Hillsborough County Florida

PUBLIC UTILITIES
PO Box 1110 Tampa, FL 33601-1110

April 30, 2018

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 Analytical Data Report
First Quarter (January – March, 2018)

Dear Mr. Morgan:

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

The referenced plan requires monthly sampling of the leachate treatment plant effluent and the daily recording of the plant pH values. Monthly effluent samples are collected by the County and analyzed for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Total Dissolved Solids (TDS), Nitrate, and five (5) field parameters. County personnel collected effluent samples from the designated sampling port at the treatment plant on January 18, February 7, and March 28, 2018.

Daily pH values recorded by plant personnel ranged from 7.23 to 8.55 pH units, which is slightly outside the State of Florida Secondary Drinking Water Standard (SDWS), FAC Ch. 62-550.320 of 6.5 to 8.5 pH units. However, pH values from the monthly analytical samples collected ranged from 7.73 to 8.18 pH units and are in compliance with SDWS.

Monthly pH logs from the treatment plant are included within this submittal. Additionally, the effluent samples collected were analyzed by our contract laboratory, Advanced Environmental Laboratories, Inc., and the complete results are provided for your technical review. Should you have any questions or comments concerning the information provided, please feel free to contact me at (813) 663-3222.

Respectfully,

Michael D. Townsel 4/30/2018
Senior Hydrologist
Public Utilities Department
Environmental Services

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

PH Calibration Log

Month	JAN 2018					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1						
2	4.00	7.01	10.01	7.68	8.00	8.10
3	4.00	7.02	10.01	7.56	7.85	RAIN
4	4.00	7.05	10.00	7.45	7.69	8.00
5	4.00	7.04	10.01	7.67	7.85	7.96
6	4.00	7.09	10.01	7.69	8.05	8.10
7						
8	4.00	7.02	10.00	7.70	8.15	8.04
9	4.00	7.01	10.00	7.62	8.20	
10	4.00	7.00	10.03	7.64	8.12	
11	4.00	7.00	10.01	7.61	8.10	8.20
12	4.01	7.00	10.04	7.77	8.07	
13	4.00	7.01	10.01	7.68	7.83	8.02
14	4.00	7.00	9.99	7.53		
15						
16	4.00	6.99	10.00	7.55	7.85	8.20
17	4.00	7.00	10.02	7.60	7.81	
18	4.01	7.02	10.00	7.74	7.81	
19	4.00	7.03	10.01	7.71	7.82	8.15
20	4.00	7.02	10.03	7.66	7.70	8.05
21						
22	4.00	7.01	10.01	7.60	7.72	8.19
23	4.01	7.00	10.02	7.87	7.82	
24	4.00	7.01	10.00	7.61	7.77	8.07
25	4.00	7.03	10.01	7.60	7.81	8.10
26	4.01	7.02	10.01	7.70	7.81	8.15
27	4.00	7.02	10.01	7.65	7.54	7.98
28						
29	4.00	7.01	10.00	7.48	7.64	8.20
30	4.00	7.02	10.00	7.51	7.70	8.35
31	4.00	7.00	10.01	7.57	7.71	8.05

Month	FEB. 2018	PH Calibration Log				
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.00	7.02	10.01	7.65	7.79	
2	4.00	7.01	10.01	7.52	7.77	7.95
3	4.00	7.02	10.01	7.61	8.04	7.94
4						
5	4.00	7.01	10.01	7.51	8.01	8.00
6	4.00	7.02	10.01	7.50	8.04	
7	4.01	7.06	10.00	7.52	8.05	
8	4.00	7.00	10.01	7.55	7.96	7.95
9	4.00	7.01	10.01	7.68	7.94	7.97
10	4.00	7.01	10.01	7.63		8.02
11						
12	4.00	7.01	10.01	7.45	7.78	8.20
13	4.00	7.00	10.05	7.79	7.23	
14	4.00	7.00	10.01	7.77	7.73	8.33
15	4.00	7.01	10.01	7.61		8.10
16	4.00	7.01	10.00	7.85	7.73	8.23
17	4.00	7.01	10.01	7.74	8.46	8.35
18						
19	4.00	7.06	10.00	7.75	8.30	
20	4.00	7.05	10.00	7.78	8.52	8.07
21	4.00	7.00	10.00	7.89	8.31	8.25
22	4.00	7.01	10.00	7.75	8.22	8.27
23	4.00	7.00	10.00	7.82	8.05	8.25
24	4.00	7.01	10.01	7.84	8.32	8.37
25						
26	4.00	7.00	10.00	7.80	8.38	8.10
27	4.00	7.00	10.00	7.78	8.25	8.05
28	4.00	7.01	10.01	7.86	8.11	8.31
29						
30						
31						

PH Calibration Log

Month	MAR. 18					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.00	7.00	10.00	7.83	8.20	8.20
2	4.00	7.00	10.00	7.76	8.15	8.21
3	4.00	7.03	10.03	7.90	8.38	8.20
4						
5	4.00	7.01	10.00	7.80	7.97	8.15
6	3.97	7.00	9.98	7.55	8.10	8.20
7	4.00	7.08	10.01	7.71	8.20	NO SPRAY
8	4.01	7.01	10.00	7.77	7.87	8.10
9	4.00	7.03	10.01	7.82	7.92	8.17
10	4.00	7.03	10.01	7.63	8.00	7.75
11						
12	4.01	7.01	10.02	7.54	8.21	7.84
13	4.00	7.07	10.00	7.55	8.37	
14	4.00	6.98	9.98	7.62	8.30	8.04
15	4.00	7.03	10.01	7.72	8.43	8.27
16	4.00	7.04	10.00	7.71	8.43	8.49
17	3.99	7.03	10.01	7.66	8.39	8.22
18						
19	4.00	6.99	10.00	7.55	8.33	8.39
20	4.00	7.00	10.00	7.60	8.28	8.30
21	4.00	7.02	10.01	7.59	8.43	8.41
22	4.00	7.04	10.01	7.73	8.55	8.30
23	4.00	7.03	10.00	7.67	8.33	8.30
24	4.00	7.03	10.01	7.59	8.29	8.31
25						
26	4.00	7.01	10.00	7.70	8.40	8.35
27	4.00	7.01	10.01	7.61	8.20	8.38
28	4.00	7.02	10.01	7.70	8.49	8.40
29	4.00	7.02	10.02	7.77	8.39	8.48
30	4.00	7.02	10.01	7.62	8.42	8.44
31						

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, 2018

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

RE: Workorder: T1801082 SELF Plant Effluent

Dear MIchael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Thursday, January 18, 2018. 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

Advanced Environmental Laboratories, Inc.

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9610 Princess Palm Ave Tampa, FL 33619
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SAMPLE SUMMARY

Workorder: T1801082 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1801082001	Leachate Effluent	Water	1/18/2018 10:55	1/18/2018 13:55
T1801082002	Field Blank	Water	1/18/2018 10:45	1/18/2018 13:55

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ANALYTICAL RESULTS

Workorder: T1801082 SELF Plant Effluent

Lab ID: **T1801082001** Date Received: 01/18/18 13:55 Matrix: Water

Sample ID: **Leachate Effluent** Date Collected: 01/18/18 10:55

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	**14275**		**umhos/cm**	**1**			1/18/2018 10:55	....
Dissolved Oxygen	**3.31**		**mg/L**	**1**			1/18/2018 10:55	....
ORP-2580BW	**-9.9**		**mV**	**1**			1/18/2018 10:55	....
Temperature	**18**		**°C**	**1**			1/18/2018 10:55	....
pH	**7.73**		**SU**	**1**			1/18/2018 10:55	....
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**1600**		**mg/L**	**10**	500	240	1/23/2018 14:36	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**8300**		**mg/L**	**1.25**	12	12	1/23/2018 06:30	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**110**		**mg/L**	**5**	5.0	5.0	1/22/2018 08:29	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	1/19/2018 09:31	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**450**		**mg/L**	**1**	2.0	2.0	1/19/2018 11:16	T

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ANALYTICAL RESULTS

Workorder: T1801082 SELF Plant Effluent

Lab ID: **T1801082002** Date Received: 01/18/18 13:55 Matrix: Water

Sample ID: **Field Blank** Date Collected: 01/18/18 10:45

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	1/23/2018 14:36	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**12**	**U**	**mg/L**	**1.25**	12	12	1/23/2018 06:30	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	1/22/2018 08:29	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	1/19/2018 09:32	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	1/19/2018 11:22	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T1801082 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: T1801082 SELF Plant Effluent

QC Batch: WCAt/1277 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T1801082001, T1801082002

METHOD BLANK: 2592831

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Nitrate	mg/L	0.18	0.18	U

LABORATORY CONTROL SAMPLE: 2592832

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate	mg/L	1	1.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2592833 2592834 Original: T1801034001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate	mg/L	2	1	3.1	3.0	103	98	90-110	2	10	

QC Batch: WCAt/1292 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T1801082001, T1801082002

METHOD BLANK: 2593190

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: T1801082 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2593191

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	210	107	84.6-115.4	

SAMPLE DUPLICATE: 2593192 Original: T1801082001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	450	520	15	20	

QC Batch: WCAt/1306 Analysis Method: SM 2540D

QC Batch Method: SM 2540D Prepared:

Associated Lab Samples: T1801082001, T1801082002

METHOD BLANK: 2593958

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

LABORATORY CONTROL SAMPLE: 2593959

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	210	107	75-125	

SAMPLE DUPLICATE: 2593960 Original: T1801086002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	3700	3800	2	10	

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QUALITY CONTROL DATA

Workorder: T1801082 SELF Plant Effluent

QC Batch: WCAt/1326 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T1801082001, T1801082002

METHOD BLANK: 2595263

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

LABORATORY CONTROL SAMPLE: 2595264

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	570	86	75-125	

SAMPLE DUPLICATE: 2595265 Original: T1801065001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	27000	27000	1	5	

SAMPLE DUPLICATE: 2595266 Original: T1801051001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	180	180	4	5	

QC Batch: WCAt/1340 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Prepared:
Associated Lab Samples: T1801082001, T1801082002

METHOD BLANK: 2595798

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: T1801082 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2595799

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	490	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2595801 2595802 Original: T1801082002

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	11	500	520	520	104	104	90-110	0	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1801082 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1801082001	Leachate Effluent			SM 4500NO3-F	WCAt/1277
T1801082002	Field Blank			SM 4500NO3-F	WCAt/1277
T1801082001	Leachate Effluent			SM 5210B	WCAt/1292
T1801082002	Field Blank			SM 5210B	WCAt/1292
T1801082001	Leachate Effluent			SM 2540D	WCAt/1306
T1801082002	Field Blank			SM 2540D	WCAt/1306
T1801082001	Leachate Effluent			SM 2540 C	WCAt/1326
T1801082002	Field Blank			SM 2540 C	WCAt/1326
T1801082001	Leachate Effluent			EPA 410.4	WCAt/1340
T1801082002	Field Blank			EPA 410.4	WCAt/1340
T1801082001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

Advanced
Environmental Laboratories, Inc.

☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597
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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

T 180182

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: T. Aguilar J. Fuller
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:

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	PRESERVATION	BOTTLE SIZE & TYPE	ANALYSIS REQUIRED: COD	BOD	TDS	TSS	Nitrate						LABORATORY I.D. NUMBER
	Leachate Effluent	G	1-17-18	10:55	WW	5			X	X	X	X	X						W1
	Field Blank	—	1-18-18	10:45	DI	5			X	X	X	X	X						W2

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 14.0 (in degrees celcius)
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
Form revised 09/19/2012

	Relinquished by:	Date	Time	Received by:	Date	Time
1		1-18-18	13:50		1/18/18	1355
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: 1-18-16

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)
10:55	N/A	N/A	N/A	N/A	7.73	18.0	14275	3.31	N/A	Brown	Effluent
				GA	1-18-16						

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: L. Aguilar J. Fuller	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 10:55	SAMPLING ENDED AT: 11:00
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: 10:55 (-9.9)

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: 1-18-18

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)

1-18-18 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: T. Aguilar J. Fuller	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 10:45	SAMPLING ENDED AT: 10:50
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)

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 26, 2018

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

RE: Workorder: T1802158 SELF Plant Effluent

Dear MIchael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, February 07, 2018. 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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SAMPLE SUMMARY

Workorder: T1802158 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1802158001	Leachate	Water	2/7/2018 09:02	2/7/2018 13:56
T1802158002	Field Blank	Water	2/7/2018 08:56	2/7/2018 13:56

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
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ANALYTICAL RESULTS

Workorder: T1802158 SELF Plant Effluent

Lab ID: **T1802158001** Date Received: 02/07/18 13:56 Matrix: Water

Sample ID: **Leachate** Date Collected: 02/07/18 09:02

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	**14545**		**umhos/cm**	**1**			2/7/2018 09:02	....
Dissolved Oxygen	**6.49**		**mg/L**	**1**			2/7/2018 09:02	....
ORP-2580BW	**172.7**		**mV**	**1**			2/7/2018 09:02	....
Temperature	**23.6**		**°C**	**1**			2/7/2018 09:02	....
pH	**8.08**		**SU**	**1**			2/7/2018 09:02	....
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**710**		**mg/L**	**1**	50	24	2/13/2018 14:40	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**9000**		**mg/L**	**1.25**	12	12	2/13/2018 08:11	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**20**		**mg/L**	**1**	1.0	1.0	2/12/2018 13:07	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**170**		**mg/L**	**20**	4.0	3.5	2/8/2018 15:40	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**12**		**mg/L**	**1**	2.0	2.0	2/8/2018 12:54	T

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ANALYTICAL RESULTS

Workorder: T1802158 SELF Plant Effluent

Lab ID: **T1802158002** Date Received: 02/07/18 13:56 Matrix: Water

Sample ID: **Field Blank** Date Collected: 02/07/18 08:56

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	2/13/2018 14:40	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**12**	**U**	**mg/L**	**1.25**	12	12	2/13/2018 08:11	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	2/12/2018 13:07	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	2/8/2018 14:16	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	2/8/2018 12:57	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T1802158 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: T1802158 SELF Plant Effluent

QC Batch: WCAt/1628 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T1802158001, T1802158002

METHOD BLANK: 2612380

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Nitrate	mg/L	0.18	0.18	U

LABORATORY CONTROL SAMPLE: 2612381

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate	mg/L	1	1.1	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2612382 2612383 Original: T1802133004

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate	mg/L	0.02	1	1.0	1.1	103	108	90-110	4	10	

QC Batch: WCAt/1637 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T1802158001, T1802158002

METHOD BLANK: 2612806

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: T1802158 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2612807

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	180	90	84.6-115.4	

SAMPLE DUPLICATE: 2612808 Original: T1802146001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	2100	2200	5	20	

QC Batch: WCAt/1683 Analysis Method: SM 2540D

QC Batch Method: SM 2540D Prepared:

Associated Lab Samples: T1802158001, T1802158002

METHOD BLANK: 2615911

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

LABORATORY CONTROL SAMPLE: 2615912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	180	91	75-125	

SAMPLE DUPLICATE: 2615913 Original: T1802168001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	230	220	4	10	

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QUALITY CONTROL DATA

Workorder: T1802158 SELF Plant Effluent

QC Batch: WCAt/1689 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T1802158001, T1802158002

METHOD BLANK: 2616295

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

LABORATORY CONTROL SAMPLE: 2616296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	630	95	75-125	

SAMPLE DUPLICATE: 2616297 Original: T1802151002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	210	200	4	5	

SAMPLE DUPLICATE: 2616298 Original: T1802283002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	330	320	2	5	

QC Batch: WCAt/1713 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Prepared:
Associated Lab Samples: T1802158001, T1802158002

METHOD BLANK: 2617047

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: T1802158 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2617048

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	490	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2617050 2617051 Original: T1802095001

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	47	500	550	550	101	101	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2617052 2617053 Original: T1802158002

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	13	500	510	510	102	102	90-110	0	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1802158 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1802158001	Leachate			SM 4500NO3-F	WCAt/1628
T1802158002	Field Blank			SM 4500NO3-F	WCAt/1628
T1802158001	Leachate			SM 5210B	WCAt/1637
T1802158002	Field Blank			SM 5210B	WCAt/1637
T1802158001	Leachate			SM 2540D	WCAt/1683
T1802158002	Field Blank			SM 2540D	WCAt/1683
T1802158001	Leachate			SM 2540 C	WCAt/1689
T1802158002	Field Blank			SM 2540 C	WCAt/1689
T1802158001	Leachate			EPA 410.4	WCAt/1713
T1802158002	Field Blank			EPA 410.4	WCAt/1713
T1802158001	Leachate	Field Measurements	FLDt/	Field Measurements	FLDt/

Advanced Environmental Laboratories, Inc.

☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597
☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639
☐ **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

T180 2158

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: T. Aguilar J. Fuller
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:

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	PRESERVATION	BOTTLE SIZE & TYPE	ANALYSIS REQUIRED: COD	BOD	TDS	TSS	Nitrate						LABORATORY I.D. NUMBER
	Leachate Effluent	G	2-7-18	9:02	WW	5			X	X	X	X	X						001
	Field Blank	—	2-7-18	8:56	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 4.9 (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		2-9-18	13:56		2/7/18	1356
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: 2-7-16

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)
9:02	N/A	N/A	N/A	N/A	8.08	23.6	14545	6.49	N/A	Brown	Leachate
				GA 2-7-16							

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 S. Fuller	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 9:02	SAMPLING ENDED AT: 9:05
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: 9:02 (~~146.3~~) (172.7) GA 2-7-16

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: 2-7-18

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 2-7-18 0A								

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 J. Fuller	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 8:56	SAMPLING ENDED AT: 9:00
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.**

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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.

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

April 18, 2018

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

RE: Workorder: T1805191 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, March 28, 2018. 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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SAMPLE SUMMARY

Workorder: T1805191 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1805191001	Leachate Effluent	Water	3/28/2018 09:13	3/28/2018 11:59
T1805191002	Field Blank	Water	3/28/2018 09:06	3/28/2018 11:59

CERTIFICATE OF ANALYSIS

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Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1805191 SELF Plant Effluent

Lab ID: **T1805191001** Date Received: 03/28/18 11:59 Matrix: Water

Sample ID: **Leachate Effluent** Date Collected: 03/28/18 09:13

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	**15041**		**umhos/cm**	**1**			3/28/2018 09:13	....
Dissolved Oxygen	**5.08**		**mg/L**	**1**			3/28/2018 09:13	....
ORP-2580BW	**202**		**mV**	**1**			3/28/2018 09:13	....
Temperature	**23.5**		**°C**	**1**			3/28/2018 09:13	....
pH	**8.18**		**SU**	**1**			3/28/2018 09:13	....
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**620**		**mg/L**	**1**	50	24	4/3/2018 14:02	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**9000**		**mg/L**	**1**	10	10	4/3/2018 07:03	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**6.6**		**mg/L**	**1**	1.0	1.0	4/2/2018 15:14	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**200**		**mg/L**	**20**	4.0	3.5	3/29/2018 12:22	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**4.2**		**mg/L**	**1**	2.0	2.0	3/29/2018 13:45	T

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ANALYTICAL RESULTS

Workorder: T1805191 SELF Plant Effluent

Lab ID: **T1805191002** Date Received: 03/28/18 11:59 Matrix: Water

Sample ID: **Field Blank** Date Collected: 03/28/18 09:06

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	4/3/2018 14:02	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**10**	**U**	**mg/L**	**1**	10	10	4/3/2018 07:03	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	4/2/2018 15:14	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	3/29/2018 12:25	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	3/29/2018 13:48	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T1805191 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: T1805191 SELF Plant Effluent

QC Batch: WCAt/2632 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T1805191001, T1805191002

METHOD BLANK: 2662881

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Nitrate	mg/L	0.18	0.18	U

LABORATORY CONTROL SAMPLE: 2662882

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate	mg/L	1	1.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2662883 2662884 Original: T1805175001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate	mg/L	0	1	1.1	0.97	108	97	90-110	12	10	

QC Batch: WCAt/2647 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T1805191001, T1805191002

METHOD BLANK: 2663634

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: T1805191 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2663635

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	180	92	84.6-115.4	

SAMPLE DUPLICATE: 2663636 Original: T1805237001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	1500	1500	6	20	

QC Batch: WCAt/2683 Analysis Method: SM 2540D

QC Batch Method: SM 2540D Prepared:

Associated Lab Samples: T1805191001, T1805191002

METHOD BLANK: 2665374

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

LABORATORY CONTROL SAMPLE: 2665375

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	230	114	85-115	

SAMPLE DUPLICATE: 2665376 Original: T1805137002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	140	150	7	10	

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QUALITY CONTROL DATA

Workorder: T1805191 SELF Plant Effluent

QC Batch: WCAt/2687 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T1805191001, T1805191002

METHOD BLANK: 2665979

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

LABORATORY CONTROL SAMPLE: 2665980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	750	113	85-115	

SAMPLE DUPLICATE: 2665981 Original: T1805089001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	170	190	9	10	

QC Batch: WCAt/2695 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Prepared:
Associated Lab Samples: T1805191001, T1805191002

METHOD BLANK: 2666174

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: T1805191 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2666175

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	520	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2666841 2666842 Original: T1805191002

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	500	510	510	102	102	90-110	0	10	

QUALITY CONTROL DATA QUALIFIERS

Workorder: T1805191 SELF Plant Effluent

QUALITY CONTROL 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.

J4 Estimated Result

CERTIFICATE OF ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1805191 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1805191001	Leachate Effluent			SM 4500NO3-F	WCAt/2632
T1805191002	Field Blank			SM 4500NO3-F	WCAt/2632
T1805191001	Leachate Effluent			SM 5210B	WCAt/2647
T1805191002	Field Blank			SM 5210B	WCAt/2647
T1805191001	Leachate Effluent			SM 2540D	WCAt/2683
T1805191002	Field Blank			SM 2540D	WCAt/2683
T1805191001	Leachate Effluent			SM 2540 C	WCAt/2687
T1805191002	Field Blank			SM 2540 C	WCAt/2687
T1805191001	Leachate Effluent			EPA 410.4	WCAt/2695
T1805191002	Field Blank			EPA 410.4	WCAt/2695
T1805191001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

Advanced Environmental Laboratories, Inc.

☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597
☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639
☐ **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

T1805191

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	
Phone: (813) 663-3222	REMARKS/SPECIAL INSTRUCTIONS:		
FAX: (813) 274-6801			
Contact: Michael Townsel			
Sampled By: J. Fuller & T. Aguilar			
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	3/28/16	9:13	WW	5		X	X	X	X	X						01
	Field Blank	—	3/28/16	9:06	DI	~~5~~ 3 3/28/16		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 4C (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		3/28/16	11:59		3-28-16	~~11:58~~ 11:59
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: 3/28/18

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)
9:13	—	—	—	—	8.18	23.5	15041	5.08	—	Lite Brown	Leachate

OA 3/28/18

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 J. Fuller	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 9:13	SAMPLING ENDED AT: 9:18
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:** 9:13 (202.0)

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: 3/28/18

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)

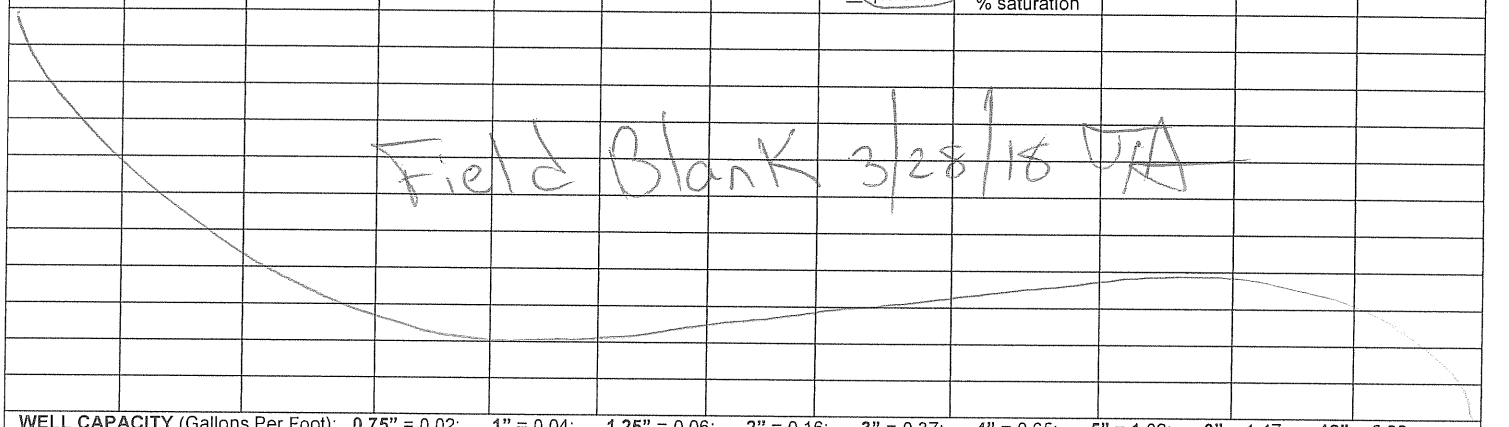
= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

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 J. Fuller	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 9:06	SAMPLING ENDED AT: 9:11
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)

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