

## Johnson, Sabrina O

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**From:** Troy Hays <thayes@jonesedmunds.com>  
**Sent:** Thursday, December 20, 2018 12:56 PM  
**To:** Morgan, Steve  
**Cc:** Henry C. Norris; Ray Oates; DAN S. SHERLOCK (DAN.SHERLOCK@citrusbocc.com)  
**Subject:** Citrus County Central Landfill (WACS ID # 39859) Leachate Tanks Inspection Report  
**Attachments:** 2018.12.18\_Leachate Tanks Inspection Report.pdf

Good Afternoon Steve,

Attached is the is the Citrus County Central Landfill (WACS ID # 39859) Leachate Tanks Inspection Report. Please don't hesitate to call me with any questions or if you need any additional information.

Thanks,

**Troy D. Hays, PG**  
Senior Manager / Vice President



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December 18, 2018

Mr. Steve Morgan, Environmental Engineer  
Department of Environmental Protection  
Solid Waste Section  
13051 North Telecom Pkwy.  
Temple Terrace, FL 33637

RE: Citrus County Central Landfill (WACS ID# 39859)  
Leachate Tanks Modifications and Inspection  
Jones Edmunds Opportunity No.: 03860-057-01

Dear Mr. Morgan:

Citrus County recently completed relining and some mechanical modifications to the Leachate Storage Tanks. The project included draining each tank, removing all accumulated grit and disposing of the grit in the landfill, and cleaning each tank. While each of the tanks were drained and after cleaning, the following modifications were conducted:

- Demolition of the Diffuser System.
- Removal of the existing bottom liner, repairs to any chips or cracks observed in the concrete flooring of the tanks, and relining of the bottom of both tanks.
- Repair of the blistering in the coating of the sidewalls of the tanks.
- Installation of a new, in-kind, diffuser system.

In addition to the work conducted on the interior of the tanks, the County also recoated the exterior of the tanks including all exposed ductile iron piping, performed upgrades to the condensate leachate line leading into the tanks, replaced a malfunctioning valve on the drain line from the containment unit, and replaced all of the expansion joint sealant in the containment unit. All of the work performed on the leachate tanks would be classified as maintenance and while the work was being performed, numerous inspections were conducted on both tanks.

## TANK INSPECTION

The leachate storage tanks are each 125,000 gallon, cast-in-place concrete tanks, and they were originally constructed in 1996. The last inspection was conducted in October 2015 so this letter constitutes the update for the three-year inspection requirement.

This inspection focuses on the current condition of the tanks following completion of the lining and mechanical modifications. The photos below all show the tanks in their current conditions. During cleaning and grit removal of the tanks, no structural deficiencies were noted. There were minor cracks in the bottom of the concrete of each tank. The cracks had no offset and were at the most 1/16 of an inch opening. All of the cracks were sealed before coating the bottom of the tanks.

Photo 1: East Leachate Tank with the new bottom liner and the repairs completed on the blisters in the walls.



Photo 2: East Leachate Tank is filled and all diffusers are working as designed.



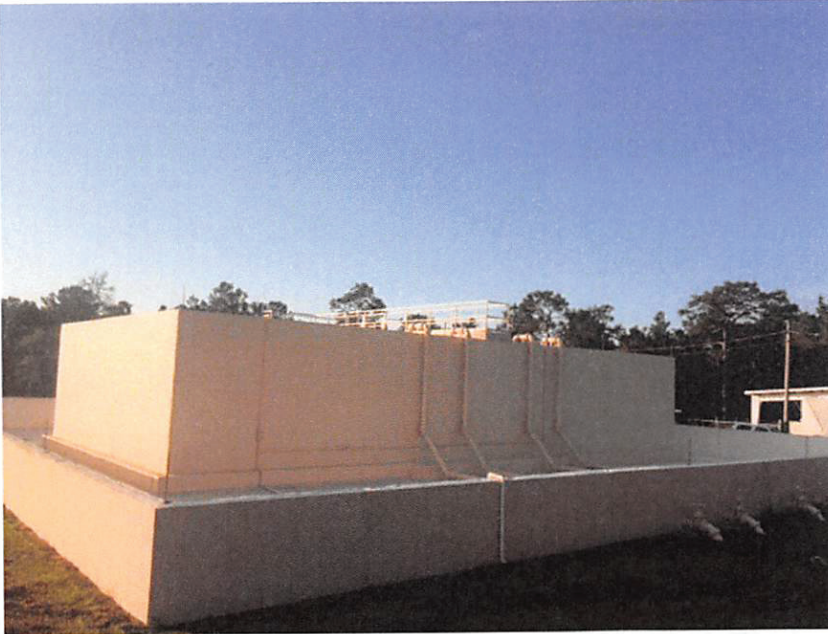
Photo 3: West Leachate Tank with the new bottom liner and the repairs completed on the blisters in the walls. The new diffuser piping has been installed. The Grit on the new white bottom liner is the sand blasting material from the wall repairs.



Photo 4: West Leachate Tank is filled and all diffusers are working designed.



Photo 5: Exterior of the tanks and all ductile Iron Piping has been recoated.



## CONCLUSIONS

The relining and mechanical modifications to the Leachate Tanks are complete and during the construction work, periodic inspections were conducted to assess the conditions of the tanks before they were recoated. No issues were identified with the structural integrity of the tanks.

### **Interior of the Tanks:**

**Bottom Liner:** The bottom liner on both tanks was removed and the bottoms of the tanks were relined. Minor cracks were observed on the concrete bottom of both tanks; however, the cracks were thin and there was no observed staining under the original liner indicating a leak. The cracks were sealed before the new bottom liner was installed in each tank.

**Wall Coatings:** The blisters in the coating on the walls of both tanks were removed and repaired.

**Diffuser System:** A new diffuser system was installed in each tank after the lining was completed. Any vertical bubblers that were still in good condition were reused on the new system.

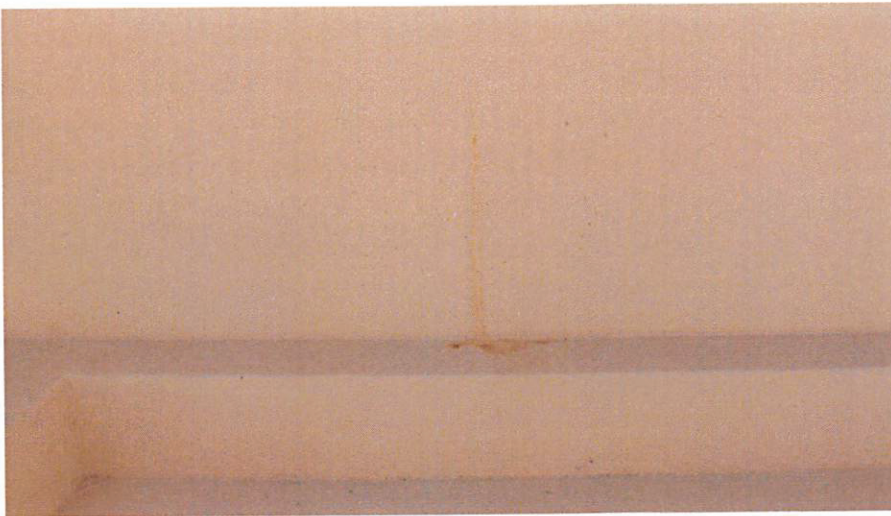
### **Exterior of the Tanks:**

The exterior of the tanks were recoated along with recoating the exterior of the containment basin. Any rust corrosion on the ductile iron piping was repaired and the exterior ductile iron piping was recoated as well. Additionally, the expansion joint sealant was removed and

replaced in the containment basin and an underground plug valve on the drain system was replaced.

After completion of the project, a very small leak was identified in the wall of the leachate tank. The Contractor who completed all of the work on the tanks was notified of the issue and the leak was repaired with a hydrophilic injection. There have been no additional issues with the work on the tanks.

Photo 6: Small leak in the tank wall that was repaired as a Warrantee item by the Contractor.



Citrus County Utilities and the Solid Waste Departments will continue with regular maintenance and inspections of the Leachate Storage Tanks in order to continue to provide proper storage and environmentally sound handling of the leachate. The next leachate storage tank inspection report will be due to FDEP in October 2021.

Sincerely,

Troy Hays, PG  
Sr. Manager / Vice President  
[thays@jonesedmunds.com](mailto:thays@jonesedmunds.com)  
730 NE Waldo Road  
Gainesville, FL 32641

Xc: Henry Norris, Citrus County  
Dan Sherlock, Citrus County  
Ray Oates, Citrus County