Hillsborough County Florida

PUBLIC UTILITIES
PO Box 1110
Tampa, FL 33601-1110

June 16, 2020

Mr. Steve Morgan
Florida Department of Environmental Protection
Waste Permitting Section
13051 Telecom Parkway
Temple Terrace, FL 33637

RE: **Southeast County Landfill**
Leachate Treatment Plant (WACS Testsite #19864)
Quarterly Effluent Report
First Quarter 2020

Dear Mr. Morgan,

In accordance with Part 9.1.2 of the November 2015 Southeast County Landfill (SCLF) Leachate Management Plan, the Hillsborough County Public Utilities Department (County) has prepared the quarterly effluent report for the SCLF leachate treatment plant (LTP), located at 15960 County Road 672 in Lithia, Florida.

Monthly sampling of the effluent and the daily recording of the plant pH values were conducted as required by the referenced LTP. County personnel collected the effluent samples from the designated sampling port on January 8, February 5, and March 4, 2020 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 largely consistent with the historical data at the plant. In addition, daily pH for the effluent was recorded from 7.46 to 8.58 pH units by plant personnel and the field logs are depicted as part of the submittal.

Should you have any questions or comments concerning the information provided, please feel free to contact me at (813) 663-3222.

Respectfully,

6/16/2020

Michael D. Townsel
Senior Hydrologist
Public Utilities Department
Environmental Services

ec: Justin Chamberlain, P.G., FDEP
Kimberly Byer, P.G., Public Utilities Dept.
Larry Ruiz, Public Utilities Dept.
Ronald Wiesman, Public Utilities Dept.
Cindy Pelley, Public Utilities Dept.
Jeffry Greenwell, P.E., Public Utilities Dept.
Ron Cope, Hillsborough County EPC

Month 01/20

PH Calibration Log

Date	PH7	PH10		INF PH	EFF PH	POND
1						
2	6.98	9.99	4.00	7.98	7.93	
3	7.0	10.03	4.0	8.05	7.95	
4	7.04	10.03	4.0	7.73	7.91	
5						
6	7.00	10.00	4.01	7.86	7.77	8.09
7	6.99	9.99	4.00	7.88	7.80	8.17
8	7.00	10.00	4.01	7.78	7.99	8.16
9	7.02	10.01	4.01	7.75	7.61	8.21
10	7.00	10.01	4.00	7.75	7.66	8.13
11	7.01	10.01	4.00	8.09		
12						
13	7.00	10.01	4.00	7.82	8.01	9.15
14	7.00	10.00	4.00	7.64	7.89	9.35
15	7.03	10.03	4.00	7.63	7.92	9.35
16	6.99	10.0	4.00	7.60	7.80	
17	7.00	9.99	4.00	7.59	7.87	9.36
18	7.00	10.0	4.01	7.39		
19						
20				8.06		
21	6.97	10.00	4.01	7.74	7.82	9.61
22	7.00	10.00	4.01	7.43	7.79	9.67
23	7.00	10.00	4.01	7.93	7.90	8.50
24	7.03	10.03	4.01	7.97	8.01	8.06
25	7.02	10.01	4.01	7.89		
26						
27	7.00	10.01	4.01	8.00	8.14	8.49
28	6.98	9.99	4.01	7.76	7.97	8.00
29	7.00	10.00	4.00	7.55	8.06	7.95
30	7.00	10.01	4.01	7.84	8.13	8.20
31	7.01	10.01	4.01	7.72	8.10	8.48

Month 2/20

PH Calibration Log

Date	PH7	PH10	4.00	INF PH	EFF PH	POND
1				7.92		
2						
3	7.00	10.00	4.00	8.06	8.22	8.65
4	7.02	10.01	4.01	7.53	7.91	8.11
5	7.00	10.01	4.00	7.60	8.20	8.21
6	6.99	10.00	4.01	7.48	8.27	8.24
7	7.00	10.01	4.01	7.87	8.27	8.44
8	7.01	10.01	4.01	7.71		
9						
10	7.02	10.02	4.00	7.64	8.23	8.24
11	7.00	10.01	4.01	7.46	8.05	8.11
12	6.98	10.01	4.01	7.74	7.46	8.04
13	7.01	10.01	4.01	7.64	8.06	8.24
14	6.98	10.0	4.01	7.69	7.90	8.28
15	7.03	10.02	4.0	7.78	8.20	
16						
17	7.03	10.02	4.0	7.78	8.20	8.23
18	7.00	10.01	4.01	8.01	8.19	8.61
19	7.00	10.01	4.00	7.97	8.37	8.88
20	6.99	10.01	4.00	7.78	8.14	8.40
21	7.00	10.01	4.00	7.67	8.31	8.50
22	7.00	10.01	4.00	7.67	8.58	
23						
24	6.96	10.00	4.00	7.80	8.28	8.61
25	7.04	10.04	4.00	7.80	8.17	8.60
26	7.02	10.07	4.00	7.75	8.28	8.90
27	7.00	10.01	4.00	7.68	7.95	9.16
28	7.00	10.01	4.01	7.33		8.93
29	7.0	10.0	4.01	7.44		
30						
31						

Month	3/20	PH Calibration Log				
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1						
2	4.01	7.00	10.01	7.71	7.80	8.50
3	4.01	7.00	10.01	7.69		
4	4.00	7.00	10.01	7.80	7.95	8.26
5	4.01	7.00	10.01	7.45	7.77	8.25
6	4.01	7.00	10.01	7.71	7.85	8.37
7				7.63		
8						
9	4.01	6.97	9.99	7.75	8.01	8.37
10	4.01	7.01	10.01	7.73	8.06	8.23
11	4.01	7.00	10.00	7.62	7.88	8.15
12	4.00	7.02	10.02	7.45	7.88	8.33
13	4.00	6.98	10.00	7.47	7.96	8.27
14						
15						
16	4.01	7.02	10.02	7.29	8.02	8.17
17	4.01	7.00	10.01	7.95	8.32	8.50
18	4.01	6.98	9.99	7.73	8.32	8.60
19	4.00	7.00	10.01	7.91	8.29	8.25
20	4.00	7.01	10.00	7.73	8.37	8.38
21						
22						
23	4.01	7.02	10.01	7.68	8.33	8.50
24	4.00	7.00	10.00	8.03	8.42	8.32
25	4.01	6.99	10.00	7.85	8.48	8.38
26	4.00	7.01	10.01	8.07	8.39	8.50
27	4.01	7.02	10.02	7.77	8.48	8.64
28	4.04	7.01	10.03	7.26	8.38	
29						
30	4.02	7.01	9.99	7.39		
31	4.00	7.01	9.99	8.08	8.40	

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

February 12, 2020

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

RE: Workorder: T2000517 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 08, 2020. 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

CERTIFICATE OF ANALYSIS

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SAMPLE SUMMARY

Workorder: T2000517 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T2000517001	Leachate Effluent	Water	1/8/2020 10:43	1/8/2020 14:45
T2000517002	Field Blank	Water	1/8/2020 10:36	1/8/2020 14:45

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ANALYTICAL RESULTS

Workorder: T2000517 SELF Plant Effluent

Lab ID: **T2000517001** Date Received: 01/08/20 14:45 Matrix: Water

Sample ID: **Leachate Effluent** Date Collected: 01/08/20 10:43

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	**16429**		**umhos/cm**	**1**			1/8/2020 10:43	....
Dissolved Oxygen	**5.16**		**mg/L**	**1**			1/8/2020 10:43	....
ORP-2580BW	**55.8**		**mV**	**1**			1/8/2020 10:43	....
Temperature	**20.9**		**°C**	**1**			1/8/2020 10:43	....
pH	**7.53**		**SU**	**1**			1/8/2020 10:43	....
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**860**		**mg/L**	**1**	50	24	1/9/2020 15:30	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**13000**		**mg/L**	**1**	10	10	1/9/2020 10:30	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**65**		**mg/L**	**5**	5.0	5.0	1/10/2020 11:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**0.39**	**U**	**mg/L**	**5**	0.50	0.39	1/9/2020 15:35	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**270**		**mg/L**	**1**	2.0	2.0	1/9/2020 17:36	T

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ANALYTICAL RESULTS

Workorder: T2000517 SELF Plant Effluent

Lab ID: **T2000517002** Date Received: 01/08/20 14:45 Matrix: Water

Sample ID: **Field Blank** Date Collected: 01/08/20 10:36

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	**24**	**U**	**mg/L**	**1**	50	24	1/9/2020 15:30	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**10**	**U**	**mg/L**	**1**	10	10	1/14/2020 14:30	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	1/10/2020 11:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**0.40**		**mg/L**	**1**	0.10	0.079	1/9/2020 15:35	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	1/9/2020 17:43	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T2000517 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: T2000517 SELF Plant Effluent

QC Batch: WCAt/1083 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T2000517001

METHOD BLANK: 3343881

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

LABORATORY CONTROL SAMPLE: 3343882

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	710	108	85-115	

SAMPLE DUPLICATE: 3343883 Original: T2000327003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	380	370	3	10	

QC Batch: WCAt/1089 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T2000517001, T2000517002

METHOD BLANK: 3344094

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Nitrate (as N)	mg/L	0.079	0.079	U

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QUALITY CONTROL DATA

Workorder: T2000517 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3344095

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate (as N)	mg/L	1	1.1	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3344096 3344097 Original: T2000517002

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	0.4	1	1.3	1.3	90	90	90-110	0	10	

QC Batch: WCAt/1104 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Prepared:
Associated Lab Samples: T2000517001, T2000517002

METHOD BLANK: 3344781

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Chemical Oxygen Demand	mg/L	24	24	U

LABORATORY CONTROL SAMPLE: 3344782

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	480	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3344784 3344785 Original: T2000355001

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	64	500	550	550	97	97	90-110	0	10	

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QUALITY CONTROL DATA

Workorder: T2000517 SELF Plant Effluent

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3344786 3344787 Original: T2000517002

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	-0.44	500	530	530	106	106	90-110	0	10	

QC Batch: WCAt/1109 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T2000517001, T2000517002

METHOD BLANK: 3345271

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

LABORATORY CONTROL SAMPLE: 3345272

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	220	110	84.6-115.4	

SAMPLE DUPLICATE: 3345273 Original: T2000517001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	270	280	2	20	

QC Batch: WCAt/1111 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T2000517001, T2000517002

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QUALITY CONTROL DATA

Workorder: T2000517 SELF Plant Effluent

METHOD BLANK: 3345558

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

LABORATORY CONTROL SAMPLE: 3345559

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	200	100	85-115	

SAMPLE DUPLICATE: 3345560 Original: T2000558001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	280	280	3	10	

QC Batch: WCAt/1182 Analysis Method: SM 2540 C

QC Batch Method: SM 2540 C Prepared:

Associated Lab Samples: T2000517002

METHOD BLANK: 3348391

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

LABORATORY CONTROL SAMPLE: 3348392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	620	95	85-115	

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QUALITY CONTROL DATA

Workorder: T2000517 SELF Plant Effluent

SAMPLE DUPLICATE: 3348393 Original: T2000517002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	10U	10	0	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T2000517 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T2000517001	Leachate Effluent			SM 2540 C	WCAt/1083
T2000517001	Leachate Effluent			SM 4500NO3-F	WCAt/1089
T2000517002	Field Blank			SM 4500NO3-F	WCAt/1089
T2000517001	Leachate Effluent			EPA 410.4	WCAt/1104
T2000517002	Field Blank			EPA 410.4	WCAt/1104
T2000517001	Leachate Effluent			SM 5210B	WCAt/1109
T2000517002	Field Blank			SM 5210B	WCAt/1109
T2000517001	Leachate Effluent			SM 2540D	WCAt/1111
T2000517002	Field Blank			SM 2540D	WCAt/1111
T2000517002	Field Blank			SM 2540 C	WCAt/1182
T2000517001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

Advanced
Environmental Laboratories, Inc.

☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamor
☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377
☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 90
☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.226
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 8
☑ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

T2000517

Client Name: Hills. Co. Public Utilities	Project Name: SELF Plant Effluent	BOTTLE SIZE & TYPE	
Address: 332 North Falkenburg Rd.	P.O. Number/Project Number: N/A		
Tampa, Florida 33619	Project Location: Southeast County Landfill	ANALYSIS REQUIRED	COD, BOD, TDS, TSS, Nitrate
Phone: (813) 663-3222	REMARKS/SPECIAL INSTRUCTIONS		
FAX: (813) 274-6801			
Contact: Michael Townsel			
Sampled By: T. Aguilar M. Murillo			
Turn Around Time: ☑ STANDARD ☐ RUSH			
Page: 1 of: 1			

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	PRESERVATION	COD	BOD	TDS	TSS	Nitrate	LABORATORY I.D. NUMBER
	Leachate Effluent	G	1/8/20	10:43	WW			X	X	X	X	X	01
	Field Blank	-	1/8/20	10:36	DI			X	X	X	X	X	02

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 Temperature when received 5.1 (in degrees celcius)

Form revised 09/19/2012 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: 1A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1		1/8/20	14:44		1/8/20	1645
2						
3						
4						

FOR DRINKING WATER USE (When PWS Information not otherwise supplied)

PWS ID:
Contact Person: Phone:
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: 1/8/2020

PURGING DATA

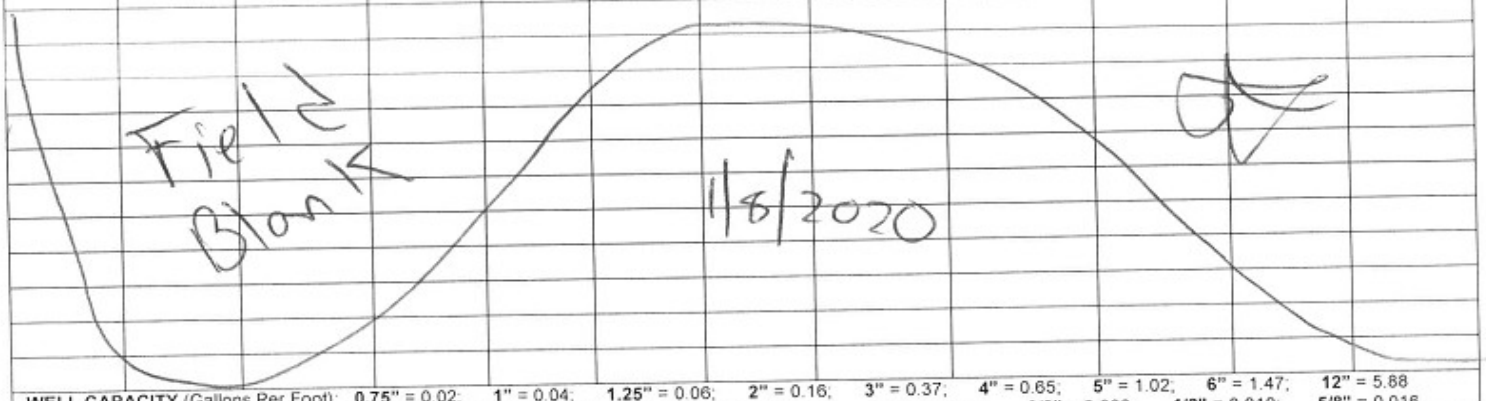
WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A ft	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: N/A

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: T. Aguilar M. Norris	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 10:36	SAMPLING ENDED AT: 10:38
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	SITE LOCATION	
Southeast County Landfill - Plant	Lithia, Florida	
WELL NO: Leachate Effluent	SAMPLE ID: Leachate Effluent	DATE: 1/8/2020

PURGING DATA

WELL DIAMETER (inches)	TUBING DIAMETER (inches)	WELL SCREEN INTERVAL DEPTH	STATIC DEPTH TO WATER (feet)	PURGE PUMP TYPE OR BAILER
N/A	N/A	N/A ft to N/A ft	N/A	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)	FINAL PUMP OR TUBING DEPTH IN WELL (feet)	PURGING INITIATED AT	PURGING ENDED AT	TOTAL VOLUME PURGED (gallons)
N/A	N/A	N/A	N/A	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)
10:43	N/A	N/A	N/A	N/A	7.53	20.9	1642	9	5.16	N/A	H Brown Effluent

JA

1/8/2020

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	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT	SAMPLING ENDED AT
T. Aguilar M. Morales		10:43	10:48

PUMP OR TUBING DEPTH IN WELL (feet)	TUBING MATERIAL CODE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
N/A	N/A		

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: 10:43 (55.8)

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)

Advanced Environmental Laboratories, Inc.

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9610 Princess Palm Ave Tampa, FL 33619
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Fax: (813)630-4327

June 5, 2020

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

RE: Workorder: T2002402 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, February 05, 2020. 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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SAMPLE SUMMARY

Workorder: T2002402 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T2002402001	Leachate Effluent	Water	2/5/2020 13:20	2/5/2020 14:35
T2002402002	Field Blank	Water	2/5/2020 13:10	2/5/2020 14:35

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ANALYTICAL RESULTS

Workorder: T2002402 SELF Plant Effluent

Lab ID: **T2002402001** Date Received: 02/05/20 14:35 Matrix: Water

Sample ID: **Leachate Effluent** Date Collected: 02/05/20 13:20

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	**22079**		**umhos/cm**	**1**			2/5/2020 13:20	....
Dissolved Oxygen	**2.87**		**mg/L**	**1**			2/5/2020 13:20	....
ORP-2580BW	**71.6**		**mV**	**1**			2/5/2020 13:20	....
Temperature	**29**		**°C**	**1**			2/5/2020 13:20	....
pH	**7.42**		**SU**	**1**			2/5/2020 13:20	....
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**2200**		**mg/L**	**10**	500	240	2/10/2020 16:00	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**13000**		**mg/L**	**1**	10	10	2/6/2020 12:00	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**61**		**mg/L**	**3.3**	3.3	3.3	2/10/2020 13:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**5.6**		**mg/L**	**5**	0.50	0.39	2/5/2020 15:54	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**73**		**mg/L**	**1**	2.0	2.0	2/6/2020 20:29	T

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ANALYTICAL RESULTS

Workorder: T2002402 SELF Plant Effluent

Lab ID: **T2002402002** Date Received: 02/05/20 14:35 Matrix: Water

Sample ID: **Field Blank** Date Collected: 02/05/20 13:10

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	**24**	**U**	**mg/L**	**1**	50	24	2/10/2020 16:00	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**10**	**U**	**mg/L**	**1**	10	10	2/6/2020 12:00	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	2/10/2020 13:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**0.079**	**U**	**mg/L**	**1**	0.10	0.079	2/5/2020 15:53	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	2/6/2020 20:34	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T2002402 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: T2002402 SELF Plant Effluent

QC Batch: WCAt/1712 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T2002402001, T2002402002

METHOD BLANK: 3373216

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Nitrate (as N)	mg/L	0.079	0.079	U

LABORATORY CONTROL SAMPLE: 3373217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate (as N)	mg/L	1	0.98	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374357 3374358 Original: T2002329001

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	0.031	1	1.0	1.1	104	105	90-110	1	10	

QC Batch: WCAt/1738 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T2002402001, T2002402002

METHOD BLANK: 3374787

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

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QUALITY CONTROL DATA

Workorder: T2002402 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3374788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	650	98	85-115	

SAMPLE DUPLICATE: 3374789 Original: T2002325001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	410	400	2	10	

QC Batch: WCAt/1756 Analysis Method: SM 5210B

QC Batch Method: SM 5210B Prepared:

Associated Lab Samples: T2002402001, T2002402002

METHOD BLANK: 3376045

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

LABORATORY CONTROL SAMPLE: 3376046

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: 3376047 Original: T2002398001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	30	29	3	20	

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QUALITY CONTROL DATA

Workorder: T2002402 SELF Plant Effluent

QC Batch: WCAt/1808 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T2002402001, T2002402002

METHOD BLANK: 3377710

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

LABORATORY CONTROL SAMPLE: 3377711

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: 3377712 Original: T2002421002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	3300	3500	5	10	

QC Batch: WCAt/1812 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Prepared:
Associated Lab Samples: T2002402001, T2002402002

METHOD BLANK: 3377964

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Chemical Oxygen Demand	mg/L	24	24	U

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QUALITY CONTROL DATA

Workorder: T2002402 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3377965

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	480	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3377966 3377967 Original: T2002360002

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	81	500	540	540	92	92	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3382275 3382276 Original: A2001348001

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	57	500	580	580	105	105	90-110	0	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T2002402 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T2002402001	Leachate Effluent			SM 4500NO3-F	WCAt/1712
T2002402002	Field Blank			SM 4500NO3-F	WCAt/1712
T2002402001	Leachate Effluent			SM 2540 C	WCAt/1738
T2002402002	Field Blank			SM 2540 C	WCAt/1738
T2002402001	Leachate Effluent			SM 5210B	WCAt/1756
T2002402002	Field Blank			SM 5210B	WCAt/1756
T2002402001	Leachate Effluent			SM 2540D	WCAt/1808
T2002402002	Field Blank			SM 2540D	WCAt/1808
T2002402001	Leachate Effluent			EPA 410.4	WCAt/1812
T2002402002	Field Blank			EPA 410.4	WCAt/1812
T2002402001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

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☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.37
☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 9
☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.22
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 •
☑ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

* T 2 0 0 2 4 0 2 *

Client Name: Hills. Co. Public Utilities	Project Name: SELF Plant Effluent	BOTTLE SIZE & TYPE	
Address: 332 North Falkenburg Rd.	P.O. Number/Project Number: N/A	ANALYSIS REQUIRED	COD, BOD, TDS, TSS, Nitrate
Tampa, Florida 33619	Project Location: Southeast County Landfill		
Phone: (813) 663-3222	REMARKS/SPECIAL INSTRUCTIONS:		
FAX: (813) 274-6801			
Contact: Michael Townsel			
Sampled By:			
Turn Around Time: ☐ STANDARD ☐ RUSH			
Page: 1 of: 1			

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	PRESERVATION	COD	BOD	TDS	TSS	Nitrate	LABORATORY I.D. NUMBER
	Leachate Effluent	G	2/5/20	1320	WW	5		X	X	X	X	X	001
	Field Blank	-	2/5/20	1310	DI	5		X	X	X	X	X	002

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 Temperature when received 2.4 (in degrees celcius)

Form revised 09/19/2012

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: 1A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1		2/6	1435		2/6/20	1435
2						
3						
4						

FOR DRINKING WATER USE (When PWS Information not otherwise supplied)

PWS ID:

Contact Person: Phone:

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: 2/5/2020

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)

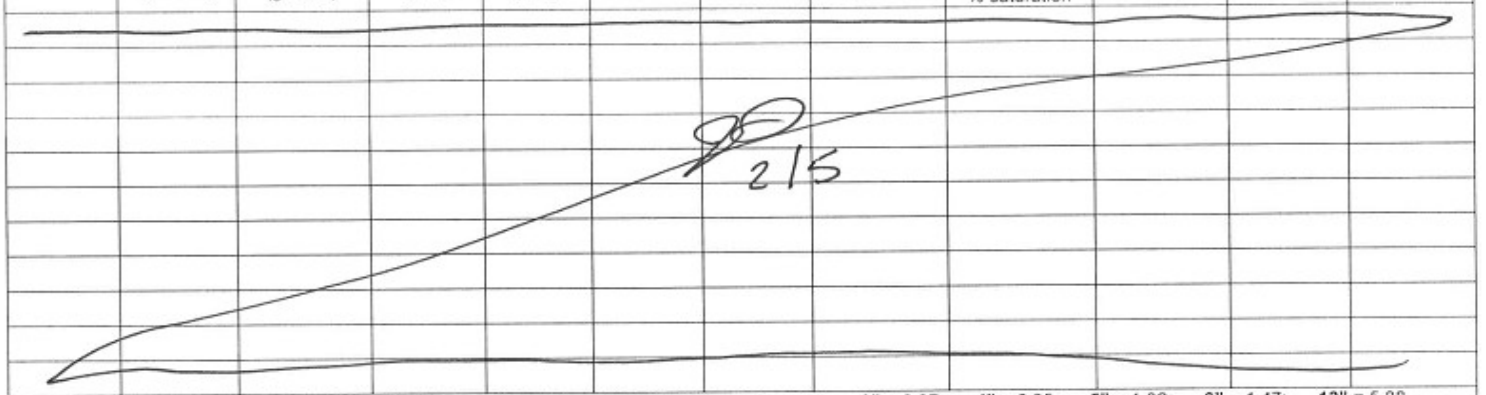
= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

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: Morales, Aguilar, Grayson	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1310	SAMPLING ENDED AT: 1313
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: 2/5/2020

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)
1320	N/A	N/A	N/A	N/A	7.73	26.3	19574	4.27	N/A	TEA	sweet

2/5/2020

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: Morales, Aguilar, Grayson	SAMPLER(S) SIGNATURE(S): M. M.	SAMPLING INITIATED AT: 1320	SAMPLING ENDED AT: 1323

2/5/2020

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: 61.7

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)

Advanced Environmental Laboratories, Inc.

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March 27, 2020

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

RE: Workorder: T2004445 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, March 04, 2020. 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

CERTIFICATE OF ANALYSIS

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SAMPLE SUMMARY

Workorder: T2004445 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T2004445001	Leachate Effluent	Water	3/4/2020 10:04	3/4/2020 14:30
T2004445002	Field Blank	Water	3/4/2020 09:58	3/4/2020 14:30

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ANALYTICAL RESULTS

Workorder: T2004445 SELF Plant Effluent

Lab ID: **T2004445001** Date Received: 03/04/20 14:30 Matrix: Water

Sample ID: **Leachate Effluent** Date Collected: 03/04/20 10:04

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	**18669**		**umhos/cm**	**1**			3/4/2020 10:04	....
Dissolved Oxygen	**4.54**		**mg/L**	**1**			3/4/2020 10:04	....
ORP-2580BW	**106.6**		**mV**	**1**			3/4/2020 10:04	....
Temperature	**24.3**		**°C**	**1**			3/4/2020 10:04	....
pH	**7.52**		**SU**	**1**			3/4/2020 10:04	....
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**950**		**mg/L**	**5**	250	120	3/6/2020 15:00	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**13000**		**mg/L**	**1**	10	10	3/5/2020 10:00	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**16**		**mg/L**	**2**	2.0	2.0	3/9/2020 14:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**3.6**		**mg/L**	**5**	0.50	0.39	3/5/2020 15:14	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**270**		**mg/L**	**5**	10	10	3/5/2020 15:13	T

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ANALYTICAL RESULTS

Workorder: T2004445 SELF Plant Effluent

Lab ID: **T2004445002** Date Received: 03/04/20 14:30 Matrix: Water

Sample ID: **Field Blank** Date Collected: 03/04/20 09:58

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	**24**	**U**	**mg/L**	**1**	50	24	3/6/2020 15:00	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**10**	**U**	**mg/L**	**1**	10	10	3/5/2020 10:00	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	3/9/2020 14:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate (as N)	**0.079**	**U**	**mg/L**	**1**	0.10	0.079	3/5/2020 15:15	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	3/5/2020 15:20	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T2004445 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: T2004445 SELF Plant Effluent

QC Batch: WCAt/2407 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T2004445001, T2004445002

METHOD BLANK: 3405451

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

LABORATORY CONTROL SAMPLE: 3405452

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	680	102	85-115	

SAMPLE DUPLICATE: 3405453 Original: T2004028023

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	770	720	7	10	

QC Batch: WCAt/2429 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T2004445001, T2004445002

METHOD BLANK: 3406049

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Nitrate (as N)	mg/L	0.079	0.079	U

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QUALITY CONTROL DATA

Workorder: T2004445 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3406050

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate (as N)	mg/L	1	0.92	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3406051 3406052 Original: T2004445002

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	1	1.0	1.1	105	107	90-110	3	10	

QC Batch: WCAt/2457 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T2004445002

METHOD BLANK: 3407604

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

LABORATORY CONTROL SAMPLE: 3407605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	200	99	85-115	

SAMPLE DUPLICATE: 3407606 Original: T2004356002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	180	170	6	10	

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QUALITY CONTROL DATA

Workorder: T2004445 SELF Plant Effluent

QC Batch: WCAt/2458 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T2004445001

METHOD BLANK: 3407609

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

LABORATORY CONTROL SAMPLE: 3407610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	210	103	85-115	

SAMPLE DUPLICATE: 3407611 Original: T2004397002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	120	110	3	10	

QC Batch: WCAt/2467 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T2004445001, T2004445002

METHOD BLANK: 3407843

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: T2004445 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3407844

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	200	102	84.6-115.4	

SAMPLE DUPLICATE: 3407845 Original: T2004444001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	34	32	5	20	

QC Batch: WCAt/2468 Analysis Method: EPA 410.4

QC Batch Method: EPA 410.4 Prepared:

Associated Lab Samples: T2004445001, T2004445002

METHOD BLANK: 3407850

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Chemical Oxygen Demand	mg/L	24	24	U

LABORATORY CONTROL SAMPLE: 3407851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	480	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3407855 3407856 Original: T2004394002

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	36	500	530	530	98	98	90-110	0	10	

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QUALITY CONTROL DATA

Workorder: T2004445 SELF Plant Effluent

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T2004445 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T2004445001	Leachate Effluent			SM 2540 C	WCAt/2407
T2004445002	Field Blank			SM 2540 C	WCAt/2407
T2004445001	Leachate Effluent			SM 4500NO3-F	WCAt/2429
T2004445002	Field Blank			SM 4500NO3-F	WCAt/2429
T2004445002	Field Blank			SM 2540D	WCAt/2457
T2004445001	Leachate Effluent			SM 2540D	WCAt/2458
T2004445001	Leachate Effluent			SM 5210B	WCAt/2467
T2004445002	Field Blank			SM 5210B	WCAt/2467
T2004445001	Leachate Effluent			EPA 410.4	WCAt/2468
T2004445002	Field Blank			EPA 410.4	WCAt/2468
T2004445001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

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☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354
☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.2288 • Fax 954.889.2281
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 850.219.6274 • Fax 850.219.6275
☑ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

Client Name:	Hills. Co. Public Utilities
Address:	332 North Falkenburg Rd.
	Tampa, Florida 33619
Phone:	(813) 663-3222
FAX:	(813) 274-6801
Contact:	Michael Townsel
Sampled By:	Morales, Grayson
Turn Around Time:	☑ STANDARD ☐ RUSH
Page:	1 of: 1

Project Name:	SELF Plant Effluent
P.O. Number/Project Number:	N/A
Project Location:	Southeast County Landfill

REMARKS/SPECIAL INSTRUCTIONS:

T20044445

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	PRESERVATION	BOTTLE SIZE & TYPE	COD	BOD	TDS	TSS	Nitrate						LABORATORY I.D
	Leachate Effluent	G	3/4/20	1004	WW	5			X	X	X	X	X						01
	Field Blank	-	3/4/20	0958	DI	5			X	X	X	X	X						02

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 Temperature when received 6 (in degrees celcius)

Form revised 09/19/2012

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: 1A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1		3/4/20	1421		3/4/2020	1420
2						
3						
4						

FOR DRINKING WATER USE (When PWS Information not otherwise supplied)

PWS ID:

Contact Person: Phone:

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: 3/4/2020

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 (mS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1004	N/A	N/A	N/A	N/A	7.52	24.3	18669	4.54	N/A	Brown	Leachate

3/4/2020

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: Morales Grayson	SAMPLER(S) SIGNATURE(S): M. Morales	SAMPLING INITIATED AT: 1004	SAMPLING ENDED AT: 1008
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: 106.6 (10:04)

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	DATE: 3/4/2020
WELL NO: Field Blank	SAMPLE ID: Field Blank	

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)

3/4/20

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: Morales, Grayson	SAMPLER(S) SIGNATURE(S): M. Morales	SAMPLING INITIATED AT: 0958	SAMPLING ENDED AT: 1002
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)