

ADDENDUM No. 1

ITB No. 4498

South Industrial Tank Coating

Bid Due Date and Time: May 22, 2017 at 2:00 P.M. (local time)

The following changes, additions, and/or deletions shall be made to the Invitation to Bid for South Industrial Tank Coating, ITB No. 4498, on which proposals will be received on/or before May 22, 2017 at 2:00 P.M. (local time)

The information contained herein shall take precedence over the original documents and all previous addenda (if any), and is appended thereto. **This Addendum includes thirty-eight (38) pages.**

Bidder is to acknowledge receipt of this Addendum No. 1, including all attachments in its Bid by so indicating on page ITB-1 of the Invitation to Bid Form. Bids submitted without acknowledgement of receipt of this addendum will be considered nonconforming.

The following forms provided within the ITB Document must be included in submitted bids at bid opening.

- City of Ann Arbor Prevailing Wage Declaration of Compliance
- City of Ann Arbor Living Wage Ordinance Declaration of Compliance
- Vendor Conflict of Interest Disclosure Form
- City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance

Bids that fail to provide these completed forms listed above upon bid opening will be rejected as non-responsive and will not be considered for award.

I. CORRECTIONS/ADDITIONS/DELETIONS

Page TC-3, Appendix A. Dixon Engineering, Inc. 4,000,000 Gallon Industrial Drive Reservoir Maintenance Inspection Report, 3-17-2017 was inadvertently omitted in the ITB Document. Appendix A has been included in this Addendum #1 herein.

Respondents are responsible for any conclusions that they may draw from the information contained in the Addendum.

Dixon Engineering, Inc.

Maintenance Inspection

4,000,000 Gallon
Industrial Drive Reservoir

Ann Arbor, Michigan

Inspection Performed: February 23, 2017
Report Prepared: March 15, 2017
Reviewed by Ira M. Gabin, P.E.: March 17, 2017

Phone (616) 374-3221
Fax (616) 374-7116
<http://www.dixonengineering.net>

Dixon Engineering Inc.
1104 Third Ave. Lake Odessa, MI 48849

CONCLUSIONS:

1. The exterior coating is an epoxy urethane system that is in fair condition overall. The coating is slightly faded and the primary mode of deterioration is spot failures to the substrate with rust undercutting, there are also a few areas of rust bleedthrough. The failures are most prevalent on the baseplate, lower sidewall, and on the roof. There is a large amount of graffiti on the lower sidewall facing the railroad tracks. The coating has good adhesion where tested.
2. The wet interior coating is an epoxy system that is in poor condition overall. Below the high water line the coating deterioration includes spot failures, blistering and delamination to the previous coat. Above the high water line there is coating delamination and rust bleedthrough on the roof panels and roof stiffeners.

RECOMMENDATIONS:

1. Complete the recommended work within the next year. The coating work is the greatest cost and largest part of the recommendations. The repairs and upgrades should be completed during the next major tank rehabilitation project when coating work is completed.
2. High pressure water clean (5,000-10,000 psi), spot power tool clean, and recoat the exterior with a polyurethane system. The estimated cost is \$160,000.
3. Abrasive blast clean the entire wet interior to a near-white metal (SSPC-SP10) condition and apply a three coat zinc epoxy system to the sidewall and floor and a 100% solids zinc epoxy system to the roof. The estimated cost is \$500,000.
4. Install cathodic clips and a pressure fitting for future installation of a submerged cathodic protection system. The estimated cost is \$2,000.
5. Abrasive blast clean the pit piping to a commercial (SSPC-SP6) condition and apply an epoxy system. The estimated cost is \$5,000.
6. Install a sump pump to keep the pit dry; work can be performed by in house personnel.
7. Coat the foundation to help prevent further deterioration. Cost would be incidental to exterior coating.

8. Repair areas of missing or damaged caulk between the steel baseplate and the concrete foundation. The estimated cost is \$1,000.
9. Install railing sections on each side of the sidewall ladder. The estimated cost is \$4,000.
10. Replace the roof vent with a new frost-free pressure vacuum vent. The estimated cost is \$7,000.
11. Replace the corroded rungs on the wet interior ladder. The estimated cost is \$1,000.
12. Replace the corroded sections of the wind girder. The estimated cost is \$15,000.
13. Reattach the nameplates on the sidewall. The cost would be incidental to exterior painting.

COST SUMMARY:

Exterior Overcoat	\$160,000
Wet Interior Repaint	500,000
Pit Piping Repaint	5,000
Cathodic Clips and Coupling	2,000
Caulk Baseplate	1,000
Roof Handrail Sections	4,000
Ladder Repair	1,000
Frost Free Roof Vent	7,000
Wind Girder Repair	<u>15,000</u>
Subtotal	\$695,000
Engineering and Contingencies	<u>\$90,000</u>
Total	\$785,000

INSPECTION:

On February 23, 2017, Dixon Engineering Inc. performed a maintenance inspection on the 4,000,000 gallon Industrial Drive reservoir owned by the City of Ann Arbor, Michigan. Purposes of the inspection were to evaluate the interior and exterior coating's performance and life expectancy; assess the condition of metal surfaces and appurtenances; review safety and health aspects; and make budgetary recommendations for continued maintenance of the tank. All recommendations with budgeting estimates for repairs are incorporated in this report. The inspection was performed by Trevor Felton, Staff Engineer. The inspector was assisted by Kyle Lay, Staff Technician and ROV Operator, and Andy Schrauben, Assistant Project Manager. Scheduling and arrangements for the inspection were completed through Brian Steglitz.

The submerged wet interior inspection was completed with a remotely operated vehicle (ROV). An inflatable raft was used to inspect the interior roof. Video of the inspection and still photos are included with this report. No cleaning is performed in the wet interior during the ROV inspection.

TANK INFORMATION:

The tank was built in 1968 by CB&I with a height to high water line of 56 feet. The tank is welded construction. The exterior and wet interior were last coated in 1996 by Atsalis Brothers. The roof was replaced during that project.

CONDITIONS AND RECOMMENDATIONS:

EXTERIOR COATING CONDITIONS:

The coating is a multiple coat epoxy urethane system applied over a SSPC-SP6 commercial blast condition.

The coating is in fair condition overall, it is beginning to chalk and fade and there is loss of gloss. Surfaces have faded due to exposure to ultraviolet light, which is a normal occurrence for an exterior coating system. There are numerous coating failures.

The sidewall coating is in fair condition with failures mostly on the base plate and lower sidewall sections with a few other failures on the upper shell sections. Primary methods of deterioration are spot failures to the substrate with rust undercutting and rust bleedthrough.

There is a large area of graffiti on the lower sidewall facing the railroad tracks.

The roof coating is in fair condition with numerous failures. Primary method of deterioration is spot failures to the substrate with some large areas up to one square foot in size.

Good adhesion was noted on the ASTM X-cut test areas, with no loss of topcoat in areas tested. The tank is a candidate for overcoating at this time.

EXTERIOR COATING RECOMMENDATIONS:

Plan and budget for overcoating this year. The typical recoat frequency for modern urethane systems is 15 years.

The recommended procedure is to high pressure water clean (5,000-10,000 psi) the exterior to remove any delamination or flaking coating and any contaminants. Then any coating failures would be spot power tool cleaned to bare metal (SSPC-SP11) condition.

The coating system would consist of a spot prime coat on the bare metal, a full coat of epoxy, followed by a two full coats of polyurethane. The polyurethane system offers excellent abrasion resistance with high gloss and sheen retention. The expected life of this system is fifteen years. The system can be recoated again in fifteen years, extending the total life of the coating to approximately forty five years before total removal would be necessary. The tank would be removed from service during the coating project. This is necessary to reduce condensation on the tank's surface. Polyurethane coatings have a minimum temperature requirement for application and are sensitive to moisture during the curing process. If moisture is present during the curing process, the appearance will become cloudy with little or no gloss. The estimated cost to spot power tool clean and overcoat the existing system with an epoxy polyurethane system is \$160,000.

WET INTERIOR COATING CONDITIONS:

The coating is an epoxy system applied over a SSPC-SP10 near white metal blast condition.

The roof coating is in poor condition overall, with delamination of the coating to the steel and rust bleedthrough on all of the panels and stiffeners.

The sidewall coating is in poor condition with numerous failures. Primary methods of deterioration are spot failures, blisters and delamination to the previous coat and to the

substrate. There are football sized failures to the steel on the upper sections and extensive delamination, spot failures and blistering on the lower sections.

The floor was covered with approximately ½ inch of sediment limiting the amount of surface visible with the ROV.

The surfaces below the normal operating water level are covered with mineral staining, which does not affect the integrity of the coating system.

WET INTERIOR COATING RECOMMENDATIONS:

Remove the coating system by abrasive blast cleaning the metal to a near-white metal (SSPC-SP10) condition and apply a zinc epoxy coating system. Wet interior coating systems are to be approved for potable storage tanks contingent upon meeting requirements of NSF/ANSI 61.

Apply a zinc epoxy system to the sidewall and floor and a high film build 100% solids zinc epoxy system to the roof. The 100% solids coating systems are not solvent based, so thicker films can be obtained in a single pass. This provides much better long term performance on the structural steel members. The estimated cost is \$500,000.

CATHODIC PROTECTION CONDITIONS:

The tank does not contain a cathodic protection system and there are no clips or a pressure fitting installed for a future cathodic protection installation.

CATHODIC PROTECTION RECOMMENDATIONS:

Install cathodic clips and couplings for future installation of floating type cathodic protection system. The estimated cost is \$2,000.

PIT AND PIT PIPING CONDITIONS:

There is a pit adjacent to the tank that contains piping and valves.

The coating on the piping is in poor condition with general surface rust.

The pit was had several feet of water in it during the inspection.

The handles on the cast iron covers are missing but the covers are in good condition overall.

PIT AND PIPING RECOMMENDATIONS:

Abrasive blast clean the piping to a commercial blast (SSPC-SP6) condition and apply an epoxy system. The estimated cost is \$5,000.

Install a sump pump to keep the pit dry; work can be performed by in-house personnel.

SITE CONDITIONS:

The size of the tank site is large and is fenced.

There is industrial development around the tank with railroad tracks on one side.

FOUNDATION CONDITIONS:

The top 0 to 20 inches of the foundation are exposed.

The exposed concrete foundation is in good condition and showed minor deterioration with some aggregate exposed from weathering.

FOUNDATION RECOMMENDATIONS:

Pressure wash and coat the exposed concrete with an epoxy coating system to help prevent further deterioration. The cost would be incidental to exterior coating.

CAULK CONDITIONS:

The gap between the baseplate and the foundation is sealed with a tar/caulking material that is in poor condition with approximately $\frac{3}{4}$ of the material deteriorated or missing.

CAULK RECOMMENDATIONS:

Repair the caulk by removing all dried and cracked caulk and fill missing areas with new caulking. The estimated cost is \$1,000.

ROOF HANDRAIL AND RIGGING COUPLING CONDITIONS:

There is a step-off platform on the roof with a handrail on the edges of the platform.

There are roof rigging couplings for safety and staging lines during wet interior coating work.

ROOF HANDRAIL AND PAINTER'S RAIL RECOMMENDATIONS:

Install handrails at the edge of the roof to either side of the sidewall ladder and step-off platform. The railings will allow someone working near the edge of the roof to be tied off and secure behind the railing. The estimated cost is \$4,000.

ANTENNA CONDITIONS:

The roof contains three small antennas that are attached to the roof using magnets. The cables routed to the antennas are also attached using magnets.

ANTENNA RECOMMENDATIONS:

The exterior coating could be applied with the antennas and cables attached and moved as needed. If possible, it would be easier to coat and would eliminate the possibility of damage to the equipment if they are removed prior to the start of the project.

OVERFLOW PIPE CONDITIONS:

The tank has a 16 inch diameter overflow pipe that exits the roof knuckle, extends down along the exterior and discharges near the ground.

The end of the pipe has a screened flap gate that is in good condition.

The pipe discharges to a splash pad with the required air gap. The discharge area is in good condition.

HATCH AND MANWAY CONDITIONS:

The tank has a 30 inch square flip top roof hatch to the wet interior that is in good condition.

The wet interior roof hatch was secured with a padlock.

The roof contains a 30 inch diameter painter's hatch at the outer edge with a bolted cover that is in good condition. The hatch is used for ventilation and lighting during maintenance or a rescue.

The tank has two 24 inch diameter bolted manways in the sidewall that are in good condition.

VENT CONDITIONS:

The roof vent is a 24 inch flow through design that is in good condition. The screen is intact.

VENT RECOMMENDATIONS:

Replace the roof vent with a new, screened pressure vacuum vent. The new vent can be bolted to a new neck that is welded to the roof.

The vent has movable plates that would allow air to flow in and out of the tank even if the screens become covered with debris or frosted over. The vent can be removed during coating or rescue operation for additional light and ventilation. The estimated cost is \$7,000.

LADDER CONDITIONS:

The tank has an exterior sidewall ladder that starts approximately 19.5 feet above ground level, and extends up to a small platform on the roof. The ladder is equipped with a T-rail type fall prevention device that is in good condition.

The wet interior contains a ladder from the roof to the floor that is in good condition except for the four top rungs and is equipped with a T-rail type fall prevention device that is in good condition. There is significant steel loss on the top four rungs.

LADDER RECOMMENDATIONS:

Replace the corroded rungs on the wet interior ladder. The estimated is \$1,000.

FILL PIPE CONDITIONS:

The fill pipe penetrates through the wet interior floor. The pipe extends across the floor to near the center and is in good condition

There is a separate draw line that is flush with the floor.

WET INTERIOR METAL CONDITIONS:

The interior roof is supported by 30 inner channel stiffeners and 60 outer I- beam stiffeners. The roof stiffeners have significant coating loss on the bottom flanges with some minor steel loss.

The roof stiffeners are supported by a center ring support, an intermediate ring beam, and to a wind girder at the roof knuckle.

The wind girder plate at the outer edge of the outer roof stiffeners is in poor condition. The coating has failed and there are sections of significant steel loss along the plate. The connections at the I-beam supports are welded and in good condition. The connections at the center support are welded and are in good condition.

The ring I-beams supporting the roof stiffeners are supported by six columns and there is one center column. The columns are tubular and are in good condition. One column has extensive coating failures.

WET INTERIOR METAL RECOMMENDATIONS:

Replace corroded sections of the wind girder. The estimated cost is \$15,000. Exact quantity cannot be determined until after abrasive blast cleaning is completed.

MISCELLANEOUS:

There are two nameplates on the lower sidewall section that are in good condition but are missing attachment rivets.

RECOMMENDATIONS:

Reattach the nameplates on the sidewall. The cost would be incidental to exterior painting.

DIXON ENGINEERING, INC.
STEEL TANK FIELD INSPECTION REPORT
RESERVOIR TANK

DATE: February 23, 2017

OWNER: City of Ann Arbor

CLIENT CODE: 22-81-01-02

TANK NAME: Industrial Tank

LOCATION: Street: 2000 Industrial Drive

City: Ann Arbor

State: Michigan

TANK SIZE: Capacity: 4,000,000 gallons

Tank Diameter: 114 feet (from nameplate)

Height to overflow (HWL): 56 feet (from nameplate)

Sidewall height: 60 feet

CONSTRUCTION:

Type of structure: Reservoir

Type of roof: Flat

DATE CONSTRUCTED: 1968; The roof and roof beams were replaced in 1996.

MANUFACTURER: CB&I

CONTRACT NUMBER: 9-8769

COATING HISTORY	EXTERIOR	WET INTERIOR
DATE LAST COATED	<u>1996</u>	<u>1996</u>
CONTRACTOR	<u>Atsalis Bros.</u>	<u>Atsalis Bros.</u>
COATING SYSTEM	<u>Epoxy urethane</u>	<u>Epoxy urethane</u>
SURFACE PREPARATION	<u>SSPC-SP6</u>	<u>SSPC-SP10</u>
COATING MANUFACTURER	<u>Tnemec</u>	<u>Tnemec</u>
HEAVY METAL COATING SAMPLES	<u>No</u>	<u>No</u>
HEAVY METAL BEARING	<u>No</u>	<u>No</u>

PERSONNEL: Inspector **Trevor Felton**, Top person **Andy Schrauben**,
Ground person/ROV operator **Kyle Lay**

TYPE OF INSPECTION: **Maintenance**

METHOD OF INSPECTION: **Float and ROV**

DATE LAST INSPECTED: **April 21, 2004 - Maintenance**

SITE CONDITIONS

Fenced: **Yes**

Site large enough for contractor's equipment: **Yes**

Control building: **Yes**

Antenna control site: **No**

Site conditions: **Well maintained**

Neighborhood: **Industrial**

Power lines within 50 feet: **No**

Site drainage: **Toward tank (on east side), Away from tank (on west side)**

Indications of underground leakage: **No**

Shrub, tree, etc. encroachment: **No**

EXPOSED PIPING:

Location: **Adjacent to tank (in pit)**

Condition of structure: **Good**

Structure is: **Wet**

Pump present: **No**

Hatch condition: **Fair**

Locked: **No**

Altitude valve: **No**

Pipe coating condition: **Poor**

Describe coating: **Rust bleedthrough**

Condition of metal: **Good**

FOUNDATION

Foundation exposed: **Yes**

Exposed height: **0-20 inches**

Exposed foundation condition: **Good**

Damage or deterioration: **Yes**

Type of damage: **Aggregate exposed**

Severity: **Minor**

Foundation coated: **No**

Type of baseplate gap filler: **Caulk/tar**

Condition: **Fair**

Amount missing: **Approximately 3/4 of circumference**

Undermining of foundation: **No**

EXTERIOR COATING

Sidewall:

Lettering: **No**

Logo: **No**

Topcoat condition: **Fair**

Previous coat condition: **Fair**

Describe coating: **Fading, spot coating failures to substrate, rust undercutting, rust bleedthrough, scratches**

Dry film thickness: **15-16 mils**

Coating adhesion: **Not taken**

Reason not taken: **Wet**

Panel connections: **Welded**

Metal condition: **Good**

Bottom shell steel thickness: **1.37 inches**

Sidewall comments: **Approximately 5 scratches and approximately another 50 spot failures with several on the baseplate and most others on the bottom 2 shells; there is graffiti on the south side facing the railroad tracks**

Roof:

Topcoat condition: **Fair**

Previous coat condition: **Fair**

Describe coating: **Fading, spot coating failures of substrate**

Dry film thickness: **8-11 mils**

Coating adhesion: **5A**

Metal condition: **Good**

Roof comments: **Approximately 100 spot failures to the steel, some up to 1 sq. ft. in size**

EXTERIOR APPURTENANCES

Sidewall manway:

Number: **2**

Size: **24 inches**

Coating condition: **Good**

Metal condition: **Good**

Anchor bolts:

N/A

Overflow pipe:

Diameter: **16 inches**

Coating condition: **Good**

EXTERIOR APPURTENANCES

Metal condition: **Good**

Condition of screen: **Good**

Percent of screen open: **100**

Flap gate: **Yes**

Design: **Screened**

Flap gate condition: **Good**

Air gap: **Yes**

Highest part of discharge to the ground distance: **23 inches**

Splash pad: **Yes**

Type: **Concrete**

Condition: **Good**

Overflow comments: **Screen is expanded metal**

Mud valve:

N/A

Sidewall ladder:

Height to start of ladder: **19 ½ feet**

Toe clearance: **7 inches or greater**

Width of rungs: **13 ¼ inches**

Thickness of rungs: **5/8 inch**

Shape of rungs: **Diamond**

Coating condition: **Good**

Metal condition: **Good**

Fall prevention device: **Yes**

Type: **T-rail**

Function Properly: **Yes**

Cage: **No**

Vandal guard: **No**

Step-off platform:

Dimensions: **32 x 36 inches**

Railing height: **42 inches**

Midrail height: **21 inches**

Toe plate height: **4 inches**

Coating condition: **Poor**

Metal condition: **Good**

Step-off platform comments: **Coating on the underside is poor, top is good**

Balcony:

N/A

EXTERIOR APPURTENANCES

Roof handrail:

N/A

Roof rigging points:

Number: **18 (6 center, 12 outer)**

Couplings covered: **Yes**

Coating condition: **Poor**

Metal condition: **Good**

Removable cathodic caps:

N/A

Wet Interior Roof Hatch:

Neck size: **39 inches**

Shape: **Square**

Hatch security: **Lock**

Outside coating condition: **Good**

Inside coating condition: **Poor**

Metal condition: **Good**

Bolted ventilation hatch:

Coating condition: **Fair**

Metal condition: **Good**

Neck diameter: **30 inches**

Roof vent:

Number: **1**

Type: **Flow-through**

Neck diameter: **24 inches**

Flange opening diameter: **24 inches**

Coating condition: **Poor**

Metal condition: **Good**

Screen condition: **Good**

Percent of screen open: **100**

Aviation lights:

N/A

Antennas:

Roof Number: **3**

Attached to: **Magnets**

EXTERIOR APPURTENANCES

Cable runs: **On exterior on magnets**

Antenna or cable interference: **No**

WET INTERIOR COATING

Roof:

Topcoat condition: **Poor**

Primer coating condition: **Poor**

Describe coating: **Delaminating, spot coating failures to substrate**

Metal condition: **Good**

Lap seams: **Open**

Condition of laps: **Poor**

Roof comments: **Widespread failures on all panels and stiffeners**

Sidewall:

Topcoat condition: **Poor**

Primer coating condition: **Poor**

Describe coating: **Delaminating, spot coating failures to substrate**

Mineral deposits: **Light**

Metal condition: **Good**

Active pitting: **No**

Previous pitting: **No**

Sidewall comments: **The top shell has 3 football sized failures to steel and a few pinholes, the next shell down has a 3 x 3 foot failure to steel and approximately 8 football sized areas of topcoat delamination, bottom 3 shells have blisters throughout, middle has topcoat delamination , approximately 25 football to 3 foot diameter spots, and spot failures dime size and smaller (approximately 25-50)**

Tank bottom:

Covered in sediment could not inspect with ROV

WET INTERIOR APPURTENANCES

Tank ladder:

Toe clearance: **7 inches or greater**

Width of rungs: **16 inches**

Thickness of rungs: **¾ inch**

Shape of rungs: **Round**

Shape of side rails: **Flat**

Coating condition: **Poor**

Metal condition: **Fair (steel loss on top 4 rungs)**

Fall prevention device: **Yes**

Type: **T-rail**

WET INTERIOR APPURTENANCES

Cathodic protection:

N/A

Clips and pressure fitting present: No

Roof stiffeners:

Orientation: Radial with support ring

Stiffener shape: Channel (inner), I-beam (outer)

Number of stiffener support rings: 1

Beam Dimensions: W18 x 40# 29 feet 9 inches long long

Number of inner ring stiffeners: 30

Dimensions: C6 x 13# x 30 ft. long

Stiffener Condition: Good

Connection at support ring: Welded

Connection Condition: Good

Number of outer ring stiffeners: 60

Dimensions: W8 x 13# x 30 ft. long

Stiffener Condition: Good

Connection at sidewall: Welded

Connection dimensions: 4 x 4 x 1/4 inch

Connection Condition: Good

Wind girder plate size: 4 x 3/8 inch

Condition: Fair – some sections are heavily corroded

Coating condition: Poor

Metal condition: Fair

Roof stiffener comments: There is coating loss on the bottom flange on most of the stiffeners

Sidewall stiffener:

Number: 1

Coating condition: Poor

Metal condition: Good

Sidewall stiffener comments: Edge corrosion throughout

Columns:

Center column shape: Round

Dimensions: 12 inches

Outer ring Number: 6

Shape: Round

Dimensions: 12 inches

Coating condition: Fair

Metal condition: Good

WET INTERIOR APPURTENANCES

Column comments: **One column had failures to the steel down approximately 20 feet from the roof**

Interior platform:

N/A

Overflow pipe:

Type: **Weir box**

Coating condition: **Poor**

Metal condition: **Good**

Overflow comments: **Extensive coating failure on inside**

Fill pipe:

Configuration: **Routes across floor to center**

One way valves present: **No**

Deflector on end: **No**

Mixing system: **No**

Coating condition: **Good**

Metal condition: **Good**

Separate draw pipe:

Deflector over end: **No**

Baffle wall:

N/A

Spider Rods:

N/A

Field Inspection Report is prepared from the contractor's viewpoint. It contains information the contractor needs to prepare his bid for any repair or recoating. The engineer uses it to prepare the engineering report. Cost estimates are more accurate if the contractor's problems can be anticipated. While prepared from the contractor's viewpoint, the only intended beneficiary is the owner. These reports are completed with diligence, but the accuracy is not guaranteed. The contractor is still advised to visit the site.



1) 4,000,000 gallon Industrial Drive reservoir located in Ann Arbor, Michigan.

2) The foundation is in good condition overall with some aggregate exposed from weathering.



3) Coating deterioration on the top of the baseplate.



4) There is a gap between the baseplate and foundation with missing caulk on $\frac{3}{4}$ of the circumference.

5) Scratch on the lower sidewall.

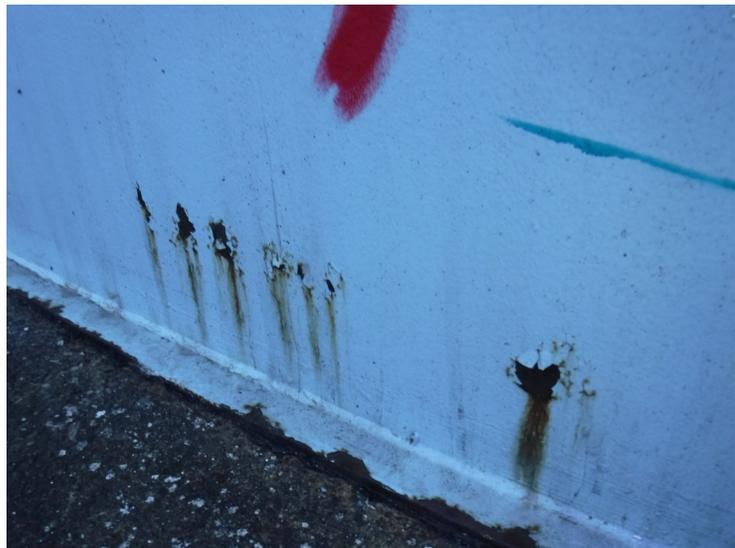


6) Coating failures to the steel substrate on the lower sidewall.



7) Graffiti on the sidewall facing the railroad tracks.

8) Spot failures with rust undercutting on the lower sidewall.



9) Rust bleedthrough and spot failures on the sidewall.



10) Same.

11) The overflow pipe discharges to a concrete splash pad and has a flap gate that is in good condition.

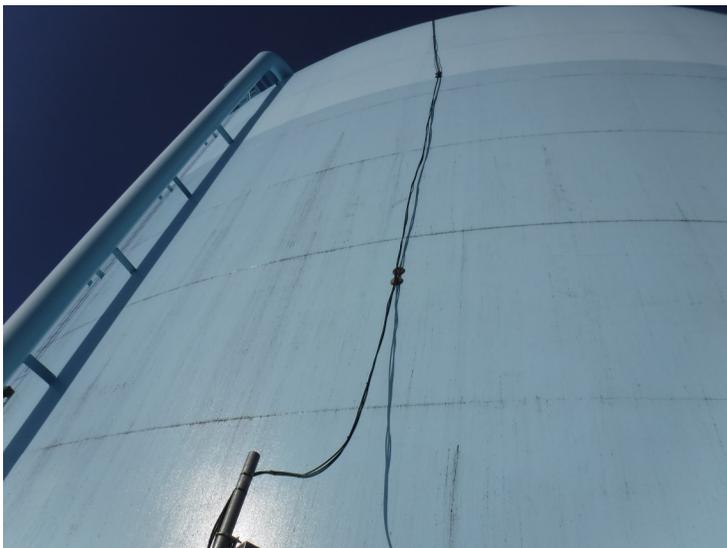


12) Sidewall manway nameplates that are not completely secure.



13) Second sidewall manway.

14) Overflow pipe routing and roof access ladder on the sidewall.



15) Antenna cables are attached with magnets on the sidewall.

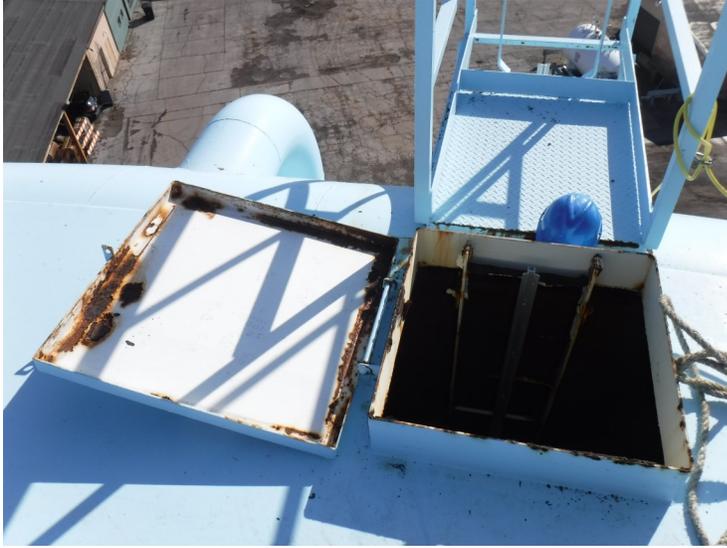


16) Pit piping cover with no handles.

17) The pit is full of water and the coating on the piping appears to be in poor condition.



18) Step-off platform and hatch on the roof.



19) The coating on the interior of the hatch is in poor condition.

20) Coating failures to the steel substrate on the roof.

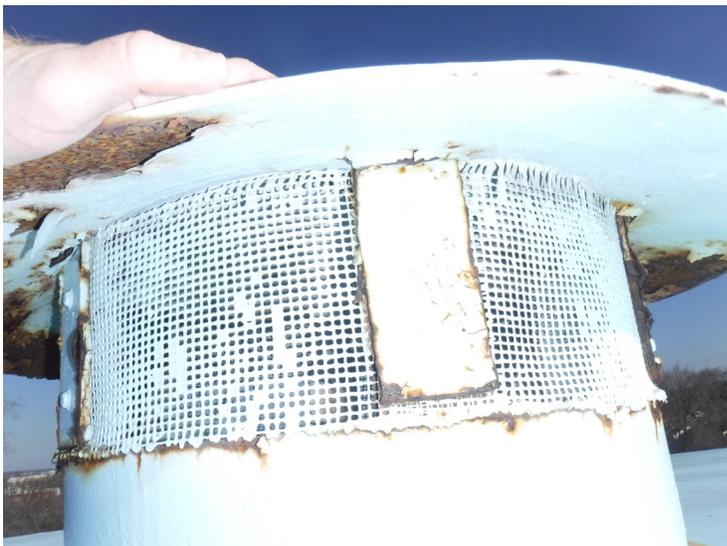


21) Same.



22) Spot coating failure on the roof.

23) Flow through vent in the center of the roof.



24) The screen is intact on the vent.



25) Antennas attached to the roof with magnets.

26) Bolted ventilation hatch on the edge of the roof.

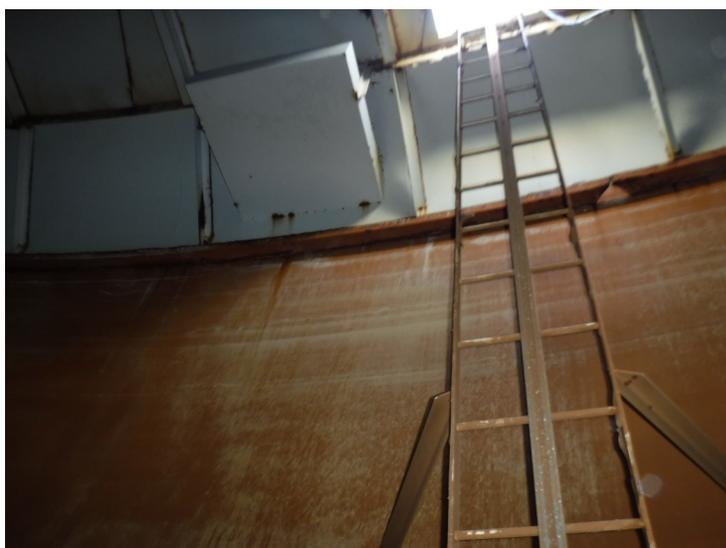


27) Typical roof rigging coupling with plug.



28) Wet interior roof knuckle wind girder and kickers at the stiffeners.

29) Section of the wind girder with extensive steel loss.



30) Wet interior ladder with fall prevention and underside of the overflow weir box.



31) Extensive corrosion on the upper four ladder rungs.

32) Extensive coating failure on the interior of the overflow weir box.



33) Coating delaminated to the steel substrate on the roof panels in numerous areas.



34) Same.

35) Rust bleedthrough and delamination on the roof.



36) Same.



37) Center of the roof with ring stiffener and column.

38) Coating failures on a column support.



39) Sidewall stiffener with coating failure to the steel.



40) Delaminated coating to the steel substrate on the upper sidewall.

41) Same.



42) Same.



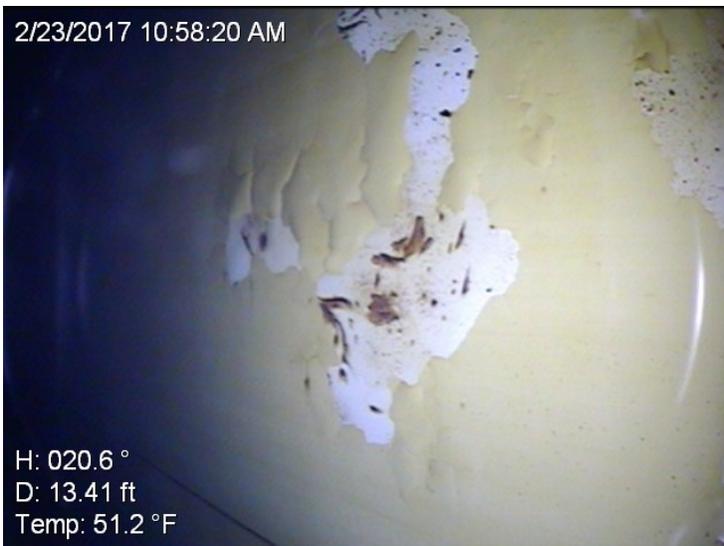
43) Delaminated coating to the steel substrate on the sidewall.



44) Delaminated coating to the previous coat on the sidewall.



45) Area of delamination to the steel substrate.



46) Coating delamination to the previous coat with areas to the steel substrate.

47) Topcoat delamination on the sidewall.



48) Rust bleedthrough and spot coating failures on the sidewall.



49) Blistering on the sidewall.

50) Same.



51) Coating failures on the bottom of the sidewall.



52) Fill pipe penetration through the floor.



53) The pipe discharges near the center of the tank.



54) The floor is covered in a thin layer of sediment.