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In Depth Inc. 555 W. Granada Blvd Suite E12 Ormond Beach, FL 32174 (386) 202-2771

# **In-Depth Inspection Report for**

**City of Ocala** 

Ocala, FL



Windstream EWT

200,000 Gallons

35' x 146'-6"

**Steel Elevated** 

**Constructed Year: 2002** 

**Inspection Date:** 9/14/20

Person Completing Report: Z.R.

Supervisor: Z.R.

Team: Alpha

Engineer: R.N.



#### Scope of Work:

Our dive / inspection team has taken this structure under full evaluation (internally & externally) to prepared an "In Depth" visual inspection (NDT) of the referenced tank and its fixtures. The evaluation taken on the construction of this tank, complies with all related ANSI/AWWA codes. All NDT (nondestructive testing) have been performed up to code, in order to identify the structural integrity as well as the coating condition of this structure. All operable plumbing components have been inspected and evaluated within this report. All evaluations done, where performed in accordance with American Water Works Association (AWWA), NACE, SSPC, ASNT, ACI and AWS standards under the guidance of OSHA, DEP, and EPA regulations. Utilizing the necessary and proper procedures, the tank has been left internal in sanitary condition. Elements found prior to the inspection, as well as details of the inspection itself, have been documented within this report.

### Summary of the Inspection:

#### **Exterior Inspection**

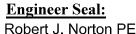
- 1. Easy access to tank w/ locked and secured perimeter
- 2. Unlocked access hatch & vandal guard (detachable lower section of ladder)
- 3. Overflow screen damaged / voids noted on discharge w/ insect nest inside penetration
- 4. Minor hairline cracking & pop-outs noted in concretes foundation w/ corrosion on seams
- 5. Minor to moderate signs of chalking & staining noted throughout all extremities
- 6. Access hatch on roof entryway into tank is partially obstructed by antenna mount railing
- 7. Minor signs of coating failure / corrosion present near seams & welds below bowl

#### **Interior Inspection**

- 1. Isolated areas of corrosion in roof determined from exterior welds (antenna mounts)
- 2. Moderate checking & cracking / d-lam noted throughout protective coating on walls
- 3. Moderate to heavy small blistering / sediment staining present throughout walls
- 4. Rating consistent throughout floor & lower extremities (moderate sediment accumulation)
- 5. Wet riser multi-functions as outlet & drain plumbing components
- Tank equipped w/ high-fill inlet plumbing component penetrating through wet riser
- 7. Tank equipped w/ two interior access ladders (roof & wet riser access ladders)

#### **Recommendations:**

- 1. Routine Inspect every 3-5 years per AWWA recommendations & FAC Rule 62-555.350
- Perform interior clean to remove all accumulated sediments throughout tanks floor
- 3. Rehabilitate / blast & re-coat, interior protective coating throughout all extremities of tank
- 4. Replace damaged screen on exterior overflow discharge & install gasket on roof access hatch
- 5. Pressure wash exterior surfaces to remove mildew staining / touch-up coating failure as needed



FL Reg. No. 54750

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Excellent - Like new, no repairs needed Good – Cosmetic problems, repair if client wants Fair – Minor problems, repairs needed Poor – Major problems, fix now

Key

# **Tank Evaluation**

#### **Tank Security**

Is the tank in a secured, gated area? Y ⊙ N O Are the access gates locked? Y O NO Is the tank equipped with a vandal guard on the access ladder(s)? YO NO N/AO Is the vandal guard locked? YO NO N/A⊙ Are all of the access hatches locked? YO NO Are all of the vents/discharge openings properly covered? YO NO Does the tank exterior show any signs of trespass? YO NO Is the area surrounding the tank well lit? YO NO Are there any additional security features? YO NO Description: Detachable lower section of access ladder (functions in lieu of vandal guard)

Additional Notes: None noted

#### **Tank Condition**

Does the tank appear to be structurally sound? Y NO Are there any unprotected openings in the tank (breaches, leaks, daylight, etc.) Y NO Is there any protective coating found throughout the exterior of the tank? Y NO Intact? Y NO N/AO Is there any protective coating found throughout the interior of the tank? Y NO Intact? Y NO N/AO

Description: Exterior: Protective coating overall is in good condition (minor discrepancies noted) Interior: Protective coating overall is in fair condition (signs of coating failure throughout walls & extremities)

#### **Tank Cleaning**

Sediment depth during inspection: 1" - 3" Sediment type: Iron / Manganeses

List any objects found inside the tank during cleaning that may have introduced contamination:

None noted

## **Additional Pictures**

#### **Construction plaque**



Ext. aerial overall



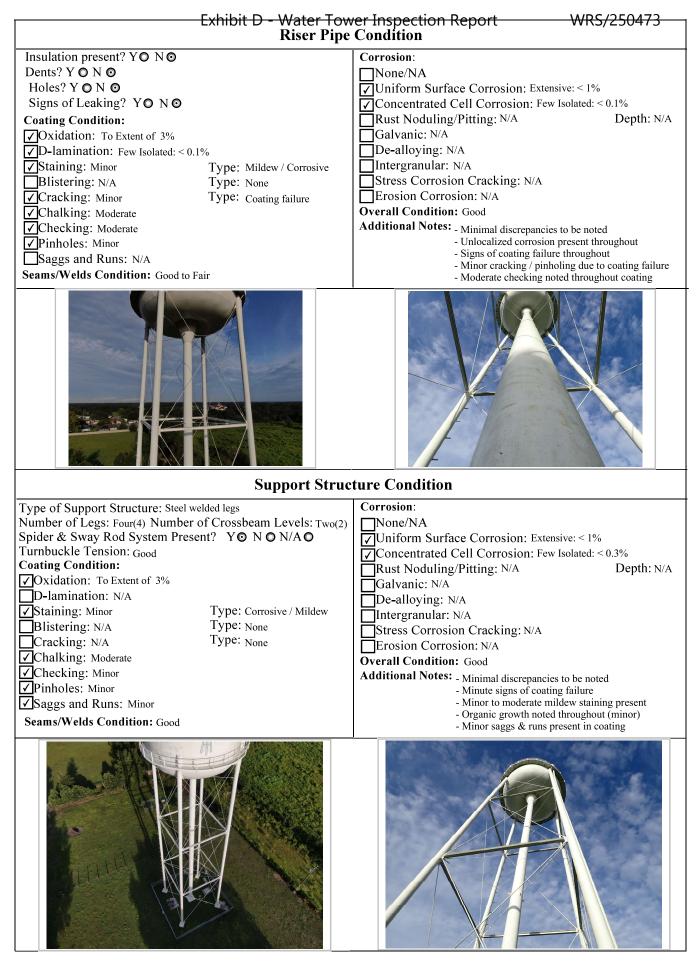




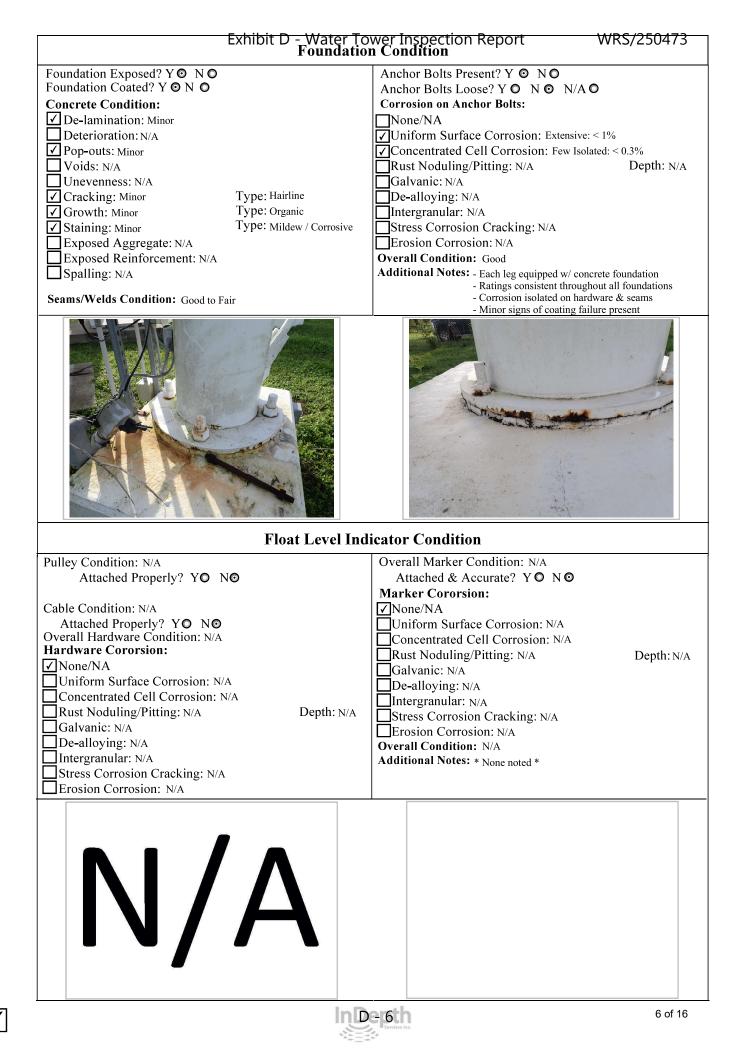


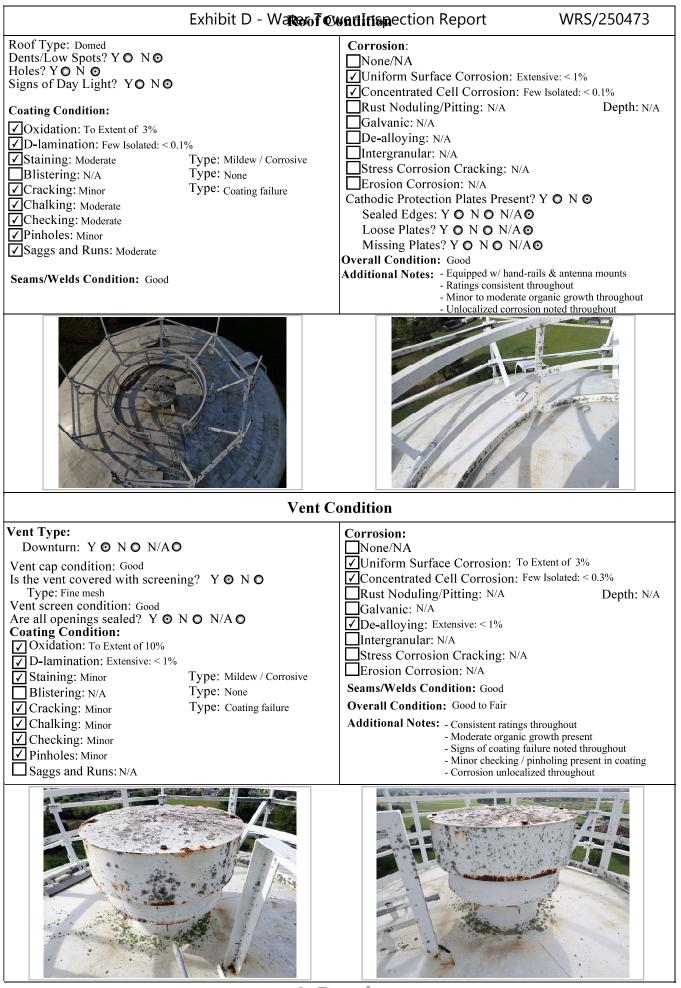
Wall Panel Condition Wall / Coating Condition: **Corrosion**: Dents? Y O N O None/NA Holes? Y O N O Uniform Surface Corrosion: Few Isolated: < 0.3% Signs of Leaking YO N O Concentrated Cell Corrosion: Few Isolated: < 0.1% Oxidation: Extensive: < 1% Rust Noduling/Pitting: N/A Depth: N/A Galvanic: N/A D-lamination: N/A Staining: Minor Type: Mildew / Corrosive De-alloying: N/A Blistering: N/A Intergranular: N/A Type: None Cracking: N/A Stress Corrosion Cracking: N/A Type: None Erosion Corrosion: N/A Chalking: Moderate **Overall Condition:** Good Checking: Moderate Additional Notes: - Consistent ratings throughout ✓ Pinholes: Moderate - Minor to moderate mildew staining present ✓ Saggs and Runs: Minor - Signs of coating failure noted throughout - Minor unlocalized corrosion present Seams/Welds Condition: Good - Corrosive staining isolated where coating has failed - Moderate checking & pinholing noted in coating **Access Ladder Condition** Ladder Type: Steel welded **Corrosion:** OSHA Adherence? Y O N O □None/NA Vandal Guard Present? Y O N O Uniform Surface Corrosion: Extensive: < 1% Locked? Y O N O N/A O Concentrated Cell Corrosion: Few Isolated: < 0.3% Safety Climb Type: Notched-rail Rust Noduling/Pitting: N/A Depth: N/A OSHA Adherence? Y ⊙ N ⊙ Galvanic: N/A **Coating Condition:** De-alloying: N/A ✓ Oxidation: To Extent of 3% Intergranular: N/A **✓D**-lamination: Extensive: < 1% Stress Corrosion Cracking: N/A Staining: Minor Erosion Corrosion: N/A Type: Corrosive / Mildew Blistering: N/A Type: None Standoff Supports Condition: Good Cracking: Minor Type: Coating failure **Overall Condition:** Good Chalking: Minor Additional Notes: - Consistent ratings throughout both ladders Checking: Minor - Minor signs of coating failure present - Rating consistent throughout balcony & handrails ✓ Pinholes: Minor - Corrosive / mildew staining throughout (minor) Saggs and Runs: N/A - Unlocalized minor d-lamination present Seams/Welds Condition: Good - No protective coating noted on safety climb



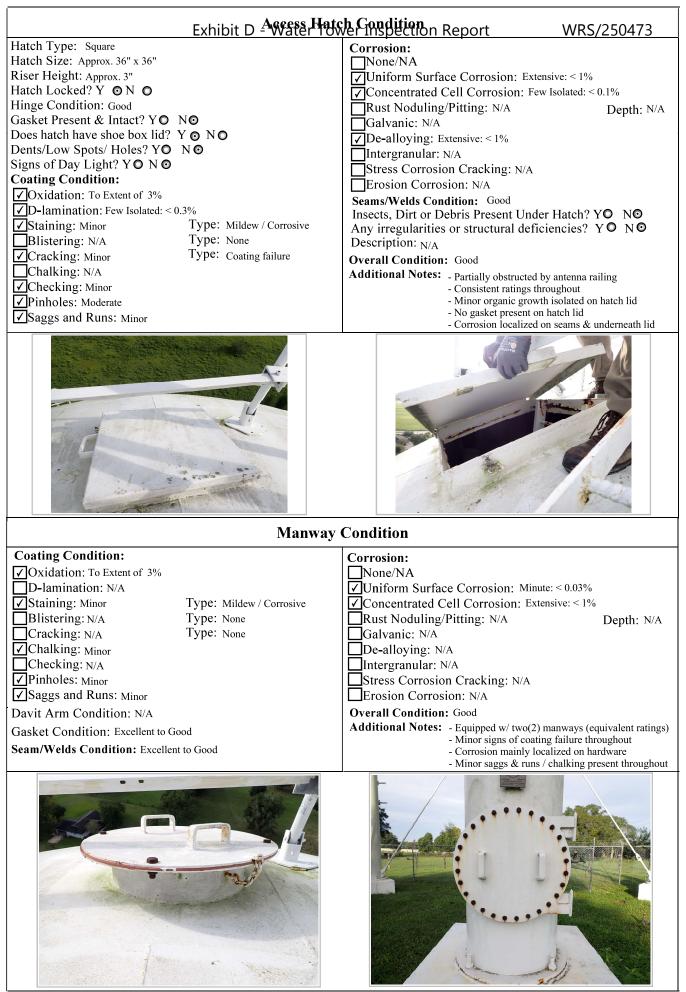




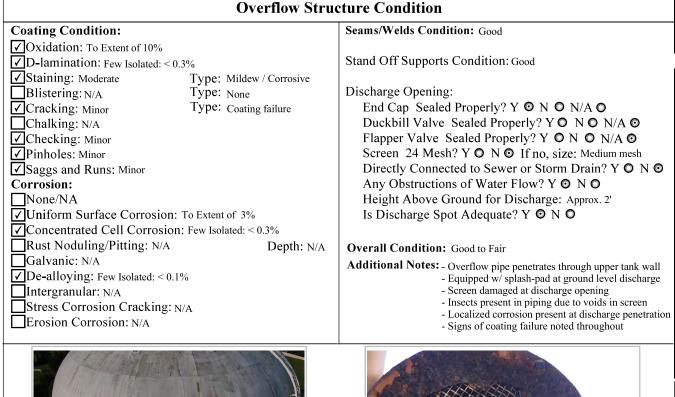




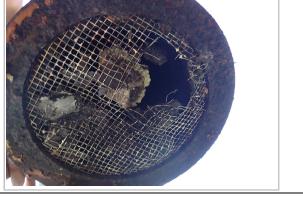
















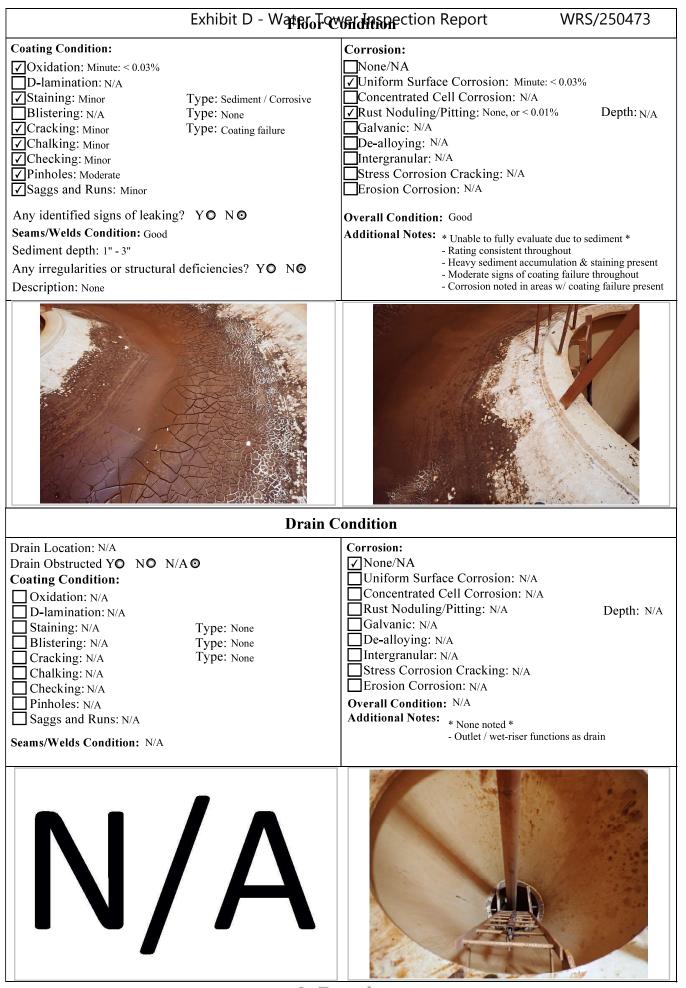




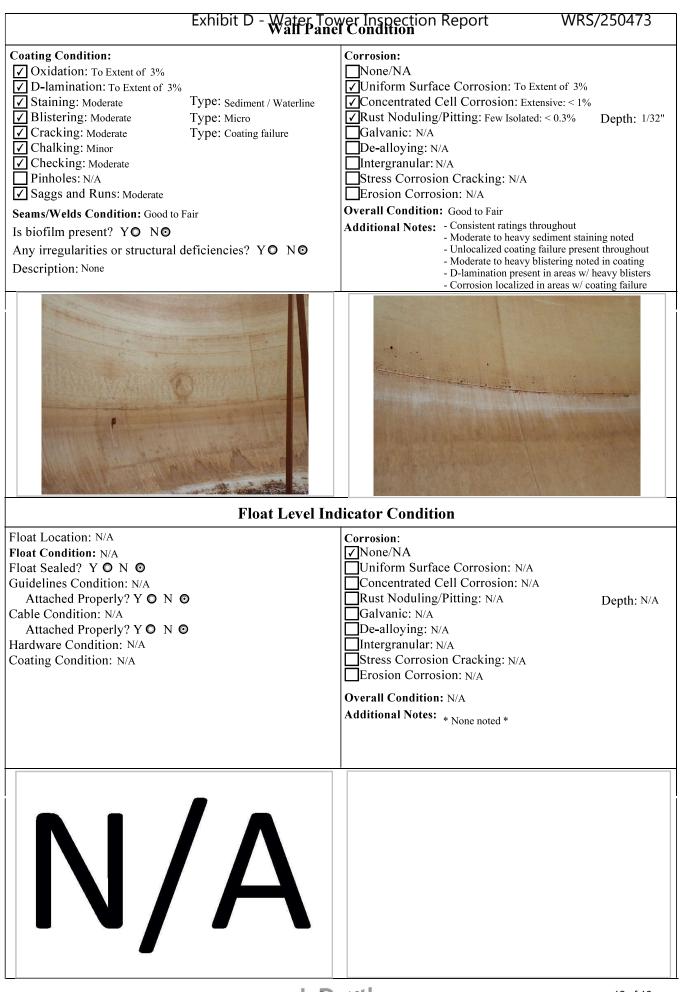
#### Roof Condition

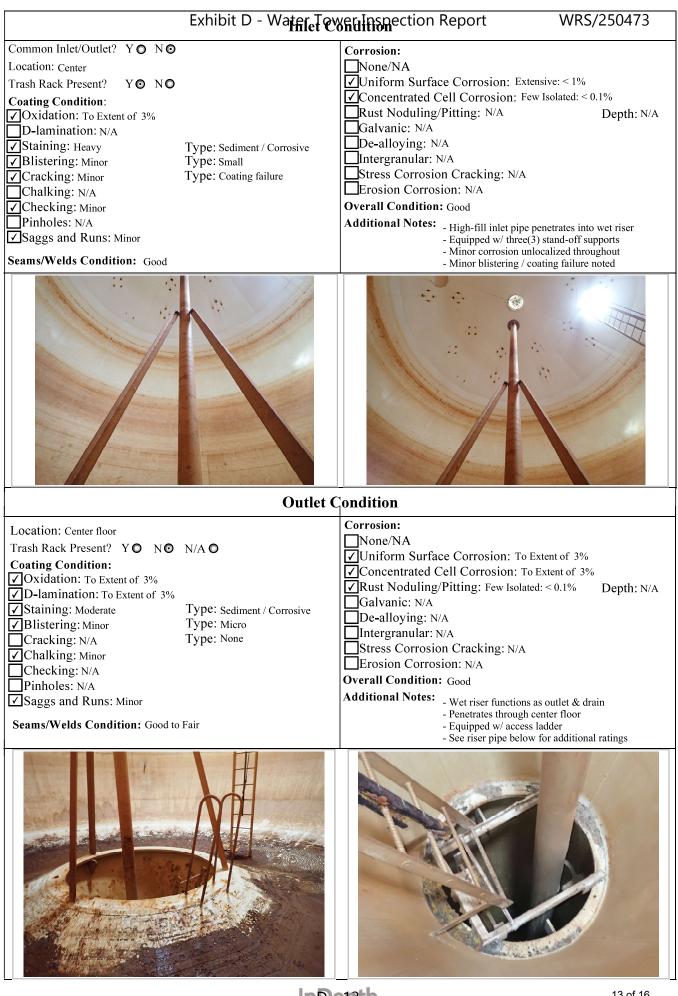
Roof Condition	
Coating Condition:   ☑ Oxidation: To Extent of 10%   □ D-lamination: N/A   ☑ Staining: Minor Type: Corrosive   □ Blistering: N/A Type: None   □ Cracking: N/A Type: None   □ Chalking: N/A Type: None   □ Chacking: N/A Pinholes: N/A   □ Pinholes: N/A Saggs and Runs: N/A   Seams/Welds Condition: Good to Fair   Any irregularities or structural deficiencies? Y ③ N ④   Description: None	Corrosion: None/NA Uniform Surface Corrosion: Extensive: < 1% Concentrated Cell Corrosion: To Extent of 3% Rust Noduling/Pitting: N/A Depth: N/A Galvanic: N/A De-alloying: Few Isolated: < 0.3% Intergranular: N/A Stress Corrosion Cracking: N/A Erosion Corrosion: N/A Overall Condition: Good Additional Notes: - Minimal discrepancies to be noted - Minute signs of coating failure present - Corrosion isolated on seams / exterior welds / vent (isolated corrosion determined from ext. welds) - Minor corrosive staining noted throughout
Ladar	Condition
Ladder Condition	
Ladder Location: 12:00 Safety Climb Type: Notched rail Coating Condition: Oxidation: To Extent of 10% D-lamination: Few Isolated: < 0.3% Staining: Minor Type: Corrosive / Sediment Blistering: N/A Type: None Cracking: Minor Type: Coating failure Chalking: Minor Checking: N/A Pinholes: N/A Saggs and Runs: N/A Seams/Welds Condition: N/A	Corrosion: None/NA Uniform Surface Corrosion: To Extent of 3% Concentrated Cell Corrosion: Extensive: < 1% Rust Noduling/Pitting: N/A Depth: N/A Galvanic: N/A De-alloying: Minute: < 0.03% Intergranular: N/A Stress Corrosion Cracking: N/A Erosion Corrosion: N/A Overall Condition: N/A Additional Notes: - Consistent ratings throughout (both ladders) - Wet riser equipped w/ secondary int. access ladder - Corrosion isolated on hardware & failed coating - Equipped w/ notched rail safety climb

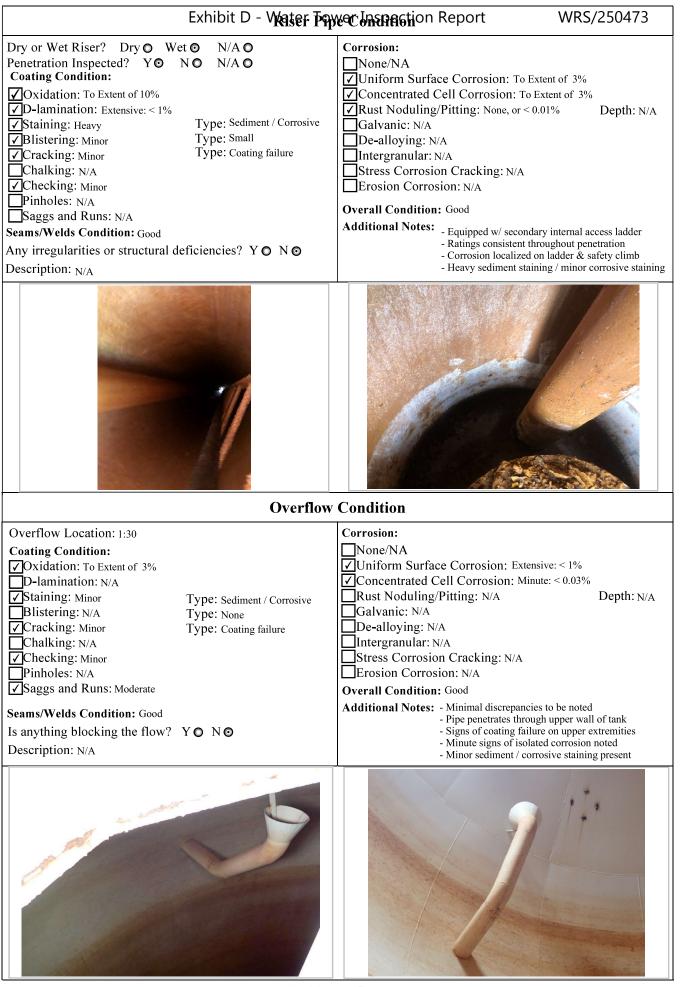


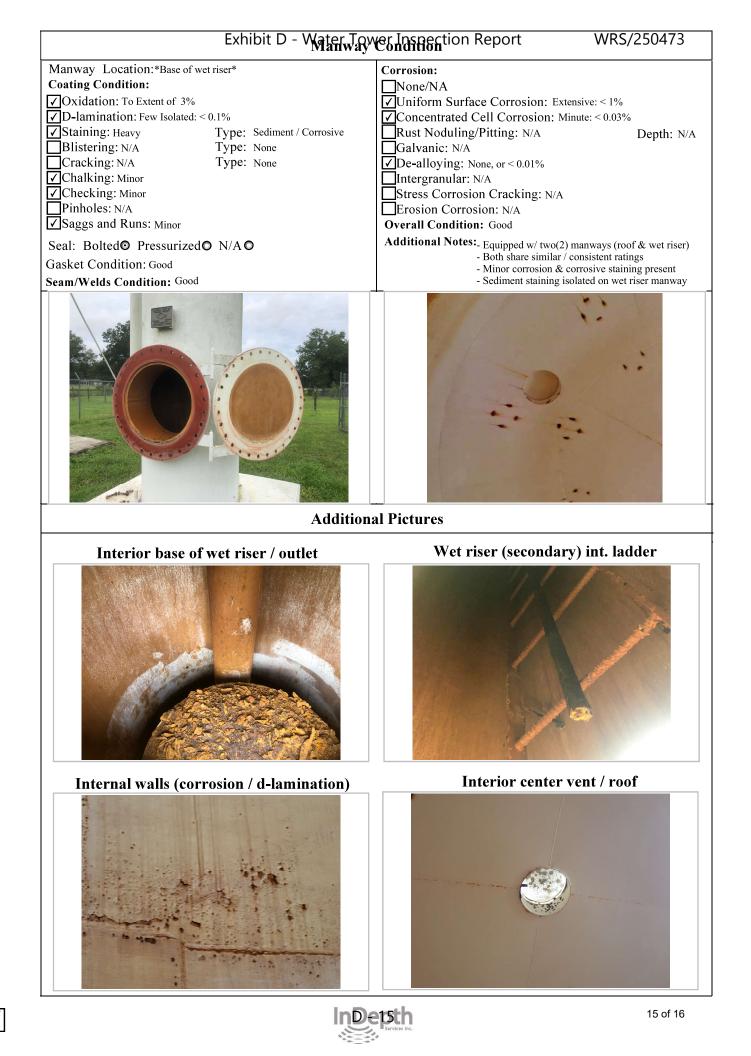


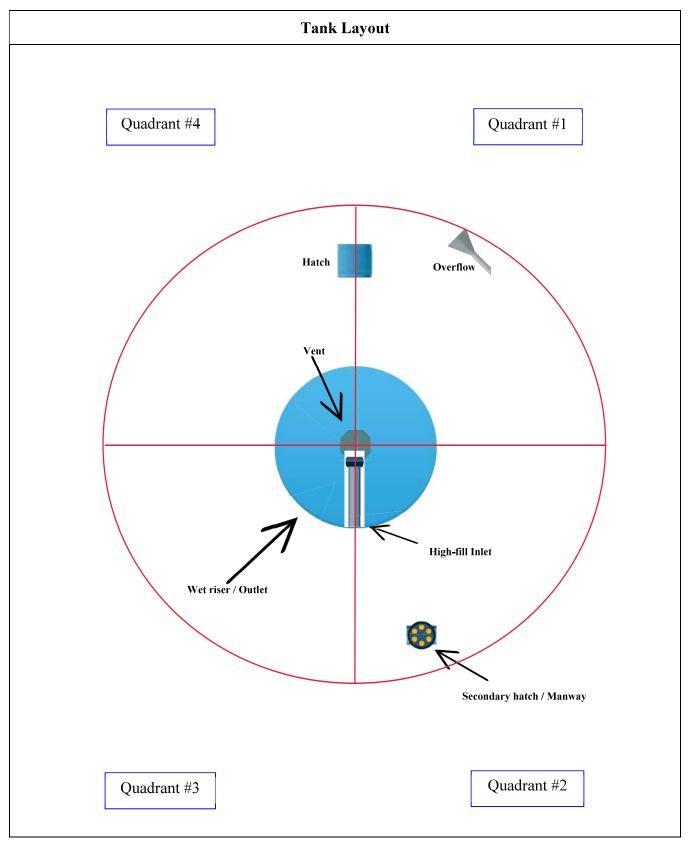
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