

## Black, Alexis

---

**From:** Henry C. Norris <Henry.Norris@citrusbocc.com>  
**Sent:** Tuesday, April 28, 2020 8:44 AM  
**To:** Black, Alexis  
**Subject:** FW: [EXTERNAL]The landfill gas expansion finished?

Good morning Alexis, I wanted to give you an update as to where we are with Final Completion of the gas system expansion project. At this time we have not issued completion of the project due to problems with the newly install blower, the contractor has agreed to replace it as soon as the manufacturer re-opens for business (covid-19 shut down). We are able to run the blower we have but at a reduced run time of 4 hours per day, I am told by the contractor this will be a high priority once work restrictions are removed, possible a week to 10 days. We are operating on normal business hours with no reduction in services and have been from the start of the pandemic.



Henry C Norris Jr  
Solid Waste Division Director  
Citrus County Board of County Commissioners  
230 W. Gulf to Lake Hwy  
Lecanto, FL 34461  
352.527.7670

"Please Note: Florida has a very broad Public Records Law. Most written communications to or from State and Local Officials regarding State or Local business are public records available to the public and media upon request. Your email communications may therefore be subject to public disclosure."

---

**From:** Henry C. Norris [mailto:Henry.Norris@citrusbocc.com]  
**Sent:** Tuesday, March 10, 2020 1:11 PM  
**To:** Black, Alexis  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Requested update

Henry,

Yesterday while on site I spoke w/ Louis Kalani (Aptim/ LFGS) Engineer regarding the specific concerns. Aptim / LFGS believes the relief valve is functioning as intended and the heating and noise issue is potentially the Blower or Motor bearings. Later yesterday afternoon Mark Hadlock (Jones Edmunds EOR) also spoke w/ Mr. Kalani.

As follows is resulting course of Action:

1. Aptim/ LFGS is contacting Rotron Blower Mfg. and Baldor Motors regarding greasing, expediting replacement bearings, or replacement units under warranty.



2. Jones Edmunds recommends the County reset the (2) Timer devices to operate in Auto Mode for 8 hours a day – during hours the County is on site. No further adjustments are recommended at this time.

I will follow-up tomorrow with Aptim/ LFGS to determine schedule.

Please notify me of any issues with the system once it has been reset to operate 8 hours a day.

Contact me with any questions.

Thanks.

**Gregg S. Fruecht**

Construction Administrator

p. 813.258.0703 x. 1765 | c. 727.432.1326

[JONESEDMUNDS.COM](http://JONESEDMUNDS.COM)

324 S. Hyde Park Ave, Suite 250, Tampa, FL, 33606

The information contained in this message including any attachment is confidential. It is intended for the private use of the intended addressee only. If you are not the intended addressee, please immediately notify the sender by reply email and destroy the original transmission and any attachment. Email transmission of information cannot be guaranteed to be free of error or other defect. If verification is required, request a hard-copy version. The sender disclaims liability for any defects in this message caused by email transmission including a virus. It is the responsibility of the recipient to ensure that this message is virus free.

**From:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>

**Sent:** Tuesday, March 10, 2020 8:06 AM

**To:** Troy Hays <[thayes@jonesedmunds.com](mailto:thayes@jonesedmunds.com)>; Gregg Fruecht <[GFRUECHT@jonesedmunds.com](mailto:GFRUECHT@jonesedmunds.com)>

**Cc:** Traci J. Schoenrock <[Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)>

**Subject:** Gas system blower update

---

**From:** Black, Alexis [mailto:[Alexis.Black@FloridaDEP.gov](mailto:Alexis.Black@FloridaDEP.gov)]

**Sent:** Tuesday, March 10, 2020 7:00 AM

**To:** Henry C. Norris

**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Good morning Henry:

I hope you're well. Any updates on this?

Thank you!

Alexis



*Alexis Black*

Environmental Specialist II

Compliance Assurance Program

Florida Department of Environmental Protection

Southwest District

**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.



---

**From:** Black, Alexis  
**Sent:** Thursday, February 27, 2020 5:18 PM  
**To:** Henry C. Norris <Henry.Norris@citrusbocc.com>  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Hi Henry:

Thank you for this information. I'll check in with you next week for an update.

Have a good evening,  
Alexis



*Alexis Black*

Environmental Specialist II  
Compliance Assurance Program  
Florida Department of Environmental Protection  
Southwest District

**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.

---

**From:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>  
**Sent:** Thursday, February 27, 2020 8:15 AM  
**To:** Black, Alexis <[Alexis.Black@FloridaDEP.gov](mailto:Alexis.Black@FloridaDEP.gov)>  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Not sure as yet, trouble shooting is ongoing I'm thinking its mechanical. The contractor will replace if necessary

Henry

---

**From:** Black, Alexis [<mailto:Alexis.Black@FloridaDEP.gov>]  
**Sent:** Wednesday, February 26, 2020 4:41 PM  
**To:** Henry C. Norris  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Hi Henry:

No problem. What could be causing the blower to overheat? Is there a mechanical issue or a vacuum issue?

Thanks,  
Alexis



*Alexis Black*

Environmental Specialist II  
Compliance Assurance Program  
Florida Department of Environmental Protection  
Southwest District



**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.

---

**From:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>  
**Sent:** Wednesday, February 26, 2020 10:34 AM  
**To:** Black, Alexis <[Alexis.Black@FloridaDEP.gov](mailto:Alexis.Black@FloridaDEP.gov)>  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Please accept my apologies for the delayed response as I have been unexpectedly out of the office. The project is complete but because the new blower that was installed on the closed site continues to have over temp problems final completion has not been issued.

Henry

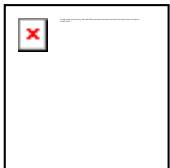
---

**From:** Black, Alexis [<mailto:Alexis.Black@FloridaDEP.gov>]  
**Sent:** Friday, February 21, 2020 7:14 AM  
**To:** Henry C. Norris  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Good morning Henry:

I hope you're well. What is the status of this project?

Thanks,  
Alexis



**Alexis Black**

Environmental Specialist II  
Compliance Assurance Program  
Florida Department of Environmental Protection  
Southwest District

**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.

---

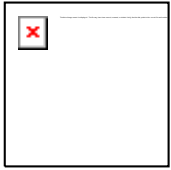
**From:** Black, Alexis  
**Sent:** Friday, January 31, 2020 11:30 AM  
**To:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>  
**Cc:** Dan S. Sherlock <[DAN.SHERLOCK@citrusbocc.com](mailto:DAN.SHERLOCK@citrusbocc.com)>; Aaron W. Lake <[Aaron.Lake@citrusbocc.com](mailto:Aaron.Lake@citrusbocc.com)>  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Hi Henry:

Thank you for this information. Please let me know when the system reaches final completion.

Have a good weekend,  
Alexis





*Alexis Black*

Environmental Specialist II  
Compliance Assurance Program  
Florida Department of Environmental Protection  
Southwest District

**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.

---

**From:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>  
**Sent:** Wednesday, January 29, 2020 8:42 AM  
**To:** Black, Alexis <[Alexis.Black@FloridaDEP.gov](mailto:Alexis.Black@FloridaDEP.gov)>  
**Cc:** Dan S. Sherlock <[DAN.SHERLOCK@citrusbocc.com](mailto:DAN.SHERLOCK@citrusbocc.com)>; Aaron W. Lake <[Aaron.Lake@citrusbocc.com](mailto:Aaron.Lake@citrusbocc.com)>  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Hello Alexis, the gas system expansion in the operational area and the blower system on the closed landfill are complete and running, the contractor is still on site working through well field tuning and some minor housekeeping issues. We expect final completion possibly next week. We have run into some overheat issues on the new blower that we are trying to resolve at this time other than that the system is functioning well.



Henry C Norris Jr  
Solid Waste Division Director  
Citrus County Board of County Commissioners  
230 W. Gulf to Lake Hwy  
Lecanto, FL 34461  
352.527.7670

"Please Note: Florida has a very broad Public Records Law. Most written communications to or from State and Local Officials regarding State or Local business are public records available to the public and media upon request. Your email communications may therefore be subject to public disclosure."

---

**From:** Black, Alexis [<mailto:Alexis.Black@FloridaDEP.gov>]  
**Sent:** Wednesday, January 29, 2020 6:37 AM  
**To:** Henry C. Norris  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Hi Henry:



I hope you are well. My name is Alexis Black, the new compliance inspector for your facility. Scott Borderieux is no longer employed with the Department. Please email all correspondence, including submittals, questions, and concerns, regarding this facility to me directly.

Per your email below, are there any updates about the expansion?

Best regards,  
Alexis



*Alexis Black*

Environmental Specialist II  
Compliance Assurance Program  
Florida Department of Environmental Protection  
Southwest District  
[Alexis.Black@floridadep.gov](mailto:Alexis.Black@floridadep.gov)  
Office: 813.470.5912

**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.

---

**From:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>  
**Sent:** Tuesday, January 7, 2020 10:54 AM  
**To:** Borderieux, Scott <[Scott.Borderieux@FloridaDEP.gov](mailto:Scott.Borderieux@FloridaDEP.gov)>  
**Subject:** RE: [EXTERNAL]The landfill gas expansion finished?

Scott, the installation is complete and we are currently working through the Contractors ITC List. Field Technicians are on site this am to troubleshoot the New Blower Sump Level Switch. There are a few wiring and Level Switch options we are reviewing so we can energize the new system. Substantial completion was met on 12/12/19 and Final was scheduled for 1/3/2020 but has not been met. I will notify you when we are up and running and project completed.

Henry

---

**From:** Borderieux, Scott [<mailto:Scott.Borderieux@FloridaDEP.gov>]  
**Sent:** Monday, January 06, 2020 1:17 PM  
**To:** Henry C. Norris  
**Subject:** [EXTERNAL]The landfill gas expansion finished?

**WARNING:** This email originated from an external Domain **DO NOT CLICK** unless you recognize the sender and know the content is safe.

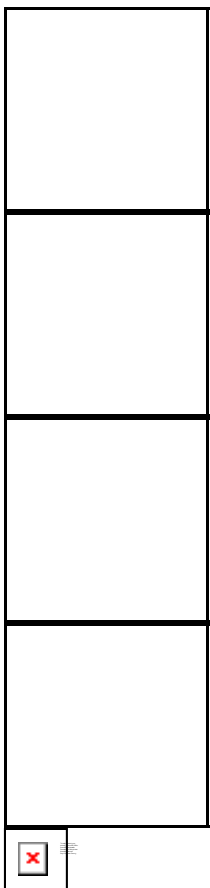
Hi Henry,

I just wanted to confirm that the expansion is finished and running (or if not, when it will be finished and running). Thanks.

Scott



Scott Borderieux  
Engineering Specialist  
Compliance Assurance  
Florida Department of Environmental  
Protection -- Southwest District  
13051 N. Telecom Pkwy Suite 101  
Temple Terrace, FL 33637-0926  
(813) 470-5758 (direct line)  
(813) 470-5995 - fax  
[scott.borderieux@floridadep.gov](mailto:scott.borderieux@floridadep.gov)





## Black, Alexis

---

**From:** Traci J. Schoenrock <Traci.Schoenrock@citrusbocc.com>  
**Sent:** Monday, June 8, 2020 12:48 PM  
**To:** SWD\_Waste  
**Cc:** Black, Alexis  
**Subject:** Citrus County Central Landfill WACS ID 38959 -Pump Replaced  
**Attachments:** 1.jpg; 2.jpg; 3.jpg

Good morning,

This is to update you on the status of the primary pump replacement for phase 2 at the Citrus County Landfill. As discussed last week, it was our initial intent to order a new one, however, there was a 3-6 week wait time for that order. Therefore, in order to rectify the issue as quickly as possible we decided to go with the 10hp we had on site. There was a concern that the increase of amperage from the previous 5hp to the 10hp could have a negative effect on our control panel, therefore, we had an electrician (Mader) verify that this would not be the case. Then, in order to ensure the old pump would work we needed to verify that the sleeve was the exact length as the previous one. A welder was called on site to ensure that this was the case. Our next hurdle was the coupling needed to seal the connection appropriately. On June 3<sup>rd</sup>, we were told that this would take 2-3 weeks to secure, however, after some diligent research and prodding, we were able to secure the coupling Friday.

Today we scheduled all of the necessary crew and appropriate machinery to replace and repair the system to full operation. Tests are being run now but everything appears to be working as intended. See attached. [Feel free to contact me with any further questions.](#)

Thank you,

Traci Schoenrock

Solid Waste Compliance Manager  
Division of Solid Waste Management  
Email: [Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)

Main Office # (352)-527-7670  
Direct # (352)-527-7679  
Fax # (352)-527-7672

















## Black, Alexis

---

**From:** Black, Alexis  
**Sent:** Wednesday, June 24, 2020 1:52 PM  
**To:** Traci J. Schoenrock  
**Cc:** Madden, Melissa  
**Subject:** RE: Forget attachments-EXTERNAL]RE: Citrus County Central Landfill WACS ID 38959 -Pump Replaced  
**Attachments:** Phase 3 - Sheet 19.png

Good afternoon Traci:

Thank you for your email. Please see my responses for each Phase below.

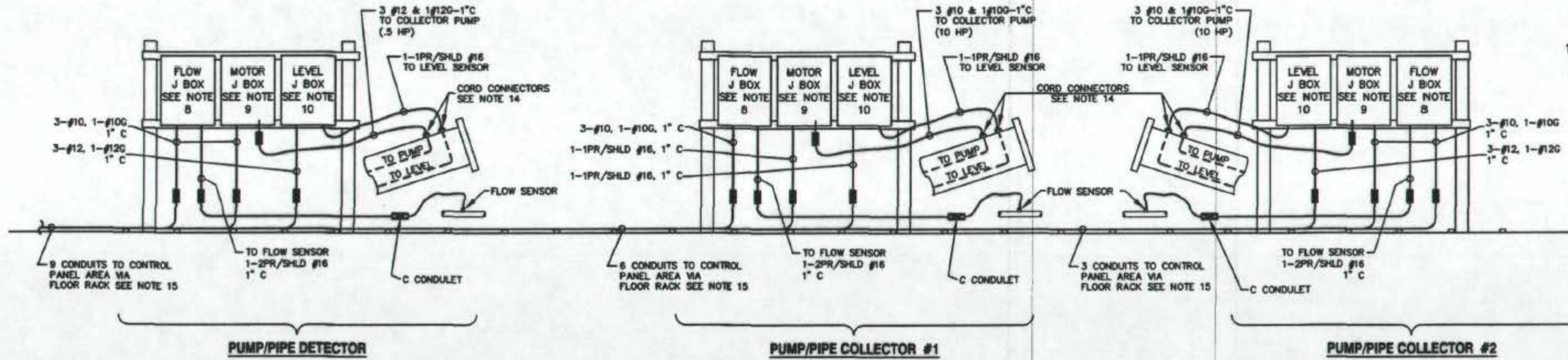
- **Phase 1/1A:** If the system was functioning properly, it may not be an issue that one of each of the collection and detection side-slope riser pipes is being used for transducers, however, the [original design](#) (Sheets 13-15) and Operation Plan Section K.2.b.2 appears to indicate redundant pumps for each so there is a lead/lag/backup method of leachate removal like in Phases 2 and 3. The lead/lag system is preferred so one pair of primary and secondary can be utilized as a backup collection/detection system in case there are issues with pumps, fuses, etc. The data that has been provided in past leachate generation reports demonstrates that there are issues occurring with the pumps and levels, i.e. the secondary data is greater than primary data, surges in pumping, etc. If issues persist, utilizing the collection/detection system in this Phase as designed may be warranted in the future. Have the issues you noted in your email for this Phase been resolved?
- **Phase 2:** What is the status of the electrical issue with the pumps? Is the system functioning properly? The Department identified that the one pump's primary reported negative numbers for the entirety of quarter one 2020. When was the damage to the pump end identified? If issues that impact the data reported are known, then these anomalies should be included as comments in the quarterly leachate generation reports or reported to the Department otherwise.
- **Phase 3:** The [original design](#) (Sheet 19 – see attached) and Operation Plan Section K.8.f. appears to indicate that each pump would have its own flow meter. If there is an issue with one of the pumps, the combined metering for this Phase could complicate troubleshooting to determine which pump is not functioning properly. Are individual pump run times recorded elsewhere on internal tracking sheets in order to back calculate individual pump volumes?
- **Other:** The calibration logs provided show that the 7 Acre/East and West Master Lift Station meter calibration was 196%. Wouldn't a calibration value this high report double the values? Is this percentage acceptable?

I am asking these questions and conducting in-depth reviews of this system for training purposes in preparation for the 2020/21 inspection, but also to address past complaints and current non-compliance issues addressed in the Warning Letter (WL) issued to this facility in 2019. During our most recent call and as indicated in the WL response letter, Henry indicated he was working to staff a new position which will be responsible for overseeing the leachate collection and control system monitoring and maintenance. Is there any update on this hiring?

Please feel free to contact me with your questions and concerns.

Best regards,  
Alexis





**LEACHATE MANIFOLD/HEADER AREA**  
NOT TO SCALE

- 15.2. SEE RACK DETAIL
- 16. GROUND ROD:
  - 16.1. E.C. TO PROVIDE GROUND ROD.
  - 16.2. INSTALL A #4 ST CONTROL PANEL.
- 17. TELEMETRY PANEL
  - 17.1. FURNISH AND INS
  - 17.2. E.C. TO ALLOW S

**RECORD DRAWING**  
DATE: APRIL 8, 2011





*Alexis Black*

Environmental Specialist II  
Compliance Assurance Program  
Florida Department of Environmental Protection  
Southwest District

**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.

---

**From:** Traci J. Schoenrock <Traci.Schoenrock@citrusbocc.com>  
**Sent:** Wednesday, June 10, 2020 1:34 PM  
**To:** Black, Alexis <Alexis.Black@FloridaDEP.gov>  
**Subject:** Forget attachments-EXTERNAL]RE: Citrus County Central Landfill WACS ID 38959 -Pump Replaced

[See attachments](#)

---

**From:** Traci J. Schoenrock  
**Sent:** Wednesday, June 10, 2020 1:33 PM  
**To:** 'Black, Alexis' <Alexis.Black@FloridaDEP.gov>  
**Subject:** RE: [EXTERNAL]RE: Citrus County Central Landfill WACS ID 38959 -Pump Replaced

Good afternoon Alexis,

Sorry for my delay in getting back to you. Please see my responses below in orange.

Also please not the highlighted areas. Please feel free to contact me for clarification on any of it.

I will be in contact with you ASAP as I know more on Phase 1 fuse issue.

Sincerely,

Traci Schoenrock

Solid Waste Compliance Manager  
Division of Solid Waste Management  
Email: [Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)

Main Office # (352)-527-7670  
Direct # (352)-527-7679  
Fax # (352)-527-7672



**Phase 1**



Do, do you have additional information about the Phase 1/1A primaries and secondaries? The drawings show two primaries and secondaries, but only one pair is reported.

- The drawings show 4 pump housings. However, there is only one primary and one secondary pump. The other two housings hold the transducers only. You can see in the attached photo labeled "Phase 1" There are two casings that have pumps attached and two that only the transducer. You cannot see the labels in the photo but primary pump is the second one to right and the primary transducer for that one is located second one to the left (or in the center).
- The secondary pump is located furthest to the left and the secondary is located farthest to the right (or outer sides).
- Phase 1 primary and Phase 1 secondary are connected to individual flow meters.
- I am still getting familiar with all of the specifics of this facility, and reading technical documents so bear with me here, but I believe this is *in fact* indicated on the drawings, see attachment labeled "Phase 1 drawings" where two of the lines are labeled "detection" and two are labeled "collection."

Is it possible that one pair of pipes was slip-lined when the system failed?

- A while back all 4 housings were slip lined due to a collapse. However, this did not change the fact that there are only two pumps as demonstrated above.

Quarter 1 Leachate Quantity report for this facility, please clarify why the secondary values reported are greater than those of the primary. The amount of leachate removed from the secondary should not exceed those of the primary, i.e the January and March 2020 readings.

- Trouble shooting, we replaced the underground wiring. Phase 1 primary motor was not performing and blowing fuses until it was replaced therefore, the secondary was taking more flow until replacement.

Also, there was a surge in pumping from March 10 through 16, please explain why.

- March 10th pump was tripping fuses causing these surges.

## Phase 2

Will you be utilizing the 10-hp pump until a replacement 5-hp pump is received?

- We plan to continue to use the 10hp as long as it continues to function as intended.
- Do we need to report this more formally?
- Also, be advised that unfortunately, we had an issue with blowing fuses throughout the day yesterday. We had previous had an electrician determine that the increase in amperage from the 5hp to the 10hp would not be an issue. Therefore, we are trying to determine the cause of the blowing fuses.
- The pump is operation, however, we are working on this issue. If it is determined we need to go back to a 5hp, obviously we will get that one ordered and my response herein, would change.
  - I will keep you posted as this progresses.

For Phase 2, the primary is reporting negative numbers for the entire quarter. Is the primary being used? If not, the values reported should be 0, not negative numbers.

- Pump end was damaged causing flow to go backwards. This was repaired 6-8-2020 as indicated in my email yesterday. Negative numbers indicated backflow or lost pumpage to leachate storage.



Also, please clarify when the last time the leachate meters were calibrated because there are readings in the secondary that are less than 10 and 0.

- Calibration Records attached.
- This indicates low leachate in the secondary unit.

### Phase 3

Only one primary is reported, but there are two primary pipes in this system. Where is the second primary data?

- Phase three has two primary pumps, but one flow meter for both, therefore there is no secondary data.
- My question for you on this one is why was this a question now? I am new but I guess I don't understand where there was a change that made this question pop up? Am I missing something here?

---

**From:** Black, Alexis [<mailto:Alexis.Black@FloridaDEP.gov>]

**Sent:** Tuesday, June 9, 2020 11:01 AM

**To:** Traci J. Schoenrock <[Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)>; SWD\_Waste <[SWD\\_Waste@dep.state.fl.us](mailto:SWD_Waste@dep.state.fl.us)>

**Subject:** [EXTERNAL]RE: Citrus County Central Landfill WACS ID 38959 -Pump Replaced

**WARNING:** This email originated from an external Domain **DO NOT CLICK** unless you recognize the sender and know the content is safe.

Hi Traci:

Thanks for following up me on this matter. Will you be utilizing the 10-hp pump until a replacement 5-hp pump is received? Also, do you have additional information about the Phase 1/1A primaries and secondaries? The drawings show two primaries and secondaries, but only one pair is reported. Is it possible that one pair of pipes was slip-lined when the system failed?

Thanks,  
Alexis



*Alexis Black*

Environmental Specialist II

Compliance Assurance Program

Florida Department of Environmental Protection

Southwest District

**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.

---

**From:** Traci J. Schoenrock <[Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)>

**Sent:** Monday, June 8, 2020 12:48 PM

**To:** SWD\_Waste <[SWD\\_Waste@dep.state.fl.us](mailto:SWD_Waste@dep.state.fl.us)>



**Cc:** Black, Alexis <[Alexis.Black@FloridaDEP.gov](mailto:Alexis.Black@FloridaDEP.gov)>

**Subject:** Citrus County Central Landfill WACS ID 38959 -Pump Replaced

Good morning,

This is to update you on the status of the primary pump replacement for phase 2 at the Citrus County Landfill. As discussed last week, it was our initial intent to order a new one, however, there was a 3-6 week wait time for that order. Therefore, in order to rectify the issue as quickly as possible we decided to go with the 10hp we had on site. There was a concern that the increase of amperage from the previous 5hp to the 10hp could have a negative effect on our control panel, therefore, we had an electrician (Mader) verify that this would not be the case. Then, in order to ensure the old pump would work we needed to verify that the sleeve was the exact length as the previous one. A welder was called on site to ensure that this was the case. Our next hurdle was the coupling needed to seal the connection appropriately. On June 3<sup>rd</sup>, we were told that this would take 2-3 weeks to secure, however, after some diligent research and prodding, we were able to secure the coupling Friday.

Today we scheduled all of the necessary crew and appropriate machinery to replace and repair the system to full operation. Tests are being run now but everything appears to be working as intended. See attached. [Feel free to contact me with any further questions.](#)

Thank you,

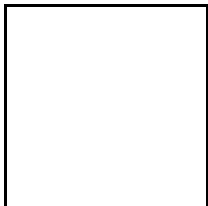
Traci Schoenrock

Solid Waste Compliance Manager  
Division of Solid Waste Management  
Email: [Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)

Main Office # (352)-527-7670

Direct # (352)-527-7679

Fax #(352)-527-7672





# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: NEXT TO SCALE  
CENTRAL LANDFILL  
METER NAME: LEACHATE FORCE MAIN METER METER SIZE: 6"  
MFGR: ROSEMOUNT MODEL: 8750  
FLOW DEVICE: ELECTROMAGNETIC METER #: 14881380  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 1200 GPM  
NORMALLY OPERATES AT: APPROX 125 GPM FOR TEST

METER TOTALIZER READING BEFORE TEST: 5394310

METER TOTALIZER READING AFTER TEST: 5394710

METER READING		TEST METER	
TOTALIZER START:	<u>5394310</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>5394710</u>	STOP:	<u>402</u>
TOTAL FLOW:	<u>400</u>	TOTAL FLOW:	<u>402</u>

OVERALL ACCURACY IN PERCENT: 99.50%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

	O.D.	WALL	POLYETHELYNE PIPE
COMMENTS:	<u>3"</u>	<u>3.5"</u>	<u>.32"</u>
	<u>1 1/4"</u>	<u>1.66"</u>	<u>.15"</u>
CORRECTIONS:	<u>1 1/2"</u>	<u>1.9"</u>	<u>.17"</u>
	<u>2'</u>	<u>2.36"</u>	<u>.22"</u>

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

Panametrics Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.

Panametrics Inc. further certifies that the calibration standard used against the listed equipment is traceable to the National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature: Robert S. Schwemmer Date: 3/13/2020

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: MASTER LIFT STATION  
CENTRAL LANDFILL  
METER NAME: PHASE 1-1A SECONDARY PUMP METER SIZE: 1"  
MFGR: FLOCAT MODEL: LB75-C SERIES  
FLOW DEVICE: TURBINE METER #: N/A  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 25 GPM  
NORMALLY OPERATES AT: 5 GPM

METER TOTALIZER READING BEFORE TEST: 80812.0

METER TOTALIZER READING AFTER TEST: 80832.0

METER READING		TEST METER	
TOTALIZER START:	<u>80812.0</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>80832.0</u>	STOP:	<u>20.7</u>
TOTAL FLOW:	<u>20</u>	TOTAL FLOW:	<u>20.7</u>

OVERALL ACCURACY IN PERCENT: 96.62%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

	O.D.	WALL	POLYETHYLENE PIPE
COMMENTS:	<u>3"</u>	<u>3.5"</u>	<u>.32"</u>
	<u>1 1/4"</u>	<u>1.66"</u>	<u>.15"</u>
CORRECTIONS:	<u>1 1/2"</u>	<u>1.9"</u>	<u>.17"</u>
	<u>2'</u>	<u>2.36"</u>	<u>.22"</u>

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

Panametrics Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.

Panametrics Inc. further certifies that the calibration standard used against the listed equipment is traceable to the National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature: Robert S. Schwemmer Date: 3/13/2020

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: MASTER LIFT STATION  
CENTRAL LANDFILL  
METER NAME: PHASE 1 1A PRIMARY PUMP METER SIZE: 1 1/2"  
MFGR: FLOCAT MODEL: 50XM21AAA  
FLOW DEVICE: TURBINE METER #: N/A  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 50 GPM  
NORMALLY OPERATES AT: APPROX 16 GPM FOR TEST

METER TOTALIZER READING BEFORE TEST: 7329400

METER TOTALIZER READING AFTER TEST: 7329440

METER READING		TEST METER	
TOTALIZER START:	<u>7329400</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>7329440</u>	STOP:	<u>40.6</u>
TOTAL FLOW:	<u>40</u>	TOTAL FLOW:	<u>40.6</u>

OVERALL ACCURACY IN PERCENT: 98.52%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

COMMENTS: \_\_\_\_\_

CORRECTIONS: \_\_\_\_\_

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

Panametrics Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.

Panametrics Inc. further certifies that the calibration standard used against the listed equipment is traceable to the National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature:  Date: 3/13/2020

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: PHASE 2 CELL  
CENTRAL LANDFILL  
METER NAME: PHASE 2 PRIMARY LEACHATE PUMP#1 METER SIZE: 3"  
MFGR: ROSEMOUNT MODEL: 8750  
FLOW DEVICE: ELECTROMAGNETIC METER #: 0019570  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 50 GPM  
NORMALLY OPERATES AT: APPROX 80 GPM FOR TEST

METER TOTALIZER READING BEFORE TEST: 1581100

METER TOTALIZER READING AFTER TEST: 1581300

METER READING		TEST METER	
TOTALIZER START:	<u>1581100</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>1581300</u>	STOP:	<u>202</u>
TOTAL FLOW:	<u>200</u>	TOTAL FLOW:	<u>202</u>

OVERALL ACCURACY IN PERCENT: 99.01%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

	O.D.	WALL	POLYETHELYNE PIPE
COMMENTS:	<u>3"</u>	<u>3.5"</u>	<u>.32"</u>
	<u>1 1/4"</u>	<u>1.66"</u>	<u>.15"</u>
CORRECTIONS:	<u>1 1/2"</u>	<u>1.9"</u>	<u>.17"</u>
	<u>2'</u>	<u>2.36"</u>	<u>.22"</u>

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

Panametrics Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.

Panametrics Inc. further certifies that the calibration standard used against the listed equipment is traceable to the National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature: Robert S. Schwemmer Date: 3/13/2020

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: PHASE 2 CELL  
CENTRAL LANDFILL  
METER NAME: PHASE 2 PRIMARY LEACHATE PUMP#2 METER SIZE: 3"  
MFGR: ROSEMOUNT MODEL: 8750  
FLOW DEVICE: ELECTROMAGNETIC METER #: 0019571  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 50 GPM  
NORMALLY OPERATES AT: APPROX 85 GPM FOR TEST

METER TOTALIZER READING BEFORE TEST: 10466420

METER TOTALIZER READING AFTER TEST: 10466820

METER READING		TEST METER	
TOTALIZER START:	<u>10466420</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>10466820</u>	STOP:	<u>404</u>
TOTAL FLOW:	<u>400</u>	TOTAL FLOW:	<u>404</u>

OVERALL ACCURACY IN PERCENT: 99.01%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

	O.D.	WALL	POLYETHELYNE PIPE
COMMENTS:	<u>3"</u>	<u>3.5"</u>	<u>.32"</u>
	<u>1 1/4"</u>	<u>1.66"</u>	<u>.15"</u>
CORRECTIONS:	<u>1 1/2"</u>	<u>1.9"</u>	<u>.17"</u>
	<u>2'</u>	<u>2.36"</u>	<u>.22"</u>

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

Panametrics Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.

Panametrics Inc. further certifies that the calibration standard used against the listed equipment is traceable to the National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature: Robert S. Schwemmer Date: 3/13/2020

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: LEACHATE PUMP STATION  
CENTRAL LANDFILL  
METER NAME: PHASE 2 SECONDARY LEACHATE METER SIZE: 1"  
MFGR: ROSEMOUNT MODEL: 8750  
FLOW DEVICE: ELECTROMAGNETIC METER #: 0014092  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 25 GPM  
NORMALLY OPERATES AT: APPROX 21 GPM FOR TEST

METER TOTALIZER READING BEFORE TEST: 96224

METER TOTALIZER READING AFTER TEST: 96274

METER READING		TEST METER	
TOTALIZER START:	<u>96224</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>96274</u>	STOP:	<u>49</u>
TOTAL FLOW:	<u>50</u>	TOTAL FLOW:	<u>49</u>

OVERALL ACCURACY IN PERCENT: 102.04%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

	O.D.	WALL	POLYETHELYNE PIPE
COMMENTS:	<u>3"</u>	<u>3.5"</u>	<u>.32"</u>
	<u>1 1/4"</u>	<u>1.66"</u>	<u>.15"</u>
CORRECTIONS:	<u>1 1/2"</u>	<u>1.9"</u>	<u>.17"</u>
	<u>2'</u>	<u>2.36"</u>	<u>.22"</u>

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

Panametrics Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.

Panametrics Inc. further certifies that the calibration standard used against the listed equipment is traceable to the National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature: Robert S. Schwemmer Date: 3/13/2020

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: MASTER LIFT STATION  
CENTRAL LANDFILL  
METER NAME: 7 ACRE EAST & WEST PUMP METER SIZE: 2"  
MFGR: ABB MODEL: MAGMASTER  
FLOW DEVICE: ELECTROMAGNETIC METER #: 3K820000024495  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 85 GPM  
NORMALLY OPERATES AT: 31 GPM FOR TEST

METER TOTALIZER READING BEFORE TEST: 4086410

METER TOTALIZER READING AFTER TEST: 4086510

METER READING		TEST METER	
TOTALIZER START:	<u>4086410</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>4086510</u>	STOP:	<u>51</u>
TOTAL FLOW:	<u>100</u>	TOTAL FLOW:	<u>51</u>

OVERALL ACCURACY IN PERCENT: 196.08%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

	O.D.	WALL	POLYETHELYNE PIPE
COMMENTS:	<u>3"</u>	<u>3.5"</u>	<u>.32"</u>
	<u>1 1/4"</u>	<u>1.66"</u>	<u>.15"</u>
CORRECTIONS:	<u>1 1/2"</u>	<u>1.9"</u>	<u>.17"</u>
	<u>2'</u>	<u>2.36"</u>	<u>.22"</u>

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

Panametrix Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.

Panametrix Inc. further certifies that the calibration standard used against the listed equipment is traceable to the National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature: Robert Schwemmer Date: 3/13/2020

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: PH 3 LEACHATE PUMP STATION  
CENTRAL LANDFILL  
METER NAME: PHASE 3 PRIMARY LEACHATE PUMP#1&2 METER SIZE: 4"  
MFGR: McCROMETER MODEL: 880003027  
FLOW DEVICE: ELECTROMAGNETIC METER #: E11-04133  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 500 GPM  
NORMALLY OPERATES AT: APPROX 146 GPM FOR TEST

METER TOTALIZER READING BEFORE TEST: 33694100

METER TOTALIZER READING AFTER TEST: 33694400

METER READING		TEST METER	
TOTALIZER START:	<u>33694100</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>33694400</u>	STOP:	<u>306</u>
TOTAL FLOW:	<u>300</u>	TOTAL FLOW:	<u>306</u>

OVERALL ACCURACY IN PERCENT: 98.04%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

	O.D.	WALL	POLYETHELYNE PIPE
COMMENTS:	<u>3"</u>	<u>3.5"</u>	<u>.32"</u>
	<u>1 1/4"</u>	<u>1.66"</u>	<u>.15"</u>
CORRECTIONS:	<u>1 1/2"</u>	<u>1.9"</u>	<u>.17"</u>
	<u>2'</u>	<u>2.36"</u>	<u>.22"</u>

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

Panametrics Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.

Panametrics Inc. further certifies that the calibration standard used against the listed equipment is traceable to the National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature: Robert S. Schwemmer Date: 3/13/2020

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: PH 3 LEACHATE PUMP STATION  
CENTRAL LANDFILL  
METER NAME: PHASE 3 LEACHATE PUMP SECONDARY METER SIZE: 2"  
MFGR: McCROMETER MODEL: 880003027  
FLOW DEVICE: ELECTROMAGNETIC METER #: E11-04132  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 200 GPM  
NORMALLY OPERATES AT: APPROX 20 GPM FOR TEST

METER TOTALIZER READING BEFORE TEST: 1332450

METER TOTALIZER READING AFTER TEST: 1332550

METER READING		TEST METER	
TOTALIZER START:	<u>1332450</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>1332550</u>	STOP:	<u>102</u>
TOTAL FLOW:	<u>100</u>	TOTAL FLOW:	<u>102</u>

OVERALL ACCURACY IN PERCENT: 98.04%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

	O.D.	WALL	POLYETHELYNE PIPE
COMMENTS:	<u>3"</u>	<u>3.5"</u>	<u>.32"</u>
	<u>1 1/4"</u>	<u>1.66"</u>	<u>.15"</u>
CORRECTIONS:	<u>1 1/2"</u>	<u>1.9"</u>	<u>.17"</u>
	<u>2'</u>	<u>2.36"</u>	<u>.22"</u>

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

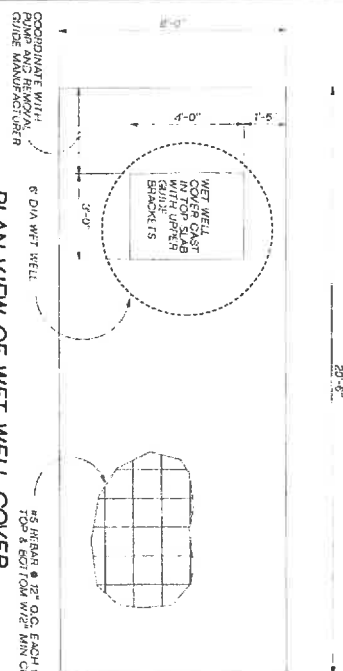
Panametrics Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.

Panametrics Inc. further certifies that the calibration standard used against the listed equipment is traceable to the National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature: Robert S. Schwemmer Date: 3/13/2020

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_





### PLAN VIEW OF WET WELL COVER

1/4" x 2" ALUMINUM COVER REINFORCED

ALUM TREAD PLATE

1

23

CONCLUSIONS

—

**OPENING:**

## NOTES

COVE

1400 JGIM

GINEEPS

ALONG

NSIOW

C	A
---	---

50"	18
-----	----

1

1



11

3" HOPE PIPELINE TO CONNECT EXISTING CLOSED LEACHATE LINE TO NEW LEACHATE TRANSFER PUMP STATION

4"x3" REDUCER

FLANGED INLET CONNECTORS (E.g. HICUT WEL WELL SUPPLIER)

ALL PIPE CONNECTIONS TO SLUIC TO BE HOPE PIPE CONNECTIONS MANUFACTURED BY 4" DI (TYPE OF SLUIC)

SLUIC PUMPS

6"

4"x1/2" ROOF

4"x2" ROOF

4"x3/4" ROOF

1/2" LEACHATE TRANSFER

UNDER 3" LEACHATE TRANSFER

LINE SEAL (OR FOUAL)

LEACHATE ISOLATION

1/2" LEACHATE DETECTION

WARNING SIGHT SEE DETAIL

PRESSURE INDICATORS

ELECTRICAL PANEL/SKIDBOXES

APPROX 10'x4'x4' PRECAST METER CHAMBER

3" LEACHATE  
TRANSEER

2







## Black, Alexis

---

**From:** Traci J. Schoenrock <Traci.Schoenrock@citrusbocc.com>  
**Sent:** Thursday, July 23, 2020 9:42 AM  
**To:** Black, Alexis  
**Cc:** Henry C. Norris  
**Subject:** RE: [EXTERNAL]RE: Leachate system update Citrus County Central Landfill WACS ID 38959  
**Attachments:** 7-14-2020 Utilities Meeting Minutes.docx

Good morning Alexis,

- All pumps are operational at this time.  
Phase II settings are as follows:  
Primary  
Pump 1: 6.0"/5.4"  
Pump 2: 6.2"/5.4"  
Secondary: 2.5"/2.0"
- We are currently waiting on the final report from Jet Clean and will submit it to you upon receipt.
- The results/minutes of the Utilities meeting are attached.
- The leachate evaluation scope of work and authorization form was sent up the chain for signatures under an "emergency declaration" on July 13, 2020 in order to expedite the approval process. Once approved, we will commence and update you accordingly.

Please let me know if you need anything further from us at this time.

Sincerely,

Traci Schoenrock

Solid Waste Compliance Manager  
Division of Solid Waste Management  
Email: [Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)

Main Office # (352)-527-7670  
Direct # (352)-527-7679  
Fax # (352)-527-7672



---

**From:** Black, Alexis [mailto:[Alexis.Black@FloridaDEP.gov](mailto:Alexis.Black@FloridaDEP.gov)]  
**Sent:** Tuesday, July 21, 2020 8:39 AM  
**To:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>



**Cc:** Traci J. Schoenrock <Traci.Schoenrock@citrusbocc.com>; Madden, Melissa <Melissa.Madden@FloridaDEP.gov>

**Subject:** RE: [EXTERNAL]RE: Leachate system update Citrus County Central Landfill WACS ID 38959

Good morning Henry:

I realized that I responded to your 7/13/20 email instead of the 7/16/20 email a few moments ago. I have a few questions about your email below:

- What are the settings for the phase II pumps?
- What is the schedule for the complete system review?
- What items discussed on the Utilities meeting agenda are being corrected?
- When do you anticipate the Jet Clean report will be completed and submitted to the Department for review?

Thanks,  
Alexis



*Alexis Black*

Environmental Specialist II  
Compliance Assurance Program  
Florida Department of Environmental Protection  
Southwest District

**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.

**From:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>

**Sent:** Thursday, July 16, 2020 2:22 PM

**To:** Black, Alexis <[Alexis.Black@FloridaDEP.gov](mailto:Alexis.Black@FloridaDEP.gov)>; Madden, Melissa <[Melissa.Madden@FloridaDEP.gov](mailto:Melissa.Madden@FloridaDEP.gov)>

**Cc:** Traci J. Schoenrock <[Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)>

**Subject:** FW: [EXTERNAL]RE: Leachate system update Citrus County Central Landfill WACS ID 38959

The following update is provided: we now have operational pumps in phase II both primary and secondary as stated below, these pumps are a temporary measure pending complete review of system operation and recommended equipment upgrades and replacement. The build specified EPG pumps are currently being ordered and are 4 to 6 weeks before delivery, please be aware that although we did have minor secondary exceedances due to the failed pumps at no time did the system indicate over one foot of head.

Respectfully



Henry C Norris Jr  
Solid Waste Division Director  
Citrus County Board of County Commissioners  
230 W. Gulf to Lake Hwy  
Lecanto, FL 34461  
352.527.7670



"Please Note: Florida has a very broad Public Records Law. Most written communications to or from State and Local Officials regarding State or Local business are public records available to the public and media upon request. Your email communications may therefore be subject to public disclosure."

**From:** Henry C. Norris

**From:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>

**Sent:** Monday, July 13, 2020 10:44 AM

**To:** Black, Alexis <[Alexis.Black@FloridaDEP.gov](mailto:Alexis.Black@FloridaDEP.gov)>; Madden, Melissa <[Melissa.Madden@FloridaDEP.gov](mailto:Melissa.Madden@FloridaDEP.gov)>

**Cc:** Traci J. Schoenrock <[Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)>

**Subject:** RE: [EXTERNAL]RE: Leachate system update Citrus County Central Landfill WACS ID 38959

Pump replacement in phase II is ongoing. Temporary pumps (1hp secondary / 5hp primary) were received and attempts to install revealed that the 5hp pump would not work and was subsequently reorder with expected delivery of 7/13, the secondary pump is operational at this time. Still waiting for quote to replace control panel that controls Phase II and III telemetry that is suspected to be source of some of the problems that have occurred. Received quote from DATAFLOW to upgrade the SCADA system for a more user friendly system that will provide alerts to staff of impending problems. Check valves are being installed at the discharge point at the top of each riser for all phases to eliminate the possibility of back flow which could potentially be the source of exceedances in phase III secondary. Florida Jet Clean will be onsite tomorrow to conduct both video and jet cleaning of the leachate system, this is being done one year early due to recent problems with the leachate system. The above attachments include services for system evaluation / upgrades and agenda for tomorrows quarterly Utilities meeting to discuss the ongoing system issues and path forward for corrective action.



Henry C Norris Jr

Solid Waste Division Director

Citrus County Board of County Commissioners

230 W. Gulf to Lake Hwy

Lecanto, FL 34461

352.527.7670

"Please Note: Florida has a very broad Public Records Law. Most written communications to or from State and Local Officials regarding State or Local business are public records available to the public and media upon request. Your email communications may therefore be subject to public disclosure."

---

**From:** Black, Alexis [<mailto:Alexis.Black@FloridaDEP.gov>]

**Sent:** Friday, July 10, 2020 12:38 PM

**To:** Henry C. Norris

**Cc:** Traci J. Schoenrock; Madden, Melissa

**Subject:** [EXTERNAL]RE: Leachate system update Citrus County Central Landfill WACS ID 38959



**WARNING:** This email originated from an external Domain **DO NOT CLICK** unless you recognize the sender and know the content is safe.

Good afternoon Henry:

Any updates about the matters discussed in your email below?

Thank you,  
Alexis



*Alexis Black*

Environmental Specialist II  
Compliance Assurance Program  
Florida Department of Environmental Protection  
Southwest District

**PLEASE NOTE:** Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.



Please consider the environment before printing this email.

---

**From:** Henry C. Norris <[Henry.Norris@citrusbocc.com](mailto:Henry.Norris@citrusbocc.com)>  
**Sent:** Friday, June 26, 2020 4:23 PM  
**To:** Madden, Melissa <[Melissa.Madden@FloridaDEP.gov](mailto:Melissa.Madden@FloridaDEP.gov)>; Black, Alexis <[Alexis.Black@FloridaDEP.gov](mailto:Alexis.Black@FloridaDEP.gov)>  
**Cc:** Traci J. Schoenrock <[Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)>  
**Subject:** Leachate system update Citrus County Central Landfill WACS ID 38959

Melissa / Alexis

The following information is provided to update you on the current operational condition of the Citrus County Landfill's leachate collection system

Phase II primary pump and pressure transducer was replaced on 6/8/20, for unknown reasons Phase II primary #2 and Phase II secondary subsequently failed.

The 10hp phase II primary that was installed on 6/8 has failed and is scheduled to be removed to investigate on 6/30, there is no operational pump in phase II at this time.

Due to delays of 5 to 8 weeks in delivery of specified pumps the decision to purchase pumps locally has been made as a temporary measure. The pumps were received today, 6/26/20, they are scheduled to be installed 6/30/20. These pumps are meant to be a temporary emergency fix and will be replaced at a later date with the proper specified pumps. Leachate levels as of 6/26/20 @ 3:30 in phase's I through III are as follows:

Cell I primary	6.3 inch
Cell I secondary	1.9 inch
Cell II primary	8.0 inch
Cell II secondary	2.9 inch
Cell III primary	6.9 inch
Cell III secondary	1.3 inch



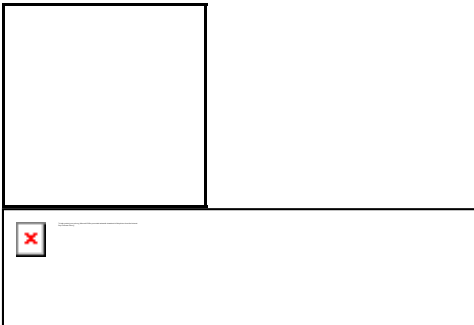
With limited precipitation in the forecast and based on the fact we have only seen 1.5 to 2.0 inch increase in phase II in a 48 hour period, the leachate levels will be below the maximum allowable limits at the time of schedule pump replacement on 6/30

An emergency meeting was held this morning, 6/26/20, at the landfill to evaluate the potential path for repairs and cause of the failures, in attendance was Troy Hays, Mark Hadlock, Gregg Fruecht (Jones Edmunds) Blake Merrell (Merrell Bros) Ron Kurtz (Citrus County Utilities). It is the intent of this Division, once an in depth evaluation has been conducted, to upgrade and/or replace all necessary leachate equipment and SCADA controls.



Henry C Norris Jr  
Solid Waste Division Director  
Citrus County Board of County Commissioners  
230 W. Gulf to Lake Hwy  
Lecanto, FL 34461  
352.527.7670

"Please Note: Florida has a very broad Public Records Law. Most written communications to or from State and Local Officials regarding State or Local business are public records available to the public and media upon request. Your email communications may therefore be subject to public disclosure."





# AGENDA

## SWM/Utilities Quarterly Meeting

July 15, 2020

1:00 – 2:00 p.m.

**Attendees:** Henry C. Norris, Jr., Larry Brock, Gary Loggins, Dan Sherlock, Ron Kurtz, Wendall Leigh, Aaron Lake, Traci Schoenrock,

### ITEMS FOR DISCUSSION:

1. Electrical Equipment
  - a. Feed to panels (power poles and underground feeds) PO has been cut and waiting possible start date August.
  - b. Phase loss, surges, and power variations may be corrected with power revamp.
  - c. Miss matching feeds in electrical ladders over the years of switching to what works (rerouting from original).
  - d. Piece meal work, older panels need to be removed and new upgraded panels (power supplies).
2. SCADA-(current version Linex TAC2) -New computer and software. (Data flow is coming?) removal of old screens, update controls
  - a. No control of transducer levels in Phase 1
  - b. Trending markers not indicating exact location Phase 2
  - c. Location of new computer may require additional space
  - d. Replace Phase 1 PLC with TCU (Phase 1 master lift station is PLC all other are TCU which has more control
3. Aboveground Equipment
  - a. New Electrical knife switch and transducer boxes
  - b. Trending markers not indicating exact location
  - c. Paint above ground metal piping
  - d. Move Phase 3 flow totalizers to front display
4. Belowground Equipment
  - a. Documentation of each pump and motor
    - i. All Serial Numbers, type and manufacturer.
    - ii. HP, phase. amps, meggar
    - iii. Size wiring, transducer, and depth
    - iv. Size and type of skid mount
    - v. Size of HDPE pipe and flange
5. Bi yearly amp and meggar of all motors-Barney's Pumps-Every February and September
6. Every other year flow meter calibrations-Central Florida Controls
7. Current Problems-



- a. Phase 2 Primary pump OOS
  - b. Phase 2 Secondary Pump OOS
  - c. Phase 2 Secondary transducer
  - d. Phase 2 No Check Valves
  - e. Limited knowledge of pumps installed
  - f. Phase 2 TCU works but no display
8. Good news
- a. Leachate station performs
  - b. Phase 3 performs
  - c. Phase 1 performs
  - d. 7-acre site east and west –ok
  - e. Master lift station –ok
  - f. Sent out TCU for Phase 2
  - g. Ordering replacement fuses for Stage 2.

**Next quarterly meeting tentatively planned for July 15, 2020. This date is flexible please let us know if another date would work best for anyone.**



## Utilities/SWM Quarterly Meeting Minutes

When: July 14, 2020 @9:00am

Where: Rm 219 Lecanto Government Building

Who: SWM: Henry Norris, Aaron Lake, and Traci Schoenrock

Utilities: Randall Olney, Gary Loggins, Wendell Leigh, Ron Kurtz

Consultant: Troy Hays (Jones and Edmunds)

What: Background

On July 14, 2020 we agreed to resume quarterly meetings to improve communication between both the SWM and Utility departments. Many issues have recently been identified within the landfill's leachate collection system. As a result, we are in the process of securing Jones and Edmunds for a complete evaluation of the entire system which should futuristically help us eliminate some of the issues that have been identified. Everyone in attendance was in agreement that communication needs to be improved in order to have a more streamlined method for troubleshooting and completing any necessary repairs as well as determining a consistent preventative maintenance schedule.

Current Issues: Shown in the meeting agenda attached and summarized here;

- Phase 2 is the most problematic currently. The recent 10hp pump that was replaced failed within 10 days and some of the troubleshooting there includes thoughts that was a reverse flow and or no soft start. It has also been identified that there are not currently check valves at the top of each riser.
- We have also identified a need to verify the level set points for each and the proper location at which the check valves should be placed.
- Check valves are being placed at the top of each riser Phases I II and III as a redundancy to the build specified check valves at each pump, this will ensure no back flow will be possible and could potentially be the source of exceedances in phase III
- The entire electrical system for phase 2 needs to be evaluated as there are continually blown fuses and breakers. This includes the feed running down the road all the way to the storage building as it was noted that since Duke Energy changed some of the transformers around the property that fuses seem to be more problematic.
- It was recommended that we install surge suppressors on each control panel.
- The current SCADA system does not have all of the correct "addresses" and therefore the set levels for each phase is not accessible in the system. It was stated that this had occurred during



the last upgrade. A new SCADA system is part of our total evaluation of the leachate system, however, temporarily, Ron Kurtz agreed to contact Data Flow to see if that can be reconfigured temporarily until the new system can be installed. Otherwise, this will at least get Data Flow on line with what our needs will be for the new software and thus one step in the right direction for the purchase of said system.

- Current TCU's. Not all have a "specific code option" and that is why the recently repaired unit did not work in phase 2 when replaced. The only phase that this TCU will be in is the 7-acre site.
- One TCU has been sent back for upgrades to include the "special code required" to function properly. Once this unit is returned and determined to work we will send the other TCUs out for the same upgrades.
- The phase II 5hp has been installed; we now have temporary pumps installed in the primary and secondary of phase II pending future replacement with the proper specified pumps.
- We all agreed that prior to any pump being installed that a meggar and amperage test needs to be conducted as well as the rotation confirmed.

#### Communication:

- Improvement on communication was identified as a priority.
- We agreed that we (the two departments) will touch base every couple of weeks to ensure that all entities are on the same page. As well as continuing these quarterly meetings.
- A complete inventory list of what is on site and what the maintenance requirements are for each component is necessary. This will be on-going as we update and replace varying components.
- As part of our operation permit and manual it requires that;

"Maintenance of each component will be performed in accordance with manufacturer specifications and documented on a Maintenance Summary Form, included in Appendix D. I have attached that form and also the form that we have "modified" and are asking for input on.

Operation and maintenance manuals include the following:

- Description of unit and component parts
- Including normal operating characteristics and limiting conditions
- Operating procedures
- Maintenance and overhaul procedures Installation instructions



- Original manufacturer's parts list, illustrations, and detailed assembly drawings
  - Spare parts ordering instructions
  - Manufacturer's printed operating and maintenance instructions
- Therefore, the development and upkeep of this documentation is a priority and will be an integral part of communicating with what, when, why and who. Furthermore, it will document that information was disseminated to the correct supervisors, operators and or technicians and contractors.
- We discussed the ability to do this via email, and we can as long as the correct folks are getting the emails and that the information is collected and stored in one specific spot. (I/Traci, am happy to do this or if we agree on other procedures, that is fine too).



**CITRUS COUNTY SOLID WASTE DEPARTMENT**  
**CITRUS COUNTY CENTRAL LANDFILL**

**Leachate System Evaluation and Upgrades**  
**Jones Edmunds Opportunity No.: 95503-226-20**

---

## **INTRODUCTION**

Citrus County requested Jones Edmunds' assistance with evaluating the current leachate collection and disposal system at the Central Landfill. Over the years, the various components of the leachate system have been replaced and modified as needed to keep the system in operation – removing and pumping leachate to the County's treatment facility. Since the County has been working on and maintaining the system, some of the parts and pumps that are currently installed are not what was included in the original design of the facilities. Additionally, issues have recently been experienced with the leachate flow throughout the system and the efficiency of operations. Because of these unknowns, Citrus County requested Jones Edmunds conduct an evaluation of the current system and provide recommendations for upgrades and maintenance.

The Leachate System Evaluation and Upgrades project has been divided into four phases. The exact work for each phase is determinant on the findings of the previous phase; therefore, this Work Scope is only for Phase 1: Assessment of the Leachate System Evaluation project. The four phases of the Leachate System Evaluation project are:

- **Phase 1: Assessment.** This phase is to review the original design intent and components of the leachate system for each cell and compare that with what is currently in use at the site, make recommendations for immediate equipment changes, and immediate upgrades to keep the system in operation.
- **Phase 2: Operations Upgrades.** The work in this phase will be based off the information acquired in Phase 1 and is to perform any needed design upgrades/ design modifications to the system. This phase may also require permitting through FDEP.
- **Phase 3: Implementation.** During this phase we will assist the County with implementing the design changes to the leachate collection system. This includes upgrades to the County's Supervisory Control and Data Acquisition (SCADA) system, reviewing vendor supplied submittals, and working with the County for the procurement of services.
- **Phase 4: Operations and Maintenance Manual.** Once all of the upgrades to the leachate system are complete and the new SCADA system has been implemented, Jones Edmunds will prepare an Operations and Maintenance Manual that includes a routine maintenance schedule to help keep the system operational.

This proposal only includes the Phase 1: Assessment of the work detailed above. The specific tasks included in Phase 1: Assessment are detailed below.



## **WORK SCOPE**

We will work with the County to assess the current condition of the leachate system and propose immediate upgrades to keep the system in operation. Additionally, we will evaluate the system for any major operational upgrades that may be needed and work with the County to determine the best method for installation and monitoring of the pressure transducers. The specific tasks for Phase 1: Assessment of the Leachate System Evaluation project are discussed below.

### **PHASE 1: ASSESSMENT—TASK 1: LEACHATE SYSTEM REVIEW**

Jones Edmunds' Solid Waste Engineers will review the original design of the leachate system for each of the cells that are currently pumping leachate to the holding tanks. We will perform a preliminary design review of the overall leachate system noting the design basis equipment for each component of the leachate system. After the preliminary design review is completed, we will conduct a site visit to review the current condition of the system and the equipment currently in use.

We will prepare a Technical Memorandum that details our findings from the preliminary design review and the site visit. The Technical Memorandum will discuss the observed differences in the original design of the leachate collection system and what is currently installed and in use today. We will provide the County with a prioritized list of system immediate needed improvements that can be implemented by County personnel in an effort to keep the system operational.

### **PHASE 1: ASSESSMENT—TASK 2: PRESSURE TRANSDUCER AND PUMP PLACEMENT**

One issue that the County is facing with the leachate collection system is the placement of the pressure transducers in the pump risers and ensuring that they are adequately recording the leachate levels in the sumps. Jones Edmunds will work with the County to develop a standard operating procedure (SOP) for installing the pressure transducers in each riser so that they are always reading from the appropriate set point. For this task we will:

- Develop an SOP for installing the pressure transducers in each riser including the required depths that the transducers should be installed at and checks to verify they are installed correctly.
- Prepare cross-sections of each of the leachate system risers showing the leachate sumps, the appropriate placement of the pump, and the appropriate placement of the pressure transducer.

This task will also include an SOPs for removing and reinstalling the leachate pumps and pressure transducers for routine maintenance.



## **PHASE 1: ASSESSMENT—TASK 3: ELECTRICAL AND COMMUNICATIONS SYSTEM REVIEW**

The electrical panels serving the leachate collection system are outdated and in need of repair. The County is working with local vendors to acquire and install a new panel that will serve the leachate pumps in Phase 3; however, the other panels need evaluation as well. Jones Edmunds will assess the condition of the panels and provide recommendations for upgrade or replacement as necessary..

We will work with the County to review the proposed panel that will be submitted by the County's selected vendor. We will verify that the necessary components are included and sized correctly for the supply voltage. We will verify that adequate lightning and surge protection are included in the panels.

The County is also working with local vendors to upgrade the Supervisory Control and Data Acquisition (SCADA) system that controls and monitors the leachate system. We will review the current SCADA system to assess that it is reading correctly and work with the County to verify what upgrades are needed. As the County has not yet contracted with a vendor to upgrade the SCADA system, we will review the proposed system in conjunction with any needed upgrades to the site's leachate system to verify that it will meet the County's data collection and reporting needs.

## **PHASE 1: ASSESSMENT—TASK 4: OPERATIONAL UPGRADES TECHNICAL MEMORANDUM**

Jones Edmunds will prepare a technical memorandum that details the work completed under Phase 1: Assessment of the Leachate System Evaluation project. The technical memorandum will include:

- Discussion of the overall leachate collection system including the original design intent and proposed equipment.
- Discussion of the current state of the leachate collection system including the equipment currently installed.
- A list of identified immediately needed repairs and details on the status of each repair.
- Cross-sections and details of each leachate riser including the installation depths for the pumps and pressure transducers.
- An overview of the County's current SCADA system including any needed upgrades and a discussion of improvements that should be implemented in the new system.
- A list and discussion of major Operational Upgrades that need to be implemented at the site to keep the system in operation.

After completion of the Operational Upgrades technical memorandum, Jones Edmunds will meet with County staff to discuss Phase 2 of this project and how the County wants to proceed. It is expected that the system will need some design modifications that may, or may not, require permitting through FDEP. Additionally, it is unknown until we finish the system assessment the scale that these projects might entail.



## **SCHEDULE**

Jones Edmunds is prepared to begin work on this project immediately after receiving the County's Notice to Proceed.

## **EXCLUSIONS AND CONDITIONS**

All work included in this Work Scope is specified in this document. The following are specific exclusions and conditions to this Work Scope:

- This project is to make recommendations for the County to budget and implement. No new equipment will be purchased under this contract.
- No permitting is expected or included with this Work Scope.
- This Work Scope is only for Phase 1: Assessment of the Leachate System Evaluation project. Jones Edmunds will work with the County to develop a Work Scope for Phase 2: Operations Upgrades after the necessary upgrades have been determined.

## **COMPENSATION AND INVOICING**

The Fee Estimate for these services will be invoiced on a time and materials basis as described in RFQ 19-065 Solid Waste Continuing Professional Services Agreement.

## **FEE ESTIMATE**

Jones Edmunds will complete the Work Scope described above on a time-and-materials basis for a not-to-exceed amount of



## Black, Alexis

---

**From:** Traci J. Schoenrock <Traci.Schoenrock@citrusbocc.com>  
**Sent:** Tuesday, August 18, 2020 4:30 PM  
**To:** Black, Alexis  
**Subject:** Citrus County Central Landfill Leachate Evaluation Update

Alexis,

I just wanted to update you that the BOCC approved the work authorization for the leachate system evaluation as of August 11, 2020. Jones and Edmunds has begun their preliminary investigation. They were here on Thursday August 13, 2020 (I was out but it is my understanding that their focus was on the SCADA system for this inspection). They were here again today and I was present. We met with a representative from our Utilities Department to confirm what Jones and Edmunds had identified on Thursday as basic functions and problems with the current SCADA so that we can identify the needs for our new system installation. Jones and Edmunds indicated that they will be preparing a bullet summary for recommendations as we move forward.

I just wanted to keep you informed and I will continue to do so as things progress.

Thank you,

Traci Schoenrock

Solid Waste Compliance Manager  
Division of Solid Waste Management  
Email: [Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)

Main Office # (352)-527-7670  
Direct # (352)-527-7679  
Fax # (352)-527-7672





## Black, Alexis

---

**From:** Traci J. Schoenrock <Traci.Schoenrock@citrusbocc.com>  
**Sent:** Thursday, August 6, 2020 12:32 PM  
**To:** Black, Alexis  
**Subject:** Responses to FDEP Inquiries  
**Attachments:** Responses to FDEP Inquiries 8-6-2020.pdf

Good afternoon Alexis,

Attached are my responses to your questions and supporting documents. I have attempted to send this email multiple times with the responses in the body and I kept getting undeliverable and file size too large alerts. I contacted our IT Department and I was told that it is a restriction on your end. So if you happen to see multiple attempts-that is why.

Therefore, I scanned everything into one pdf. Should you need a word version to add any additional comments I can provide that to you.

Again, please don't hesitate to contact me regarding the information herein and I appreciate your time and attention to this matter.

Sincerely,

Traci Schoenrock

Solid Waste Compliance Manager  
Division of Solid Waste Management  
Email: [Traci.Schoenrock@citrusbocc.com](mailto:Traci.Schoenrock@citrusbocc.com)

Main Office # (352)-527-7670  
Direct # (352)-527-7679  
Fax # (352)-527-7672





Good afternoon Alexis,

I have included a detailed list addressing each of your inquiries (**in bold**) and my responses follow. In the specific phase sections, I have also compiled some notes from our operator's logbook. I started my detailed review in January 2019 to present. My purpose was twofold, 1) to try to identify any trends and report to you and, 2) to better educate myself. However, my review simply emphasizes the urgency of our upcoming complete leachate evaluation. This evaluation is scheduled to begin on August 14, 2020 following the BOCC approval on August 11, 2020.

With that said, I would like to start with the below question;

## **Leachate Anomalies Reporting**

- **If issues that impact the data reported are known, then these anomalies should be included as comments in the quarterly leachate generation reports or reported to the Department otherwise.**
  - I was hired by Citrus County Landfill as the new compliance manager on March 9, 2020 and was sent to work from home shortly thereafter due to Covid-19. Being new to the position and not knowing the full background of the leachate system, I was not fully engulfed in monitoring these numbers. Future reports will include commentary to reflect these instances.
  - We have reported the need and the scheduling of the upcoming evaluation and welcome any input and or recommendations you may have regarding that matter.
  - It is our stance that we cannot continue to speculate and or pin point exact problems, nor can we confidently remedy it without the results of that evaluation. We simply do not know the root causes for continuous failure of the pumps-mechanically and or electrically. Furthermore, a review of the logbook and data reported herein has me questioning the reliability of our SCADA. These issues have been reported and are the priority of the upcoming evaluation.

## **Phase 1/1A**

- **If the system was functioning properly, it may not be an issue that one of each of the collection and detection side-slope riser pipes is being used for transducers, however, the original design (Sheets 13-15) and Operation Plan Section K.2.b.2 appears to indicate redundant pumps for each so there is a lead/lag/backup method of leachate removal like in Phases 2 and 3. The lead/lag system is preferred so one pair of primary and secondary can be utilized as a backup collection/detection system in case there are issues with pumps, fuses, etc. The data that has been provided in past leachate generation reports demonstrates that there are issues occurring with the pumps and levels, i.e. the secondary data is greater than primary data, surges in pumping, etc. If issues persist, utilizing the collection/detection system in this Phase as designed may be warranted in the future.**



A thorough review of the history of Phase 1 indicates that a minor permit modification was requested and deemed unnecessary by the Department 3-23-2011. Documentation in Oculus is as follows.

- July-2009 Summary of Issues and Full Report was submitted to the Department.
  - June 2010 is the summary again and the feasibility study to correct the issues.
  - October 2010 is our notice to proceed.
  - October 23, 2010 is the technical report for the scope of work.
  - December 2, 2010 is the completion report.
  - February 22, 2011 is the request for a permit modification and indication that only one primary and one secondary were installed and operational and;
  - February 22, 2011, page 2 & 3, indicate **no permit** modification was needed.
  - March 23, 2011 Leachate Riser Rehab Completion Approval.
- **This should help clarify the difference in the “as build original design” questions you had regarding this phase.**
    - However, we are all in agreeance that a permit modification and or construction design change may be warranted once a complete evaluation of the leachate system is complete
- **In regards to historic data flow.**
    - An event occurred on May 20, 2019 phase 1 primary had an alarm and on May 21, 2019, that pump failed. Our operator log indicates that primary pump phase 1 was “switched to auto and that the secondary pump showed as failed.”
    - 5-29-2020, it was determined that the secondary pump was set in an off position with a question as to why. Logbook indicates these results were passed on to the compliance manager at that time.
    - Based on a review of the data and flow spreadsheets it is my speculation that the surging/failing of these pumps began around this time.
      - Side Note: (Just an excerpt from some research I was doing to try to identify causation.)  
“Surge occurs when the flow through a pump is fluctuating or when the pump is being driven at a constant speed and pressure that the pump needs to overcome exceeds the amount of slowing down which can occur in the pump’s casing, some of the flow begins to flow backward. This creates a temporary blockage, which the remaining flow eventually overcomes, speeding up the flow shortly and initiates the next cycle. This sustains the surge. Bubbles in the liquid or damages to the impeller profile can exacerbate surge.”  
<https://www.cla-val.com/images/B59.pdf>
    - 11-14-2019 phase 1 primary’s transducer was damaged and repaired and then appears to report greater number from the 14<sup>th</sup>-22<sup>nd</sup>. Operator log indicates a possible broken “nipple Valve” on Phase 1 primary.



- 1-8-2020 Log indicates that phase 1 primary was down and that fuses, wires and switches need replacing.
- 1-24-2020 a problem with the SCADA was determined. Computer would not reboot and a new computer for the SCADA was requested at that time.
- 2-13-2020 it is logged that the SCADA server was very noisy. Additionally, it was noted that "the transducers were identified as hooked up backwards and switched." However, the flow data does not change at that point. You would think that if the transducers were switched from primary to secondary and vice versa, the data would change/flip as well and it did not. Later in the day, it is also indicated that while running phase 1 secondary, the primary level was dropping?
- 3-10-2020 A new primary pump motor, and fuses were replaced and the flow data seems to go back to normal indicating greater flow in phase 1 primary than in the secondary until 3-18-2020 when the primary pump's flow returns to a zero reading.
- 4-6-2020 A SCADA reboot was required.
- 4-15-2020 Electricians on site to troubleshoot phase 1 primary pump again and the flow data indicates a temporary reverse in reporting at that time-meaning primary number are again greater than secondary, but only temporarily as May 2020 and June 2020 indicate surges.
- 6-23-2020 Phase 1 pump breaker was tripped and reset (this oddly corresponds with a phase 2 primary 1 starter fault and a phase II secondary high level alarm) on that same date? This cannot be explained.
- Also, the MLS screen had Phase 1 pumps in manual off and the storage tank pumps indicated a fail that when reset did not run. At panel, it was determined that the phase monitor was bad which was replaced and that seemed to rectify the issue.
- As of the date of this transmittal, both pumps in phase I appear to functioning as intended. As you can see on the flow data for July the data for the primary are again greater than the secondary as it should be.

## **Phase 2**

- **What is the status of the electrical issue with the pumps? Is the system functioning properly? The Department identified that the one pump's primary reported negative numbers for the entirety of quarter one 2020. When was the damage to the pump end identified?**
  - 5-11-2020 it was identified that phase 2, primary pump 1 was not running and that there was no working flow through meter.
  - 6-8-2020 the phase 2 primary pump and transducer were replaced.



- On 6-9- 2020 both the phase 2 primary 2<sup>nd</sup> pump and the phase II secondary pump went out. Four fuses were replaced and only the primary pump 1 was running.
- On 6-10-2020, electricians were called out to assess the situation at Phase 2.
- 6-23-2020 Phase 2 pump 1 had a starter fault and was reset, electricians were on site to assess and found phase 1 pump bleeder was tripped, it was reset and ran ok. When they checked the SCADA the M/L/S phase 1 pumps in manual off, this was potentially due to a power outage, it was also identified that the storage tank pumps also had a “fail” that was reset –not running.
- By 6-26-2020 temporary pumps 1hp and 5hp were ordered/received and it was determined that the 5hp would not work and therefore it was reordered.
- 6-30-2020 phase II pump secondary pump replaced with new pump. Phase II secondary was also pulled and it was determined that it had a broken shaft and a vendor was contracted to fix the pump.
- A quote was requested to replace the control panels for phase II and III-which has been identified as a possible cause of pump failures. Requested a quote from DATA FLOW to upgrade SCADA and train new staff on that system.
- 7-15-2020 Phase II pump 2 was replaced, motor tested 100% meg prior to install but when lowered into cell-meg was at 10-30%. They were able to run pump at 95amp with ok function. Ran on auto from 10-1:30pm and level dropped from 11.5 to 6.9 within that period. As build EPG pumps were ordered with a delivery expected with 4-6 weeks.
- 7-16-2020 Phase 2 primary pump 1 was showing a lower level than the day before and pump 2 began showing reverse flow. Again, however, this is *not* reflected in our data flow numbers-in fact, the exact opposite is reported.
- 7-24-2020 check valves were installed on all three pumps in phase II.

### **Phase 3**

- The original design (Sheet 19 – see attached) and Operation Plan Section K.8.f. appears to indicate that each pump would have its own flow meter. If there is an issue with one of the pumps, the combined metering for this Phase could complicate troubleshooting to determine which pump is not functioning properly.
  - I agree that sheet 19 (attachment 1) indicates that each pump would have its own flow meter and I understand and agree with you about the reasoning behind that for troubleshooting purposes. However, it *is* noted in the bottom right hand corner “**actual field installation differs from engineering documents,**” which may include the varying placement of those meters? Again, this is only speculation at this time and is an integral part of the reasoning in completing the full evaluation.



- Are individual pump run times recorded elsewhere on internal tracking sheets in order to back calculate individual pump volumes?
  - **K.8.f Recording Leachate Quantities (Rule 62-701.500(8)(f), F.A.C.)** *"Citrus County uses a number of metering points to measure leachate generation. The flows generated from each landfill phase of the newer 80-acre area are measured directly by flow meters within the discharge line of each pump. Flows from the closed 7-acre area have been measured in the past with an older mechanical flow meter. It is suspected that this meter is not providing accurate readings due to repeated malfunctions. The County has calibrated flow from the 7-acre pumps against the elapsed time meters (ETMs) for each pump. The ETM readings are now taken and converted to flow in gallons in a spreadsheet."*
  - Again, this is in the operation manual that there have been historic problems within the system and that there is "recirculation and conversions are being made" that should ultimately be done through an updated and "addressed properly" SCADA system that we intend to install as part of the evaluation.

## Other

- The calibration logs provided show that the 7 Acre/East and West Master Lift Station meter calibration was 196%. Wouldn't a calibration value this high report double the values? Is this percentage acceptable?
  - Thank you for bringing this to my attention. (See attachment 2)
  - On August 4, 2020, I contacted Florida Central Controls to verify the calibration form submitted for the 7 Acre/East and West Master Lift Station meter and his response is as follows;
    - From: bobs@mfi.net <bobs@mfi.net>  
Sent: Tuesday, August 4, 2020 6:10 PM  
To: Traci J. Schoenrock <Traci.Schoenrock@citrusbocc.com>  
Subject: [EXTERNAL]RE: Citrus County Central Landfill March Flow Calibration Question  
Traci,  
I am sure that was a error on my part, when I entered the numbers into the spreadsheet form. When I do this I use the form from the previous calibration. I've attached the previous calibration. You can see the 51 in the test meter end number. I must not have entered the correct number for this year in that cell. The calculation is done in the spread sheet, and I didn't catch the excessive error displayed. If you like we can stop in and retest that meter at no charge and send you an updated sheet.  
Bob Schwenneker  
Central Florida Controls, LLC  
Ph (352) 427-2621  
Fax (352) 419-6915



- Does the Department feel a retest is necessary? If so, I will schedule it accordingly.
- **During our most recent call and as indicated in the WL response letter, Henry indicated he was working to staff a new position which will be responsible for overseeing the leachate collection and control system monitoring and maintenance. Is there any update on this hiring?**
  - The Board of county Commissioners has not yet approved our 2021 annual budget, and therefore we are waiting for that approval. Both the Landfill and the Utilities Departments are operated under an Enterprise Fund and thus the new position will not have any effect on the Board's general fund. Therefore, we participate no negative reviews and or responses from them regarding moving forward. We cannot however, began the advertising and or interviewing process until that approval is "heard."
  - We will certainly update you once final approval has been publically announced.
- **What is the schedule for the complete system review?**
  - Final Approval Set for the August 11, 2020 BOCC meeting and work is scheduled to begin August 14, 2020.
- **What items discussed on the Utilities meeting agenda are being corrected?**
  - Improved communication between utility operators and the SWM staff has been identified as a main priority.
  - Tracking all maintenance with an updated maintenance summary form (in revision process) as well as a hard copy binder located by the SCADA so that if issues are identified when other key staff are not present we can review the status of each repair and or service request (attachment 3).
  - Finally, getting the new staff member on board and trained so that this can be overseen by him/her and ensure that communication remains fluid amongst the operators and other SWM staff.
- **When do you anticipate the Jet Clean report will be completed and submitted to the Department for review?**
  - "We are currently waiting on the final report from Jet Clean and will submit it to you upon receipt."
  - I emailed our consultant on August 6, 2020 for an update and it was stated they are reviewing the final report and will be submitting it to us shortly. I will submit those results as soon as I receive them.







# Central Florida Controls, Inc.

## FLOW METER CALIBRATION REPORT

FACILITY: SOLID WASTE MANAGEMENT LOCATION: MASTER LIFT STATION  
CENTRAL LANDFILL  
METER NAME: 7 ACRE EAST & WEST PUMP METER SIZE: 2"  
MFGR: ABB MODEL: MAGMASTER  
FLOW DEVICE: ELECTROMAGNETIC METER #: 3K820000024495  
MINIMUM FLOW: 0 GPM MAXIMUM FLOW: 85 GPM  
NORMALLY OPERATES AT: 11 GPM FOR TEST

METER TOTALIZER READING BEFORE TEST: 3872760

METER TOTALIZER READING AFTER TEST: 3872810

METER READING		TEST METER	
TOTALIZER START:	<u>3872760</u>	START:	<u>0</u>
TOTALIZER STOP:	<u>3872810</u>	STOP:	<u>51</u>
TOTAL FLOW:	<u>50</u>	TOTAL FLOW:	<u>51</u>

OVERALL ACCURACY IN PERCENT: 98.04%  
(Meter total flow / test meter total flow x 100)

ACCEPTABLE?: ☒ YES ☐ NO

	O.D.	WALL	POLYETHYLENE PIPE
COMMENTS:	<u>3"</u>	<u>3.5"</u>	<u>.32"</u>
CORRECTIONS:	<u>1 1/4"</u>	<u>1.66"</u>	<u>.15"</u>
	<u>1 1/2"</u>	<u>1.9"</u>	<u>.17"</u>
	<u>2"</u>	<u>2.36"</u>	<u>.22"</u>

TEST EQUIPMENT USED: PANAMETRICS PT 878 TRANSIT TIME METER S/N 729

Panametrics Inc. certifies that the equipment listed above was tested, calibrated, and meets published specifications.  
Panametrics Inc. further certifies that the calibration standard used against the listed equipment is traceable to the  
National Institute of standards and Technology. Procedure ID TCD-001-7.5-006 Rev A (Liquid Flow meter processing).

Field Engineer Signature: Robert D. Schweitzer Date: 8/15/2017

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

#2





**Board of County Commissioners**  
**DEPARTMENT OF PUBLIC WORKS**  
**SOLID WASTE MANAGEMENT DIVISION**

**Maintenance Summary Form**

Date of Maintenance / Problem Identified \_\_\_\_\_

Identified by: (staff name) \_\_\_\_\_

Description of Maintenance Needed / Problem \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date Item Originally Placed into Service \_\_\_\_\_

Manufacturer \_\_\_\_\_ Model \_\_\_\_\_

Serial # \_\_\_\_\_ Other \_\_\_\_\_

Type \_\_\_\_\_ Hp \_\_\_\_\_

Voltage \_\_\_\_\_ Phase \_\_\_\_\_ Primary/Secondary \_\_\_\_\_

Speed/RPM \_\_\_\_\_

Location (if other) \_\_\_\_\_

Control panel # \_\_\_\_\_

Materials used/Needed \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Received by (Staff name) \_\_\_\_\_

Reviewed by (Supervisor's Name) \_\_\_\_\_

Assigned to / POC for Completion (Staff Name) \_\_\_\_\_

Date Completed (Supervisor's Signature) \_\_\_\_\_

#3