Smith, George

From: Townsel, Michael <TownselM@HillsboroughCounty.ORG>
Sent: Tuesday, October 16, 2018 10:15 AM
To: Morgan, Steve
Cc: Chamberlain, Justin; SWD_Waste; Ruiz, Larry; Wiesman, Ronald; Greenwell, Jeffry; Watson, Edward; Cope, Ronald; Byer, Kimberly; Pelley, Cindy; Moore, Clark B.
Subject: Southeast County Landfill - 3rd Quarter Effluent Report
Attachments: SELF2018-3rdQtrEffluent.pdf

Dear Mr. Morgan,

In accordance with Part 9.1.2 of the Southeast County Landfill Leachate Management Plan, attached please find an electronic copy of the 3rd Quarter 2018 Effluent data report. The Adapt files shall be submitted through the FDEP Business Portal.

Should you have any questions or wish to discuss the information submitted, please do not hesitate to call me at (813) 663-3222.

Best Regards,

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

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

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

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Hillsborough County Florida

PUBLIC UTILITIES
PO Box 1110
Tampa, FL 33601-1110

October 15, 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
Third Quarter (July – August, 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 this quarterly report to provide the laboratory analytical data for the sampling of effluent at the leachate treatment plant, located at the SCLF at 15960 County Road 672 in Lithia, Florida.

Monthly sampling of the leachate treatment plant effluent and the daily recording of the plant pH was conducted as required by the referenced plan. County personnel collected effluent samples from the designated sampling port at the treatment plant on July 18, 2018 for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Total Dissolved Solids (TDS), Nitrate, and five (5) field parameters. Sampling was not conducted during the remainder of the third quarter due to the treatment plant shutting down on August 15, 2018 for their 3-year inspection.

Daily pH for the effluent was recorded by plant personnel and the logs are depicted as part of this submittal. Over this quarter, the pH ranged from 7.26 to 8.12 pH units and are within the State of Florida Secondary Drinking Water Standard (SDWS), FAC Ch. 62-550.320 of 6.5 to 8.5

pH units. The analytical sample collected from the effluent port recorded pH at 7.16 pH units. Once the plant goes back online, the County shall collect the required parameters outlined in the permit. 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 10/15/2018
Senior Hydrologist
Public Utilities Department
Environmental Services

ec: 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 Dept.
Ron Cope, Hillsborough County EPC

PH Calibration Log

Month	July 18					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1						
2	4.00	7.00	10.01	7.35	7.93	N/S
3	4.00	6.98	10.01	7.41	7.97	N/S
4	3.99	7.00	10.01	7.40	8.02	N/S
5	3.99	7.01	10.00	7.35	8.00	N/S
6	4.00	7.03	10.00	7.43	8.04	N/S
7	3.99	7.00	10.00	7.40	7.78	N/S
8						
9	4.00	7.00	10.00	7.30	8.00	N/S
10	3.99	7.01	10.00	7.50	8.10	N/S
11	4.00	6.99	10.00	7.26	7.87	N/S
12	4.00	6.99	10.00	7.72	8.07	N/S
13	3.99	7.01	10.01	7.54	8.12	N/S
14	3.98	7.02	10.00	7.38		N/S
15						
16	4.00	7.00	10.00	7.53	7.69	N/S
17	4.00	6.99	10.00	7.57	7.60	N/S
18	3.99	6.99	10.01	7.61	7.74	N/S
19	4.00	6.99	10.00	7.57	7.52	N/S
20	4.00	7.00	10.01	7.62	7.54	N/S
21	4.00	7.00	10.04	7.55		N/S
22						
23	3.99	7.02	9.99	7.40	7.35	N/S
24	4.00	7.06	10.00	7.54	7.63	N/S
25	4.00	6.99	10.00	7.48	7.61	N/S
26	3.99	6.98	10.00	7.52	7.95	N/S
27	3.99	7.02	10.01	7.30	7.80	N/S
28	4.00	7.00	10.02	7.27		N/S
29	3.98	7.00	10.00	7.47		N/S
30	3.99	6.98	10.01	7.17	7.70	N/S
31	3.99	6.96	9.99	7.30	7.75	N/S

PH Calibration Log

Month	AUGUST					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.00	7.01	10.01	7.40	7.86	N/S
2	4.00	6.99	10.00	7.44	7.92	N/S
3	4.00	6.99	10.00	7.33	7.72	N/S
4	4.02	6.98	10.00	7.28		N/S
5	4.00	7.00	10.00	7.29		N/S
6	4.00	7.00	10.00	7.35	7.51	N/S
7	4.00	6.98	10.00	7.28	7.51	N/S
8	4.00	7.02	10.01	7.27	7.44	N/S
9	4.00	6.99	10.01	7.09	7.26	N/S
10	4.00	7.00	10.00	7.40	7.53	N/S
11	3.99	6.98	10.00	7.38		N/S
12	4.00	7.01	10.00	7.17		N/S
13	4.01	6.99	10.00	7.39	8.03	N/S
14	4.00	6.99	10.01	7.51	8.09	N/S
15	4.00	6.99	10.00	7.46	8.09	N/S
16	4.00	7.00	10.01	7.51		N/S
17	3.95	6.99	10.01	7.69		N/S
18	3.98	6.99	10.00	7.10		N/S
19	3.99	7.00	10.01	7.32		N/S
20	3.99	6.99	10.00	7.60		N/S
21	4.00	7.00	10.00	7.49		N/S
22	4.00	6.99	10.00	7.53		N/S
23	4.00	7.00	10.00	7.51		N/S
24	4.00	6.96	10.00	7.80		N/S
25	4.06	7.00	10.00	7.55		N/S
26	4.05	7.04	10.01	7.22		N/S
27	4.00	6.96	10.00	7.40		N/S
28	4.00	6.99	10.00	7.35		N/S
29	4.00	6.99	10.00	7.44		N/S
30	4.00	6.99	10.02	7.55		N/S
31	4.01	6.96	10.00	7.63		N/S

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

August 8, 2018

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

RE: Workorder: T1812049 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, July 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

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SAMPLE SUMMARY

Workorder: T1812049 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1812049001	Leachate Effluent	Water	7/18/2018 12:27	7/18/2018 13:40
T1812049002	Field Blank	Water	7/18/2018 12:23	7/18/2018 13:40

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: T1812049 SELF Plant Effluent

Lab ID: **T1812049001** Date Received: 07/18/18 13:40 Matrix: Water

Sample ID: **Leachate Effluent** Date Collected: 07/18/18 12:27

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	**12798**		**umhos/cm**	**1**			7/18/2018 12:27	....
Dissolved Oxygen	**1.17**		**mg/L**	**1**			7/18/2018 12:27	....
ORP-2580BW	**-67**		**mV**	**1**			7/18/2018 12:27	....
Temperature	**30.8**		**°C**	**1**			7/18/2018 12:27	....
pH	**7.16**		**SU**	**1**			7/18/2018 12:27	....
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**1800**		**mg/L**	**10**	500	240	7/23/2018 14:20	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**8700**		**mg/L**	**1**	10	10	7/23/2018 15:45	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**320**		**mg/L**	**10**	10	10	7/23/2018 13:42	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	7/19/2018 15:42	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**840**		**mg/L**	**1**	2.0	2.0	7/18/2018 15:08	T

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ANALYTICAL RESULTS

Workorder: T1812049 SELF Plant Effluent

Lab ID: **T1812049002** Date Received: 07/18/18 13:40 Matrix: Water

Sample ID: **Field Blank** Date Collected: 07/18/18 12:23

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	7/23/2018 14:20	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**10**	**U**	**mg/L**	**1**	10	10	7/23/2018 15:45	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	7/20/2018 15:04	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	7/19/2018 15:39	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	7/18/2018 15:11	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T1812049 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: T1812049 SELF Plant Effluent

QC Batch: WCAt/4853 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T1812049001, T1812049002

METHOD BLANK: 2778822

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

LABORATORY CONTROL SAMPLE: 2778823

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

SAMPLE DUPLICATE: 2778824 Original: T1811901001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	210	210	2	20	

QC Batch: WCAt/4899 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T1812049001, T1812049002

METHOD BLANK: 2781011

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

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QUALITY CONTROL DATA

Workorder: T1812049 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2781012

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2781013 2781014 Original: T1812089002

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	2.7	1	3.7	3.7	106	108	90-110	0	10	

QC Batch: WCAt/4908 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T1812049002

METHOD BLANK: 2781150

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

LABORATORY CONTROL SAMPLE: 2781151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	170	87	85-115	

SAMPLE DUPLICATE: 2781152 Original: T1812053001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	160	160	0	10	

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QUALITY CONTROL DATA

Workorder: T1812049 SELF Plant Effluent

QC Batch: WCAt/4926 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T1812049001

METHOD BLANK: 2782467

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

LABORATORY CONTROL SAMPLE: 2782468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	170	85	85-115	

SAMPLE DUPLICATE: 2782469 Original: M1802876003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	4500	4500	0	10	

QC Batch: WCAt/4929 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T1812049001, T1812049002

METHOD BLANK: 2782485

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: T1812049 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2782486

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	650	99	85-115	

SAMPLE DUPLICATE: 2782487 Original: T1811903002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	62	100	3	10	

QC Batch: WCAt/4945 Analysis Method: EPA 410.4

QC Batch Method: EPA 410.4 Prepared:

Associated Lab Samples: T1812049001, T1812049002

METHOD BLANK: 2783353

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

LABORATORY CONTROL SAMPLE: 2783354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	490	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2783356 2783357 Original: T1811970001

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	2500	5000	7400	7400	98	98	90-110	0	10	

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QUALITY CONTROL DATA

Workorder: T1812049 SELF Plant Effluent

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2783360 2783361 Original: T1812049002

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	2.2	500	490	490	98	98	90-110	0	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1812049 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1812049001	Leachate Effluent			SM 5210B	WCAt/4853
T1812049002	Field Blank			SM 5210B	WCAt/4853
T1812049001	Leachate Effluent			SM 4500NO3-F	WCAt/4899
T1812049002	Field Blank			SM 4500NO3-F	WCAt/4899
T1812049002	Field Blank			SM 2540D	WCAt/4908
T1812049001	Leachate Effluent			SM 2540D	WCAt/4926
T1812049001	Leachate Effluent			SM 2540 C	WCAt/4929
T1812049002	Field Blank			SM 2540 C	WCAt/4929
T1812049001	Leachate Effluent			EPA 410.4	WCAt/4945
T1812049002	Field Blank			EPA 410.4	WCAt/4945
T1812049001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

T18|2049

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 352.385.6639
☐ **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

Client Name: Hills. Co. Public Utilities	Project Name: SELF Plant Effluent
Address: 332 North Falkenburg Rd.	P.O. Number/Project Number: N/A
Tampa, Florida 33619	Project Location: Southeast County Landfill
Phone: (813) 663-3222	REMARKS/SPECIAL INSTRUCTIONS:
FAX: (813) 274-6801	
Contact: Michael Townsel	
Sampled By: T. Aguilar J. Fuller	
Turn Around Time: ☒ STANDARD ☐ RUSH	
Page: 1 of: 1	

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	PRESERVATION	ANALYSIS REQUIRED: COD	BOD	TDS	TSS	Nitrate	BOTTLE SIZE & TYPE	LABORATORY I.D. NUMBER
	Leachate Effluent	G	7/13/16	12:27	WW	5		X	X	X	X	X		01
	Field Blank	-	7/13/16	12:23	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 4.5 (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		7/13/16	13:39		7/14/16	13:40
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: 7/18/18

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: 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)
12:27	N/A	N/A	N/A	N/A	7.16	30.8	12798	1.17	N/A	Black	waste

GTA 7/18/18

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: 12:27	SAMPLING ENDED AT: 12:30
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:** 12:27 (-67.0)

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: 7/18/18

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)

Field Blank 7/18/18 GA

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
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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. Fulker	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 12:23	SAMPLING ENDED AT: 12:26

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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