Smith, George

From: Townsel, Michael <TownselM@HillsboroughCounty.ORG>
Sent: Tuesday, November 30, 2021 4:10 PM
To: Morgan, Steve
Cc: Chamberlain, Justin; SWD_Waste; Aguilar, Tiffany
Subject: Southeast Landfill Quarterly Effluent Results - WACS Testsite ID# 19864
Attachments: 2021 - 3rd Qtr SELF Leachate Plant Effluent.pdf

EXTERNAL MESSAGE
This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Good Afternoon,

Please see attached the effluent report for the Southeast County Landfill treatment plant. The report and Adapt files shall be uploaded into the Business Portal.
If you have any questions, please let me know.

Thank you!

Michael D. Townsel
Senior Hydrogeologist
Public Utilities Department – Environmental Services

P: (813) 663-3222
VOIP: 43955
E: townselm@HCFLGov.net
W: HCFLGov.net

Hillsborough County
332 N. Falkenburg Road, Tampa, FL 33619

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Hillsborough County Florida

PUBLIC UTILITIES
PO Box 1110
Tampa, FL 33601-1110

Southeast County Landfill
Leachate Treatment Plant
WACS Testsite #19864
Lithia, Florida

Effluent Quality
July-September 2021

Hillsborough County
Public Utilities Department
Environmental Services Division
332 North Falkenburg Road
Tampa, Florida 33619

Michael D. Townsel

Michael D. Townsel 11/30/21
Hydrologist
Environmental Services Division
Public Utilities Department

Southeast County Landfill Leachate Treatment Plant
Effluent Report – Third Quarter 2021
WACS Testsite #19864

Southeast Landfill Quarterly Results (July-September 2021)

In accordance with Southeast County Landfill (SCLF) permit modification 35435-29-SO-MM, dated May 24, 2021, the Hillsborough County Public Utilities Department (County), has prepared the quarterly effluent results for the SCLF leachate treatment plant (LTP), located at 15960 County Road 672 in Lithia, Florida.

Monthly sampling of the LTP effluent and the daily recording of the plant pH was conducted as required by the leachate management plan (LMP) as part of the referenced permit. Plant pH for the dates of August 11-13, 2021 were not recorded due to the leachate pumps turned off for maintenance. County personnel collected effluent samples from the designated sampling port at the treatment plant on July 9, August 10, and September 20, 2021 for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Total Dissolved Solids (TDS), Nitrate, and field parameters.

Each of the effluent samples were analyzed by our contract laboratory, Advanced Environmental Laboratories, Inc. and is consistent with the historical data over the period of record. Additionally, pH for the effluent exhibited a range from 7.00 to 7.55 pH units by LTP personnel and the field logs are exhibited as part of the submittal. The ADaPT EDD and quarterly report shall be uploaded to the FDEP Business Portal.

PH Calibration Log

Month	7/21					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.00	7.00	10.00	7.79	7.21	
2	4.00	7.00	10.00	7.82	7.55	
3						
4						
5	4.00	7.00	10.00	7.83	7.47	
6	4.00	7.00	10.00	7.65	7.11	
7	4.00	7.00	10.00	7.80	7.16	
8	4.00	7.00	10.00	7.63	7.15	
9	4.00	7.00	10.00	7.54	7.14	8.45
10						
11						
12	4.00	7.00	10.00	7.51	7.21	
13	4.00	7.00	10.00	7.48	7.18	
14	4.00	7.00	10.00			
15	4.00	7.00	10.00	7.43	7.25	
16	4.00	7.00	10.00	7.42	7.11	
17						
18						
19	4.00	7.00	10.00	7.38	7.12	
20	4.00	7.00	10.00	7.58	7.41	
21	4.00	7.00	10.00	7.44	7.21	
22	4.00	7.00	10.00	7.35	7.24	
23	4.00	7.00	10.00	7.44	7.19	
24						
25						
26	4.00	7.00	10.00	7.51	7.17	
27	4.00	7.00	10.00	7.32	7.14	
28	4.00	7.00	10.00	7.47	7.19	
29	4.00	7.00	10.00	7.54	7.25	
30	4.00	7.00	10.00	7.49	7.23	
31						

PH Calibration Log

Month	8/21					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1						
2	4.00	7.00	10.00	7.31	7.35	
3	4.00	7.00	10.00	7.26	7.31	
4	4.00	7.00	10.00	7.44	7.38	
5	4.00	7.00	10.00	7.26	7.25	
6	4.00	7.00	10.00	7.36	7.15	
7						
8						
9	4.00	7.00	10.00	7.27	7.31	7.73
10	4.00	7.00	10.00	7.44	7.21	
11	4.00	7.00	10.00	7.38		
12	4.00	7.00	10.00	7.49		
13	4.00	7.00	10.00	7.28		
14						
15						
16	4.00	7.00	10.00	7.33	7.18	7.90
17	4.00	7.00	10.00	7.34	7.17	8.15
18	4.00	7.00	10.00	7.37	7.15	8.10
19	4.00	7.00	10.00	7.50	7.13	8.13
20	4.00	7.00	10.00	7.42	7.19	8.25
21						
22						
23	4.00	7.00	10.00	7.19	7.00	7.61
24	4.00	7.00	10.00	7.24	7.01	7.53
25	4.00	7.00	10.00	7.19	7.01	7.49
26	4.00	7.00	10.00	7.42	7.11	
27	4.00	7.00	10.00	7.47	7.27	
28						
29						
30	4.00	7.00	10.00	7.49	7.13	
31	4.00	7.00	10.00	7.24	7.02	8.23

Month	9/21	PH Calibration Log				
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.00	7.00	10.00	7.28	7.01	
2	4.00	7.00	10.00	7.30	7.03	
3	4.00	7.00	10.00	7.45	7.00	
4						
5						
6						
7	4.00	7.00	10.00	7.20	7.12	
8	4.00	7.00	10.00	7.53	7.15	
9	4.00	7.00	10.00	7.51	7.40	7.89
10	4.00	7.00	10.00	7.52	7.40	7.91
11						
12						
13	4.00	7.00	10.00	7.54	7.52	
14	4.00	7.00	10.00	7.51	7.43	
15	4.00	7.00	10.00	7.63	7.28	
16	4.00	7.00	10.00	7.39	7.46	
17	4.00	7.00	10.00	7.27	7.41	
18						
19						
20	4.00	7.00	10.00	7.43	7.32	
21	4.00	7.00	10.00	7.33	7.10	7.46
22	4.00	7.00	10.00	7.46	7.25	
23	4.00	7.00	10.00	7.23	7.26	
24	4.00	7.00	10.00	7.27	7.24	
25	4.00	7.00	10.00	7.22	7.27	
26	4.00	7.00	10.00	7.20	7.25	
27	4.00	7.00	10.00	7.14	7.27	7.38
28	4.00	7.00	10.00	7.34	7.33	7.63
29	4.00	7.00	10.00	7.29	7.35	7.58
30	4.00	7.00	10.00	7.13	7.29	7.44
31						

Advanced Environmental Laboratories, Inc.

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9610 Princess Palm Ave T ampa, FL 33619
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Phone: (813)630-9616
Fax: (813)630-4327

August 4, 2021

Michael Townsel
Hillsborough Co Public Utilites
332 North Falkenburg Rd
Tampa, FL 33619

RE: Workorder: T2112324 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, July 09, 2021. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Heidi Parker - Project Manager
HParker@AELLab.com

Enclosures

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Fax: (813)630-4327

SAMPLE SUMMARY

Workorder: T2112324 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T2112324001	Leachate Effluent	Water	7/9/2021 09:53	7/9/2021 10:45
T2112324002	Field Blank	Water	7/9/2021 09:47	7/9/2021 10:45

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ANALYTICAL RESULTS

Workorder: T2112324 SELF Plant Effluent

Lab ID: **T2112324001** Date Received: 07/09/21 10:45 Matrix: Water

Sample ID: **Leachate Effluent** Date Collected: 07/09/21 09:53

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**17823**		**umhos/cm**	**1**			7/9/2021 09:53	
Dissolved Oxygen	**4.71**		**mg/L**	**1**			7/9/2021 09:53	
ORP-2580BW	**28.1**		**mV**	**1**			7/9/2021 09:53	
Temperature	**30.1**		**°C**	**1**			7/9/2021 09:53	
pH	**7.13**		**SU**	**1**			7/9/2021 09:53	
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**670**		**mg/L**	**1**	50	20	7/14/2021 13:50	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**11000**		**mg/L**	**1**	10	10	7/14/2021 09:30	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**150**		**mg/L**	**10**	10	10	7/15/2021 16:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**250**		**mg/L**	**250**	25	23	7/9/2021 16:59	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**64**		**mg/L**	**1**	2.0	2.0	7/9/2021 14:25	T

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ANALYTICAL RESULTS

Workorder: T2112324 SELF Plant Effluent

Lab ID: **T2112324002**
Sample ID: **Field Blank**

Date Received: 07/09/21 10:45 Matrix: Water
Date Collected: 07/09/21 09:47

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**20**	**U**	**mg/L**	**1**	50	20	7/14/2021 13:50	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**10**	**U**	**mg/L**	**1**	10	10	7/14/2021 09:30	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	7/15/2021 16:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**0.092**	**U**	**mg/L**	**1**	0.10	0.092	7/9/2021 16:57	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	7/9/2021 14:42	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T2112324 SELF Plant Effluent

PARAMETER QUALIFIERS

U	The compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

LAB QUALIFIERS

T	DOH Certification #E84589(AEL-T)(FL NELAC Certification)
T^	Not Certified

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QUALITY CONTROL DATA

Workorder: T2112324 SELF Plant Effluent

QC Batch: WCAt/5455 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T2112324001, T2112324002

METHOD BLANK: 3950366

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Nitrate (as N)	mg/L	0.092	0.092	U

LABORATORY CONTROL SAMPLE: 3950367

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate (as N)	mg/L	1	0.96	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3950368 3950369 Original: T2112335001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate (as N)	mg/L	1.6	1	2.6	2.6	100	95	90-110	2	10	

QC Batch: WCAt/5460 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T2112324001, T2112324002

METHOD BLANK: 3950471

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Biochemical Oxygen Demand	mg/L	2.0	2.0	U

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QUALITY CONTROL DATA

Workorder: T2112324 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3950472

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	190	94	84.6-115.4	

SAMPLE DUPLICATE: 3950473 Original: T2112382004

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	2300	2100	11	20	

QC Batch: WCAt/5536 Analysis Method: EPA 410.4

QC Batch Method: EPA 410.4 Prepared:

Associated Lab Samples: T2112324001, T2112324002

METHOD BLANK: 3954788

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Chemical Oxygen Demand	mg/L	20	20	U

LABORATORY CONTROL SAMPLE: 3954789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	500	100	90-110	

QC Batch: WCAt/5578 Analysis Method: SM 2540D

QC Batch Method: SM 2540D Prepared:

Associated Lab Samples: T2112324001, T2112324002

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QUALITY CONTROL DATA

Workorder: T2112324 SELF Plant Effluent

METHOD BLANK: 3957923

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Total Suspended Solids	mg/L	1.0	1.0	U

LABORATORY CONTROL SAMPLE: 3957924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	200	101	85-115	

SAMPLE DUPLICATE: 3957925 Original: T2112499001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	140	130	7	10	

QC Batch: WCAt/5605 Analysis Method: SM 2540 C

QC Batch Method: SM 2540 C Prepared:

Associated Lab Samples: T2112324001, T2112324002

METHOD BLANK: 3959211

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Total Dissolved Solids	mg/L	10	10	U

LABORATORY CONTROL SAMPLE: 3959212

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	660	101	85-115	

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QUALITY CONTROL DATA

Workorder: T2112324 SELF Plant Effluent

SAMPLE DUPLICATE: 3959214 Original: T2112358001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	160	140	8	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T2112324 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T2112324001	Leachate Effluent			SM 4500NO3-F	WCAt/5455
T2112324002	Field Blank			SM 4500NO3-F	WCAt/5455
T2112324001	Leachate Effluent			SM 5210B	WCAt/5460
T2112324002	Field Blank			SM 5210B	WCAt/5460
T2112324001	Leachate Effluent			EPA 410.4	WCAt/5536
T2112324002	Field Blank			EPA 410.4	WCAt/5536
T2112324001	Leachate Effluent			SM 2540D	WCAt/5578
T2112324002	Field Blank			SM 2540D	WCAt/5578
T2112324001	Leachate Effluent			SM 2540 C	WCAt/5605
T2112324002	Field Blank			SM 2540 C	WCAt/5605
T2112324001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

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☐ **Altamonte Springs:** 380 Northlake Blvd., Ste. 1048, FL 32701 • 407.937.1594 • Lab ID: E53076
☐ **Fort Myers:** 13100 Westlinks Terrace, Ste. 10, FL 33913 • 239.674.8130 • Lab ID: E84492
☐ **Jacksonville:** 6681 Southpoint Pkwy., FL 32216 • 904.363.9350 • Lab ID: E82574
☐ **Tallahassee:** 2639 North Monroe St., Suite D, FL 32303 • 850.219.6274 • Lab ID: E811095
☐ **Gainesville:** 4965 SW 41st Blvd., FL 32608 • 352.377.2349 • Lab ID: E82001
☐ **Miramar:** 10200 USA Today Way, FL 33025 • 954.889.2288 • Lab ID: E82535
☑ **Tampa:** 9610 Princess Palm Ave., FL 33619 • 813.630.9616 • Lab ID: E84589

Client Name:	Hills. Co. Public Utilities	Project Name:	SELF Plant Effluent
Address:	332 North Falkenburg Rd	Project Number:	N/A
	Tampa, FL 33619	PO Number:	N/A
Phone:	(813) 663-3222	FDEP Facility No:	
FAX:	(813) 274-6801	FDEP Facility Addr:	15960 CR 672
Contact:	Michael Townsel		
Sampled By:	Grayson, Morales	Special Instructions:	
Turn Around Time:	(Standard) Rush		
AEL Profile #:		ADaPT EQuIS Other	

* T 2 1 1 2 3 2 4 *

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	BOTTLE SIZE & TYPE	COD	BOD	TDS	TSS	Nitrate	LABORATORY I.D. NUMBER
							ANALYSIS REQUIRED						
							Preservation						
							Field-Filtered?						
	Leachate Effluent	G	7/9/21	0953	WW	5		X	X	X	X	X	207
	Field Blank	-	7/9/21	0947	DI	5		X	X	X	X	X	208

Matrix Code: **WW** = wastewater **SW** = surface water **GW** = ground water **DW** = drinking water **O** = oil **A** = air **SO** = soil **SL** = sludge **Preservation Code:** I = ice H=(HCl) S = (H_2SO_4) N = (HNO_3) T = (Sodium Thiosulfate)

Received on Ice ☐ Yes ☐ No ☑ Temp taken from sample ☐ Temp from blank ☑ Where required, pH checked Temp. when received (observed) 6 °C Temp. when received (corrected) 6 °C

DCN: AD-D051web Form last revised 08/07/2019 Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V F: 1A

	Relinquished by:	Date	Time	Received by:	Date	Time
1		7/9/21	1045		7/9/21	1045
2						
3						
4						

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____

Contact Person: _____

Supplier of Water: _____

Site-Address: _____

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill - Plant	SITE LOCATION: Lithia, Florida	
WELL NO: Field Blank	SAMPLE ID: Field Blank	DATE: 7/9/21

PURGING DATA

WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A ft	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: N/A

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= N/A gallons + (N/A gallons/foot X N/A feet) + N/A gallons = N/A gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

7/9/21
FIELD BLANK

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Grayson, Morales	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0947	SAMPLING ENDED AT: 0948
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y ~~N~~ (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS**

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill - Plant	SITE LOCATION: Lithia, Florida	
WELL NO: Leachate Effluent	SAMPLE ID: Leachate Effluent	DATE: 7/9/21

PURGING DATA

WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A ft	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: Valve

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= N/A gallons + (N/A gallons/foot X N/A feet) + N/A gallons = N/A gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0953	N/A	N/A	N/A	N/A	7.13	30.1	17823	4.71	N/A	yellow	Leachate Effluent

7/9/21

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Grayson, Morales	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0953	SAMPLING ENDED AT: 0955
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP: 0953 (28.1)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

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August 31, 2021

Michael Townsel
Hillsborough Co Public Utilites
332 North Falkenburg Rd
Tampa, FL 33619

RE: Workorder: T2114641 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, August 10, 2021. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Heidi Parker

Heidi Parker - Project Manager
HParker@AELLab.com

Enclosures

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3004.1.0.0

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SAMPLE SUMMARY

Workorder: T2114641 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T2114641001	Leachate Effluent	Water	8/10/2021 12:16	8/10/2021 13:40
T2114641002	Field Blank	Water	8/10/2021 12:05	8/10/2021 13:40

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ANALYTICAL RESULTS

Workorder: T2114641 SELF Plant Effluent

Lab ID: **T2114641001** Date Received: 08/10/21 13:40 Matrix: Water

Sample ID: **Leachate Effluent** Date Collected: 08/10/21 12:16

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**15064**		**umhos/cm**	**1**			8/10/2021 12:16	
Dissolved Oxygen	**2.77**		**mg/L**	**1**			8/10/2021 12:16	
ORP-2580BW	**88.8**		**mV**	**1**			8/10/2021 12:16	
Temperature	**33.5**		**°C**	**1**			8/10/2021 12:16	
pH	**6.24**		**SU**	**1**			8/10/2021 12:16	
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**400**		**mg/L**	**1**	50	20	8/16/2021 13:20	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**9500**		**mg/L**	**1**	10	10	8/13/2021 15:00	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**110**		**mg/L**	**5**	5.0	5.0	8/11/2021 15:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**190**		**mg/L**	**125**	12	12	8/11/2021 12:34	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**3.5**		**mg/L**	**1**	2.0	2.0	8/11/2021 13:30	T

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ANALYTICAL RESULTS

Workorder: T2114641 SELF Plant Effluent

Lab ID: **T2114641002**
Sample ID: **Field Blank**

Date Received: 08/10/21 13:40 Matrix: Water
Date Collected: 08/10/21 12:05

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**20**	**U**	**mg/L**	**1**	50	20	8/16/2021 13:20	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**10**	**U**	**mg/L**	**1**	10	10	8/13/2021 15:00	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	8/11/2021 15:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**0.092**	**U**	**mg/L**	**1**	0.10	0.092	8/11/2021 11:14	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	8/11/2021 13:38	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T2114641 SELF Plant Effluent

PARAMETER QUALIFIERS

U	The compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

LAB QUALIFIERS

T	DOH Certification #E84589(AEL-T)(FL NELAC Certification)
T^	Not Certified

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QUALITY CONTROL DATA

Workorder: T2114641 SELF Plant Effluent

QC Batch: WCAt/6152 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T2114641001, T2114641002

METHOD BLANK: 3986331

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Total Suspended Solids	mg/L	1.0	1.0	U

LABORATORY CONTROL SAMPLE: 3986332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	190	97	85-115	

SAMPLE DUPLICATE: 3986333 Original: T2114644002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L		1200	8	10	

QC Batch: WCAt/6162 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T2114641001, T2114641002

METHOD BLANK: 3986390

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Nitrate (as N)	mg/L	0.092	0.092	U

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QUALITY CONTROL DATA

Workorder: T2114641 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3986391

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate (as N)	mg/L	1	1.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3986392 3986393 Original: T2114607002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate (as N)	mg/L	0.52	1	1.6	1.5	104	101	90-110	2	10	

QC Batch: WCAt/6196 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T2114641001, T2114641002

METHOD BLANK: 3987792

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Biochemical Oxygen Demand	mg/L	2.0	2.0	U

LABORATORY CONTROL SAMPLE: 3987793

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	180	89	84.6-115.4	

SAMPLE DUPLICATE: 3987794 Original: T2114725001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						

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QUALITY CONTROL DATA

Workorder: T2114641 SELF Plant Effluent

SAMPLE DUPLICATE: 3987794 Original: T2114725001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
Biochemical Oxygen Demand	mg/L	2300	2100	8	20	

QC Batch: WCAt/6242 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T2114641001, T2114641002

METHOD BLANK: 3990065

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Total Dissolved Solids	mg/L	10	10	U

LABORATORY CONTROL SAMPLE: 3990066

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	660	100	85-115	

SAMPLE DUPLICATE: 3990067 Original: T2114584003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	170	170	4	10	

QC Batch: WCAt/6277 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Prepared:
Associated Lab Samples: T2114641001, T2114641002

METHOD BLANK: 3991739

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Chemical Oxygen Demand	mg/L	20	20	U

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QUALITY CONTROL DATA

Workorder: T2114641 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3991740

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	500	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3991742 3991743 Original: A2106825001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Chemical Oxygen Demand	mg/L	5.5	500	550	550	110	110	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3991746 3991747 Original: T2114738002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Chemical Oxygen Demand	mg/L	73	500	550	550	96	96	90-110	0	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T2114641 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T2114641001	Leachate Effluent			SM 2540D	WCAt/6152
T2114641002	Field Blank			SM 2540D	WCAt/6152
T2114641001	Leachate Effluent			SM 4500NO3-F	WCAt/6162
T2114641002	Field Blank			SM 4500NO3-F	WCAt/6162
T2114641001	Leachate Effluent			SM 5210B	WCAt/6196
T2114641002	Field Blank			SM 5210B	WCAt/6196
T2114641001	Leachate Effluent			SM 2540 C	WCAt/6242
T2114641002	Field Blank			SM 2540 C	WCAt/6242
T2114641001	Leachate Effluent			EPA 410.4	WCAt/6277
T2114641002	Field Blank			EPA 410.4	WCAt/6277
T2114641001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

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☐ **Fort Myers:** 13100 Westlinks Terrace, Ste. 10, FL 33913 • 239.674.8130 • Lab ID: E84492
☐ **Jacksonville:** 6681 Southpoint Pkwy., FL 32216 • 904.363.9350 • Lab ID: E82574
☐ **Tallahassee:** 2639 North Monroe St., Suite D, FL 32303 • 850.219.6274 • Lab ID: E811095
☐ **Gainesville:** 4965 SW 41st Blvd., FL 32608 • 352.377.2349 • Lab ID: E82001
☐ **Miramar:** 10200 USA Today Way, FL 33025 • 954.889.2288 • Lab ID: E82535
☑ **Tampa:** 9610 Princess Palm Ave., FL 33619 • 813.630.9616 • Lab ID: E84589

Client Name:	Hills. Co. Public Utilities	Project Name:	SELF Plant Effluent
Address:	332 North Falkenburg Rd	Project Number:	N/A
	Tampa, FL 33619	PO Number:	N/A
Phone:	(813) 663-3222	FDEP Facility No:	
FAX:	(813) 274-6801	FDEP Facility Addr:	15960 CR 672
Contact:	Michael Townsel		
Sampled By:	T. Aguilar	Special Instructions:	
Turn Around Time:	(Standard) Rush		
AEL Profile #:		ADaPT EQuIS Other	

* T 2 1 1 4 6 4 1 *

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	BOTTLE SIZE & TYPE	COD	BOD	TDS	TSS	Nitrate						LABORATORY I.D. NUM
							ANALYSIS REQUIRED											
							Preservation											
							Field-Filtered?											
	Leachate Effluent	G	8/10/21	1216	WW	5		X	X	X	X	X						201
	Field Blank	-	8/10/21	1205	DI	5		X	X	X	X	X						202

Matrix Code: **WW** = wastewater **SW** = surface water **GW** = ground water **DW** = drinking water **O** = oil **A** = air **SO** = soil **SL** = sludge **Preservation Code:** I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☑ Yes ☐ No ☑ Temp taken from sample ☐ Temp from blank ☑ Where required, pH checked Temp. when received (observed) 6 °C Temp. when received (corrected) 6 °C

DCN: AD-D051web Form last revised 08/07/2019 Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V F: 1A

	Relinquished by:	Date	Time	Received by:	Date	Time
1		8/10/21	1341		8/10/21	1341
2						
3						
4						

FOR DRINKING WATER USE:
(When PWS Information not otherwise supplied) PWS ID: _____
Contact Person: _____
Supplier of Water: _____
Site-Address: _____

Tuesday, August 31, 2021 2:15:32 PM
Page 11 of 13

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill - Plant	SITE LOCATION: Lithia, Florida	
WELL NO: Leachate Effluent	SAMPLE ID: Leachate Effluent	DATE: 8/10/21

PURGING DATA

WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A ft	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: Valve

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= N/A gallons + (N/A gallons/foot X N/A feet) + N/A gallons = N/A gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1216	N/A	N/A	N/A	N/A	6.24	33.5	15064	2.77	N/A	Brown	Effluent

8/10/21

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: T. Aguilar	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1216	SAMPLING ENDED AT: 1218
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP: 1216 (88.8)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill - Plant	SITE LOCATION: Lithia, Florida	
WELL NO: Field Blank	SAMPLE ID: Field Blank	DATE: 8/10/21

PURGING DATA

WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A ft	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: N/A

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= N/A gallons + (N/A gallons/foot X N/A feet) + N/A gallons = N/A gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

Field Blank 8/10/21

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: T. Aguilar	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1205	SAMPLING ENDED AT: 1207
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS**

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

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FINAL

Workorder: SELF Plant Effluent (T2117391)

October 26, 2021

Michael Townsel
Hillsborough Co Public Utilites
332 North Falkenburg Rd
Tampa, FL 33619

RE: Workorder: T2117391 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Monday September 20, 2021. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Heidi Parker

Heidi Parker
HParker@aellab.com

Certificate of Analysis

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Workorder: SELF Plant Effluent (T2117391)

Sample Summary

Lab ID	Sample ID	Matrix	Method	Date Collected	Date Received	Analytes Reported
T2117391001	Leachate Effluent	WA	EPA 410.4	09/20/2021 09:28	09/20/2021 10:30	1
T2117391001	Leachate Effluent	WA	Field Measurements	09/20/2021 09:28	09/20/2021 10:30	5
T2117391001	Leachate Effluent	WA	SM 2540 C	09/20/2021 09:28	09/20/2021 10:30	1
T2117391001	Leachate Effluent	WA	SM 2540D	09/20/2021 09:28	09/20/2021 10:30	1
T2117391001	Leachate Effluent	WA	SM 4500NO3-F	09/20/2021 09:28	09/20/2021 10:30	1
T2117391001	Leachate Effluent	WA	SM 5210B	09/20/2021 09:28	09/20/2021 10:30	1
T2117391002	Field Blank	WA	EPA 410.4	09/20/2021 09:23	09/20/2021 10:30	1
T2117391002	Field Blank	WA	SM 2540 C	09/20/2021 09:23	09/20/2021 10:30	1
T2117391002	Field Blank	WA	SM 2540D	09/20/2021 09:23	09/20/2021 10:30	1
T2117391002	Field Blank	WA	SM 4500NO3-F	09/20/2021 09:23	09/20/2021 10:30	1
T2117391002	Field Blank	WA	SM 5210B	09/20/2021 09:23	09/20/2021 10:30	1

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FINAL

Workorder: SELF Plant Effluent (T2117391)

Analytical Results Qualifiers

Parameter Qualifiers

U	The compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

Lab Qualifiers

T^	Not Certified
T	DOH Certification #E84589 (FL NELAC) AEL-Tampa

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FINAL

Workorder: SELF Plant Effluent (T2117391)

Analytical Results

Lab ID: T2117391001 **Date Collected:** 9/20/2021 **Matrix:** Water
Sample ID: Leachate Effluent **Date Received:** 9/20/2021

Parameter	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Lab
Field Parameters (Field Measurements)								
Conductivity	**13296**	umhos			1	09/20/2021 09:28	09/20/2021 09:28	
Dissolved Oxygen	**3.09**	mg/L			1	09/20/2021 09:28	09/20/2021 09:28	
ORP-2580BW	**126.9**	mV			1	09/20/2021 09:28	09/20/2021 09:28	
Temperature	**29.4**	°C			1	09/20/2021 09:28	09/20/2021 09:28	
pH	**6.52**	SU			1	09/20/2021 09:28	09/20/2021 09:28	
Wet Chemistry (EPA 410.4)								
Chemical Oxygen Demand	**360**	mg/L	50	20	1	09/28/2021 09:15	09/28/2021 09:15	T
Wet Chemistry (SM 2540 C)								
Total Dissolved Solids	**6300**	mg/L	10	10	1	09/23/2021 16:00	09/23/2021 16:00	T
Wet Chemistry (SM 2540D)								
Total Suspended Solids	**34**	mg/L	10	10	10	09/23/2021 14:00	09/23/2021 14:00	T
Wet Chemistry (SM 4500NO3-F)								
Nitrate (as N)	**170**	mg/L	12	12	125	09/20/2021 18:45	09/20/2021 18:45	T
Wet Chemistry (SM 5210B)								
Biochemical Oxygen Demand	**15**	mg/L	2	2.0	1	09/20/2021 14:39	09/20/2021 14:39	T

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FINAL

Workorder: SELF Plant Effluent (T2117391)

Analytical Results

Lab ID: T2117391002 **Date Collected:** 9/20/2021 **Matrix:** Water
Sample ID: Field Blank **Date Received:** 9/20/2021

Parameter	Results	Units	PQL	MDL	DF	Prepared	Analyzed	Lab
Wet Chemistry (EPA 410.4)								
Chemical Oxygen Demand	20U	mg/L	50	20	1	09/28/2021 09:15	09/28/2021 09:15	T
Wet Chemistry (SM 2540 C)								
Total Dissolved Solids	10U	mg/L	10	10	1	09/23/2021 16:00	09/23/2021 16:00	T
Wet Chemistry (SM 2540D)								
Total Suspended Solids	2.0U	mg/L	2	2.0	2	09/23/2021 14:00	09/23/2021 14:00	T
Wet Chemistry (SM 4500NO3-F)								
Nitrate (as N)	0.092U	mg/L	0.1	0.092	1	09/20/2021 18:44	09/20/2021 18:44	T
Wet Chemistry (SM 5210B)								
Biochemical Oxygen Demand	2.0U	mg/L	2	2.0	1	09/20/2021 14:44	09/20/2021 14:44	T

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Workorder: SELF Plant Effluent (T2117391)

QC Results

QC Batch: WCAt/7030
Preparation Method: SM 5210B
Associated Lab IDs: T2117391001, T2117391002
Analysis Method: SM 5210B

Method Blank(4032976)

Parameter	Results	Units	PQL	MDL	Lab
Biochemical Oxygen Demand	2.0U	mg/L	2.0	2.0	T

Lab Control Sample (4032977)

Parameter	Units	Spiked Amount	Spike Result	Spike Recovery	Control Limits	Lab
Biochemical Oxygen Demand	mg/L	198	188	95	84.60 - 115.40	T

Sample Duplicate (4032978)

Parameter	Original	Duplicate	Units	RPD	RPD Limit	Lab
Biochemical Oxygen Demand	2717.8	2664.14	mg/L	2	20	T

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FINAL

Workorder: SELF Plant Effluent (T2117391)

QC Results

QC Batch: WCAt/7034
Preparation Method: SM 4500NO3-F
Associated Lab IDs: T2117391001, T2117391002
Analysis Method: SM 4500NO3-F

Method Blank(4033099)

Parameter	Results	Units	PQL	MDL	Lab
Nitrate (as N)	0.092U	mg/L	0.10	0.092	T

Lab Control Sample (4033100)

Parameter	Units	Spiked Amount	Spike Result	Spike Recovery	Control Limits	Lab
Nitrate (as N)	mg/L	1	1	103	90 - 110	T

Matrix Spike (4033101); Matrix Spike Duplicate (4033102)

Parameter	Units	Spiked Amount	Spike Result	Spike Recovery	Control Limits	Dup Result	Dup Recovery	RPD	RPD Limit	Lab
Nitrate (as N)	mg/L	1	2.2	98	90 - 110	2.2	102	2	10	T

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Workorder: SELF Plant Effluent (T2117391)

QC Results

QC Batch: WCAt/7114
Preparation Method: SM 2540D
Associated Lab IDs: T2117391001, T2117391002
Analysis Method: SM 2540D

Method Blank(4036908)

Parameter	Results	Units	PQL	MDL	Lab
Total Suspended Solids	1.0U	mg/L	1.0	1.0	T

Lab Control Sample (4036909)

Parameter	Units	Spiked Amount	Spike Result	Spike Recovery	Control Limits	Lab
Total Suspended Solids	mg/L	200	200	98	85 - 115	T

Sample Duplicate (4039040)

Parameter	Original	Duplicate	Units	RPD	RPD Limit	Lab
Total Suspended Solids	174	180	mg/L	3	10	T

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Workorder: SELF Plant Effluent (T2117391)

QC Results

QC Batch: WCAt/7118
Preparation Method: SM 2540 C
Associated Lab IDs: T2117391001, T2117391002
Analysis Method: SM 2540 C

Method Blank(4036923)

Parameter	Results	Units	PQL	MDL	Lab
Total Dissolved Solids	10U	mg/L	10	10	T

Lab Control Sample (4036924)

Parameter	Units	Spiked Amount	Spike Result	Spike Recovery	Control Limits	Lab
Total Dissolved Solids	mg/L	660	660	100	85 - 115	T

Sample Duplicate (4036925)

Parameter	Original	Duplicate	Units	RPD	RPD Limit	Lab
Total Dissolved Solids	686	746	mg/L	8	10	T

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Workorder: SELF Plant Effluent (T2117391)

QC Results

QC Batch: WCAt/7211
Preparation Method: EPA 410.4
Associated Lab IDs: T2117391001, T2117391002
Analysis Method: EPA 410.4

Method Blank(4041653)

Parameter	Results	Units	PQL	MDL	Lab
Chemical Oxygen Demand	20U	mg/L	50	20	T

Lab Control Sample (4041654)

Parameter	Units	Spiked Amount	Spike Result	Spike Recovery	Control Limits	Lab
Chemical Oxygen Demand	mg/L	500	510	101	90 - 110	T

Matrix Spike (4041656); Matrix Spike Duplicate (4041657)

Parameter	Units	Spiked Amount	Spike Result	Spike Recovery	Control Limits	Dup Result	Dup Recovery	RPD	RPD Limit	Lab
Chemical Oxygen Demand	mg/L	500	600	110	90 - 110	600	110	0	10	T

Matrix Spike (4041660); Matrix Spike Duplicate (4041661)

Parameter	Units	Spiked Amount	Spike Result	Spike Recovery	Control Limits	Dup Result	Dup Recovery	RPD	RPD Limit	Lab
Chemical Oxygen Demand	mg/L	500	530	106	90 - 110	530	106	0	10	T

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FINAL

Workorder: SELF Plant Effluent (T2117391)

QC Cross Reference

Lab ID	Sample ID	Prep Batch	Prep Method
WCAt/7030 - SM 5210B			
T2117391001	Leachate Effluent		
T2117391002	Field Blank		
WCAt/7034 - SM 4500NO3-F			
T2117391001	Leachate Effluent		
T2117391002	Field Blank		
WCAt/7114 - SM 2540D			
T2117391001	Leachate Effluent		
T2117391002	Field Blank		
WCAt/7118 - SM 2540 C			
T2117391001	Leachate Effluent		
T2117391002	Field Blank		
WCAt/7211 - EPA 410.4			
T2117391001	Leachate Effluent		
T2117391002	Field Blank		

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☐ **Fort Myers:** 13100 Westlinks Terrace, Ste. 10, FL 33913 • 239.674.8130 • Lab ID: E84492
☐ **Jacksonville:** 6681 Southpoint Pkwy., FL 32216 • 904.363.9350 • Lab ID: E82574
☐ **Tallahassee:** 2639 North Monroe St., Suite D, FL 32303 • 850.219.6274 • Lab ID: E811095
☐ **Gainesville:** 4965 SW 41st Blvd., FL 32608 • 352.377.2349 • Lab ID: E82001
☐ **Miramar:** 10200 USA Today Way, FL 33025 • 954.889.2288 • Lab ID: E82535
☒ **Tampa:** 9610 Princess Palm Ave., FL 33619 • 813.630.9616 • Lab ID: E84589

Client Name:	Hills. Co. Public Utilities	Project Name:	SELF Plant Effluent
Address:	332 North Falkenburg Rd	Project Number:	N/A
	Tampa, FL 33619	PO Number:	N/A
Phone:	(813) 663-3222	FDEP Facility No:	
FAX:	(813) 274-6801	FDEP Facility Addr:	15960 CR 672
Contact:	Michael Townsel		
Sampled By:	M. Morales	Special Instructions:	
Turn Around Time:	(Standard) Rush		
AEL Profile #:		ADaPT EQuIS Other	

T2117391

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	BOTTLE SIZE & TYPE	COD	BOD	TDS	TSS	Nitrate	LABORATORY I.D. NUMBER
	Leachate Effluent	G	9/20/21	~~1043~~ 09:28	WW	4	Preservation	X	X	X	X	X	001
	Field Blank	-	9/20/21	~~1028~~ 09:23	DI	4	Field-Filtered?	X	X	X	X	X	002

NO Recvd

Matrix Code: **WW** = wastewater **SW** = surface water **GW** = ground water **DW** = drinking water **O** = oil **A** = air **SO** = soil **SL** = sludge

Preservation Code: I = ice H=(HCl) S = (H_2SO_4) N = (HNO_3) T = (Sodium Thiosulfate)

Received on Ice ☐ Yes ☐ No ☑ Temp taken from sample ☐ Temp from blank ☑ Where required, pH checked

Temp. when received (observed) 6 °C Temp. when received (corrected) 6 °C

DCN: AD-D051web Form last revised 08/07/2019

Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V F: 1A

	Relinquished by:	Date	Time	Received by:	Date	Time
1	M. Muley	9/20/21	1030		9/20/21	1030
2						
3						
4						

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID: _____

Contact Person: _____

Supplier of Water: _____

Site-Address: _____

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill - Plant	SITE LOCATION: Lithia, Florida	
WELL NO: Leachate Effluent	SAMPLE ID: Leachate Effluent	DATE: 09/20/2021

PURGING DATA

WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A ft	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: Valve

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

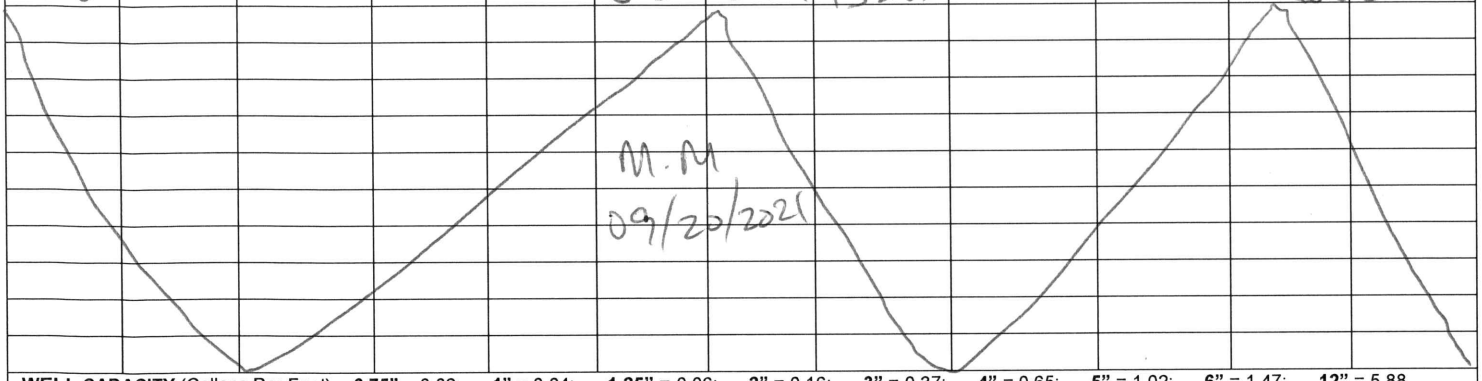
= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= N/A gallons + (N/A gallons/foot X N/A feet) + N/A gallons = N/A gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0928	N/A	N/A	N/A	N/A	6.52	29.4	13296	3.09	N/A	Brown Effluent	



WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Morales	SAMPLER(S) SIGNATURE(S): M. Morales	SAMPLING INITIATED AT: 0928	SAMPLING ENDED AT: 0931
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** **ORP:** 0928 (126.9)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill - Plant	SITE LOCATION: Lithia, Florida	
WELL NO: Field Blank	SAMPLE ID: Field Blank	DATE: 09/20/2021

PURGING DATA

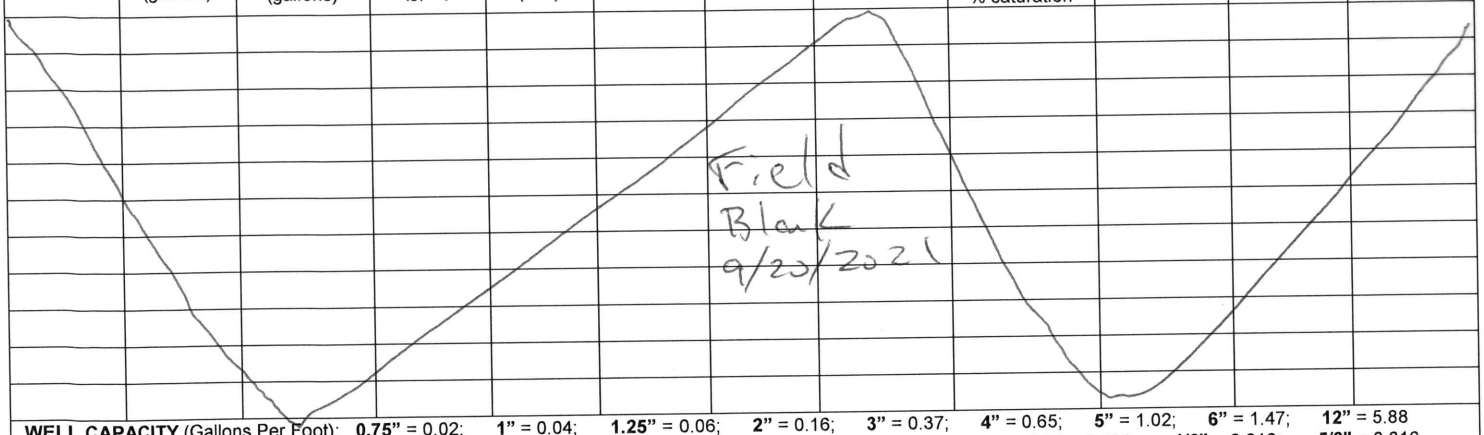
WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A ft	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: N/A

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= N/A gallons + (N/A gallons/foot X N/A feet) + N/A gallons = N/A gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)



WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Morales	SAMPLER(S) SIGNATURE(S): M. Morales	SAMPLING INITIATED AT: 0923	SAMPLING ENDED AT: 0926
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS**

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
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