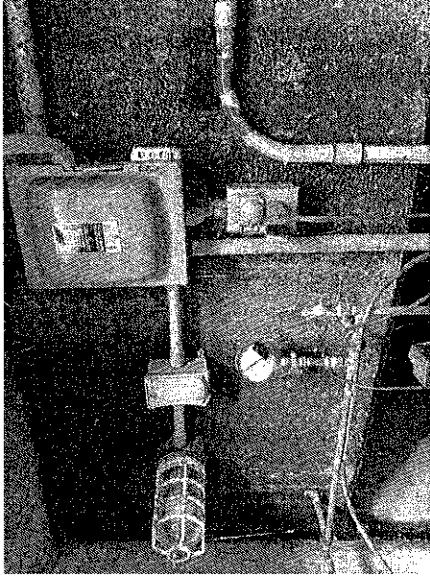
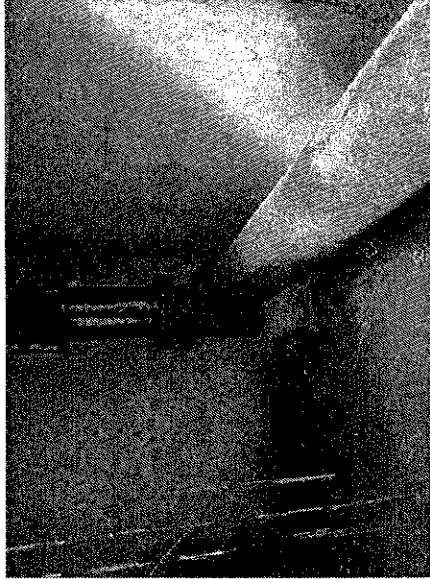
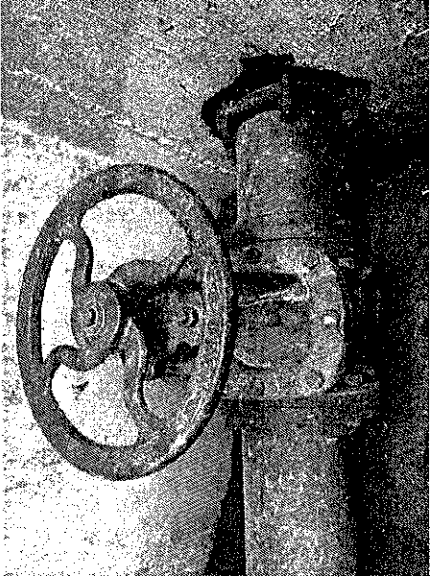
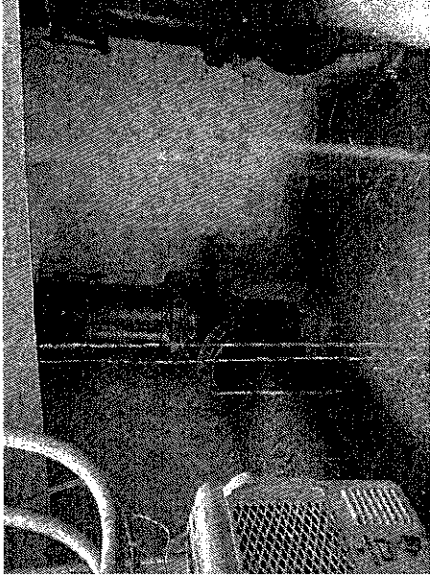
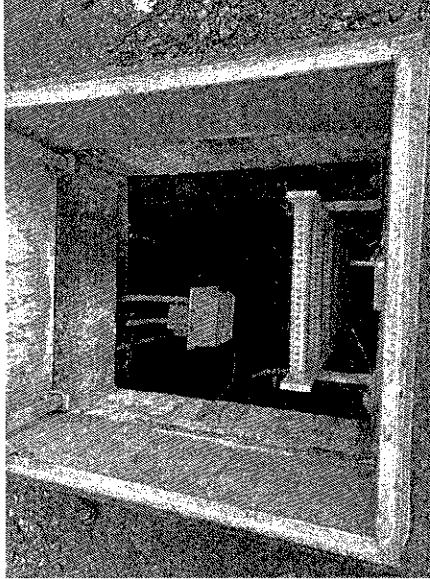
↳ Replace bottom portion of the overflow. The overflow should be cut back 16" off the ground and a flapper/screen combo end should be installed.

Vault/Pump House

Valve vault/Pump house

Valve/Pump house Photo

Vault



Vault/Pump house piping coating condition
Vault area free of standing water

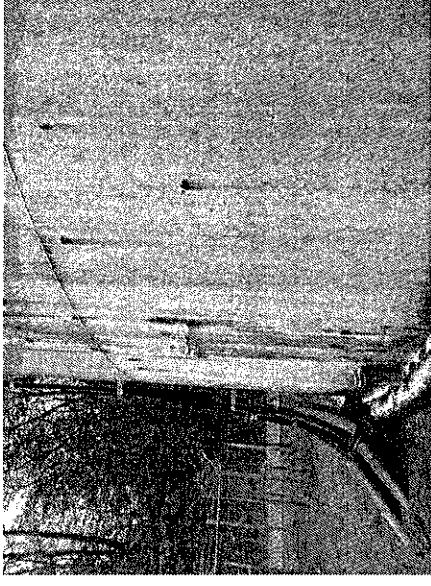
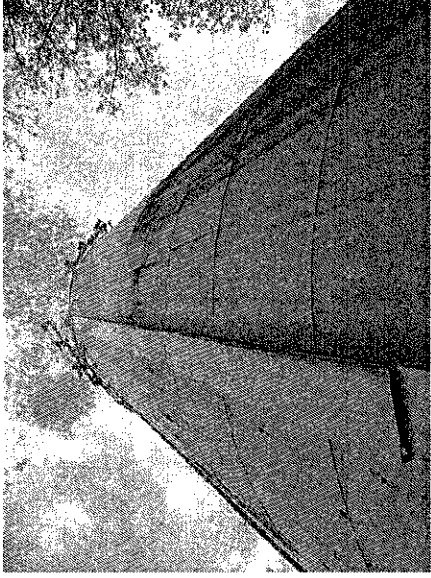
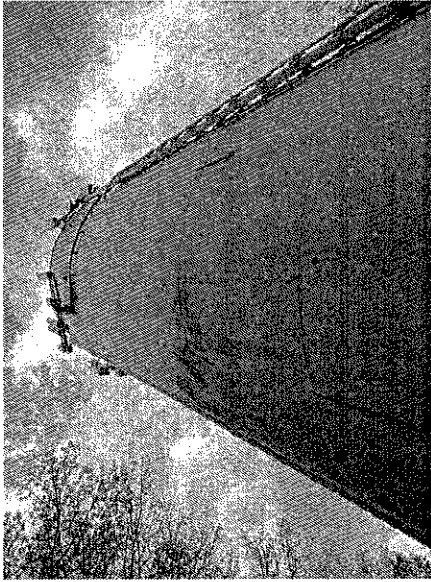
Good
Yes

ANTENNAS AND COAXIAL

ANTENNA/COAXIAL

1 OF 3

Antenna/Coaxial Photo



Antenna/Coaxial Location

Mounting style

Mount method to tank surface

Do all antenna brackets, mounts & coaxial give at least 8" clearance to tank surfaces

↳ Describe clearance issue

Do antenna, brackets, mounts & coaxial block safe access for climbing or rigging

Exterior shell

Mounted to other tank apparatus

Bolted

No

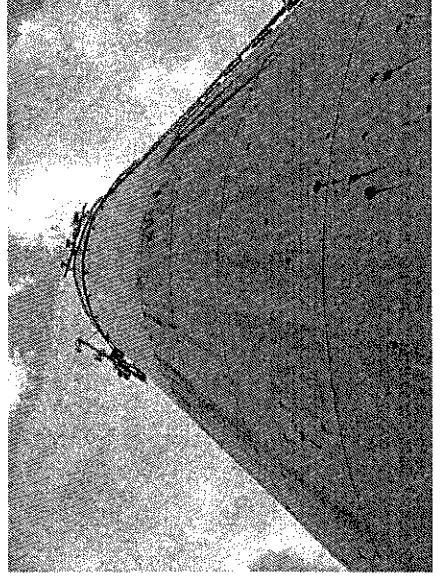
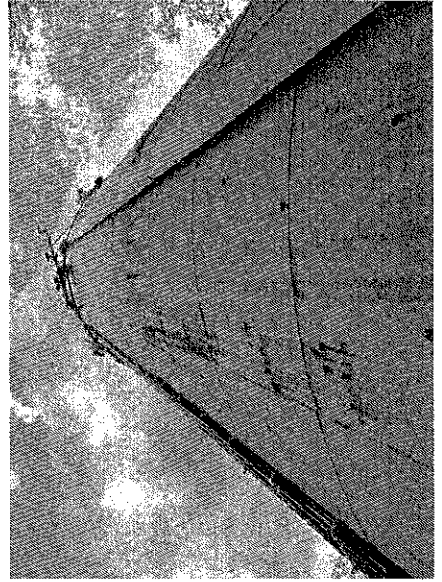
↳ Under 8" clearance.

No

ANTENNA/COAXIAL

2 OF 3

Antenna/Coaxial Photo



Exterior shell

9

Mounted to other tank apparatus

Yes

Do all antenna brackets, mounts & coaxial give at least 8" clearance to tank surfaces

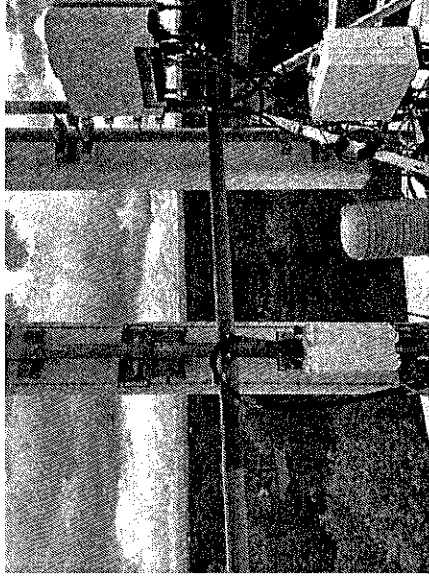
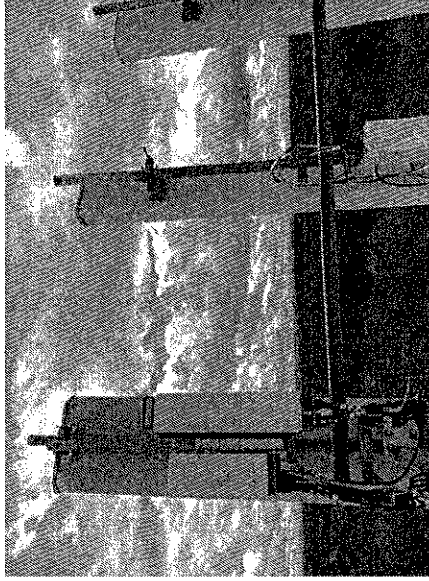
No

Do antenna, brackets, mounts & coaxial block safe access for climbing or rigging

ANTENNA/COAXIAL

3 OF 3

Antenna/Coaxial Photo



Antenna/Coaxial Location

Mounting style

Mount method to tank surface

Do all antenna brackets, mounts & coaxial give at least 8" clearance to tank surfaces

Yes

Do antenna, brackets, mounts & coaxial block safe access for climbing or rigging

No

Exterior roof

Corral system

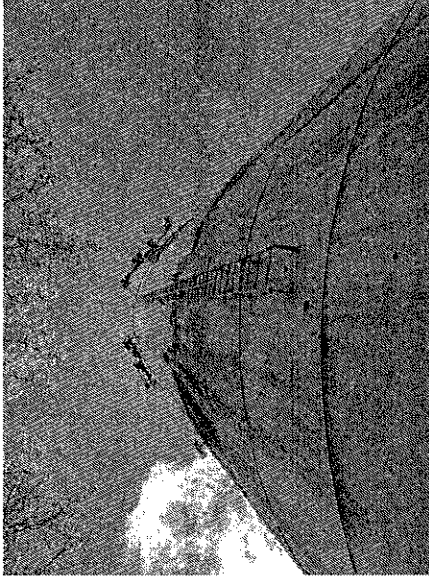
Bolted

LADDERS/HANDRAILS/STAIRS/PLATFORMS

LADDER INFORMATION

1 OF 2

Ladder Photo



Ladder location

Are all ladders on tank design and dimensions the same

Height from ground to ladder

Ladder material

Ladder safety climb device(s)

↳ SOW

Ladder Repair/Replacement/Installation needed

Ladder length (FT)

Ladder security door/gate present

↳ SOW - Repair/Replace/Install

Ladder cage present

Exterior shell

Yes

20'

Steel

Notched rail

↳ Removal notched rail and install flex cable climb.

No repair or replacement needed

70

No

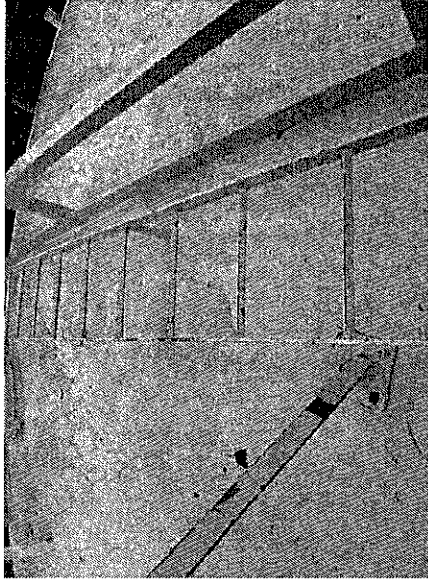
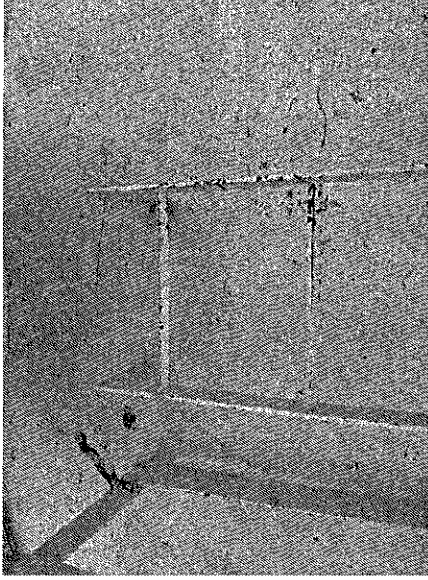
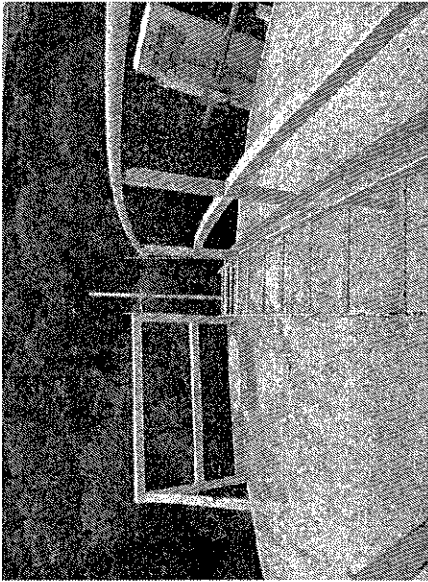
↳ Install lockable ladder gate.

No

LADDER INFORMATION

2 OF 2

Ladder Photo



Ladder location

Are all ladders on tank design and dimensions the same

Ladder material

Ladder safety climb device(s)

↳ SOW

Ladder length (FT)

Ladder security door/gate present

Ladder cage present

Exterior roof/Dome/Shell

Yes

Steel

None installed

↳ Install flex cable climb.

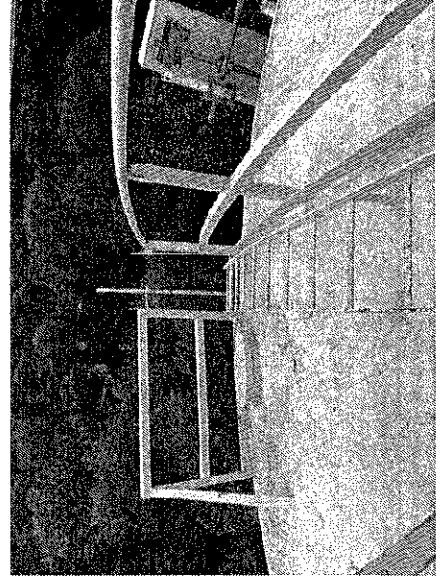
16

N/A

No

HANDRAILS/PLATFORMS

Handrails/Platforms Photo



Handrail/Platform location
 Handrail/Platform material
 Handrail/Platform OSHA non-compliance
 Handrail/Platform Repair/Replacement/Installation needed
 ↳ SOW

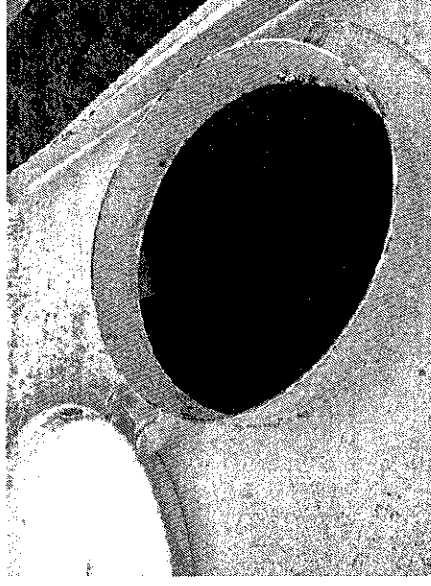
Exterior roof
 Steel
 Can pass an 18" sphere through handrail at any point
 Install
 ↳ Install a rail between upper and mid rail to close the gap to under 18"

HATCHES/MAN WAYS/DOORS

HATCHES

1 OF 2

Hatch Photo



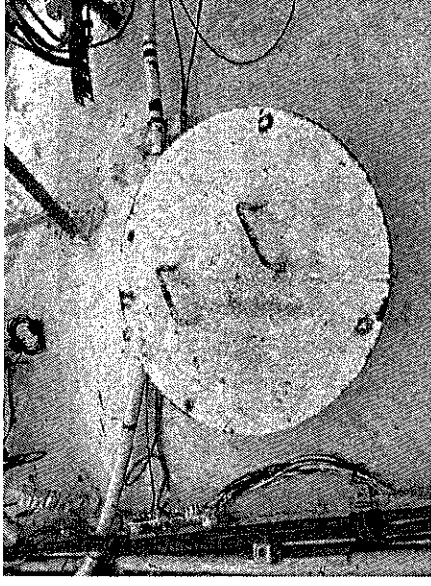
Hatch location
 Hatch type
 Hatch opening measurement(s) IN
 Hatch security
 ↳ Did you add a lock/bolt/carabiner?
 Hatch compliance with sanitary requirements
 ↳ Explain issue(s)
 Hatch repair/replace/install needed
 ↳ SOW

Water chamber-roof perimeter
 Round hinged
 24
 Lockable but not locked
 ↳ No
 Unsatisfactory
 ↳ Needs a lock.
 Install
 ↳ Install lock

HATCHES

2 OF 2

Hatch Photo

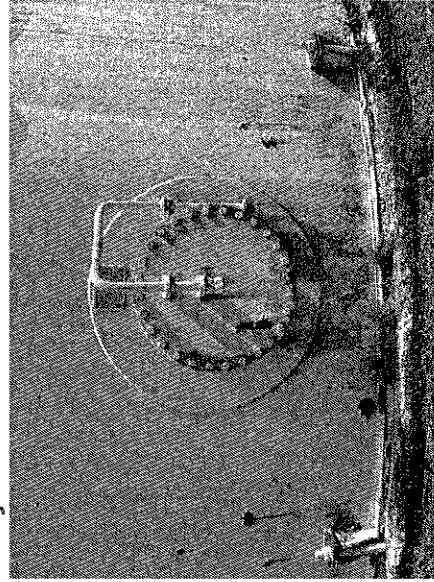


Hatch location Water chamber-roof center
Hatch type Round bolt flanged
Hatch opening measurement(s) IN 24
Hatch security Locked
Hatch compliance with sanitary requirements Satisfactory
Hatch repair/replace/install needed No repair or replacement needed

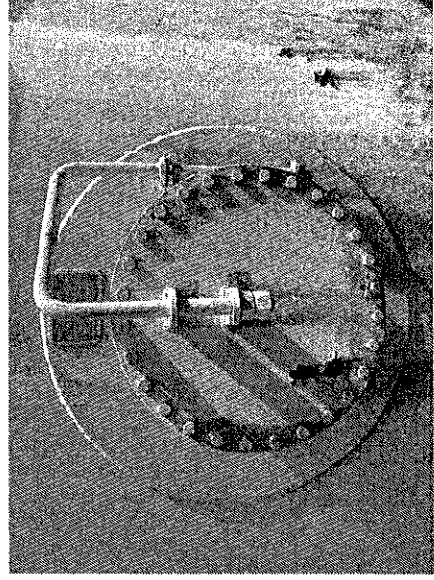
MAN WAYS

1 OF 2

Man way Photo



Man way location



Shell

Man way type
Man way opening measurement(s) IN
Man way gasket condition
Watertight condition
Man way securing assembly condition
Man way - Repair or replacement needed

Bolted flange
24
Good
No leaks visible
Good
No repair or replacement needed

MANWAYS

2 OF 2

Man way Photo



Man way location
Man way type
Man way opening measurement(s) IN
Man way - Repair or replacement needed
↳ SOW

Shell
Bolted flange
36
Install
↳ Install new 36" man way 180 degrees from current man way.

DOORS/ACCESS

1 OF 1

Door/Access Photo



Door type
Door Access Security
↳ Describe issue
Door Access - Repair/Replacement needed

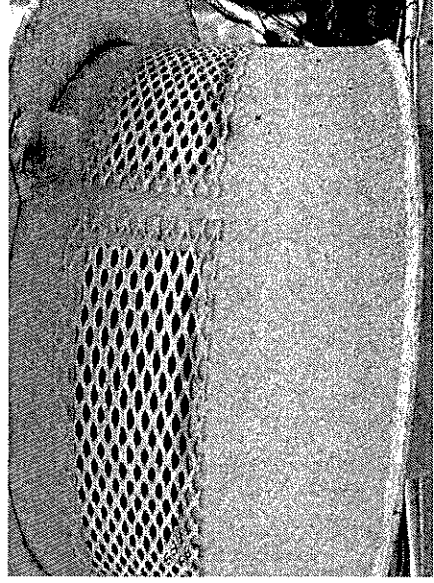
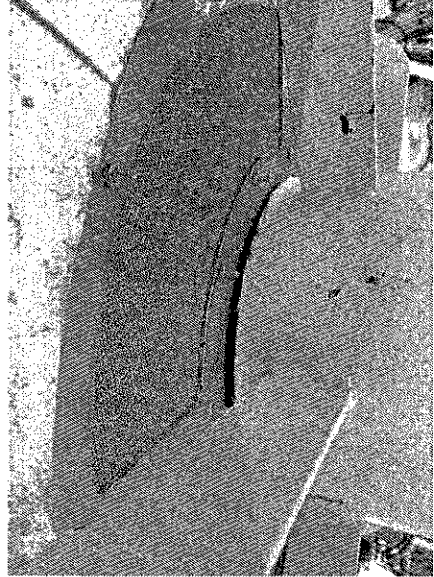
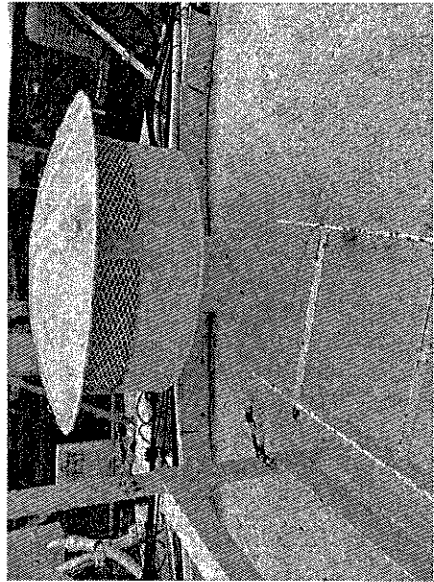
Hatch style man door
Unlocked/not secured
↳ Install a lock.
No repair/replacement needed

VENTING

VENT

1 OF 1

Vent Photo



Location

Center

Material	Steel
Neck Diameter (vent side)	9
Neck Diameter (Tank mount side)	9
Items attached to the vent	No
Vent repair/replace/install	No repair/replacement needed

POST INSPECTION INFORMATION

General Review of Coatings Condition

Exterior General Coatings Condition Poor
Water Chamber General Coatings Condition Poor

APPROVAL

Select Approver

christopher.patterson@suez.com



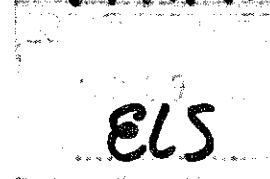
Sales Department
Paint Chip Identification Request



SHERWIN-WILLIAMS.

*Date: 05/02/2023
*City or County: Ballston Spa
*State: NY
Customer: Village of Ballston Spa NY
Tank Name: John St Tank
Tank Size/Type: 750k/Standpipe
SUEZ Sample #: CP 05/02/2023-1
*Submitted By: Christopher Patterson
Employee Dept. #: 134

18-1491-1892



(*) Denotes Required Information for proper identification by Analytical Lab

To: Mr. E Lynn Shirey II
Shirey Analytical Services, LLC
1028 Hercules Avenue
Houston, TX 77058
Phone: 281-352-6357

1. Interior Sample

Sample Location: (ie.: Roof, Sidewall, Floor) Hatch neck
This sample should reflect the majority of the tested area, please avoid Touchup areas
Topcoat Color that needs to be identified White
FTIR Generic Topcoat Analysis: Pigmented Epoxy

2. Exterior Sample

Sample Location (ie.: Roof, Sidewall, Floor) Shell bottom
This sample should reflect the majority of the tested area, please avoid Touchup areas
Topcoat Color that needs to be identified Light blue
*Please check for clear coat: NO CC
FTIR Generic Topcoat Analysis: Pigmented Acrylic Aliphatic Urethane

3. Additional Sample

Sample Location: (ie.: Roof, Sidewall, Floor) N/A
This sample should reflect the majority of the tested area, please avoid Touchup areas
Topcoat Color that needs to be identified N/A
FTIR Generic Topcoat Analysis:

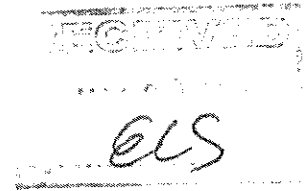
Analytical Use Only:

	1	2	3

No evidence of coating. (Inorganic/Rust Material)
Missing Information.
Not enough samples in bag for proper identification.

Email to: lara.townsend@usgwater.com , Brian.k.huffman@sherwin.com,
christopher.patterson@usgwater.com

*SAMPLER NAME/SUBMITTED BY: *Christopher Patterson*
SAMPLER EMAIL: *christopher.patterson@usgwater.com*
EMPLOYEE DEPT #: *134*
SAMPLE # (ie.: SUEZ BM12-01-2018): *CP 05/02/2023-1*
*DATE RELINQUISHED: *05/08/2023*
TIME SENT: *3:00pm*
CUSTOMER: *Village of Ballston Spa NY*
*CITY: *Ballston Spa*
*STATE: *NY*
TANK NAME: *John St Tank*
TANK SIZE/TYPE: *750k/Standpipe*
SAMPLE DATE: *05/02/2023*
INTERIOR
INT SAMPLE TIME: *11:00am*
INT SPEC LOCATION: *Hatch neck*
INT TOPCOAT COLOR: *White*
EXTERIOR
EXT SAMPLE TIME: *10:30am*
EXT SPEC LOCATION: *Shell bottom*
EXT TOPCOAT COLOR: *Light blue*
ADDITIONAL
ADD SAMPLE TIME: *N/A*
ADD SPEC LOCATION: *N/A*
ADD TOPCOAT COLOR: *N/A*



(*) Denotes Required Information for proper identification by Analytical Lab

HHH LABORATORY, INC.

100 E. NASA Parkway, Suite 210
 P.O. Box 57727
 Webster, Tx 77598
 (281) 338-9000
 FAX (281) 338-2351

Report Number 55697

PO Number 18-1491-1892

LABORATORY ANALYSIS REPORT

SHIREY ANALYTICAL SERVICES
 1028 HERCULES AVE.
 HOUSTON TX 77058

Attention: Mr. Lynn Shirey
Report Number 55697
Client Number: 1105 0
Date Received: 05/09/2023
Date Reported: 05/12/2023

HHH Sample Number: _____
Client Sample ID _____
Date Collected _____
Result _____
Units _____
Actual Exp _____
Units _____
Test date: _____
Reporting Limit _____
Blank Corrected _____
Lower 95% Confidence Limit _____
Upper 95% Confidence Limit _____

Analyte	Result	Units	Sample time (min)	Sample Vol. (L) or Area	Actual Exp	Units	Test date:	Reporting Limit	Blank Corrected	Lower 95% Confidence Limit	Upper 95% Confidence Limit
572293 JOHN ST TANK CP05/02/2023- 5/2/2023 1 INTERIOR HATCH NECK Chromium (as Cr)	40	ug/g		0.004	%		5/11/2023	30 ug/g	No		
572294 JOHN ST TANK CP05/02/2023- 5/2/2023 1 EXTERIOR SHELL BOTTOM Chromium (as Cr)	< 30	ug/g		< 0.003	%		5/11/2023	30 ug/g	No		
572293 JOHN ST TANK CP05/02/2023- 5/2/2023 Lead (as Pb)	< 50	ug/g		< 0.005	%		5/11/2023	50 ug/g	No		
572294 JOHN ST TANK CP05/02/2023- 5/2/2023 Lead (as Pb)	4900	ug/g		0.49	%		5/11/2023	50 ug/g	No		

HIH LABORATORY, INC.

100 E. NASA Parkway, Suite 210

P.O. Box 57727

Webster, Tx 77598

(281) 338-9000

FAX (281) 338-2351

Report Number 55697

PO Number 18-1491-1892

LABORATORY ANALYSIS REPORT

SUPPLEMENTARY QUALITY ASSURANCE INFORMATION

Report Number
55697

Analyte	Method	Media	Test date	Analyst	Instrument	MS % Recovery	MSD % RECOVERY	MS/MSD RPD	LCS % Recovery:	Precision (% Sr)	Blank Result	DUP RPD	Range	Batch No	Lit Ref	HIH Sample #
Chromium (as Cr)	NIOSH 7303M	Paint	05/11/2023	EP	8300MET	99.2	101	1.49	97.2	< 30	ug/g			41031	97	572293
Lead (as Pb)	NIOSH 7303M	Paint	05/11/2023	EP	8300MET	97.2	99.8	2.68	108	< 50	ug/g			41031	97	572293

Method Literature References

97 NIOSH Manual of Analytical Methods, 4th Edition, August, 1994

HIH Laboratory did not collect these samples; therefore, calculations and sampling information are based on client-supplied sampling data. Samples arrived in good condition unless otherwise noted.

Approved Signatory:

Carole A. Newman

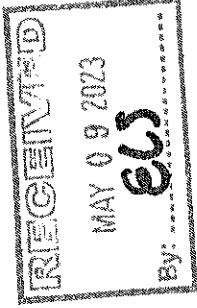
Esteban P. Piña, Technical Manager

END OF REPORT



USG WATER SOLUTIONS

CHAIN - OF - CUSTODY RECORD



18-4191-1892

TYPE SAMPLE: Paint chips

CUSTOMER: <u>Village of Ballston Spa NY</u>	CITY: <u>Ballston Spa</u>	STATE: <u>NY</u>
TANK NAME: <u>John St Tank</u>	TANK SIZE/TYPE: <u>750k/Standpipe</u>	
SAMPLER: <u>Christopher Patterson</u>	DEPARTMENT #: <u>134</u>	SIGNATURE:
RETURN ADDRESS: <u>USG Water Solutions</u> <u>ATTN: Lara Townsend</u> <u>PO Box 1350</u> <u>Perry, GA 31069</u>	DATE: <u>05/08/2023</u>	

RETURN COPY OF THIS RECORD WITH RESULTS

SAMPLE #	SAMPLE REMOVAL DATA			ANALYSIS REQUESTED	
	DATE	TIME	SPECIFIC LOCATION	LEAD	CHROMIUM
CP 05/02/2023-1	05/02/2023	11:00am	Interior Hatch neck	X	X
CP 05/02/2023-1	05/02/2023	10:50am	Exterior Shell bottom	X	X
CP 05/02/2023-1	05/02/2023	N/A	Additional N/A	X	X

SAMPLES RELINQUISHED BY:			SAMPLES RECEIVED BY:		
NAME	DATE	TIME	NAME	DATE	TIME
Christopher Patterson	05/02/2023	3:00pm	Lynn Shively	5/19/23	11
Lynn Shively	5/19/23		Lara Townsend	5/19/2023	1612

UTILITY SERVICE COMPANY INC.
WATER TANK MAINTENANCE

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Fax: (478) 987-2991

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