Aleda E. Lutz VA Medical Center
Re: Water Tower ROV Evaluation
Attn: Calvin Hugo
From: B&N Inspection

Mr. Hugo,

This letter is in reference to the recent inspection of the Single Pedestal Water Storage Tank at the Aleda E. Lutz VA Medical Center in Saginaw, MI. The attached tank inspection report was completed by Derek Goff (Director of Operations, NACE Level 3 Coatings Inspector, & AMPP Senior Certified Coatings Inspector) on July 23, 2024.

Executive Summary:

- The overall condition of the tank is good. No significant coating failures, corrosion, or discontinuities were found. The site is secured, maintained, and well kept.
- The exterior coating system is in sound condition and exhibits good adhesion properties. The exterior coating system is "chalking," which indicates the UV protection is breaking down. The tank exterior is a candidate for washing and overcoating at the time of the next scheduled maintenance.
- The exterior roof is in overall good condition. The safety railing is functioning properly and in sound condition. The roof vent appears to be functioning properly and is in sound condition.
- The interior dry areas are in good condition. Typical wear and tear are visible, but no significant corrosion or coating failures were found. The ladder is sound, stable, and in good condition.
- The interior coating system is in fair condition. Localized corrosion and coating failures are visible below the typical water line. The areas above the water line appear in good condition with normal wear and tear visible. Due to the age of the existing coating system and availability of new NSF/ANSI 61 approved products, removal and replacement of the interior system is recommended at the time of the next scheduled maintenance.

Very Respectfully,
Derek Goff
Director of Operations
NACE Level 3 Coatings Inspector #31446
AMPP Senior Certified Coatings Inspector

SINGLE PEDESTAL TANK INSPECTION REPORT

REPORT #VA HOSPITAL ROV - 20240723-1, APPROVED
VA SAGINAW, SAGINAW, MICHIGAN, UNITED STATES

Started: 07/23/2024, 7:52 AM EDT - Location: 43.45,-83.96 Submitted: 08/02/2024, 10:46 AM EDT - Location: 38.65,-90.32 Approved: 08/02/2024, 10:46 AM EDT

INSPECTION OF THE ALEDA E. LUTZ VA MEDICAL CENTER WATER TOWER

1500 WEISS ST. SAGINAW, MI 48602

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GENERAL

Date of Evaluation: 07/23/2024, EDT
Name of Tank: VA Hospital ROV
Height to TCL: 151
Tank Capacity: 250000 gal
Interior Wet: White
Location: 1500 Weiss St, Saginaw, MI

Name of Inspectors: Derek Goff, Nick Lamm

Exterior: White
Interior Dry: White
Type of Inspection: Periodic

NON-CONFORMANCE

EXTERIOR COMPONENTS

Balcony Obstruction Lights Present: No

SITE

ACCESS ROAD TO SITE

Access Road Condition: Sat

Comments: Access to the tank is a paved road at the VA Hospital Site

FENCE

Fence Condition: Sat
Type: Decorative
Gate / Site Entrance: Sat
Locked?: Yes
Width: 45 in

Comments: Tank is secured by a 8 ft steel fence
Height: 8 ft

SITE LAYOUT

General Description of Site: VA Hospital Site

Distance to Nearest Structures: 12
Direction from Tank: East

Units: Feet
Structure Type: Commercial

Nearest Power Lines: 100
Direction from Tank: North

Units: Feet

VALVE VAULT

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Photo Description: General Exterior Tank View

Photo Description: Utility building in close proximity to tank. Paved access to site

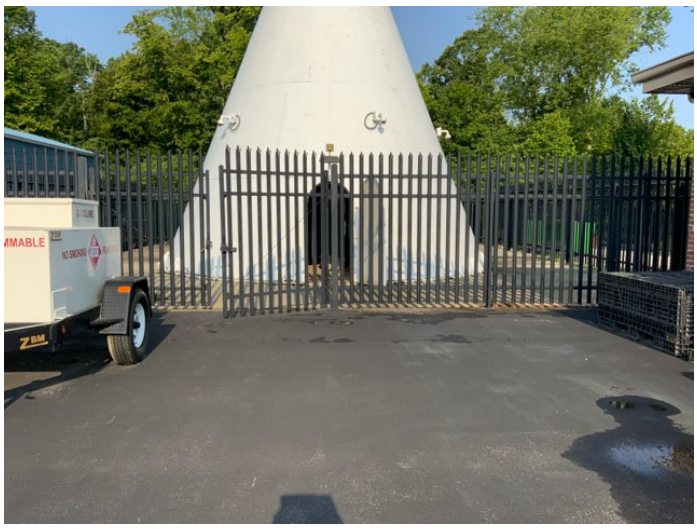

Photo Description: Security Fence

Photo Description: Security Fence

Photo Description: Tank exterior view

Photo Description: Security fence

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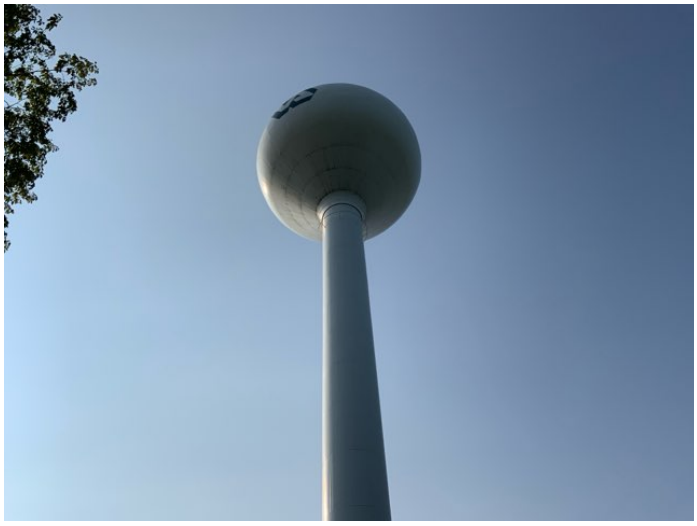

Photo Description: Tank exterior view

NAME PLATE INFORMATION

Nameplate Present: Sat
Location on Tank: East
Serial or Contract Number: NA

Comments: Good condition
Attachment Details: Welded

Photo Description: Tank Name Plate located on the entrance door

RISER

RISER FOUNDATION

Riser Foundation Condition: Sat
Riser Type: Dry
Projection Above Grade: 2 in
Concrete Condition: Sat

Exterior Coating Condition: Sat

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ANCHOR BOLTS

Anchor Bolts Condition: Sat
Number of Bolts: 16
Diameter: 1.5 in
Condition: Good

ANCHOR BOLT CHAIRS

Anchor Bolt Chairs Condition: Sat
Width: 6 in
Height: 12 in
Condition: Good

BASE PLATES

Base Plates Condition: Sat
Riser Floor Plate Thickness: Sat

DIAGONAL BRACING

Diagonal Bracing Condition: N/A
Comments: No diagonal bracing

RISER LADDER

Riser Ladder Condition: Sat
Comments: Overall Good Condition
Side Rail Size: 2.5 in
Ladder Type: Continuous
Rungs: Sat
Size: 0.75 in
Spacing: 12 in
Width: 16 in
Ladder Condition: Good
Ladder Safe-Climbing Device Present: Yes
Type: Cable
Condition: Good

BRACKET

Bracket Condition: N/A

Painted: Yes

INLET / OUTLET PIPE

Inlet / Outlet Pipe Condition: Sat
Comments: Appears in sound condition
Circumference / Diameter: 6 in
Reinforcing Plate: N/A
Protective Cover: Sat
Lead Joint: No

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Photo Description: Tank foundation and surrounding area

Photo Description: Anchor bolts in typical condition

Photo Description: Anchor bolts in typical condition

Photo Description: Overflow pipe discharge area

Photo Description: Overflow pipe mesh screen in good condition

Photo Description: Overflow pipe discharge area

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Photo Description: Anchor bolts in typical condition

Photo Description: Anchor bolts in typical condition

Photo Description: Anchor bolts in typical condition

Photo Description: Anchor bolt chairs

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Photo Description: Anchor bolt chairs

Photo Description: Tank foundation and bottom plate

Photo Description: Tank foundation and bottom plate

Concrete pad is chipping

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Photo Description: Overflow pipe

Photo Description: Overflow pipe

Photo Description: Anchor Bolts

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Photo Description: Tank foundation and bottom plate

Photo Description: Interior Dry - interior piping

Photo Description: Interior Dry - Mechanical and electrical controls

Photo Description: Interior Dry

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Photo Description: Interior Dry - Looking up the riser

Photo Description: Interior Dry

MANWAY

RISER MANWAY

Riser Manway Condition: Sat

Manway Type: Round
Neck: N/A

Comments: Riser manway entrance into lower bowl in good condition

ROOF MANWAY

Roof Manway Condition: Sat
Manway Type: Round

Curb: 12 in
Welded: Outside

Comments: Roof manway is in good condition
Size: 30 in
Locked: No

Cover Overlap: 5 in

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Photo Description: Roof manway opening

Photo Description: Manway neck

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Photo Description: Interior of manway lid with overlap

Photo Description: Tank manway lid in good condition

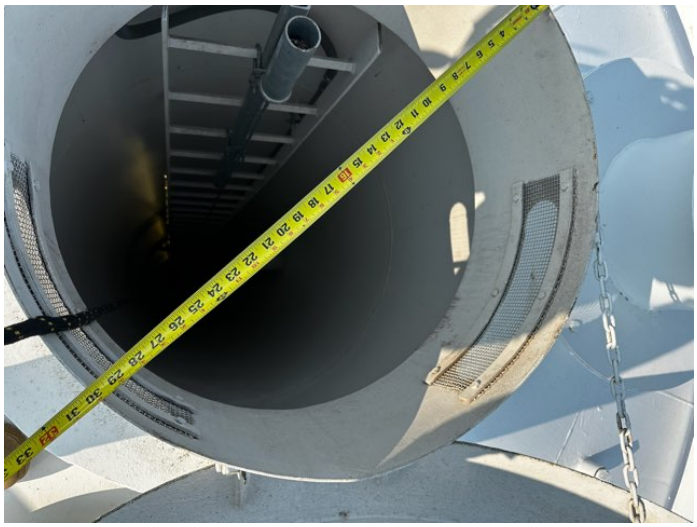

Photo Description: Rider manway

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Photo Description: Riser manway lid with overlap

Photo Description: Riser neck

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Photo Description: Pressure sealed manway entrance to lower bowl

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Photo Description: Manway to exterior - top of riser

TOWER LADDER

TOWER LADDER

Rung Shape: Square
Rung Shape and Size: 0.75 in
Rung Spacing: 12 in
Width: 16 in
Condition: Good
Conduit Attachment: Yes
Conduit Attachment Condition: Sat
Ladder Safe Climbing Device Present: Yes
Condition: Good
Operational: Yes
Safety Belt and Sleeve Available: Yes
Painted: No

LADDER SAFETY CAGE

Ladder Safety Cage Present: No

VANDAL DETERRENT

Vandal Deterrent Present: No

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LADDER PLATFORMS

Ladder Platforms Present: Yes

Drainage: Sat
Condition: Good

Do Ladders Extend Above Platforms: Yes

SAFETY RAIL

Safety Rail Present: No

Photo Description: View from roof into riser

Photo Description: Dry Riser and ladder

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Photo Description: Ladder with 12” spacing between rungs

Photo Description: Ladder with appropriate stand off distance between ladder and wall

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Photo Description: Riser Manway 24” opening

EXTERIOR COMPONENTS

BOWL

Bowl Condition: Sat

Comments: Overall condition of the bowl is good. No significant dents, damage, or other concerns

% Failure to Primer: 5 %

% Failure to Rust: 0 %

Overflow Pipe: Sat

Comments: Overflow pipe in good condition. Drains to a splash pad and appears drainage is good

Circumference/Diameter: 6 in

Air Break: N/A

Screen Type: #24

Drain Type: Splash Pad

Brackets: N/A

BALCONY

Balcony Condition: N/A

Toe Bar: Sat

Comments: Toe bar is present but there are areas where the distance above surface exceeds 0.25 in

Height Off Balcony: 0.25 in

Size: 2 in

Connection to Toe Bar and to Shell Present: N/A

Comments: Toe bar is welded to safety railing upright

Condition: Good

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Drainage: Sat

Balcony Entrance: N/A
Balcony Obstruction Lights Present: No

SIGN/LOGO

Sign / Logo Present: Yes
Condition: Fair
Color: Blue
Application Type: Painted

Photo Description: Logos are beginning to fade

SHELL

EXTERIOR SHELL

Exterior Shell Condition: Sat
Comments: Exterior shell appears in good condition
% Failure to Primer: 0 %
% Failure to Rust: 0 %
Shell Rings: Sat
Comments: Shell rings appear in sound condition
Additional Remarks about the Shell: The overall condition of the shell appears to be good. There are no visible discontinuities or coating failures. The exterior top coat is beginning to chalk, showing signs of degradation.

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SHELL

Shell Condition: Sat
Target Gage Present: N/A
Shell Coating Condition: Sat
Shell and Roof Ladder: N/A
Shell Ladder: Fixed
Bolted or Welded: Welded

Level Gage Present: N/A
Comments: Overall coatings condition is good
Comments: Shell and Roof Ladder are in good condition
Shell and Roof Ladder Safety Cage Present: No

INTERIOR SHELL

Interior Shell Condition: Sat

Comments: The overall condition of the interior shell is good. There are no visible discontinuities or leaks visible

Shell Stiffening Angle Present: No
Condition: Good
Shell Coating Condition: Sat

Comments: Areas above the typical water line are in good condition. Areas below the water line show initial stages of corrosion

Shell Rings: Sat

Comments: Shell rings appear in good condition

ROOF

ROOF LADDER

Roof Ladder Type: Fixed
Brackets: N/A
Ladder Safe-Climbing Device Present: Yes
Condition: Good
Vertical Bars: N/A
Horizontal Bars: N/A

Comments: No roof ladder
Type: Cable

ROOF SAFETY RAILING

Roof Safety Railing Present: Yes
Railing Type: Continuous
Handrail: Sat
Height: 42 in
Mid-rail Size: 2 in
Toe Bar: Sat

Size: 2 in
Upright Size: 2 in
Comments: Toe rail in place. There are areas where the toe bar distance from the roof is greater than 0.25 in and object may pass between.

Size: 2 in

Height Above Roof: 0.25 in

ROOF VENT

Roof Vent Condition: Sat
Type: Non-Downturned
Neck Height: 12 in
Screen: Sat

Comments: Roof vent is in good condition
Condition: Good

Comments: Screen is in good condition and free of debris

ROOF OBSTRUCTING LIGHTS

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Roof Obstructing Lights Present: No

ANTENNAS

Antennas Present: Yes
Number: 1
Antenna Attachment: Bracket
Brackets: Sat

Location: East

Photo Description: Roof toe bar. Some areas exceed 0.25in above the roof

Photo Description: Roof Safety Railing

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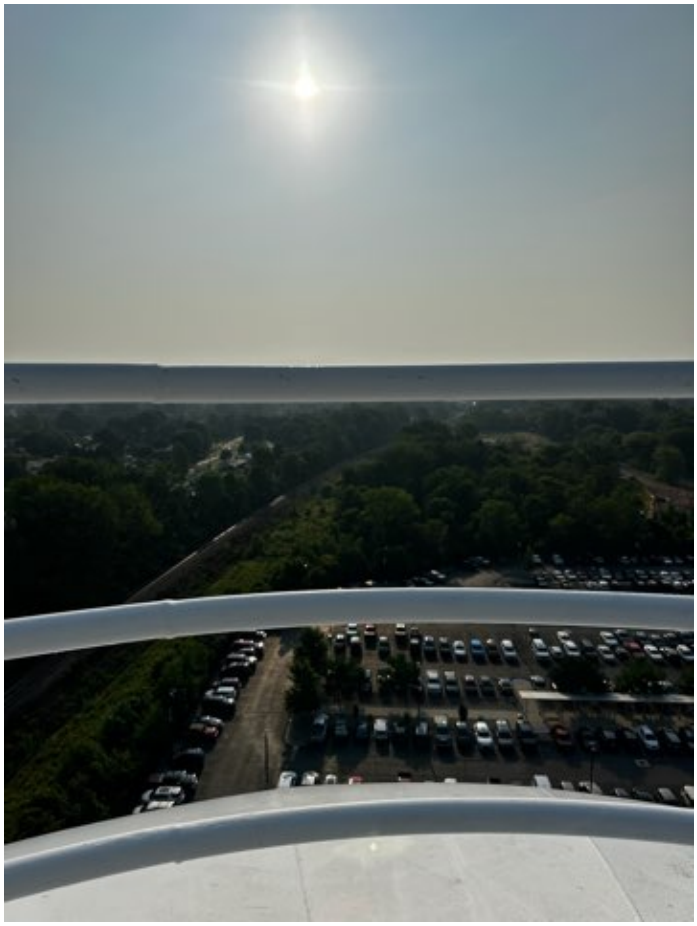

Photo Description: Roof Safety Railing

Photo Description: Roof Vent

Photo Description: Roof Vent

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Photo Description: Roof Antenna

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Photo Description: Roof vent mesh screen in good condition

Photo Description: Roof vent mesh screen in good condition

INTERIOR

ROOF STRUCTURE

Main Rafters / Stiffeners: N/A

Comments: Visual only - appear in sound condition

INTERIOR

Coating Condition: Sat

Comments: Coating condition is good. Areas below the typical water line show signs of coating degradation and early corrosion.

Type of Coating Failures: Staining

Mixing System and Type: None

Interior Ladder Present: Yes

Rungs: N/A

Comments: Visual observation only. Ladder has minor corrosion but appears in good condition

Width: N/A

Toe Room: N/A

Ladder Condition: N/A

Head Clearance: N/A

Bracket: N/A

Ladder Safe Climbing Device Present: Yes

Overflow Pipe: Sat

Comments: Overflow collection box visible on riser

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Location of Overflow Inlet Below or Above Unwelded Seams: Overflow is welded to the interior riser
Overflow Pipe Size: 6 in
Bowl Plate Thickness: N/A
Welding Estimate in Container: N/A
Seam Sealing / Pit Filling Estimates in Container: N/A
Number of Gallons (approx): 250000
Riser Safety Grate: N/A
Interior Container Piping: N/A

Inlet Type: Weir Box

Bowl Coating Condition: Good

Comments: Dry riser

Photo Description: Interior bowl - coating failure and staining visible

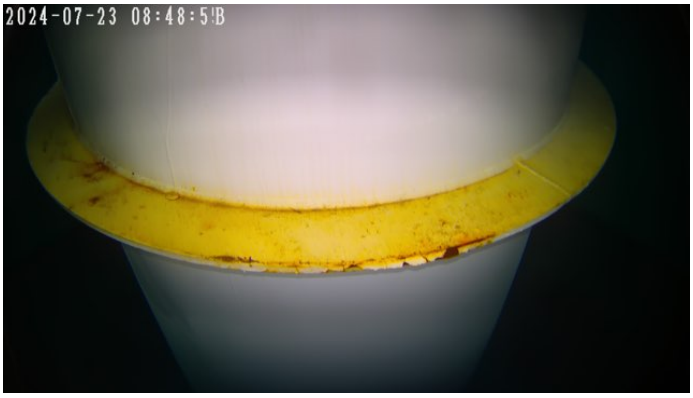

Photo Description: Coating failure and corrosion visible on riser connection

Photo Description: Interior roof view from bowl. Ladder in good condition

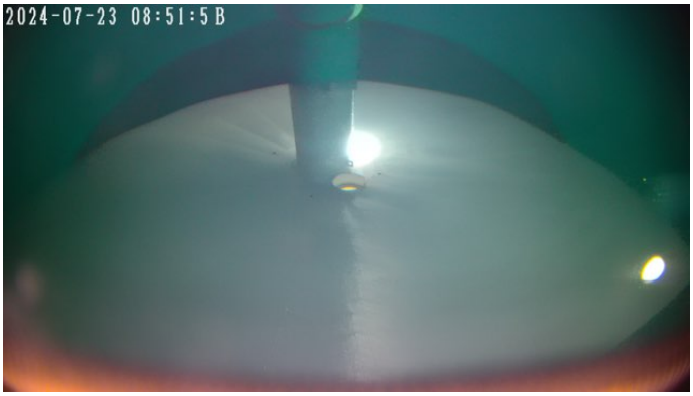

Photo Description: Interior roof view from bowl.

Coating above the water line and roof in good condition

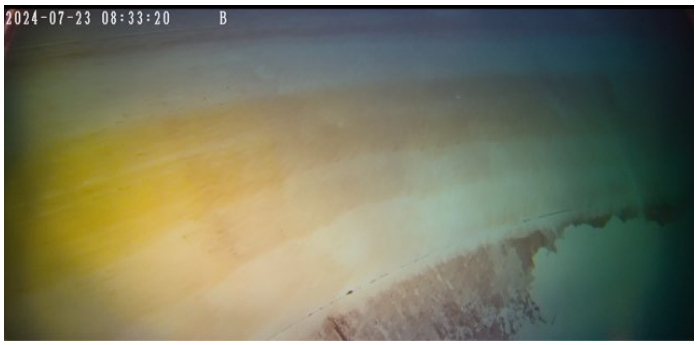

Photo Description: Coating failure and staining visible on shell

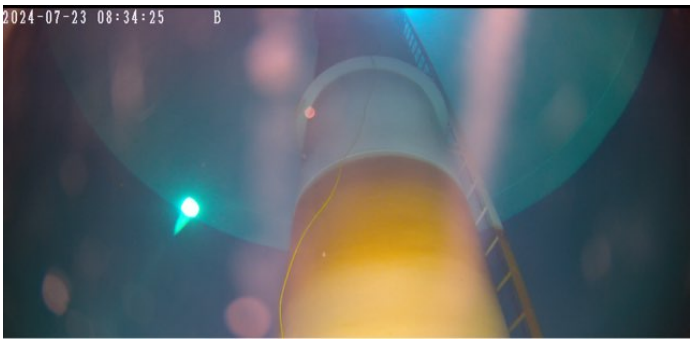

Photo Description: Interior view looking up the riser - staining visible at typical water line

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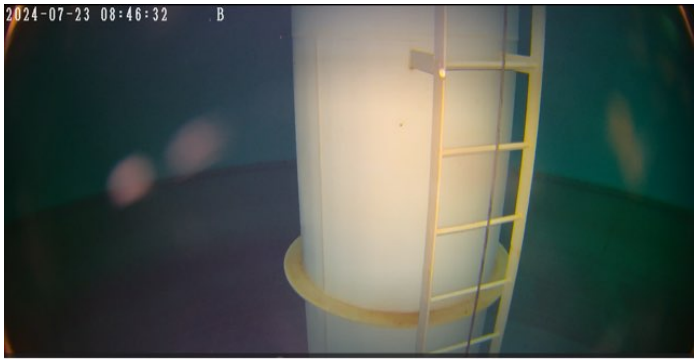

Photo Description: Interior ladder in sound condition

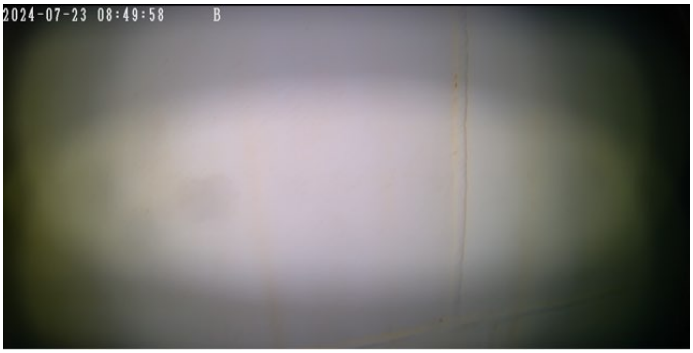

Photo Description: Staining on shell - interior welds appear sound

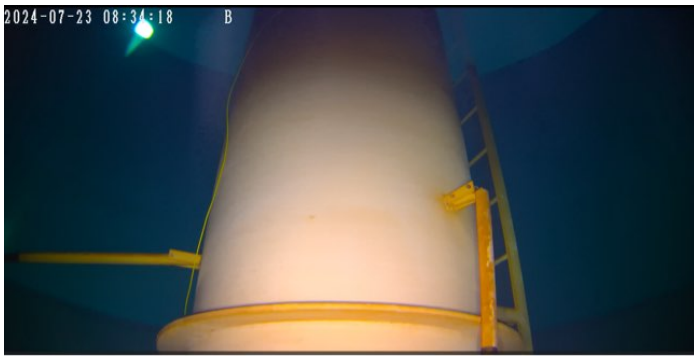

Photo Description: Staining and minor corrosion visible on riser and connections

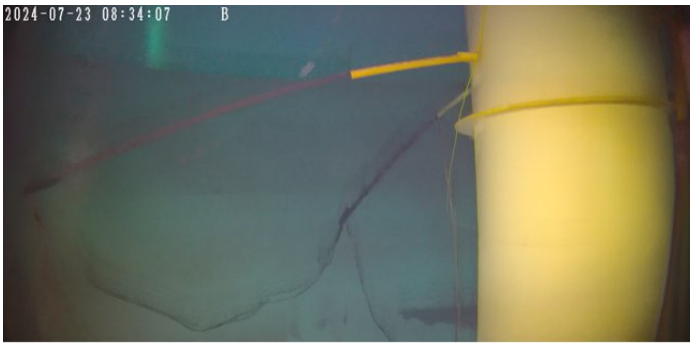

Photo Description: Interior

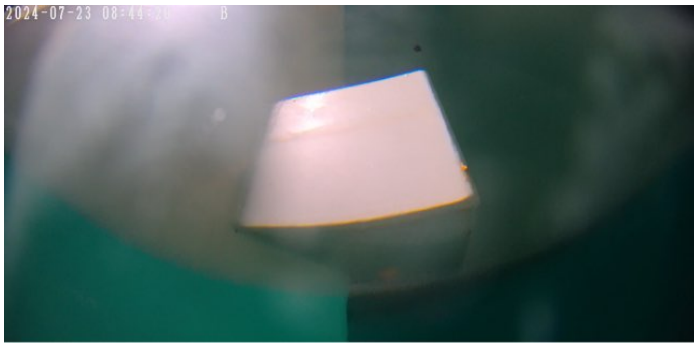

Photo Description: Overflow collection box

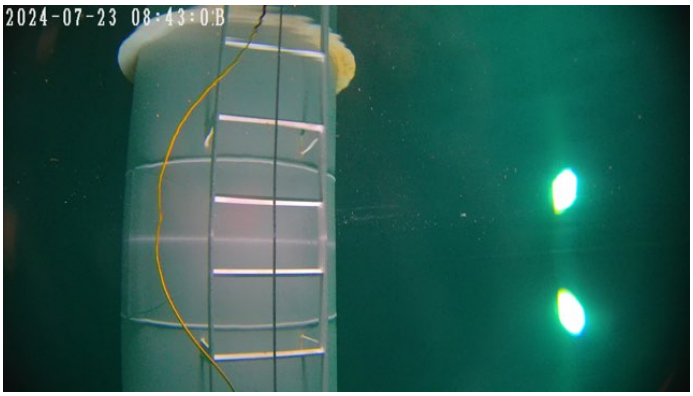

Photo Description: Interior Ladder

Photo Description: View of interior roof

Photo Description: Interior manway hatch with corrosion and staining visible.

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Photo Description: Interior piping with corrosion and staining visible in lower bowl

TESTING

Location: Adhesion on exterior coating system is good. Tank is candidate for clean and overcoat

Adhesion Test: Yes

Location: South

Type: Type A

Results: 4A

REMARKS AND SIGNATURES

REMARKS

The tank was evaluated on 7/23/2024. At the time of evaluation, the overall condition of the tank is good. The exterior of the tank is in good condition with no significant coating failures or discontinuities visible. The exterior coating is lightly “chalking”, indicating that the Polyurethane top coat UV protection is beginning to wear down. The existing coating system shows good adhesion properties making this tank a candidate for washing and overcoating. Overcoating would extend the service life of the existing coating while providing adequate protection to the structure.

The interior coating system is in overall good condition. Coating failure and localized corrosion were visible but were limited to below the typical water line. Corrosion was visible along the riser, on the shell and in the lower bowl areas but it was minor. The tank has been well kept and in turn the coating system has performed well. Due to the age of the current coating system and the early indication of corrosion, B&N would recommend that that interior coating system be removed and replaced at a time that is feasible for the tank owner. New NSF/ANSI 61 compliant coating systems are now available that ensures materials and products are safe for public use. A proactive approach to the tanks maintenance plan would ensure that the tank can continue to properly function and provide the VA hospital with the appropriate water supply needed to run daily operations.

The toe bar connected to the safety railing on the roof has areas where the distance above the surface exceeds 0.25 in. OSHA regulations state the maximum height above the surface is 0.25 inches to avoid objects falling below.

SIGNATURES

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Name: Derek Goff
Type: Quality Systems Manager
Date: 07/30/2024, 12:00 PM EDT

SINGLE PEDESTAL TANK INSPECTION REPORT APPROVAL SIGNATURES

Name: Derek Goff
Date: 07/30/2024, 12:01 PM EDT

Name: Derek Goff
Date: 08/02/2024, 10:46 AM EDT

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