

4000 Knights Trail Rd. Nokomis, FL 34275

> 941-861-5000 scgov.net

February 7, 2019

Solid Waste Section
Department of Environmental Protection
South District Office
2295 Victoria Avenue, Suite 364
Ft. Myers, Florida 33902

Re: Sarasota County

Central County Solid Waste Disposal Complex

Permit No. 0130542-028-SO-IM)

WACS No. 51614

Above-Ground Leachate Storage Tank Inspection

### To Whom It May Concern:

Sarasota County is pleased to submit the attached storage tank inspection report for the 1.8million-gallon capacity pre-stressed concrete leachate storage tank located at the Central County Solid Waste Disposal Complex in Nokomis, FL. The inspection was performed in accordance with Permit No. 130542-028-S0-IM and Operations Plan Section K.8.b.(4). Starting on January 21, 2019, In-Depth Services, Inc. emptied and cleaned the storage tank. Upon completion of the tank cleaning on January 23, 2019, the inspection was performed in accordance with the applicable standards. The inspection was supervised by and the report signed and sealed by a Professional Engineer licensed in the State of Florida. As detailed in the inspection report, the inspector found the tank to be in good structural condition, with no signs of leakage or structural issues with the tank walls and floors. All appurtenances including external stairs, piping, and the level gauge were found in good condition and operational. At the conclusion of the inspection, the inspector released the County to continue operation of the storage tank since no items were found that compromised the integrity and operation of the tank. The recommendations provided by the inspector in the report include replacement of interior pipe that is corroded as well as repairs to the walls and coatings for the interior and exterior walls of the primary and secondary tank systems. None of these items were urgent and were provided for future consideration by the County.

In accordance with the requirements of Rule 62-701, Permit No. 130542-028-S0-IM, and the facility's Operations Plan, the County will schedule the next inspection to be completed no later than April 15, 2022. In the next inspection, the items the inspector listed in the report to re-inspect will be specifically included in the inspection requirements.

FDEP February 7, 2019 Page 2 of 2

Please note that the County continues to work on a construction project to address the repairs noted in the 2015 and 2019 inspection reports including replacement of the interior piping, recoating of the interior tank walls and floor joint, and sealing and coating of exterior wall cracks. The work is anticipated to be completed in Fall 2019 to Spring 2020 to coincide with the dry season.

Please contact me anytime at 941-861-1572 if you have any questions or require additional information regarding this inspection report and attached documents.

Sincerely,

Jason Timmons, PE Solid Waste Engineer

Xc: FDEP Tallahassee Solid Waste

Lois Rose, Sarasota County

Attachments (1)

In Depth Services, Inc. Inspection Report signed and sealed on January 30, 2019



In Depth Inc. 800 Belle Terre Pkwy Unit 200 #122 Palm Coast, FL 32164 (386) 202-2771

## **In-Depth Inspection Report for**

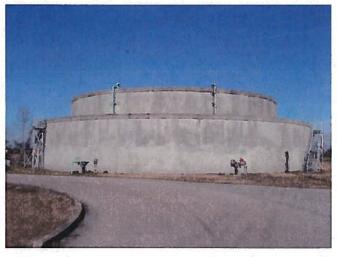
**Sarasota County** 

Sarasota, FL



Lechate Storage Tank

1.8 MG / 2.1 MG



100' x 30-8"' / 130' x 21'-2"

Concrete On-Grade

Constructed Date: 1997

Inspection Date: 1/21/19

Person Completing Report: Z.R.

Supervisor: Z.R.

Team: Alpha

Engineer: R.N.





## Scope of Work:

Our team has performed and completed a full dewatered clean/sediment removal to the previously referenced tank. Sediment depths, ranging from 6" - 10", have been removed from the tanks floor and/or walls. Upon the completion of the cleaning services, our surveying crew and inspection team has taken this structure under full evaluation (internally & externally) to prepared an "In Depth" visual inspection (NDT) of this tank and its fixtures. The evaluation taken on the construction of this tank, complies with all related ANSI/AWWA codes. All NDT (non-destructive 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 according to 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 in operable condition. Elements found prior to clean as well as details of the inspection and its findings have been included within the report below.

## **Summary of the Inspection:**

## **Exterior Inspection:**

- 1. Easy access to tank w/ secured gated perimeter
- 2. Primary storage tank equipped with outer containment tank
- 3. Opened roof tanks, exposed to the environment

### **Containment Tank Inspection:**

- 1. Crossover plumbing components in good to excellent condition
- 2. Heavy moderate staining noted throughout floor
- 3. Heavy signs of shrinkage / hairline cracking noted throughout inner & outer walls
- 4. Minor corrosive staining noted on walls in areas of exposed reinforcements

### **Interior Inspection:**

- 1. 6 to 10 inches of sediment found throughout tank (Removed during clean)
- 2. Severe corrosion noted throughout all internal plumbing components below waterline
- 3. Heavy blistering noted on floor to wall seen (elastomeric urethane floor-wall boot)
- 4. Moderate checking, cracking, & pop outs noted throughout upper / lower walls
- 5. Heavy moderate staining noted throughout all extremities of tank
- 6. Minor unevenness noted throughout tank floor (coating: good excellent condition)

#### **Recommendations:**

- 1. Routine Clean & Inspect every 3 years per sludge accumulation / report findings
- 2. Replace severely corroded / de-alloying plumbing components (internal: inlet & outlet)
- 3. Pressure wash & re-coat containment tank (grout / repair areas as needed)
- 4. Consider replacement of elastomeric urethane floor-wall boot due to heavy blistering

#### **Engineer Seal:**

Robert J. Norton PE
FL Reg. No. 54750
This lave less less executively Supped and Sealed Pr.
ROBERT T. MIXTON TE FLEED, \$7.700 Using A Digitals
Signatury AND USING PRINCE COSES. THE SEASON OF THE DESCRIPTION OF THE SEASON OF TH

Digitally signed by Robert Norton

Date: 2019.01.30 14:11:24

-05'00'

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 O 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/AO

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: Guarded Facility

Additional Notes: On site of county landfill

#### **Tank Condition**

Does the tank appear to be structurally sound? YO NO Are there any unprotected openings in the tank (breaches, leaks, daylight, etc.) YO NO When viewed from inside the tank, is there visible daylight around the hatches, vents, joints or other fixtures? YO NO

Description: Opened roof tanks (fully exposed to the environment)

### **Tank Description:**

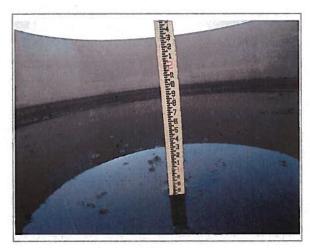
This leachate storage tank was built and constructed by "Crom Corporation" in 1997.

Primary Tank: inside diameter of 100'-0" and a side wall height of 30'-8" Containment Tank: inside diameter of 130'-0" and a side wall height of 21'-2"

#### **Tank Cleaning**

Sediment type: Leachate Sludge Sediment depth before cleaning: 6" - 10"

#### **Additional Pictures**











## In Depth Inc. <u>Exterior Inspection Report</u>



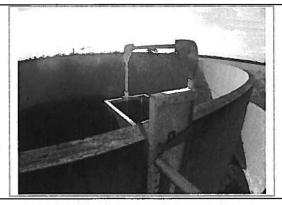
Wall Condition	
Concrete / Coating Condition:  Signs of Leaking? Y O N O  Dents / Holes? Y O N O  Type: None  De-lamination: N/A  Deterioration: N/A  Pop-outs: Minor  Voids: N/A  Unevenness: N/A  Cracking: Moderate  Growth: N/A  Staining: Minor  Exposed Aggregate: N/A  Exposed Reinforcement: N/A  Spalling: Minor  Seams/Joints Condition: Excellent to Good	Corrosion:  None: N/A  Uniform Surface Corrosion: N/A  Concentrated Cell Corrosion: N/A  Rust Noduling/Pitting: N/A  Galvanic: N/A  De-alloying: N/A  Intergranular: N/A  Stress Corrosion Cracking: N/A  Erosion Corrosion: N/A  Overall Condition: Excellent to Good  Additional Notes:  Prestressed concrete walls (no coating)  Minor spalling noted on upper walls near opening  Mildew staining localized on upper walls  Consistent ratings noted throughout
Access Stairs	way Condition
Ladder Type: Aluminum welded OSHA Adherence? Y O N O Vandal Guard Present? Y O N O Locked? Y O N O N/A O Safety Climb Type: Guided rail OSHA Adherence? Y O N O Coating Condition: Oxidation: N/A De-lamination: N/A Staining: Moderate Blistering: N/A Type: None Chalking: N/A Checking: N/A Cracking: N/A Type: None Pinholes: N/A Saggs/Runs: N/A Seams/Welds Condition: Excellent	Corrosion:  None: N/A Uniform Surface Corrosion: N/A Concentrated Cell Corrosion: N/A Rust Noduling/Pitting: N/A Depth: N/A  Galvanic: N/A De-alloying: N/A Intergranular: N/A Stress Corrosion Cracking: N/A Erosion Corrosion: N/A  Standoff Supports Condition: Excellent Overall Condition: Excellent Additional Notes: - Equipped w/ multiple stairways and access ladders (3 Outer stairways & 2 Inner ladders) - All shared equally ratings (no discrepancies) - Moderate signs of mildew staining noted throughout - Constructed of aluminum (no coating)

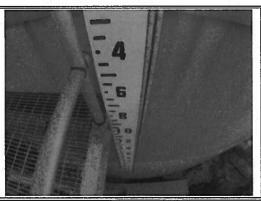


#### **Foundation Condition** Foundation Exposed? Y O N O Anchor Bolts Present? Y O NO Anchor Bolts Loose? YO NO N/AO **Corrosion on Anchor Bolts: Concrete Condition:** ✓ None: N/A De-lamination: N/A Uniform Surface Corrosion: N/A Deterioration: N/A Concentrated Cell Corrosion: N/A Pop-outs: N/A Rust Noduling/Pitting: N/A ☐Voids: N/A Galvanic: N/A Unevenness: N/A De-alloying: N/A Cracking: N/A Type: None Intergranular: N/A Type: None Growth: N/A Stress Corrosion Cracking: N/A Staining: N/A Type: None Erosion Corrosion: N/A Exposed Aggregate: N/A Exposed Reinforcement: N/A Overall Condition: Select the Overall Condition Additional Notes: - Buried foundation ( unable to fully evaluate) Spalling: N/A - Backfilled approx. 12" Seams/Joints Condition: Excellent to Good

#### Float Level Indicator Condition

Pulley Condition: Excellent to Good Overall Marker Condition: Excellent to Good Attached Properly? YO NO Attached & Accurate? YO NO Marker Corrosion: Cable Condition: Excellent to Good ✓ None: N/A Attached Properly? YO NO Uniform Surface Corrosion: N/A Overall Hardware Condition: Excellent to Good Concentrated Cell Corrosion: N/A Hardware Corrosion: Rust Noduling/Pitting: N/A Depth: N/A None: N/A Galvanic: N/A ✓ Uniform Surface Corrosion: None, or < 0.01% De-alloying: N/A ✓ Concentrated Cell Corrosion: Minute: < 0.03% ☐Intergranular: N/A Rust Noduling/Pitting: N/A Depth: N/A Stress Corrosion Cracking: N/A Galvanic: N/A Terosion Corrosion: N/A De-alloying: N/A Overall Condition: Excellent to Good Intergranular: N/A Additional Notes: - Attached an accurate Stress Corrosion Cracking: N/A - Minimal discrepancies to be noted Erosion Corrosion: N/A - Minor biological growth / staining noted









#### **Manway #1 Condition** Corrosion: **Coating Condition:** ✓ None: N/A Uniform Surface Corrosion: N/A Concentrated Cell Corrosion: N/A Rust Noduling/Pitting: N/A Oxidation: N/A De-lamination: N/A ✓ Staining: Minor Type: Sediment Depth: N/A Blistering: N/A Galvanic: N/A Chalking: N/A De-alloying: N/A Checking: N/A Intergranular: N/A Cracking: N/A Type: None Stress Corrosion Cracking: N/A Growth: N/A Type: None Erosion Corrosion: N/A Pinholes: N/A Overall Condition: Excellent to Good Saggs/Runs: N/A Additional Notes: - Outer manway ratings Seam/Welds Condition: Excellent to Good - Consistent ratings throughout (26.5" x 16.5") - Constructed of stainless steel - Minimal discrepancies to be noted (no coating) Gasket Condition: Good Location: 11:00 - Minor spalling noted around penetration

	/A Surface Corrosion: N/A rated Cell Corrosion: N/A
Blistering: N/A Chalking: N/A Checking: N/A De-alloy	fuling/Pitting: N/A  Depth: N/A  N/A  ing: N/A
Pinholes: N/A	ular: N/A orrosion Cracking: N/A Corrosion: N/A ndition: Excellent to Good
	Notes: - Inner manway ratings - Consistent ratings throughout (26.5" x 16.5") - Constructed of stainless steel - Minimal discrepancies to be noted (no coating)











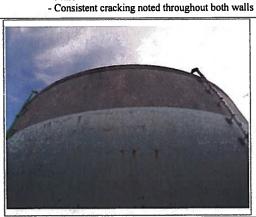
## In Depth Inc. Containment Tank Inspection Report



1111	Inspection 120 port	
Tank Floor & Wall Seam Condition		
Concrete / Coating Condition:    De-lamination: Minute: < 0.03%     Deterioration: N/A     Pop-outs: N/A     Voids: N/A     Unevenness: N/A     Cracking: Moderate   Type: Hairline / Shrinkage     Growth: N/A   Type: None     Staining: Minor   Type: Sediment     Exposed Aggregate: N/A     Exposed Reinforcement: N/A     Spalling: N/A     Seams/Joints Condition: Excellent to Good     Any irregularities or structural deficiencies? Y     Description: N/A	Corrosion:  None: N/A Uniform Surface Corrosion: N/A Concentrated Cell Corrosion: N/A Rust Noduling/Pitting: N/A Depth: N/A Galvanic: N/A De-alloying: N/A Intergranular: N/A Stress Corrosion Cracking: N/A Erosion Corrosion: N/A Overall Condition: Excellent to Good Additional Notes: - Inner & Outer wall seams share similar ratings - Minimal discrepancies to be noted - Consistent ratings noted throughout - No signs of leaking or seepage noted	
Ladder	Condition	
Lauder		
Ladder Location: 12:00  Coating Condition:  Oxidation: N/A  De-lamination: N/A  Staining: Minor  Blistering: N/A  Chalking: N/A  Checking: N/A  Cracking: N/A  Type: None  Growth: N/A  Type: None  Type: None  Pinholes: N/A  Seams/Welds Condition: Excellent	Corrosion:  None: N/A  Uniform Surface Corrosion: N/A  Concentrated Cell Corrosion: N/A  Rust Noduling/Pitting: N/A  Depth: N/A  Galvanic: N/A  De-alloying: N/A  Intergranular: N/A  Stress Corrosion Cracking: N/A  Erosion Corrosion: N/A  Overall Condition: Excellent  Additional Notes: - Equipped w/ 2 ladders inside of containment tank  - Both ladders share equal ratings (consistent)  - Constructed of aluminum (no coating)  - Guided rail safety climb	



#### **Containment Tank Wall Condition** Corrosion: Number of Walls: Two (2) None: N/A **Concrete Condition:** Uniform Surface Corrosion: Extensive: < 1% De-lamination: Minute < 0.03% Concentrated Cell Corrosion: N/A Deterioration: None, or < 0.01% Rust Noduling/Pitting: N/A Pop-outs: Minor Galvanic: N/A Voids: N/A De-alloying: N/A Unevenness: N/A ☐Intergranular: N/A ✓ Cracking: Heavy Type: Hairline / Shrinkage Stress Corrosion Cracking: Few Isolated: < 0.1% ✓Growth: N/A Type: None ☐Erosion Corrosion: N/A Type: Corrosive ✓ Staining: Minor Exposed Aggregate: N/A Overall Condition: Excellent to Good Additional Notes: - Tank has 2 walls (inner & outer) ▼Exposed Reinforcement: Minor - Walls share similar ratings Seams/Joints Condition: Excellent to Good - Inner wall only partially coated Any irregularities or structural deficiencies? Y O N O - Minor unlocalized areas or corrosion on inner wall Description: N/A



Depth: N/A



#### **Containment Tank Floor Condition**

Drain Location: Corrosion: 11:55 ☑None: N/A **Coating Condition:** Uniform Surface Corrosion: N/A Oxidation: N/A Concentrated Cell Corrosion: N/A De-lamination: None, or < 0.01% Rust Noduling/Pitting: N/A Depth: N/A ✓ Staining: Heavy Type: Mildew / Dirt / Bio Galvanic: N/A Blistering: N/A De-alloying: N/A Chalking: Minor Intergranular: N/A ✓ Checking: Moderate Stress Corrosion Cracking: N/A ✓ Cracking: Minor Type: Hairline ☐Erosion Corrosion: N/A ✓ Growth: Minor Type: Biological Overall Condition: Excellent to Good Pinholes: N/A Saggs/Runs: N/A Additional Notes: - Consistent ratings noted throughout - Crossover plumbing in good / excellent condition Seams/Welds Condition: Excellent to Good - Drain penetrates through sump in floor Is anything blocking the drain? YO NO - Minor unevenness noted throughout concrete floor Description: N/A







#### **Plumbing Condition Coating Condition:** ✓ Oxidation: Extensive: < 1% ✓ De-lamination: Few Isolated: < 0.3% ✓ Staining: Minor Type: Corrosive Blistering: N/A Chalking: N/A Checking: N/A Type: None Cracking: N/A Growth: N/A Type: None Pinholes: N/A Saggs/Runs: Minor Corrosion: □None: N/A Uniform Surface Corrosion: Extensive: < 1% ✓ Concentrated Cell Corrosion: Extensive: < 1% Rust Noduling/Pitting: N/A Depth: N/A Galvanic: N/A De-alloying: N/A ☐Intergranular: <sub>N/A</sub> Stress Corrosion Cracking: N/A

Seams/Welds Condition: Excellent to Good

Stand-off Supports Condition: Excellent to Good

Discharge Opening:

End Cap Sealed Properly? Y O N O N/A O Duckbill Valve Sealed Properly? Y O N O N/A O Flapper Valve Sealed Properly? Y O N O N/A O Screen 24 Mesh? Y O N O If no, size: N/A

Directly Connected to Sewer or Storm Drain? Y O N O Any Obstructions of Water Flow? Y O N O

Height Above Ground for Discharge: N/A Is Discharge Spot Adequate? Y O N O

Overall Condition: Excellent to Good

Additional Notes: - All crossover plumbing in good / excellent condition

- Consistent ratings noted throughout

- High-fill inlet constructed on stainless steel - All others coated & constructed of carbon steel

- No discharge location (fully contained)

**Crossover Plumbing** 

Erosion Corrosion: Extensive: < 1%



**High-fill Inlet Plumbing** 



**Primary Inlet Crossover Plumbing** 



Drain / Outlet / Sump









# In Depth Inc. Interior Inspection Report



## **Tank Wall Condition**

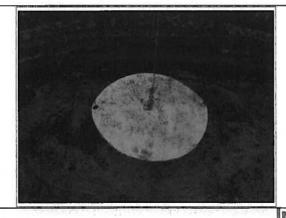
Concrete / Coating Condition:		Corrosion:	
✓De-lamination: To Extent of 39	<b>%</b>	✓None: N/A	
✓ Deterioration: Minute: < 0.03%		Uniform Surface Corrosion: N/A	N/A
Pop-outs: Minor		Concentrated Cell Corrosion: N/A	
□Voids: N/A		Rust Noduling/Pitting: N/A	Depth:
Unevenness: N/A		☐Galvanic: N/A	
✓ Cracking: Moderate	Type: Hairline / Shrinkage	De-alloying: N/A	
☐Growth: N/A	Type: None	Intergranular: N/A	
✓Staining: Heavy	Type: Sediment	Stress Corrosion Cracking: N/A	
Exposed Aggregate: N/A		Erosion Corrosion: N/A	
Exposed Reinforcement: N/A		Overall Condition: Good	
Spalling: Minor			
✓Saggs/Runs: Minor		Additional Notes: - Consistent ratings noted throu	ghout
Seams/Joints Condition: Good		- Prestressed coated concrete was - Moderate signs of bug holing	1115
Is biofilm present? YO NO		- Heavier staining noted on low	er walls
Any irregularities or structural of	leficiencies? Y O N O	- Heavy blistering noted on floo	
Description: N/A		- Minor chalking & checking no	ted throughout coating
			The state of the s

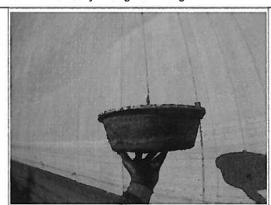




## Float Condition

Float Location: 11:45	Corrosion:
Float Condition: Excellent to Good	□None: N/A
Float Sealed? Y O N O	Uniform Surface Corrosion: None, or < 0.01%
Guidelines Condition: Excellent to Good	Concentrated Cell Corrosion: Few Isolated: < 0.1%
Attached Properly? Y O N O	Rust Noduling/Pitting: N/A Depth: N/A
Cable Condition: Excellent	Galvanic: N/A
Attached Properly? Y O N O	De-alloying: N/A
Hardware Condition: Excellent to Good	Intergranular: N/A
Coating Condition: Excellent to Good	Stress Corrosion Cracking: N/A
	Erosion Corrosion: N/A
	Overall Condition: Excellent to Good
	Additional Notes: - Constructed of fiberglass - Attached and accurate (Anchored properly) - Heavy staining noted throughout





Tank Floor Condition	
Concrete / Coating Condition:  ☑ De-lamination: Extensive: < 1%  ☐ Deterioration: N/A  ☑ Pop-outs: Minor  ☐ Voids: N/A  ☑ Unevenness: Minor  ☐ Cracking: N/A  ☐ Growth: N/A  ☐ Growth: N/A  ☐ Staining: Heavy  ☐ Exposed Aggregate: N/A  ☐ Exposed Reinforcement: N/A  ☐ Exposed Reinforcement: N/A  ☐ Spalling: N/A  Any identified signs of leaking? Y O N O  Seams/Joints Condition: Good  Sediment depth: 6" - 10"  Any irregularities or structural deficiencies? Y O N O  Description: N/A	Corrosion:  ✓ None: N/A  Uniform Surface Corrosion: N/A  Concentrated Cell Corrosion: N/A  Rust Noduling/Pitting: N/A  Depth: N/A  Galvanic: N/A  De-alloying: N/A  Intergranular: N/A  Stress Corrosion Cracking: N/A  Erosion Corrosion: N/A  Overall Condition: Excellent to Good  Additional Notes: - Consistent ratings noted throughout  - Heavy blistering noted on floor to wall seam  - Coating present and in-tact  - No signs of leaking or seepage noted throughout
Floor to Wal	I Seam Condition
Coating: Y O NO Coating Condition:  Oxidation: N/A  De-lamination: Extensive: < 1%  Staining: Heavy  Chalking: Heavy  Chalking: N/A  Checking: Minor  Cracking: N/A  Type: None  Growth: N/A  Pinholes: N/A  Saggs/Runs: Moderate  Seams/Welds Condition: Good  Gasket Condition: Good to Fair	Concrete Condition:  Deterioration: N/A  Pop-outs: Minor  Voids: N/A  Unevenness: N/A  Cracking: N/A  Exposed Aggregate: N/A  Exposed Reinforcement: N/A  Spalling: N/A  Corrosion: N/A  Overall Condition: Good  Additional Notes: - Sloped floor to wall seams  - Consistent rating noted throughout  - Has elastomeric urethane floor-wall boot (blistering)  - No signs of leaking or seepage noted





#### **Inlet Condition** Common Inlet/Outlet? Y O N O Location: N/A Corrosion: □None: N/A ✓ Uniform Surface Corrosion: Approx 100% Inlet Location: 7:30 ✓ Concentrated Cell Corrosion: Approx 50% Coating Condition: ✓ Rust Noduling/Pitting: To Extent of 10% Depth: 1/8" Oxidation: Approx. 100% Galvanic: N/A De-lamination: Approx. 50% ✓De-alloying: Approx. 50% Staining: Heavy Type: Corrosive / Sediment ✓Intergranular: Approx. 50% Blistering: N/A Stress Corrosion Cracking: N/A Chalking: N/A Erosion Corrosion: To Extent of 3% ✓Checking: Heavy Overall Condition: Poor ✓ Cracking: Moderate Type: Coating Growth: N/A Additional Notes: - Consistent ratings noted throughout Type: None Severe corrosion present (coating failure) Stainless stand-offs in excellent condition Ultrasonic measurement readings: 373" - 369" High & Low fill opening flange Pinholes: N/A Saggs/Runs: N/A Seams/Welds Condition: Fair

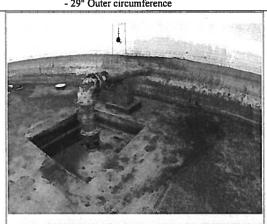




#### **Outlet Condition**

Outlet Location: 11:50 Coating Condition:  Oxidation: Approx. 100% De-lamination: Approx. 33% Staining: Heavy Blistering: N/A Chalking: N/A Checking: Heavy Cracking: Moderate Growth: N/A Pinholes: N/A Saggs/Runs: N/A Seams/Welds Condition: Poor	Type: Corrosive / Sediment  Type: Stress / Coating Type: None	Corrosion:  None: N/A  Uniform Surface Corrosion: Approx. 50%  Concentrated Cell Corrosion: Approx. 50%  Rust Noduling/Pitting: To Extent of 10%  Depth: 1/8"  Galvanic: N/A  De-alloying: Approx. 17%  Intergranular: Approx. 17%  Stress Corrosion Cracking: Approx. 33%  Erosion Corrosion: To Extent of 10%  Overall Condition: Poor  Additional Notes: - Severe corrosion noted throughout (coating failure)  - Penetrates through stainless flange in lower wall  - House within concrete floor sump (60"x60"x12")  - Ultrasonic thickness readings: 331 - 365  - 29" Outer circumference
--	---	---







#### **Secondary High-Fill Inlet Condition** High-Fill Location: 6:00 Corrosion: ✓ None: N/A **Coating Condition:** Uniform Surface Corrosion: N/A Oxidation: N/A Concentrated Cell Corrosion: N/A De-lamination: N/A Rust Noduling/Pitting: N/A Depth: N/A Staining: N/A Type: None Galvanic: N/A Blistering: N/A De-alloying: N/A Chalking: N/A Intergranular: N/A Checking: N/A Stress Corrosion Cracking: N/A Cracking: N/A Type: None Erosion Corrosion: N/A Growth: N/A Type: None Overall Condition: Excellent Pinholes: N/A Additional Notes: - Constructed of stainless steel Saggs/Runs: N/A - No coating present Seam/Welds Condition: Excellent - No discrepancies to be noted





#### **Additional Pictures**

<u>Plaque</u>



**Pitting Measurement** 



Outlet





