



**Hillsborough
County** Florida

PUBLIC UTILITIES
PO Box 1110
Tampa, FL 33601-1110

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

Quarterly Effluent Report – Third Quarter 2020

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

Michael D. Townsel

**Michael D. Townsel
Hydrologist
Environmental Services Division
Public Utilities Department**

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 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 LMP. County personnel collected the effluent samples from the designated sampling port on July 8, August 5, and September 2, 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. In addition, daily pH for the effluent was recorded from 7.50 to 8.69 pH units by plant personnel and the field logs are depicted as part of the submittal. No unusual changes were observed and the results are consistent with the historical data set.

Month	PH Calibration Log					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.01	7.00	10.00	7.96	8.45	8.50
2	4.01	7.00	10.00	7.70	8.37	8.50
3	4.0	7.0	10.02	7.43	8.49	8.46
4						8.47
5	4.0	7.0	10.01	7.47	8.51	8.49
6	4.00	7.00	10.00	7.28	8.14	8.45
7	4.00	7.00	10.00	7.32	8.16	8.48
8	4.01	7.00	10.00	7.54	8.43	8.50
9	4.00	7.00	10.01	7.55	8.13	8.46
10	4.01	7.00	10.01	7.47	8.17	8.39
11						8.31
12						
13	4.00	7.00	10.00	7.41	7.96	8.28
14	4.00	7.00	10.00	7.49	8.15	8.37
15	4.00	7.01	10.00	7.46	8.18	8.34
16	4.00	7.00	10.00	8.02	8.38	8.38
17	4.01	7.00	10.00	7.78	8.42	8.50
18						8.25
19						
20	4.01	7.00	10.01	8.06	8.21	8.46
21	4.01	7.00	10.00	7.82	8.37	8.23
22	4.01	7.00	10.00	8.10	8.40	8.38
23	4.00	7.00	10.00		8.46	8.50
24	4.00	7.00	10.00	7.65	8.34	8.34
25						
26						
27	4.01	7.00	10.00	7.78	8.13	—
28	4.00	7.00	10.00	7.76	8.28	8.37
29	4.00	7.00	10.00	7.20	8.16	8.50
30	4.01	7.00	10.00	7.71	8.28	8.48
31	4.01	7.00	10.01	7.97	8.58	✓

Month	PH Calibration Log					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1						
2						
3	4.00	7.00	10.00	7.87	8.26	
4	4.01	7.00	10.00	7.77	8.28	8.48
5	4.00	7.00	10.01	7.76	8.10	8.50
6	4.00	7.00	10.00	7.72	8.35	8.47
7	4.00	7.00	10.00	7.47	8.27	8.49
8						
9						
10	4.01	7.00	10.00	7.24	8.40	8.45
11	4.01	6.99	10.01	7.71	8.39	8.50
12	4.00	7.00	10.00	7.61	8.48	8.49
13	4.00	7.01	10.00	7.80	8.42	8.42
14	4.00	7.00	10.00	7.77	8.43	8.50
15						
16						
17	4.01	7.00	10.01	7.31	8.41	8.47
18	4.00	7.00	10.00	7.88	8.42	8.42
19	4.00	7.00	10.00	7.57	8.26	N/A
20	4.00	7.00	10.00	7.58	8.48	8.38
21	4.00	7.00	10.00	7.27	7.91	8.46
22						
23						
24	4.01	7.00	10.01	7.40	8.50	8.50
25	4.00	7.01	10.00	7.40	8.46	8.50
26	4.00	7.00	10.00	7.96	8.50	8.49
27	4.01	7.00	10.01	7.36	8.69	8.47
28	4.02	7.00	10.00	7.69	8.12	8.46
29						8.33
30						
31	4.00	7.00	9.99	7.73	8.46	

Month	PH Calibration Log					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.01	7.00	10.01	7.55	8.36	8.47
2	4.00	7.00	10.00	7.69	8.48	8.46
3	4.01	7.01	10.00	7.57	8.30	8.50
4	4.02	7.00	10.00	7.60	8.42	8.43
5						
6						
7						
8	4.01	7.00	10.01	7.45	8.06	8.21
9	4.00	7.00	10.00	7.96	8.05	8.50
10	4.00	7.00	10.00	7.92	7.91	8.50
11	4.00	7.00	10.00	7.98	7.93	8.38
12	4.00	7.00	10.00	8.02		8.49
13						
14	4.00	7.00	10.00	7.90	7.92	8.43
15	4.00	7.00	10.00	7.80	7.76	8.46
16	4.00	7.00	10.01	7.88	7.63	8.49
17	4.00	7.00	10.00	7.74	8.14	8.45
18	4.01	7.00	10.00	7.82	7.91	8.47
19						
20						
21						
22	4.0	7.0	10.0	7.86	7.95	8.46
23	4.0	7.0	10.0	7.88	8.16	8.48
24	4.00	7.00	10.00	7.90	7.90	8.50
25	4.00	7.00	10.00	7.85	8.19	8.50
26						
27						
28	4.00	7.00	10.00	7.10	8.30	8.49
29	4.00	7.0	10.00	7.56	8.20	8.47
30	4.00	7.00	10.00	7.27	7.50	7.54
31						



Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
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August 4, 2020

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

RE: Workorder: T2012842 SELF Plant Effluent

Dear Michael Townsel:

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

A handwritten signature in black ink that reads 'Heidi Parker'.

Heidi Parker - Project Manager
HParker@AELLab.com

Enclosures

Report ID: 980738 - 3169471

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SAMPLE SUMMARY

Workorder: T2012842 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T2012842001	Leachate Effluent	Water	7/8/2020 11:32	7/8/2020 13:40
T2012842002	Field Blank	Water	7/8/2020 11:26	7/8/2020 13:40

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ANALYTICAL RESULTS

Workorder: T2012842 SELF Plant Effluent

Lab ID: **T2012842001**
Sample ID: **Leachate Effluent**

Date Received: 07/08/20 13:40 Matrix: Water
Date Collected: 07/08/20 11:32

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	22313		umhos/cm	1			7/8/2020 11:32	....
Dissolved Oxygen	4.19		mg/L	1			7/8/2020 11:32	....
ORP-2580BW	83		mV	1			7/8/2020 11:32	....
Temperature	32.4		°C	1			7/8/2020 11:32	....
pH	7.78		SU	1			7/8/2020 11:32	....
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water			Analytical Method: EPA 410.4					
Chemical Oxygen Demand	1100		mg/L	5	250	100	7/10/2020 12:00	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	11000		mg/L	1	10	10	7/10/2020 12:13	T
Analysis Desc: TSS,SM2540D,Water			Analytical Method: SM 2540D					
Total Suspended Solids	62		mg/L	2	2.0	2.0	7/10/2020 14:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water			Analytical Method: SM 4500NO3-F					
Nitrate (as N)	1.4	U	mg/L	15	1.5	1.4	7/9/2020 15:18	T
Analysis Desc: BOD,SM5210B,Water			Analytical Method: SM 5210B					
Biochemical Oxygen Demand	540		mg/L	1	2.0	2.0	7/9/2020 17:35	T

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ANALYTICAL RESULTS

Workorder: T2012842 SELF Plant Effluent

Lab ID: **T2012842002**

Date Received: 07/08/20 13:40 Matrix: Water

Sample ID: **Field Blank**

Date Collected: 07/08/20 11:26

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water			Analytical Method: EPA 410.4					
Chemical Oxygen Demand	20	U	mg/L	1	50	20	7/10/2020 12:00	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	10	U	mg/L	1	10	10	7/10/2020 12:13	T
Analysis Desc: TSS,SM2540D,Water			Analytical Method: SM 2540D					
Total Suspended Solids	1.0	U	mg/L	1	1.0	1.0	7/10/2020 11:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water			Analytical Method: SM 4500NO3-F					
Nitrate (as N)	0.092	U	mg/L	1	0.10	0.092	7/9/2020 15:19	T
Analysis Desc: BOD,SM5210B,Water			Analytical Method: SM 5210B					
Biochemical Oxygen Demand	2.0	U	mg/L	1	2.0	2.0	7/9/2020 17:38	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T2012842 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: T2012842 SELF Plant Effluent

QC Batch: WCAI/5025 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T2012842001, T2012842002

METHOD BLANK: 3542435

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

LABORATORY CONTROL SAMPLE: 3542436

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY Nitrate (as N)	mg/L	1	0.97	97	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3542437 3542438 Original: T2012877002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY Nitrate (as N)	mg/L	1.8	1	2.9	2.9	111	114	90-110	1	10	

QC Batch: WCAI/5029 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T2012842002

METHOD BLANK: 3542554

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

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QUALITY CONTROL DATA

Workorder: T2012842 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3542555

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Total Suspended Solids	mg/L	200	200	102	85-115

SAMPLE DUPLICATE: 3542556

Original: T2012753002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Suspended Solids	mg/L		1600	3	10
QC Batch:	WCAt/5038		Analysis Method:	SM 5210B	
QC Batch Method:	SM 5210B		Prepared:		
Associated Lab Samples: T2012842001, T2012842002					

METHOD BLANK: 3542857

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

LABORATORY CONTROL SAMPLE: 3542858

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: 3542859

Original: T2012807001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Biochemical Oxygen Demand	mg/L	870	810	6	20

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QUALITY CONTROL DATA

Workorder: T2012842 SELF Plant Effluent

QC Batch: WCAI/5043 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Prepared:
Associated Lab Samples: T2012842001, T2012842002

METHOD BLANK: 3543043

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

LABORATORY CONTROL SAMPLE: 3543044

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543050 3543051 Original: T2012809001

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	630	500	1100	1100	102	102	90-110	0	10	

QC Batch: WCAI/5045 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T2012842001, T2012842002

METHOD BLANK: 3543428

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: T2012842 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3543429

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	660	580	88	85-115

SAMPLE DUPLICATE: 3543430

Original: T2012696001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	830	840	0	10
QC Batch:	WCAI/5047		Analysis Method:	SM 2540D	
QC Batch Method:	SM 2540D		Prepared:		
Associated Lab Samples:	T2012842001				

METHOD BLANK: 3543605

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

LABORATORY CONTROL SAMPLE: 3543606

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: 3543607

Original: T2012837002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Suspended Solids	mg/L	7700	7800	2	10

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QUALITY CONTROL DATA QUALIFIERS

Workorder: T2012842 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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

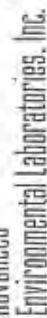
Workorder: T2012842 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T2012842001	Leachate Effluent			SM 4500NO3-F	WCAt/5025
T2012842002	Field Blank			SM 4500NO3-F	WCAt/5025
T2012842002	Field Blank			SM 2540D	WCAt/5029
T2012842001	Leachate Effluent			SM 5210B	WCAt/5038
T2012842002	Field Blank			SM 5210B	WCAt/5038
T2012842001	Leachate Effluent			EPA 410.4	WCAt/5043
T2012842002	Field Blank			EPA 410.4	WCAt/5043
T2012842001	Leachate Effluent			SM 2540 C	WCAt/5045
T2012842002	Field Blank			SM 2540 C	WCAt/5045
T2012842001	Leachate Effluent			SM 2540D	WCAt/5047
T2012842001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

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☐ **Jacksonville:** 6581 Southport Pkwy., FL 32216 • 904.363.9360 • fax ID: E52574

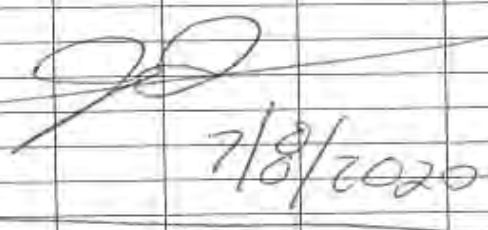
☐ **Tallahassee:** 25338 North Monroe St., Suite D, FL 32303 • 850.219.6274 • fax ID: E611048

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Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill - Plant		SITE LOCATION: Lithia, Florida	
WELL NO: Leachate Effluent		DATE: 7/8/2020	

PURGING DATA

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) $= (\text{N/A} \text{ feet} - \text{N/A} \text{ feet}) \times \text{N/A} \text{ gallons/foot} = \text{N/A} \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) $= \text{N/A} \text{ gallons} + (\text{N/A} \text{ gallons/foot} \times \text{N/A} \text{ feet}) + \text{N/A} \text{ gallons} = \text{N/A} \text{ gallons}$											
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)
1138	N/A	N/A	N/A	N/A	7.78	32.4	22313	4.19	N/A	Brown	Leachate
											
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

[illegible]

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)

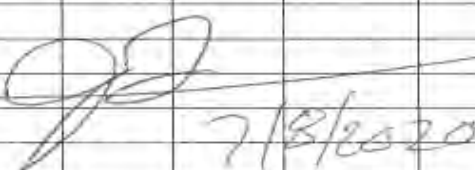
2. **STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE TABLE FS 2200-2):**
 pH: ± 0.2 units; **Temperature:** $\pm 0.2^\circ\text{C}$; **Specific Conductance:** $\pm 5\%$; **Dissolved Oxygen:** all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, $\pm 0.2\text{ mg/L}$ or $\pm 10\%$ (whichever is greater); **Turbidity:** all readings $\leq 20\text{ NTU}$, optionally $\pm 5\text{ NTU}$ or $\pm 10\%$ (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: 7/8/2020

PURGING DATA

WELL	TUBING	WELL SCREEN INTERVAL	STATIC DEPTH	PURGE PUMP TYPE
DIAMETER (inches): N/A	DIAMETER (inches): N/A	DEPTH: N/A ft to N/A ft	TO WATER (feet): N/A	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	FINAL PUMP OR TUBING	PURGING	PURGING	TOTAL VOLUME
DEPTH IN WELL (feet): N/A	DEPTH IN WELL (feet): N/A	INITIATED AT: N/A	ENDED AT: N/A	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: Grayson Morales				SAMPLER(S) SIGNATURE(S): 				SAMPLING INITIATED AT: 1126		SAMPLING ENDED AT: 1128	
PUMP OR TUBING				TUBING				FIELD-FILTERED: Y ☐ N ☒		FILTER SIZE: _____ μm	
DEPTH IN WELL (feet): N/A				MATERIAL CODE: N/A				Filtration Equipment Type:			
FIELD DECONTAMINATION: PUMP Y ☐ N ☒				TUBING Y ☐ N (replaced) ☒				DUPLICATE: Y ☐ N ☒			

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

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

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

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

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

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: T2012842
Client Name: Hillsborough County Public Utilities
ProjectID: SELF Plant Effluent

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: SM 4500NO3-F

Preparation: None

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Duplicates: All acceptance criteria were met.

D. Spikes: The matrix spike recoveries of Nitrate for T2012877002 were outside control criteria. Recoveries in the Laboratory Control Sample (LCS), and %RPD were acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this matrix. No further corrective action was required.

E. Serial Dilution: All acceptance criteria were met.

F. Samples: T2012842001 was diluted due to color and appearance of sample

G. Other:

August 31, 2020

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

RE: Workorder: T2014617 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, August 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 - Project Manager
HParker@AELLab.com

Enclosures

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SAMPLE SUMMARY

Workorder: T2014617 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T2014617001	Leachate Effluent	Water	8/5/2020 09:30	8/5/2020 10:55
T2014617002	Field Blank	Water	8/5/2020 09:24	8/5/2020 10:55

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ANALYTICAL RESULTS

Workorder: T2014617 SELF Plant Effluent

Lab ID: **T2014617001**
Sample ID: **Leachate Effluent**

Date Received: 08/05/20 10:55 Matrix: Water
Date Collected: 08/05/20 09:30

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	1400		mg/L	5	250	100	8/7/2020 16:00	T
Analysis Desc: Data entry of field measurements			Analytical Method: Field Measurements					
Conductivity	21433		umhos/cm	1			8/5/2020 09:30	....
Dissolved Oxygen	0.79		mg/L	1			8/5/2020 09:30	....
ORP-2580BW	95.3		mV	1			8/5/2020 09:30	....
Temperature	32.3		°C	1			8/5/2020 09:30	....
pH	7.6		SU	1			8/5/2020 09:30	....
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	12000		mg/L	1	10	10	8/6/2020 10:46	T
Analysis Desc: TSS,SM2540D,Water			Analytical Method: SM 2540D					
Total Suspended Solids	34		mg/L	1.4	1.4	1.4	8/7/2020 14:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water			Analytical Method: SM 4500NO3-F					
Nitrate (as N)	0.092	U	mg/L	1	0.10	0.092	8/6/2020 09:58	T
Analysis Desc: BOD,SM5210B,Water			Analytical Method: SM 5210B					
Biochemical Oxygen Demand	420		mg/L	1	2.0	2.0	8/5/2020 14:34	T

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ANALYTICAL RESULTS

Workorder: T2014617 SELF Plant Effluent

Lab ID: **T2014617002**

Date Received: 08/05/20 10:55 Matrix: Water

Sample ID: **Field Blank**

Date Collected: 08/05/20 09:24

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water			Analytical Method: EPA 410.4					
Chemical Oxygen Demand	20	U	mg/L	1	50	20	8/7/2020 16:00	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	10	U	mg/L	1	10	10	8/6/2020 10:46	T
Analysis Desc: TSS,SM2540D,Water			Analytical Method: SM 2540D					
Total Suspended Solids	1.1	U	mg/L	1.1	1.1	1.1	8/7/2020 14:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water			Analytical Method: SM 4500NO3-F					
Nitrate (as N)	0.092	U	mg/L	1	0.10	0.092	8/6/2020 09:58	T
Analysis Desc: BOD,SM5210B,Water			Analytical Method: SM 5210B					
Biochemical Oxygen Demand	2.0	U	mg/L	1	2.0	2.0	8/5/2020 14:13	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T2014617 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: T2014617 SELF Plant Effluent

QC Batch: WCAI/5544 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T2014617001, T2014617002

METHOD BLANK: 3571218

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

LABORATORY CONTROL SAMPLE: 3571219

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Biochemical Oxygen Demand	mg/L	200	180	91	84.6-115.4

SAMPLE DUPLICATE: 3571220

Original: T2014542001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Biochemical Oxygen Demand	mg/L	1600	1700	5	20

QC Batch: WCAI/5557 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T2014617001, T2014617002

METHOD BLANK: 3572080

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: T2014617 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3572081

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	660	720	109	85-115

SAMPLE DUPLICATE: 3572088

Original: T2014515001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	670	720	7	10	
QC Batch:	WCAI/5571		Analysis Method:		SM 4500NO3-F	
QC Batch Method:	SM 4500NO3-F		Prepared:			
Associated Lab Samples:	T2014617001, T2014617002					

METHOD BLANK: 3572952

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

LABORATORY CONTROL SAMPLE: 3572953

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: 3572954

3572955

Original: T2014611001

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	0.046	1	1.1	1.1	106	106	90-110	0	10

Report ID: 987034 - 3360234

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QUALITY CONTROL DATA

Workorder: T2014617 SELF Plant Effluent

QC Batch: WCAI/5587 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T2014617001, T2014617002

METHOD BLANK: 3573928

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

LABORATORY CONTROL SAMPLE: 3573929

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Total Suspended Solids	mg/L	200	190	94	85-115

SAMPLE DUPLICATE: 3573930 Original: T2014620002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Suspended Solids	mg/L		4400	1	10
QC Batch:	WCAI/5589		Analysis Method:	EPA 410.4	
QC Batch Method:	EPA 410.4		Prepared:		
Associated Lab Samples: T2014617001, T2014617002					

METHOD BLANK: 3574133

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

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QUALITY CONTROL DATA

Workorder: T2014617 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3574134

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3574136 3574137 Original: S2001961001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Chemical Oxygen Demand	mg/L	-6.2	500	510	510	101	101	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3574140 3574141 Original: S2001961002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Chemical Oxygen Demand	mg/L	27	500	560	560	106	106	90-110	0	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T2014617 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T2014617001	Leachate Effluent			SM 5210B	WCAI/5544
T2014617002	Field Blank			SM 5210B	WCAI/5544
T2014617001	Leachate Effluent			SM 2540 C	WCAI/5557
T2014617002	Field Blank			SM 2540 C	WCAI/5557
T2014617001	Leachate Effluent			SM 4500NO3-F	WCAI/5571
T2014617002	Field Blank			SM 4500NO3-F	WCAI/5571
T2014617001	Leachate Effluent			SM 2540D	WCAI/5587
T2014617002	Field Blank			SM 2540D	WCAI/5587
T2014617001	Leachate Effluent			EPA 410.4	WCAI/5589
T2014617002	Field Blank			EPA 410.4	WCAI/5589
T2014617001	Leachate Effluent	Field Measurements	FLDI/	Field Measurements	FLDI/

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☐ Fort Myers: 13100 Weedlands Terrace, Ste. 10, FL 33913 • 235 574 8130 • Lab ID: E54492
☐ Jacksonville: 6691 Southpoint Pkwy., FL 32216 • 904 303 5150 • Lab ID: E82574
☐ Tallahassee: 2539 North Monroe St., Suite D, FL 32303 • 850 279 6274 • Lab ID: E811095

Page 1 of 1
☐ Gainesville: 4965 SW 41st Blvd., FL 32608 • 352 377 2249 • Lab ID: E82001
☐ Miramar: 10200 USA Today Way, FL 33025 • 954 889 2288 • Lab ID: E82535
☒ Tampa: 5610 Princess Palm Ave., FL 33619 • 813 630 9516 • Lab ID: E84559

Client Name: Hills, Co. Public Utilities

Project Name: SELF Plant Effluent

Address: 3332 North Falkenburg Rd

Project Number: N/A

Tampa, FL 33619

PO Number: N/A

Phone: (813) 663-3222

FDEP Facility No:

FAX: (813) 274-6801

FDEP Facility Addr: 15960 CR 672

Contact: Michael Townsend

Sampled By: Grayson, Moxles

Special Instructions

Turn Around Time: Standard Rush

ADAPT

EQUIS

Other

SAMPLE ID

SAMPLE DESCRIPTION

Grab Comp

SAMPLING DATE TIME

MATRIX

NO COUNT

Preservation

Filtered?

Analysis Required

COD

BOD

TDS

TSS

Nitrate

LABORATORY I.D. NUMBER

Leachate Effluent

G

8/3/20 0930

WW

5

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

Field Blank

-

8/3/20 0934

DI

5

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

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

Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

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

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

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

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

Relinquished by: Date Time Received by: Date Time

FOR DRINKING WATER USE:

(When PWS information not otherwise supplied) PWS ID:

Contact Person:

Supplier of Water:

Site Address:



SITE NAME: Southeast County Landfill - Plant		SITE LOCATION: Lithia, Florida	
WELL NO: Leachate Effluent		SAMPLE ID: Leachate Effluent	DATE: 8/5/2020

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

DIAMETER (inches):	N/A	DIAMETER (inches):	N/A	DEPTH (feet):	0	TO WATER (feet):	0
WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY							

(only fill out if applicable)

$$= \left(\frac{\text{N/A}}{\text{feet}} - \frac{\text{N/A}}{\text{feet}} \right) \times \frac{\text{N/A}}{\text{gallons/foot}} = \frac{\text{N/A}}{\text{gallons}}$$

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) / 2.28 (feet)
(only fill out if applicable)

(only fill out if applicable)

$$= \frac{\text{N/A}}{\text{gallons}} + \left(\frac{\text{N/A}}{\text{gallons/foot}} \times \frac{\text{N/A}}{\text{feet}} \right) + \frac{\text{N/A}}{\text{gallons}} = \frac{\text{N/A}}{\text{gallons}}$$

INITIAL PUMP OR TUBING	FINAL PUMP OR TUBING	PURGING	PURGING	TOTAL VOLUME
DEPTH IN WELL (feet): N/A	DEPTH IN WELL (feet): N/A	INITIATED AT: N/A	ENDED AT: N/A	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)
0930	N/A	N/A	N/A	N/A	7.60	32.3	21433	0.79	N/A	Brown	LEACHING

8/5/2020

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" = 0.0008; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

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

SAMPLING DATA									
SAMPLED BY (PRINT) / AFFILIATION: Grayson, Morales			SAMPLER(S) SIGNATURE(S): M. Morales			SAMPLING INITIATED AT: 0930		SAMPLING ENDED AT: 0933	
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)			
						INTENDED		SAMPLE PUMP	

[illegible]

REMARKS: SEE C.O.C. FOR SAMPLE ANALYSIS ORP: 0930 (95.3)

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

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; PS = Polystyrene; PVDF = Polyvinylidene Fluoride; Teflon = Teflon

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = 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.

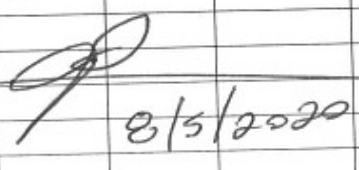
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq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

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill - Plant		SITE LOCATION: Lithia, Florida	
WELL NO: Field Blank		SAMPLE ID: Field Blank	
DATE: 8/5/2020			

PURGING DATA

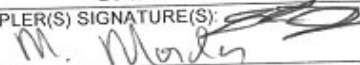
WELL DIAMETER (inches): N/A		TUBING DIAMETER (inches): N/A		WELL SCREEN INTERVAL DEPTH: N/A ft to N/A ft		STATIC DEPTH TO WATER (feet): N/A		PURGE PUMP TYPE OR BAILER: N/A	
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (N/A 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: Grayson, Morales				SAMPLER(S) SIGNATURE(S): 				SAMPLING INITIATED AT: 0924		SAMPLING ENDED AT: 0927	
PUMP OR TUBING DEPTH IN WELL (feet): N/A				TUBING MATERIAL CODE: N/A				FIELD-FILTERED: Y ☒ N ☐		FILTER SIZE: _____ μm	
FIELD DECONTAMINATION: PUMP Y ☐ N ☒				TUBING Y ☐ N ☒ (replaced)				DUPLICATE: Y ☐ N ☒			

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

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

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

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

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

September 30, 2020

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

RE: Workorder: T2016412 SELF Plant Effluent

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, September 02, 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

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SAMPLE SUMMARY

Workorder: T2016412 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T2016412001	Leachate Effluent	Water	9/2/2020 09:42	9/2/2020 11:00
T2016412002	Field Blank	Water	9/2/2020 09:38	9/2/2020 11:00

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ANALYTICAL RESULTS

Workorder: T2016412 SELF Plant Effluent

Lab ID: **T2016412001**
Sample ID: **Leachate Effluent**

Date Received: 09/02/20 11:00 Matrix: Water
Date Collected: 09/02/20 09:42

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	19617		umhos/cm	1			9/2/2020 09:42	....
Dissolved Oxygen	0.15		mg/L	1			9/2/2020 09:42	....
ORP-2580BW	31.7		mV	1			9/2/2020 09:42	....
Temperature	32.4		°C	1			9/2/2020 09:42	....
pH	7.57		SU	1			9/2/2020 09:42	....
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water			Analytical Method: EPA 410.4					
Chemical Oxygen Demand	940		mg/L	1	50	20	9/4/2020 13:20	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	8700		mg/L	1	10	10	9/4/2020 10:30	T
Analysis Desc: TSS,SM2540D,Water			Analytical Method: SM 2540D					
Total Suspended Solids	41		mg/L	1.4	1.4	1.4	9/8/2020 11:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water			Analytical Method: SM 4500NO3-F					
Nitrate (as N)	0.092	U	mg/L	1	0.10	0.092	9/2/2020 17:26	T
Analysis Desc: BOD,SM5210B,Water			Analytical Method: SM 5210B					
Biochemical Oxygen Demand	73		mg/L	1	2.0	2.0	9/2/2020 14:14	T

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ANALYTICAL RESULTS

Workorder: T2016412 SELF Plant Effluent

Lab ID: **T2016412002**

Date Received: 09/02/20 11:00 Matrix: Water

Sample ID: **Field Blank**

Date Collected: 09/02/20 09:38

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water			Analytical Method: EPA 410.4					
Chemical Oxygen Demand	20	U	mg/L	1	50	20	9/4/2020 13:20	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	10	U	mg/L	1	10	10	9/4/2020 10:30	T
Analysis Desc: TSS,SM2540D,Water			Analytical Method: SM 2540D					
Total Suspended Solids	1.0	U	mg/L	1	1.0	1.0	9/8/2020 11:30	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water			Analytical Method: SM 4500NO3-F					
Nitrate (as N)	0.092	U	mg/L	1	0.10	0.092	9/2/2020 17:26	T
Analysis Desc: BOD,SM5210B,Water			Analytical Method: SM 5210B					
Biochemical Oxygen Demand	2.0	U	mg/L	1	2.0	2.0	9/2/2020 14:20	T

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ANALYTICAL RESULTS QUALIFIERS

Workorder: T2016412 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: T2016412 SELF Plant Effluent

QC Batch: WCAI/6180 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T2016412001, T2016412002

METHOD BLANK: 3603467

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

LABORATORY CONTROL SAMPLE: 3603468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Biochemical Oxygen Demand	mg/L	200	180	91	84.6-115.4

SAMPLE DUPLICATE: 3603469

Original: T2016374001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Biochemical Oxygen Demand	mg/L	1400	1200	14	20

QC Batch: WCAI/6187 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T2016412001, T2016412002

METHOD BLANK: 3603662

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

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QUALITY CONTROL DATA

Workorder: T2016412 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 3603663

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: 3603664 3603665 Original: T2016370002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD Qualifiers
WET CHEMISTRY										
Nitrate (as N)	mg/L	1.6	1	2.5	2.6	96	104	90-110	3	10

QC Batch: WCAI/6206 Analysis Method: EPA 410.4

QC Batch Method: EPA 410.4 Prepared:

Associated Lab Samples: T2016412001, T2016412002

METHOD BLANK: 3605849

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

LABORATORY CONTROL SAMPLE: 3605850

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605852 3605853 Original: S2002245003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD Qualifiers
WET CHEMISTRY										
Chemical Oxygen Demand	mg/L	390	500	900	900	104	104	90-110	0	10

Report ID: 993158 - 3544428

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QUALITY CONTROL DATA

Workorder: T2016412 SELF Plant Effluent

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605886 3605887 Original: A2007605001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	Max RPD	RPD	Qualifiers
WET CHEMISTRY											
Chemical Oxygen Demand	mg/L	11	500	520	520	105	105	90-110	0	10	

QC Batch: WCAI/6216 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T2016412001, T2016412002

METHOD BLANK: 3606789

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

LABORATORY CONTROL SAMPLE: 3606790

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	710	107	85-115	

SAMPLE DUPLICATE: 3606791 Original: T2016382001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	350	360	1	10	

QC Batch: WCAI/6250 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T2016412001, T2016412002

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QUALITY CONTROL DATA

Workorder: T2016412 SELF Plant Effluent

METHOD BLANK: 3607487

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

LABORATORY CONTROL SAMPLE: 3607488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Total Suspended Solids	mg/L	200	190	95	85-115

SAMPLE DUPLICATE: 3607489

Original: T2016414002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Suspended Solids	mg/L		3100	1	10

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

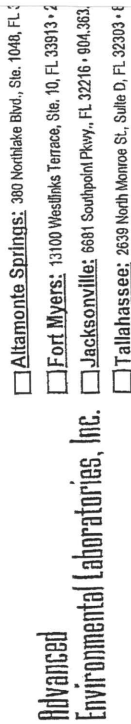
Workorder: T2016412 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T2016412001	Leachate Effluent			SM 5210B	WCA/t/6180
T2016412002	Field Blank			SM 5210B	WCA/t/6180
T2016412001	Leachate Effluent			SM 4500NO3-F	WCA/t/6187
T2016412002	Field Blank			SM 4500NO3-F	WCA/t/6187
T2016412001	Leachate Effluent			EPA 410.4	WCA/t/6206
T2016412002	Field Blank			EPA 410.4	WCA/t/6206
T2016412001	Leachate Effluent			SM 2540 C	WCA/t/6216
T2016412002	Field Blank			SM 2540 C	WCA/t/6216
T2016412001	Leachate Effluent			SM 2540D	WCA/t/6250
T2016412002	Field Blank			SM 2540D	WCA/t/6250
T2016412001	Leachate Effluent	Field Measurements	FLDt/	Field Measurements	FLDt/

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e: 4965 SW 41st Blvd., FL 32608 • 352.377.2349 • Lab ID: E82001
10200 USA Today Way, FL 33025 • 954.899.2288 • Lab ID: E82535
110 Princess Palm Ave., FL 33619 • 813.630.9616 • Lab ID: E84589

[illegible]

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill - Plant		SITE LOCATION: Lithia, Florida	
WELL NO: Field Blank	SAMPLE ID: Field Blank		DATE: 09/02/20

PURGING DATA

WELL DIAMETER (inches): N/A		TUBING DIAMETER (inches): N/A		WELL SCREEN INTERVAL DEPTH: N/A ft to N/A ft		STATIC DEPTH TO WATER (feet): N/A		PURGE PUMP TYPE OR BAILER: N/A			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (N/A feet - N/A feet) X N/A gallons/foot = N/A gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = N/A gallons + (N/A gallons/foot X N/A feet) + N/A gallons = N/A gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A			FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A			PURGING INITIATED AT: N/A		PURGING ENDED AT: N/A		TOTAL VOLUME PURGED (gallons): N/A	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88											
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Morales / P. Manning				SAMPLER(S) SIGNATURE(S): M. Morales / Peter Manning				SAMPLING INITIATED AT: 09:38		SAMPLING ENDED AT: 09:40	
PUMP OR TUBING DEPTH IN WELL (feet): N/A				TUBING MATERIAL CODE: N/A			FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y (N)						TUBING Y (N)(replaced)		DUPLICATE: Y (N)			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
REMARKS: SEE C.O.C. FOR SAMPLE ANALYSIS											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = 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: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ 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

SITE NAME: Southeast County Landfill - Plant		SITE LOCATION: Lithia, Florida	
WELL NO: Leachate Effluent	SAMPLE ID: Leachate Effluent	DATE: 09/26/00	

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)

$$= (\text{N/A feet} - \text{N/A feet}) \times \text{N/A gallons/foot} = \text{N/A gallons}$$

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

$$= \text{N/A gallons} + (\text{N/A gallons/foot} \times \text{N/A feet}) + \text{N/A gallons} = \text{N/A gallons}$$

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) $\mu\text{mhos/cm}$ or $\mu\text{S/cm}$	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
09:42	N/A	N/A	N/A	N/A	7.57	32.4	19617	0.15	N/A	Brown	None

M.M.
09/02/20

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: M. Minder / D. Minder	SAMPLER(S) SIGNATURE(S): M. Minder / PETER Minder	SAMPLING INITIATED AT: 09:42	SAMPLING ENDED AT: 09:47
--	--	------------------------------	--------------------------

PUMP OR TUBING	TUBING	FIELD-FILTERED: Y <u>(N)</u>	FILTER SIZE: _____ μ m
DEPTH IN WELL (feet): <u>N/A</u>	MATERIAL CODE: <u>N/A</u>	Filtration Equipment Type: _____	

FIELD DECONTAMINATION:	PUMP	Y	(N)	TUBING	Y	(N) (replaced)	DUPLICATE:	Y	(N)
------------------------	------	---	-----	--------	---	----------------	------------	---	-----

[illegible]

REMARKS: SEE C.O.C. FOR SAMPLE ANALYSIS ORP: 09:42 (31.7)

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: $\pm 0.2^{\circ}\text{C}$ Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)