



# Hillsborough County Florida

## PUBLIC UTILITIES

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Tampa, FL 33601-1110

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April 24, 2018

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

CHIEF DEVELOPMENT &  
INFRASTRUCTURE SERVICES  
ADMINISTRATOR  
Lucia E. Garsys

**SUBJECT:** **Southeast County Class I Landfill**  
**WACS Facility ID No. 41193**  
**Supplemental Groundwater Sampling Report – January/February 2018**  
**Consent Agreement, OGC File No. 17-0058**

Dear Mr. Tafuni:

The Hillsborough County Public Utilities Department (County) has prepared this supplemental groundwater data report in accordance with part 9(g) of the referenced Consent Agreement and Rule 62-701.510(8)(a), F.A.C. Water quality sampling events were conducted at the Southeast County Landfill (SCLF) to address surficial aquifer impacts on the east side of the Phase II waste filled area.

An initial representative groundwater sample was collected following the installation of a new surficial aquifer detection well identified as TH-83 on January 4, 2018 for total dissolved solids (TDS), chloride, sodium, and ammonia. Each parameter was within their respective standards and analyzed by our contract laboratory, Advanced Environmental Laboratories, Inc. (AEL).

The County collected representative groundwater samples on February 7-8, 2018 from nine (9) surficial aquifer monitoring wells identified as TH-20B, TH-38B, TH-66A, TH-67, TH-79, TH-80, TH-81, TH-82, and TH-83, for TDS, chloride, sodium, and ammonia. The following paragraphs provide a brief discussion of the parameter-specific water quality observations.

### **Water Quality Observations**

#### **pH**

Seven (7) of the nine (9) surficial aquifer monitoring wells east of the Phase II waste filled area continued to exhibit pH values below the Secondary Drinking Water Standard (SDWS) acceptable criteria of 6.5 to 8.5 pH units and has historically been observed below this criteria. The pH during this monitoring event ranged from 5.07 to 6.55 pH units, respectively. Background water quality recorded within the surficial aquifer prior to construction and operation of the landfill established the pH and has been consistent over the period of record.

#### **Conductivity**

Conductivity within the network of surficial aquifer monitoring locations ranged from 79.2 to 956 umhos/cm with the highest value detected at TH-79. The County has observed water quality improvements as conductivity has significantly decreased in TH-79 over the past two (2) to three (3) water quality monitoring events.

Detection well TH-67 also indicates decreasing conductivity. Over the last year, conductivity at this location has dropped from 3,830 to 207.7 uhmos/cm, respectively. The County believes this trend shall continue as implementation of the corrective actions and natural attenuation continue to improve water quality.

#### **Total Dissolved Solids (TDS)**

Detection well TH-67 exhibited TDS at 140 mg/l during this water quality monitoring event and is within the SDWS of 500 mg/l. The current water quality in TH-67 is representative of groundwater conditions prior to elevated parameters detected in February 2016. Detection well TH-79 continued to slightly exceed the standard with a TDS value of 560 mg/l. Both locations continue to demonstrate a significant downward trend as implementation of the corrective actions continues to create a positive effect on water quality. The remaining groundwater monitoring wells did not indicate any TDS exceedance during this monitoring event.

#### **Chloride**

Chloride was detected from 6.4 to 150 mg/l during this water quality monitoring event with the highest value exhibited in TH-79. Chloride has been above the SDWS of 250 mg/l over the period of record in wells TH-67, TH-79, and TH-81; however, over the last three (3) water quality monitoring events, chloride levels have dropped below the SDWS and continues to exhibit a continued downward trend.

## **Sodium**

Sodium was detected at each monitoring location below the Primary Drinking Water Standard (PDWS) of 160 mg/l during this water quality monitoring event and continues to exhibit a downward trend across the affected area. Monitoring locations previously exceeding the PDWS continue to exhibit substantial improvements over the last two (2) to three (3) water quality monitoring events as sodium levels have decreased in TH-67 to 6.3 mg/l, TH-79 to 100 mg/l, and TH-81 to 21 mg/l, respectively. The County believes the implementation of corrective actions within the landfill and natural attenuation of water quality continues to support improved water quality conditions.

## **Groundwater Elevations and Flow Direction**

Groundwater elevations were recorded prior to sampling the nine (9) surficial aquifer groundwater monitoring wells on February 7, 2018. A surficial aquifer groundwater contour diagram was prepared to evaluate the general direction of flow at and around the affected area. The direction of flow in the surficial aquifer continues toward the Mine Cut to the southeast, east, and northeast directions and is consistent with the historical evaluations in this general area. The surface water elevation in Mine Cut 1 is the primary influence on the direction of flow in this area, and is clearly demonstrated by the elevation data recorded.

## **Conclusions**

Water quality observed in surficial aquifer monitoring wells along the east side of Phase II exhibited minimal impacts from leachate originating from the landfill. Detection well TH-79 indicated TDS slightly exceeding the SDWS but continues to exhibit substantial water quality improvements since February 2017. All other parameters from the remaining monitoring wells except pH, were within their respective cleanup standards.

Ongoing evaluation and implementation of the remedial actions shall continue along the Phase II area of the landfill. Improved water quality generated from the combination of these remedial processes and natural attenuation of the surficial aquifer are supported by the representative groundwater data. As seasonal groundwater fluctuation may result in the rebound of some constituents of concern, the County believes that the overall downward trend will continue based on corrective actions implemented to date. The next quarterly water quality monitoring event is scheduled for May 2018.

Enclosed for your review please find a detailed site location map, a January and February 2018 water quality data summary tables, the groundwater elevation data summary table, a February 2018 surficial aquifer groundwater elevation and contour diagram, historical data tables for the

Mr. Steve Tafuni  
April 24, 2018  
Page 4 of 4

monitoring wells included in the supplemental assessment sampling events, and the complete laboratory analytical data report from AEL.

Should you have any questions, require any additional information, or would like to discuss the information provided within this submittal, please feel free to contact us at (813) 663-3222 or (813) 612-7757.

Respectfully submitted,



Michael D. Townsel  
Senior Hydrologist  
Environmental Services  
Public Utilities Department

4/24/2018



Jeffry Greenwell, P.E.  
Section Manager – GM III  
Environmental Services  
Public Utilities Department

TSD\...\solid waste\enviro\Southeast\SELF Supplemental Site Assessment Project\Reports\SCLF Supplemental Eval Report  
February 18.pdf

Enclosures

xc: Kimberly Byer, Director, Solid Waste Management Division  
Larry Ruiz, Landfill Manager, Solid Waste Management Division  
Joe O'Neill, Professional Engineer II, Solid Waste Management Division  
Kelly Boatwright, Florida Department of Environmental Protection  
Justin Chamberlain, P.G., Florida Department of Environmental Protection  
Ken Guilbeault, P.G., Project Director, SCS Engineers, Inc.  
Clark Moore, Florida Department of Environmental Protection  
Andy Schipfer, HC Environmental Protection Commission  
Bob Curtis, P.E., SCS Engineers, Inc.



SOUTHEAST COUNTY LANDFILL  
SURFICIAL AQUIFER GROUNDWATER  
CONTOUR MAP  
FEBRUARY 7, 2018

2016 AERIAL PHOTO

Legend

Existing Monitoring Wells



Hillsborough  
County Florida

**Southeast County Landfill**  
**Supplemental Site Assessment Data**  
**January 4, 2018**

General Parameters Detected	TH-83	MCL Standard
well type	Detection	
conductivity (umhos/cm) (field)	1504	NS
dissolved oxygen (mg/l) (field)	1.12	NS
ORP (mV)	6.7	NS
temperature (°C) (field)	22.70	NS
turbidity (NTU) (field)	5.05	NS
pH (SU) (field)	6.90	(6.5 - 8.5)**
Field Parameters Detected		MCL Standard
total dissolved solids (mg/l)	430	500**
chloride (mg/l)	170	250**
ammonia nitrogen (mg/l as N)	6.5	NS
Metals Detected (mg/l)		MCL Standard
sodium	98	160*
Notes: Reference Groundwater Guidance Concentrations, FDEP 2012		
NS=No Standard		
MCL=Maximum Contaminant Level (Groundwater Standards)		
*= Primary Drinking Water Standards as per Cahpter 62-550.310, F.A.C.		
**=Secondary Drinking Water Standards as per Chapter 62-550.320, F.A.C.		
NTU=Nephelometric Turbidity Units		
u = parameter was analyzed but not detected.		
ug/l=micrograms per liter		
mg/l=milligrams per liter		
mV = millivolts		

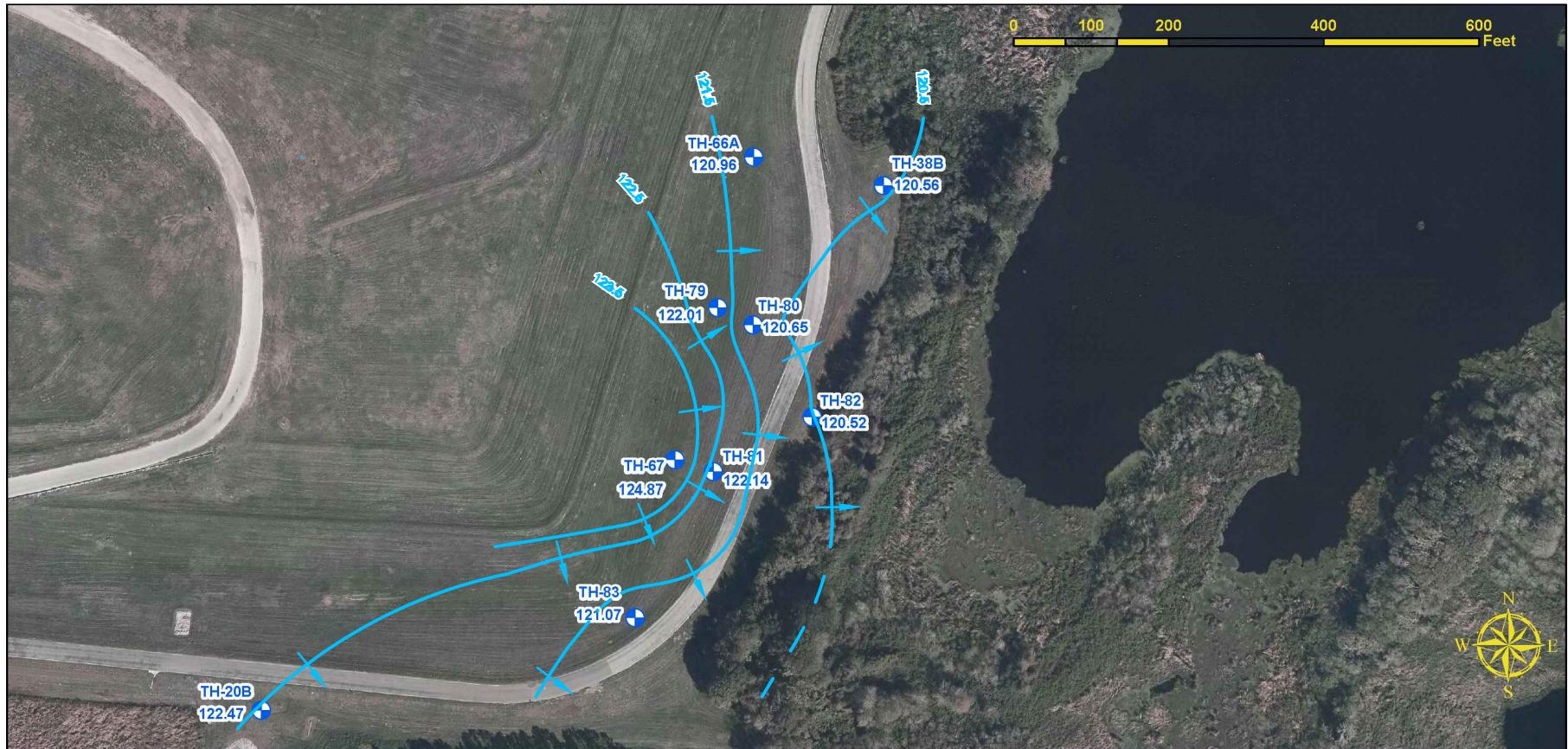
# **Southeast County Landfill**

## **Supplemental Site Assessment Data**

### **February 7-8, 2018**

**Southeast County Landfill**  
**Surficial Aquifer Groundwater Elevations**  
**February 7, 2018**

Measuring Point	T.O.C. Elevations (NGVD)	W.L. B.T.O.C.	W.L. (NGVD)
TH-20B	132.57	10.10	122.47
TH-38B	131.81	11.25	120.56
TH-66A	130.66	9.70	120.96
TH-67	129.51	4.64	124.87
TH-79	129.60	7.59	122.01
TH-80	129.52	8.87	120.65
TH-81	130.26	8.12	122.14
TH-82	131.24	10.72	120.52
TH-83	130.23	9.16	121.07
NGVD	= National Geodetic Vertical Datum		
T.O.C.	= Top of Casing		
B.T.O.C.	= Below Top of Casing		
W.L.	= Water Level		



SOUTHEAST COUNTY LANDFILL  
SURFICIAL AQUIFER GROUNDWATER  
CONTOUR MAP  
FEBRUARY 7, 2018

2016 AERIAL PHOTO

Legend

- Existing Monitoring Wells
- ← Direction Of Flow



Hillsborough  
County Florida

**Southeast County Landfill**  
**Historical Supplemental Assessment Groundwater Data**  
**TH-20B**

Field Parameters	May-16	Nov-16	Feb-17	Jun-17	Aug-17	Nov-17	Feb-18	MCL Standard
conductivity (umhos/cm) (field)	473	332	427	275	294	192.9	394.8	NS
dissolved oxygen (mg/l) (field)	0.23	0.27	0.18	0.19	0.1	2	0.37	NS
ORP (mV)	-9.6	-31.2	-41.7	36.9	-34	-26.7	-2.4	NS
temperature (°C) (field)	23.47	25.47	23.77	23.92	25.51	25.90	22.90	NS
turbidity (NTU) (field)	2.39	4.14	3.77	1.37	2.82	4.3	2.99	NS
pH (field)	5.67	5.43	5.82	5.52	5.72	5.95	5.68	(6.5 - 8.5)**
General Parameters								MCL Standard
total dissolved solids (mg/l)	310	200	230	130	150	130	280	500**
chloride (mg/l)	92	63	83	38	34	18	89	250**
ammonia nitrogen (mg/l as N)	2.2	1.5	1.2	1.2	1.7	1.3	1.2	NS
Metals Detected (mg/l)								MCL Standard
sodium	35	15	31	24	14	10	29	160*

**Southeast County Landfill**  
**Historical Supplemental Assessment Groundwater Data**  
**TH-38B**

Field Parameters	May-16	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	MCL Standard
conductivity (umhos/cm) (field)	70	61	103	ND	46	49.6	79.2	NS
dissolved oxygen (mg/l) (field)	1.5	0.76	2.02	ND	0.96	1.27	0.86	NS
ORP (mV)	175.5	-22.9	6.2	ND	158	28.1	70.7	NS
temperature (°C) (field)	24.78	25.37	23.93	ND	26.66	26.10	23.50	NS
turbidity (NTU) (field)	8.75	16	16.5	ND	46.6	11.2	3.6	NS
pH (field)	<b>4.95</b>	<b>4.73</b>	<b>5.45</b>	ND	<b>4.69</b>	<b>5.16</b>	<b>5.22</b>	(6.5 - 8.5)**
General Parameters								<b>MCL Standard</b>
total dissolved solids (mg/l)	65	45	57	ND	73	30	83	500**
chloride (mg/l)	4.2 i	4.2 i	8.2	ND	3.4 i	3.9 i	6.4	250**
ammonia nitrogen (mg/l as N)	0.79	0.66	1.4	ND	0.14	0.23	2.2	NS
Metals Detected (mg/l)								<b>MCL Standard</b>
sodium	2.8	3	3.6	ND	2.7	2.8	3.4	160*
Note: Reference FDEP Groundwater Guidance Concentrations								
NS = No Standard								
MCL = Maximum Contaminant Level								
ND = No Data, well was dry								
* = Primary Drinking Water Standard								
** = Secondary Drinking Water Standard								
mV = millivolts								
NTU = Nephelometric Turbidity Units								
mg/l = milligrams per liter								
NGVD = National Geodetic Vertical Datum								

**Southeast County Landfill**  
**Historical Supplemental Assessment Groundwater Data**  
**TH-66A**

Field Parameters	Feb-16	Feb-16	May-16	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	MCL Standard
conductivity (umhos/cm) (field)	295	313	334	512	580	513	376	342.1	315.6	NS
dissolved oxygen (mg/l) (field)	0.38	0.5	0.65	0.33	0.64	1.13	0.09	1.93	0.46	NS
ORP (mV)	ND	ND	69.7	-3	-69.2	30.3	-102.9	-158.7	-43.6	NS
temperature (°C) (field)	27.01	21.5	24.55	25.44	23.68	27.67	26.63	25.90	22.50	NS
turbidity (NTU) (field)	3.17	1.35	0.86	0.49	1.06	2.17	1.81	1.89	0.89	NS
pH (field)	<b>6.00</b>	<b>6.12</b>	<b>6.03</b>	<b>5.82</b>	<b>6.18</b>	<b>6.09</b>	<b>5.88</b>	<b>6.09</b>	<b>5.87</b>	(6.5 - 8.5)**
<b>General Parameters</b>										<b>MCL Standard</b>
total dissolved solids (mg/l)	180	180	180	320	300	230	250	160	210	500**
chloride (mg/l)	4.9 i	15	15	92	78	52	16	24	24	250**
ammonia nitrogen (mg/l as N)	0.22	0.12	0.34	0.44	0.5	0.57	0.02 u	0.88	0.09 i	NS
<b>Metals Detected (mg/l)</b>										<b>MCL Standard</b>
sodium	5.7	8.7	9.5	21	21	20	15	15	12	160*

Note: Reference FDEP Groundwater Guidance Concentrations  
 NS = No Standard  
 MCL = Maximum Contaminant Level  
 \* = Primary Drinking Water Standard  
 \*\* = Secondary Drinking Water Standard  
**6.00 = Exceeds Standard**  
 mV = millivolts  
 NTU = Nephelometric Turbidity Units  
 mg/l = milligrams per liter  
 NGVD = National Geodetic Vertical Datum

**Southeast County Landfill**  
**Historical Supplemental Assessment Groundwater Data**  
**TH-67**

Field Parameters	Aug-15	Feb-16	May-16	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	MCL Standard
conductivity (umhos/cm) (field)	429	1780	3973	2166	3830	3630	215	497.4	207.7	NS
dissolved oxygen (mg/l) (field)	0.55	1.05	0.42	3.04	2.13	0.26	0.31	2.06	5.97	NS
ORP (mV)	ND	ND	-7.9	-100	-41.7	-12.1	43.2	-9.5	103.7	NS
temperature (°C) (field)	28.32	20.81	24.63	25.23	24.52	25.25	26.79	25.40	22.20	NS
turbidity (NTU) (field)	1.13	10.11	7.64	5.29	8.72	7.64	16.5	5.05	7.76	NS
pH (field)	<b>6.41</b>	<b>5.98</b>	<b>6.18</b>	<b>6.21</b>	<b>6.44</b>	<b>6.32</b>	<b>6.29</b>	<b>6.43</b>	6.54	(6.5 - 8.5)**
General Parameters										MCL Standard
total dissolved solids (mg/l)	220	<b>1600</b>	<b>2200</b>	<b>1400</b>	<b>2000</b>	<b>2000</b>	150	280	140	500**
chloride (mg/l)	29	<b>620</b>	<b>910</b>	<b>600</b>	<b>990</b>	<b>790</b>	13	79	12	250**
ammonia nitrogen (mg/l as N)	0.12	1.5	36	11	14	14	0.02 u	1.5	0.025 u	NS
Metals Detected (mg/l)										MCL Standard
sodium	8.7	120	<b>360</b>	49	<b>330</b>	<b>380</b>	8.4	38	6.3	160*
Note: Reference FDEP Groundwater Guidance Concentrations										
NS = No Standard										
MCL = Maximum Contaminant Level										
* = Primary Drinking Water Standard										
** = Secondary Drinking Water Standard										
<b>6.18 = Exceeds Standard</b>										
mV = millivolts										
NTU = Nephelometric Turbidity Units										
mg/l = milligrams per liter										
NGVD = National Geodetic Vertical Datum										

# **Southeast County Landfill**

## **Historical Supplemental Assessment Groundwater Data**

### **TH-79**

General Parameters	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	MCL Standard
conductivity (umhos/cm) (field)	2740	4980	5212	2221	1183	956	NS
dissolved oxygen (mg/l) (field)	0.25	1.73	1.23	1.67	4.39	3.33	NS
ORP (mV)	1.4	-20.3	-40.6	-30.8	-27.7	-15.0	NS
temperature (°C) (field)	24.03	21.77	25.49	28.04	24.90	20.70	NS
turbidity (NTU) (field)	27.6	60.2	12	2.66	2.81	7.97	NS
pH (field)	6.09	6.40	6.29	6.19	6.28	6.11	(6.5 - 8.5)**
Field Parameters							MCL Standard
total dissolved solids (mg/l)	1500	2700	2600	1200	590	560	500**
chloride (mg/l)	500	1200	1000	430	180 j4	150	250**
ammonia nitrogen (mg/l as N)	30	35	32	8.8	4.5	3.8	NS
Metals Detected (mg/l)							MCL Standard
sodium	140	650	730	280	120	100	160*

# Southeast County Landfill

## Historical Groundwater Assessment Groundwater Data

### TH-80

Field Parameters	Mar-17	May-17	Aug-17	Nov-17	Feb-18	MCL Standard
conductivity (umhos/cm) (field)	889	1090	1055	714	733	NS
dissolved oxygen (mg/l) (field)	0.38	0.16	0.05	3.24	0.79	NS
ORP (mV)	-10.7	34.2	-120.4	-100.7	13.8	NS
temperature (°C) (field)	24.49	25.26	25.17	25.70	24.90	NS
turbidity (NTU) (field)	16	10.6	37	17.3	2.49	NS
pH (field)	<b>5.67</b>	<b>5.63</b>	<b>5.69</b>	<b>5.95</b>	<b>5.69</b>	(6.5 - 8.5)**
General Parameters						MCL Standard
total dissolved solids (mg/l)	500	<b>630</b>	<b>680</b>	370	410	500**
chloride (mg/l)	130 j4	170	210	110	110	250**
ammonia nitrogen (mg/l as N)	1.5	0.74	0.64	0.36	0.52	NS
Metals Detected (mg/l)						MCL Standard
sodium	37	55	92	63	62	160*

Note: Reference FDEP Groundwater Guidance Concentrations  
 NS = No Standard  
 MCL = Maximum Contaminant Level  
 \* = Primary Drinking Water Standard  
 \*\* = Secondary Drinking Water Standard  
**5.67 = Exceeds Standard**  
 mV = millivolts  
 NTU = Nephelometric Turbidity Units  
 mg/l = milligrams per liter  
 NGVD = National Geodetic Vertical Datum

**Southeast County Landfill**  
**Historical Supplemental Assessment Groundwater Data**  
**TH-81**

Field Parameters	Mar-17	May-17	Aug-17	Nov-17	Feb-18	MCL Standard
conductivity (umhos/cm) (field)	2723	2476	493	216.8	194.9	NS
dissolved oxygen (mg/l) (field)	0.53	0.72	1.77	1.73	2.12	NS
ORP (mV)	24.9	17.7	68.5	76	71.7	NS
temperature (°C) (field)	23.7	25.81	28.68	26.50	22.10	NS
turbidity (NTU) (field)	16.1	27.5	22.7	13	14.5	NS
pH (field)	6.00	6.05	6.12	5.95	6.15	(6.5 - 8.5)**
<b>General Parameters</b>						<b>MCL Standard</b>
total dissolved solids (mg/l)	2000	1500	230	100	130	500**
chloride (mg/l)	810	670	62	15	27	250**
ammonia nitrogen (mg/l as N)	4.1	2.3	0.52	0.025 u	0.33	NS
<b>Metals Detected (mg/l)</b>						<b>MCL Standard</b>
sodium	250	280	37	8.2	21	160*
Note: Reference FDEP Groundwater Guidance Concentrations						
NS = No Standard						
MCL = Maximum Contaminant Level						
* = Primary Drinking Water Standard						
** = Secondary Drinking Water Standard						
<b>6.00 = Exceeds Standard</b>						
mV = millivolts						
NTU = Nephelometric Turbidity Units						
mg/l = milligrams per liter						
NGVD = National Geodetic Vertical Datum						

# Southeast County Landfill

## Historical Supplemental Assessment Groundwater Data

### TH-82

Field Parameters	Mar-17	Jun-17	Aug-17	Nov-17	Feb-18	MCL Standard
conductivity (umhos/cm) (field)	239	210	82	83	174.3	NS
dissolved oxygen (mg/l) (field)	0.23	0.70	4.11	1.28	1.17	NS
ORP (mV)	-147.1	41.9	177.2	-17.5	107.3	NS
temperature (°C) (field)	26.16	25.5	27.84	27.40	24.10	NS
turbidity (NTU) (field)	ND	33.4	34.3	27.4	4.56	NS
pH (field)	<b>5.69</b>	<b>5.48</b>	<b>4.73</b>	<b>5.30</b>	<b>5.07</b>	(6.5 - 8.5)**
General Parameters						MCL Standard
total dissolved solids (mg/l)	130	94	65	68	140	500**
chloride (mg/l)	25	22	4.3 i	8.4	41	250**
ammonia nitrogen (mg/l as N)	4.9	4.7	0.02 u	1.4	0.69	NS
Metals Detected (mg/l)						MCL Standard
sodium	11	9	2.8	4.5	5.4	160*

Note: Reference FDEP Groundwater Guidance Concentrations

NS = No Standard

MCL = Maximum Contaminant Level

\* = Primary Drinking Water Standard

\*\* = Secondary Drinking Water Standard

**5.69 = Exceeds Standard**

mV = millivolts

NTU = Nephelometric Turbidity Units

mg/l = milligrams per liter

NGVD = National Geodetic Vertical Datum

# Southeast County Landfill

## Historical Supplemental Assessment Groundwater Data

### TH-83

Field Parameters	Jan-18	Feb-18	MCL Standard
conductivity (umhos/cm) (field)	1504	537	NS
dissolved oxygen (mg/l) (field)	1.12	1.02	NS
ORP (mV)	6.7	10.6	NS
temperature (°C) (field)	22.7	23.10	NS
turbidity (NTU) (field)	5.05	4.78	NS
pH (field)	6.90	6.55	(6.5 - 8.5)**
<b>General Parameters</b>			<b>MCL Standard</b>
total dissolved solids (mg/l)	430	290	500**
chloride (mg/l)	170	62	250**
ammonia nitrogen (mg/l as N)	6.5	4.7	NS
<b>Metals Detected (mg/l)</b>			<b>MCL Standard</b>
sodium	98	58	160*
Note: Reference FDEP Groundwater Guidance Concentrations			
NS = No Standard			
MCL = Maximum Contaminant Level			
* = Primary Drinking Water Standard			
** = Secondary Drinking Water Standard			
<b>= Exceeds Standard</b>			
mV = millivolts			
NTU = Nephelometric Turbidity Units			
mg/l = milligrams per liter			
NGVD = National Geodetic Vertical Datum			



Advanced  
Environmental Laboratories, Inc.

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January 22, 2018

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

RE: Workorder: T1800276 SELF Supplemental Site Assess

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory on Thursday, January 04, 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,

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

Heidi Parker - Project Manager  
HParker@AELLab.com

Enclosures

Report ID: 529984 - 87681

Page 1 of 10

## CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Advanced Environmental Laboratories, Inc.



## SAMPLE SUMMARY

Workorder: T1800276 SELF Supplemental Site Assess

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1800276001	TH-83	Water	1/4/2018 11:32	1/4/2018 13:00
T1800276002	Field Blank	Water	1/4/2018 11:40	1/4/2018 13:00

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## ANALYTICAL RESULTS

Workorder: T1800276 SELF Supplemental Site Assess

Lab ID:	<b>T1800276001</b>	Date Received:	01/04/18 13:00	Matrix:	Water
Sample ID:	<b>TH-83</b>	Date Collected:	01/04/18 11:32		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### FIELD PARAMETERS

Analysis Desc: Data entry of field measurements		Analytical Method: Field Measurements						
Conductivity	<b>1504</b>		<b>umhos/cm</b>	<b>1</b>			1/4/2018 11:32	....
Dissolved Oxygen	<b>1.12</b>		<b>mg/L</b>	<b>1</b>			1/4/2018 11:32	....
ORP-2580BW	<b>6.7</b>		<b>mV</b>	<b>1</b>			1/4/2018 11:32	....
Temperature	<b>22.7</b>		<b>°C</b>	<b>1</b>			1/4/2018 11:32	....
Turbidity	<b>5.05</b>		<b>NTU</b>	<b>1</b>			1/4/2018 11:32	....
pH	<b>6.9</b>		<b>SU</b>	<b>1</b>			1/4/2018 11:32	....

### METALS

Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Sodium	<b>98</b>		<b>mg/L</b>	<b>1</b>		0.20	0.17	1/5/2018 21:35 T
<b>WET CHEMISTRY</b>								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	<b>6.5</b>		<b>mg/L</b>	<b>1</b>		0.10	0.025	1/5/2018 11:59 T
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	<b>430</b>		<b>mg/L</b>	<b>1.25</b>		12	12	1/5/2018 08:24 T
Analysis Desc: Chlorides,SM4500-Cl-E,Water		Analytical Method: SM 4500-Cl-E						
Chloride	<b>170</b>		<b>mg/L</b>	<b>5</b>		25	13	1/10/2018 16:12 T

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## ANALYTICAL RESULTS

Workorder: T1800276 SELF Supplemental Site Assess

Lab ID: **T1800276002** Date Received: 01/04/18 13:00 Matrix: Water  
 Sample ID: **Field Blank** Date Collected: 01/04/18 11:40

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### METALS

Analysis Desc: SW846 6010B Preparation Method: SW-846 3010A  
 Analysis,Water Analytical Method: SW-846 6010

Sodium	0.17	U	mg/L	1	0.20	0.17	1/5/2018 21:43	T
--------	------	---	------	---	------	------	----------------	---

### WET CHEMISTRY

Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1

Ammonia (N)	0.025	U	mg/L	1	0.10	0.025	1/5/2018 11:59	T
-------------	-------	---	------	---	------	-------	----------------	---

Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C

Total Dissolved Solids	12	U	mg/L	1.25	12	12	1/5/2018 08:24	T
------------------------	----	---	------	------	----	----	----------------	---

Analysis Desc: Chlorides,SM4500-Cl-E,Water Analytical Method: SM 4500-Cl-E

Chloride	2.6	U	mg/L	1	5.0	2.6	1/10/2018 15:44	T
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Fax: (813)630-4327

## ANALYTICAL RESULTS QUALIFIERS

Workorder: T1800276 SELF Supplemental Site Assess

### 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: T1800276 SELF Supplemental Site Assess

QC Batch: WCAt/1035 Analysis Method: SM 2540 C  
QC Batch Method: SM 2540 C Prepared:  
Associated Lab Samples: T1800276001, T1800276002

METHOD BLANK: 2577867

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

LABORATORY CONTROL SAMPLE: 2577868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	550	83	75-125	

SAMPLE DUPLICATE: 2577870 Original: T1800254002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	62	60	4	5	
QC Batch: WCAt/1049 Analysis Method: EPA 350.1						
QC Batch Method: EPA 350.1			Prepared:			
Associated Lab Samples:	T1800276001, T1800276002					

METHOD BLANK: 2578167

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Ammonia (N)	mg/L	0.025	0.025	U

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## QUALITY CONTROL DATA

Workorder: T1800276 SELF Supplemental Site Assess

LABORATORY CONTROL SAMPLE: 2578168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
<b>WET CHEMISTRY</b>					
Ammonia (N)	mg/L	0.5	0.55	110	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2578171      2578172      Original: T1800235002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Max Qualifiers
<b>WET CHEMISTRY</b>											
Ammonia (N)	mg/L	1.9	1	2.9	2.8	102	98	90-110	2	10	

QC Batch: DGMt/1010      Analysis Method: SW-846 6010

QC Batch Method: SW-846 3010A      Prepared: 01/05/2018 11:40

Associated Lab Samples: T1800276001, T1800276002

METHOD BLANK: 2578217

Parameter	Units	Blank Result	Reporting Limit Qualifiers
<b>METALS</b>			
Sodium	mg/L	0.17	0.17 U

LABORATORY CONTROL SAMPLE: 2578218

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
<b>METALS</b>					
Sodium	mg/L	50	51	100	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2578219      2578220      Original: T1800254001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Max Qualifiers
<b>METALS</b>											
Sodium	mg/L	4.3	50	55	54	100	99	75-125	1	20	

Report ID: 529984 - 87681

Page 7 of 10

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## QUALITY CONTROL DATA

Workorder: T1800276 SELF Supplemental Site Assess

QC Batch: WCAt/1149 Analysis Method: SM 4500-CI-E

QC Batch Method: SM 4500-CI-E Prepared:

Associated Lab Samples: T1800276001, T1800276002

METHOD BLANK: 2584601

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Chloride	mg/L	2.6	2.6	U

LABORATORY CONTROL SAMPLE: 2584602

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chloride	mg/L	50	48	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2584603                    2584604                    Original: T1800276002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Max Qualifiers
WET CHEMISTRY											
Chloride	mg/L	0.54	50	47	47	94	93	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2584605                    2584606                    Original: T1800175009

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Max Qualifiers
WET CHEMISTRY											
Chloride	mg/L	120	50	170	170	88	88	90-110	0	10	

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## QUALITY CONTROL DATA QUALIFIERS

Workorder: T1800276 SELF Supplemental Site Assess

### 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: T1800276 SELF Supplemental Site Assess

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1800276001	TH-83			SM 2540 C	WCAt/1035
T1800276002	Field Blank			SM 2540 C	WCAt/1035
T1800276001	TH-83			EPA 350.1	WCAt/1049
T1800276002	Field Blank			EPA 350.1	WCAt/1049
T1800276001	TH-83	SW-846 3010A	DGMt/1010	SW-846 6010	ICPt/1008
T1800276002	Field Blank	SW-846 3010A	DGMt/1010	SW-846 6010	ICPt/1008
T1800276001	TH-83			SM 4500-CI-E	WCAt/1149
T1800276002	Field Blank			SM 4500-CI-E	WCAt/1149
T1800276001	TH-83	Field Measurements	FLDt/	Field Measurements	FLDt/

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**Form FD 9000-24**  
**GROUNDWATER SAMPLING LOG**

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, Florida	
WELL NO: TH-83	SAMPLE ID: TH-83	DATE: 1-4-2018

## PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 5.47 ft to 15.47 Ft	STATIC DEPTH TO WATER (feet): 9.30	PURGE PUMP TYPE OR BAILER: BP
------------------------------	----------------------------------	--	---------------------------------------	----------------------------------

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

$$= (15.47 \text{ feet} - 9.30 \text{ feet}) \times 0.16 \text{ gallons/foot} = 0.99 \text{ gallons}$$

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	14.47	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	14.47	PURGING INITIATED AT:	11:21	PURGING ENDED AT:	11:32	TOTAL VOLUME PURGED (gallons):	1.76
---	-------	---	-------	--------------------------	-------	----------------------	-------	-----------------------------------	------

**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.):  $1/8'' = 0.0006; \frac{3}{16}'' = 0.0014; \frac{1}{4}'' = 0.0026; \frac{5}{16}'' = 0.004; \frac{3}{8}'' = 0.006; \frac{1}{2}'' = 0.010; \frac{5}{8}'' = 0.016$

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

## SAMPLING DATA

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

**ORP:** 11:28 (12.8); 11:36 (9.6) | 11:32 (6.7)

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; RPP = Reverse Flow Peristaltic Pump; SM = Strom Method (Taking Quant. Dose); S = Other (See Description)

**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 ES 2212 SECTION 3)

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

Form FD 9000-24  
GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill		SITE LOCATION: Lithia, Florida	
WELL NO: Field Blank	SAMPLE ID: Field Blank		DATE: 1/4/18

**PURGING DATA**

WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A	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 0.16 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
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)
				pH (standard units)
				TEMP. (°C)
				COND. (circle units) $\mu\text{mhos}/\text{cm}$ or $\mu\text{S}/\text{cm}$
				DISSOLVED OXYGEN (circle units) mg/L or % saturation
				TURBIDITY (NTUs)
				COLOR (describe)
				ODOR (describe)

*Field*  
*1/4/18* *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 = Baler; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <i>J. Fuller / T. Aguilar</i>		SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>		SAMPLING INITIATED AT: 11:40	SAMPLING ENDED AT: 11:42
PUMP OR TUBING DEPTH IN WELL (feet): N/A		TUBING MATERIAL CODE: N/A		FIELD-FILTERED: Y <input checked="" type="checkbox"/> FILTER SIZE: _____ μm Filtration Equipment Type:	
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/>		TUBING Y <input checked="" type="checkbox"/> (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/>	
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)					

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



**Queue:** WCAt

**Batch Number:** 1149

**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 4500-Cl-E  
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 (MS 88%) and matrix spike duplicate (MSD 88%) recoveries of Chloride for T1800175009 were outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential low bias in this matrix. No further corrective action is required.  
E. Serial Dilution: All acceptance criteria were met.  
F. Samples: Sample analyses proceeded normally.  
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Quality Assurance Officer, or designee, as verified by the following signature, has authorized release of the data contained in this data package:

March 1, 2018

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

RE: Workorder: T1802151 SELF Supplemental Site

Dear Michael Townsel:

Enclosed are the analytical results for sample(s) received by the laboratory between Wednesday, February 07, 2018 and Thursday, February 08, 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: T1802151 SELF Supplemental Site

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1802151001	Field Blank	Water	2/7/2018 09:43	2/7/2018 13:56
T1802151002	TH-66A	Water	2/7/2018 09:52	2/7/2018 13:56
T1802151003	TH-79	Water	2/7/2018 10:36	2/7/2018 13:56
T1802151004	TH-80	Water	2/7/2018 11:08	2/7/2018 13:56
T1802151005	TH-81	Water	2/7/2018 11:37	2/7/2018 13:56
T1802151006	TH-67	Water	2/7/2018 12:21	2/7/2018 13:56
T1802151007	TH-83	Water	2/7/2018 12:49	2/7/2018 13:56
T1802151008	Duplicate	Water	2/7/2018 00:00	2/7/2018 13:56
T1802151009	TH-20B	Water	2/8/2018 09:54	2/8/2018 12:17
T1802151010	TH-82	Water	2/8/2018 10:35	2/8/2018 12:17
T1802151011	TH-38B	Water	2/8/2018 10:59	2/8/2018 12:17

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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID:	<b>T1802151001</b>	Date Received:	02/07/18 13:56	Matrix:	Water
Sample ID:	<b>Field Blank</b>	Date Collected:	02/07/18 09:43		

Sample Description:	Location:
---------------------	-----------

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### METALS

Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010
---	---

Sodium	0.17	U	mg/L	1	0.20	0.17	2/26/2018 15:40	T
--------	------	---	------	---	------	------	-----------------	---

### WET CHEMISTRY

Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1
-------------------------------------	------------------------------

Ammonia (N)	0.025	U	mg/L	1	0.10	0.025	2/9/2018 14:35	T
-------------	-------	---	------	---	------	-------	----------------	---

Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C
---	------------------------------

Total Dissolved Solids	12	U	mg/L	1.25	12	12	2/8/2018 12:15	T
------------------------	----	---	------	------	----	----	----------------	---

Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E
--	---------------------------------

Chloride	2.6	U	mg/L	1	5.0	2.6	2/14/2018 11:14	T
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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID: **T1802151002** Date Received: 02/07/18 13:56 Matrix: Water  
 Sample ID: **TH-66A** Date Collected: 02/07/18 09:52

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### **FIELD PARAMETERS**

Analysis Desc: Data entry of field measurements		Analytical Method: Field Measurements						
Conductivity	<b>315.6</b>		umhos/cm	1			2/7/2018 09:52	....
Dissolved Oxygen	<b>0.46</b>		mg/L	1			2/7/2018 09:52	....
ORP-2580BW	<b>-43.6</b>		mV	1			2/7/2018 09:52	....
Temperature	<b>22.5</b>		°C	1			2/7/2018 09:52	....
Turbidity	<b>0.89</b>		NTU	1			2/7/2018 09:52	....
pH	<b>5.87</b>		SU	1			2/7/2018 09:52	....

### **METALS**

Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	<b>210</b>		mg/L	<b>1.25</b>		12	12	2/13/2018 08:11 T
Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Sodium	<b>12</b>		mg/L	<b>1</b>		0.20	0.17	2/9/2018 23:54 T

### **WET CHEMISTRY**

Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	<b>0.09</b>	I	mg/L	<b>1</b>		0.10	0.025	2/9/2018 14:35 T
Analysis Desc: Chlorides,SM4500-Cl-E,Water		Analytical Method: SM 4500-Cl-E						
Chloride	<b>24</b>		mg/L	<b>1</b>		5.0	2.6	2/14/2018 12:18 T

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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID:	<b>T1802151003</b>	Date Received:	02/07/18 13:56	Matrix:	Water
Sample ID:	<b>TH-79</b>	Date Collected:	02/07/18 10:36		

Sample Description:	Location:
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Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### FIELD PARAMETERS

Analysis Desc: Data entry of field measurements		Analytical Method: Field Measurements						
Conductivity	956		umhos/cm	1			2/7/2018 10:36	....
Dissolved Oxygen	3.33		mg/L	1			2/7/2018 10:36	....
ORP-2580BW	-15		mV	1			2/7/2018 10:36	....
Temperature	20.7		°C	1			2/7/2018 10:36	....
Turbidity	7.97		NTU	1			2/7/2018 10:36	....
pH	6.11		SU	1			2/7/2018 10:36	....

### METALS

Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Sodium	100		mg/L	1		0.20	0.17	2/9/2018 23:58 T
<b>WET CHEMISTRY</b>								
Ammonia (N)	3.8		mg/L	1		0.10	0.025	2/9/2018 14:35 T
Analysis Desc: Tot Dissolved Solids,SM2540C								
Total Dissolved Solids	560		mg/L	1.25		12	12	2/13/2018 08:11 T
Analysis Desc: Chlorides,SM4500-Cl-E,Water								
Chloride	150		mg/L	5		25	13	2/14/2018 12:18 T

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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID:	<b>T1802151004</b>	Date Received:	02/07/18 13:56	Matrix:	Water
Sample ID:	<b>TH-80</b>	Date Collected:	02/07/18 11:08		

Sample Description:	Location:
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Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### FIELD PARAMETERS

Analysis Desc: Data entry of field measurements		Analytical Method: Field Measurements						
Conductivity	733		umhos/cm	1			2/7/2018 11:08	....
Dissolved Oxygen	0.79		mg/L	1			2/7/2018 11:08	....
ORP-2580BW	13.8		mV	1			2/7/2018 11:08	....
Temperature	24.9		°C	1			2/7/2018 11:08	....
Turbidity	2.49		NTU	1			2/7/2018 11:08	....
pH	5.69		SU	1			2/7/2018 11:08	....

### METALS

Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Sodium	62		mg/L	1		0.20	0.17	2/10/2018 00:01 T

### WET CHEMISTRY

Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	0.52		mg/L	1		0.10	0.025	2/9/2018 14:35 T
Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	410		mg/L	1.25		12	12	2/13/2018 08:11 T
Analysis Desc: Chlorides,SM4500-Cl-E,Water		Analytical Method: SM 4500-Cl-E						
Chloride	110		mg/L	5		25	13	2/14/2018 11:33 T

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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID:	<b>T1802151005</b>	Date Received:	02/07/18 13:56	Matrix:	Water
Sample ID:	<b>TH-81</b>	Date Collected:	02/07/18 11:37		

Sample Description:	Location:
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Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### FIELD PARAMETERS

Analysis Desc: Data entry of field measurements		Analytical Method: Field Measurements						
Conductivity	194.9		umhos/cm	1			2/7/2018 11:37	....
Dissolved Oxygen	2.12		mg/L	1			2/7/2018 11:37	....
ORP-2580BW	71.7		mV	1			2/7/2018 11:37	....
Temperature	22.1		°C	1			2/7/2018 11:37	....
Turbidity	14.5		NTU	1			2/7/2018 11:37	....
pH	6.15		SU	1			2/7/2018 11:37	....

### METALS

Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Sodium	21		mg/L	1		0.20	0.17	2/10/2018 00:05 T
<b>WET CHEMISTRY</b>								
Ammonia (N)	0.33		mg/L	1		0.10	0.025	2/9/2018 14:35 T
Analysis Desc: Tot Dissolved Solids,SM2540C								
Total Dissolved Solids	130		mg/L	1.25		12	12	2/13/2018 08:11 T
Analysis Desc: Chlorides,SM4500-Cl-E,Water								
Chloride	27		mg/L	1		5.0	2.6	2/14/2018 11:18 T

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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID: **T1802151006** Date Received: 02/07/18 13:56 Matrix: Water  
Sample ID: **TH-67** Date Collected: 02/07/18 12:21

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### FIELD PARAMETERS

Analysis Desc: Data entry of field measurements Analytical Method: Field Measurements

Conductivity	<b>207.7</b>		umhos/cm	1			2/7/2018 12:21	....
Dissolved Oxygen	<b>5.97</b>		mg/L	1			2/7/2018 12:21	....
ORP-2580BW	<b>103.7</b>		mV	1			2/7/2018 12:21	....
Temperature	<b>22.2</b>		°C	1			2/7/2018 12:21	....
Turbidity	<b>7.76</b>		NTU	1			2/7/2018 12:21	....
pH	<b>6.54</b>		SU	1			2/7/2018 12:21	....

### METALS

Analysis Desc: SW846 6010B Preparation Method: SW-846 3010A  
Analysis,Water Analytical Method: SW-846 6010

Sodium	<b>6.3</b>		mg/L	1	0.20	0.17	2/10/2018 00:09	T
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### WET CHEMISTRY

Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1

Ammonia (N)	<b>0.025</b>	U	mg/L	1	0.10	0.025	2/9/2018 14:35	T
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Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C

Total Dissolved Solids	<b>140</b>		mg/L	1.25	12	12	2/13/2018 08:11	T
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Analysis Desc: Chlorides,SM4500-Cl-E,Water Analytical Method: SM 4500-Cl-E

Chloride	<b>12</b>		mg/L	1	5.0	2.6	2/14/2018 12:19	T
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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID: **T1802151007** Date Received: 02/07/18 13:56 Matrix: Water  
Sample ID: **TH-83** Date Collected: 02/07/18 12:49

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### FIELD PARAMETERS

Analysis Desc: Data entry of field measurements Analytical Method: Field Measurements

Conductivity	537	umhos/cm	1			2/7/2018 12:49	....
Dissolved Oxygen	1.02	mg/L	1			2/7/2018 12:49	....
ORP-2580BW	10.6	mV	1			2/7/2018 12:49	....
Temperature	23.1	°C	1			2/7/2018 12:49	....
Turbidity	4.78	NTU	1			2/7/2018 12:49	....
pH	6.55	SU	1			2/7/2018 12:49	....

### METALS

Analysis Desc: SW846 6010B Preparation Method: SW-846 3010A  
Analysis,Water Analytical Method: SW-846 6010

Sodium	58	mg/L	1	0.20	0.17	2/10/2018 00:12	T
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### WET CHEMISTRY

Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1

Ammonia (N)	4.7	mg/L	1	0.10	0.025	2/9/2018 14:35	T
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Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C

Total Dissolved Solids	290	mg/L	1.25	12	12	2/13/2018 08:11	T
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Analysis Desc: Chlorides,SM4500-Cl-E,Water Analytical Method: SM 4500-Cl-E

Chloride	62	mg/L	1	5.0	2.6	2/14/2018 11:19	T
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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID:	<b>T1802151008</b>	Date Received:	02/07/18 13:56	Matrix:	Water
Sample ID:	<b>Duplicate</b>	Date Collected:	02/07/18 00:00		

Sample Description:	Location:
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Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### METALS

Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010
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Sodium	<b>6.2</b>	<b>mg/L</b>	<b>1</b>	0.20	0.17	2/10/2018 00:31	T
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### WET CHEMISTRY

Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1
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Ammonia (N)	<b>0.025</b>	<b>U</b>	<b>mg/L</b>	<b>1</b>	0.10	0.025	2/9/2018 14:35	T
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Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C
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Total Dissolved Solids	<b>150</b>	<b>mg/L</b>	<b>1.25</b>	12	12	2/13/2018 08:11	T
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Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E
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Chloride	<b>11</b>	<b>mg/L</b>	<b>1</b>	5.0	2.6	2/14/2018 11:20	T
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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID:	<b>T1802151009</b>	Date Received:	02/08/18 12:17	Matrix:	Water
Sample ID:	<b>TH-20B</b>	Date Collected:	02/08/18 09:54		

Sample Description:	Location:
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Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### FIELD PARAMETERS

Analysis Desc: Data entry of field measurements		Analytical Method: Field Measurements						
Conductivity	394.8		umhos/cm	1			2/8/2018 09:54	....
Dissolved Oxygen	0.37		mg/L	1			2/8/2018 09:54	....
ORP-2580BW	-2.4		mV	1			2/8/2018 09:54	....
Temperature	22.9		°C	1			2/8/2018 09:54	....
Turbidity	2.99		NTU	1			2/8/2018 09:54	....
pH	5.68		SU	1			2/8/2018 09:54	....

### METALS

Analysis Desc: Tot Dissolved Solids,SM2540C		Analytical Method: SM 2540 C						
Total Dissolved Solids	280		mg/L	1.25		12	12	2/13/2018 09:18 T
Analysis Desc: SW846 6010B Analysis,Water		Preparation Method: SW-846 3010A Analytical Method: SW-846 6010						
Sodium	29		mg/L	1		0.20	0.17	2/12/2018 17:53 T

### WET CHEMISTRY

Analysis Desc: Ammonia,E350.1,Water		Analytical Method: EPA 350.1						
Ammonia (N)	1.2		mg/L	1		0.10	0.025	2/15/2018 14:28 T
Analysis Desc: Chlorides,SM4500-Cl-E,Water		Analytical Method: SM 4500-Cl-E						
Chloride	89		mg/L	1		5.0	2.6	2/14/2018 11:20 T

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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID: **T1802151010** Date Received: 02/08/18 12:17 Matrix: Water  
 Sample ID: **TH-82** Date Collected: 02/08/18 10:35

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### **FIELD PARAMETERS**

Analysis Desc: Data entry of field measurements Analytical Method: Field Measurements

Conductivity	174.3	umhos/cm	1		2/8/2018 10:35	....
Dissolved Oxygen	1.17	mg/L	1		2/8/2018 10:35	....
ORP-2580BW	107.3	mV	1		2/8/2018 10:35	....
Temperature	24.1	°C	1		2/8/2018 10:35	....
Turbidity	4.56	NTU	1		2/8/2018 10:35	....
pH	5.07	SU	1		2/8/2018 10:35	....

### **METALS**

Analysis Desc: SW846 6010B Preparation Method: SW-846 3010A  
 Analysis,Water Analytical Method: SW-846 6010

Sodium	5.4	mg/L	1	0.20	0.17	2/12/2018 17:57	T
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### **WET CHEMISTRY**

Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1

Ammonia (N)	0.69	mg/L	1	0.10	0.025	2/15/2018 14:28	T
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Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C

Total Dissolved Solids	140	mg/L	1.25	12	12	2/13/2018 09:18	T
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Analysis Desc: Chlorides,SM4500-Cl-E,Water Analytical Method: SM 4500-Cl-E

Chloride	41	mg/L	1	5.0	2.6	2/14/2018 11:21	T
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## ANALYTICAL RESULTS

Workorder: T1802151 SELF Supplemental Site

Lab ID: **T1802151011** Date Received: 02/08/18 12:17 Matrix: Water  
Sample ID: **TH-38B** Date Collected: 02/08/18 10:59

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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### FIELD PARAMETERS

Analysis Desc: Data entry of field measurements Analytical Method: Field Measurements

Conductivity	<b>79.2</b>		umhos/cm	1			2/8/2018 10:59	....
Dissolved Oxygen	<b>0.86</b>		mg/L	1			2/8/2018 10:59	....
ORP-2580BW	<b>70.7</b>		mV	1			2/8/2018 10:59	....
Temperature	<b>23.5</b>		°C	1			2/8/2018 10:59	....
Turbidity	<b>3.6</b>		NTU	1			2/8/2018 10:59	....
pH	<b>5.22</b>		SU	1			2/8/2018 10:59	....

### METALS

Analysis Desc: SW846 6010B Preparation Method: SW-846 3010A  
Analysis,Water Analytical Method: SW-846 6010

Sodium	<b>3.4</b>		mg/L	1	0.20	0.17	2/12/2018 18:00	T
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### WET CHEMISTRY

Analysis Desc: Ammonia,E350.1,Water Analytical Method: EPA 350.1

Ammonia (N)	<b>2.2</b>		mg/L	1	0.10	0.025	2/15/2018 14:28	T
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Analysis Desc: Tot Dissolved Solids,SM2540C Analytical Method: SM 2540 C

Total Dissolved Solids	<b>83</b>		mg/L	1.25	12	12	2/13/2018 09:18	T
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Analysis Desc: Chlorides,SM4500-Cl-E,Water Analytical Method: SM 4500-Cl-E

Chloride	<b>6.4</b>		mg/L	1	5.0	2.6	2/14/2018 11:12	T
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## ANALYTICAL RESULTS QUALIFIERS

Workorder: T1802151 SELF Supplemental Site

### 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: T1802151 SELF Supplemental Site

QC Batch: WCAt/1636 Analysis Method: SM 2540 C  
QC Batch Method: SM 2540 C Prepared:  
Associated Lab Samples: T1802151001

METHOD BLANK: 2612683

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

LABORATORY CONTROL SAMPLE: 2612684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	660	610	92	75-125

SAMPLE DUPLICATE: 2612686 Original: T1802081001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	280	290	4	5
QC Batch:	DGMt/1179			Analysis Method:	SW-846 6010
QC Batch Method:	SW-846 3010A			Prepared:	02/09/2018 10:00
Associated Lab Samples: T1802151001, T1802151002, T1802151003, T1802151004, T1802151005, T1802151006, T1802151007, T1802151008					

METHOD BLANK: 2614342

Parameter	Units	Blank Result	Reporting Limit Qualifiers
METALS			
Sodium	mg/L	0.17	0.17 U

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## QUALITY CONTROL DATA

Workorder: T1802151 SELF Supplemental Site

LABORATORY CONTROL SAMPLE: 2614343

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
<b>METALS</b>					
Sodium	mg/L	50	50	100	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2614344 2614345 Original: T1802133001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Max Qualifiers
<b>METALS</b>											
Sodium	mg/L	66	50	110	110	96	97	75-125	0	20	

QC Batch: WCAt/1667

Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1

Prepared:

Associated Lab Samples: T1802151001

METHOD BLANK: 2614982

Parameter	Units	Blank Result	Reporting Limit Qualifiers
<b>WET CHEMISTRY</b>			
Ammonia (N)	mg/L	0.025	0.025 U

LABORATORY CONTROL SAMPLE: 2614983

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
<b>WET CHEMISTRY</b>					
Ammonia (N)	mg/L	0.5	0.54	108	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2614984 2614985 Original: S1800198002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Max Qualifiers
<b>WET CHEMISTRY</b>											
Ammonia (N)	mg/L	0	1	1.1	1.1	109	109	90-110	0	10	

Report ID: 536784 - 230933

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## QUALITY CONTROL DATA

Workorder: T1802151 SELF Supplemental Site

QC Batch: WCAt/1668 Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1 Prepared:

Associated Lab Samples: T1802151002, T1802151003, T1802151004, T1802151005, T1802151006, T1802151007, T1802151008

METHOD BLANK: 2614990

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Ammonia (N)	mg/L	0.025	0.025 U

LABORATORY CONTROL SAMPLE: 2614991

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Ammonia (N)	mg/L	0.5	0.54	108	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2614992 2614993 Original: T1802133001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Max Qualifiers
WET CHEMISTRY											
Ammonia (N)	mg/L	0.03	1	1.1	1.1	109	109	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2614994 2614995 Original: T1802237001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Max Qualifiers
WET CHEMISTRY											
Ammonia (N)	mg/L	0.02	1	1.1	1.1	109	110	90-110	0	10	

QC Batch: DGMt/1186 Analysis Method: SW-846 6010

QC Batch Method: SW-846 3010A Prepared: 02/12/2018 10:00

Associated Lab Samples: T1802151009, T1802151010, T1802151011

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## QUALITY CONTROL DATA

Workorder: T1802151 SELF Supplemental Site

METHOD BLANK: 2615768

Parameter	Units	Blank Result	Reporting Limit Qualifiers
<b>METALS</b>			
Sodium	mg/L	0.17	0.17 U

LABORATORY CONTROL SAMPLE: 2615769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
<b>METALS</b>					
Sodium	mg/L	50	48	96	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2615770      2615771      Original: T1802095001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>METALS</b>											
Sodium	mg/L	30	50	78	78	96	96	75-125	0	20	

QC Batch: WCAt/1689      Analysis Method: SM 2540 C

QC Batch Method: SM 2540 C      Prepared:

Associated Lab Samples: T1802151002, T1802151003, T1802151004, T1802151005, T1802151006, T1802151007, T1802151008

METHOD BLANK: 2616295

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

LABORATORY CONTROL SAMPLE: 2616296

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

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## **QUALITY CONTROL DATA**

Workorder: T1802151 SELF Supplemental Site

SAMPLE DUPLICATE: 2616297 Original: T1802151002

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

SAMPLE DUPLICATE: 2616298 Original: T1802283002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
<b>WET CHEMISTRY</b>						
Total Dissolved Solids	mg/L	330	320	2	5	
QC Batch:	WCAt/1715		Analysis Method:		SM 2540 C	
QC Batch Method:	SM 2540 C		Prepared:			
Associated Lab Samples:	T1802151009, T1802151010, T1802151011					

METHOD BLANK: 2617143

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

LABORATORY CONTROL SAMPLE: 2617144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
<b>WET CHEMISTRY</b>						
Total Dissolved Solids	mg/L	660	620	94	75-125	

SAMPLE DUPLICATE: 2617145 Original: T1802151009

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
<b>WET CHEMISTRY</b>					
Total Dissolved Solids	mg/L	280	280	2	5

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## QUALITY CONTROL DATA

Workorder: T1802151 SELF Supplemental Site

SAMPLE DUPLICATE: 2617146                      Original: T1802306003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
Total Dissolved Solids	mg/L	210	210	0	5
QC Batch:	WCAt/1751		Analysis Method:	SM 4500-CI-E	
QC Batch Method:	SM 4500-CI-E		Prepared:		
Associated Lab Samples:		T1802151001, T1802151002, T1802151003, T1802151004, T1802151005, T1802151006, T1802151007,			

METHOD BLANK: 2618930

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
Chloride	mg/L	2.6	2.6 U

LABORATORY CONTROL SAMPLE: 2618931

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Chloride	mg/L	50	50	101	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2618932                      2618933                      Original: S1800222003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers
WET CHEMISTRY										
Chloride	mg/L	19	50	66	68	95	99	90-110	3	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2618934                      2618935                      Original: T1802151001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers
WET CHEMISTRY										
Chloride	mg/L	1.1	50	52	52	103	105	90-110	1	10

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## QUALITY CONTROL DATA

Workorder: T1802151 SELF Supplemental Site

QC Batch: WCAt/1776 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Prepared:  
Associated Lab Samples: T1802151009, T1802151010, T1802151011

METHOD BLANK: 2620885

Parameter	Units	Blank Result	Reporting Limit Qualifiers	
			LCS	% Rec
<b>WET CHEMISTRY</b>				
Ammonia (N)	mg/L	0.025	0.025	U

LABORATORY CONTROL SAMPLE: 2620886

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec	
					Limits	Qualifiers
<b>WET CHEMISTRY</b>						
Ammonia (N)	mg/L	0.5	0.53	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2620887 2620888 Original: A1801257002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec		
								Limit	RPD	Max
<b>WET CHEMISTRY</b>										
Ammonia (N)	mg/L	2	1	3.1	3.1	108	106	90-110	0	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2620889 2620890 Original: T1802181002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec		
								Limit	RPD	Max
<b>WET CHEMISTRY</b>										
Ammonia (N)	mg/L	0.01	1	1.1	1.1	110	110	90-110	0	10

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1802151 SELF Supplemental Site

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1802151001	Field Blank			SM 2540 C	WCAt/1636
T1802151001	Field Blank	SW-846 3010A	DGMt/1179	SW-846 6010	ICPt/1115
T1802151002	TH-66A	SW-846 3010A	DGMt/1179	SW-846 6010	ICPt/1115
T1802151003	TH-79	SW-846 3010A	DGMt/1179	SW-846 6010	ICPt/1115
T1802151004	TH-80	SW-846 3010A	DGMt/1179	SW-846 6010	ICPt/1115
T1802151005	TH-81	SW-846 3010A	DGMt/1179	SW-846 6010	ICPt/1115
T1802151006	TH-67	SW-846 3010A	DGMt/1179	SW-846 6010	ICPt/1115
T1802151007	TH-83	SW-846 3010A	DGMt/1179	SW-846 6010	ICPt/1115
T1802151008	Duplicate	SW-846 3010A	DGMt/1179	SW-846 6010	ICPt/1115
T1802151001	Field Blank			EPA 350.1	WCAt/1667
T1802151002	TH-66A			EPA 350.1	WCAt/1668
T1802151003	TH-79			EPA 350.1	WCAt/1668
T1802151004	TH-80			EPA 350.1	WCAt/1668
T1802151005	TH-81			EPA 350.1	WCAt/1668
T1802151006	TH-67			EPA 350.1	WCAt/1668
T1802151007	TH-83			EPA 350.1	WCAt/1668
T1802151008	Duplicate			EPA 350.1	WCAt/1668
T1802151009	TH-20B	SW-846 3010A	DGMt/1186	SW-846 6010	ICPt/1119
T1802151010	TH-82	SW-846 3010A	DGMt/1186	SW-846 6010	ICPt/1119
T1802151011	TH-38B	SW-846 3010A	DGMt/1186	SW-846 6010	ICPt/1119
T1802151002	TH-66A			SM 2540 C	WCAt/1689
T1802151003	TH-79			SM 2540 C	WCAt/1689
T1802151004	TH-80			SM 2540 C	WCAt/1689
T1802151005	TH-81			SM 2540 C	WCAt/1689
T1802151006	TH-67			SM 2540 C	WCAt/1689
T1802151007	TH-83			SM 2540 C	WCAt/1689
T1802151008	Duplicate			SM 2540 C	WCAt/1689

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

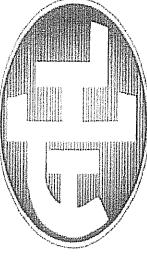
Workorder: T1802151 SELF Supplemental Site

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1802151009	TH-20B			SM 2540 C	WCAt/1715
T1802151010	TH-82			SM 2540 C	WCAt/1715
T1802151011	TH-38B			SM 2540 C	WCAt/1715
T1802151001	Field Blank			SM 4500-CI-E	WCAt/1751
T1802151002	TH-66A			SM 4500-CI-E	WCAt/1751
T1802151003	TH-79			SM 4500-CI-E	WCAt/1751
T1802151004	TH-80			SM 4500-CI-E	WCAt/1751
T1802151005	TH-81			SM 4500-CI-E	WCAt/1751
T1802151006	TH-67			SM 4500-CI-E	WCAt/1751
T1802151007	TH-83			SM 4500-CI-E	WCAt/1751
T1802151008	Duplicate			SM 4500-CI-E	WCAt/1751
T1802151009	TH-20B			SM 4500-CI-E	WCAt/1751
T1802151010	TH-82			SM 4500-CI-E	WCAt/1751
T1802151011	TH-38B			SM 4500-CI-E	WCAt/1751
T1802151009	TH-20B			EPA 350.1	WCAt/1776
T1802151010	TH-82			EPA 350.1	WCAt/1776
T1802151011	TH-38B			EPA 350.1	WCAt/1776
T1802151002	TH-66A	Field Measurements	FLDt/	Field Measurements	FLDt/
T1802151003	TH-79	Field Measurements	FLDt/	Field Measurements	FLDt/
T1802151004	TH-80	Field Measurements	FLDt/	Field Measurements	FLDt/
T1802151005	TH-81	Field Measurements	FLDt/	Field Measurements	FLDt/
T1802151006	TH-67	Field Measurements	FLDt/	Field Measurements	FLDt/
T1802151007	TH-83	Field Measurements	FLDt/	Field Measurements	FLDt/
T1802151009	TH-20B	Field Measurements	FLDt/	Field Measurements	FLDt/
T1802151010	TH-82	Field Measurements	FLDt/	Field Measurements	FLDt/
T1802151011	TH-38B	Field Measurements	FLDt/	Field Measurements	FLDt/

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Client Name: Hills. Co. Public Utilities

Project Name: SELF Supplemental Site

Project Name: SELF Supplemental Site Assessment

Assessment

ASSESSMENT OF THE INFLUENCE OF THE CULTIVATION PRACTICES ON THE SOIL MICROBIAL COMMUNITY

Assessment of the effect of the new treatment on the survival probability

Assessment	PE	PE as Title	PE as Subtitle	PE as Text	PE as Footnote
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ASSESSMENT

Assessment

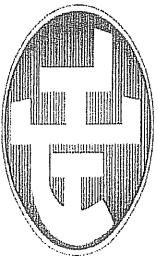
ASSESSMENT OF THE INFLUENCE OF THE COUNCIL OF STATE ON THE POLITICAL PARTIES IN PORTUGAL

**ASSESSMENT**

Assessment Title \_\_\_\_\_ PE \_\_\_\_\_ Date \_\_\_\_\_

Assessment Title \_\_\_\_\_ PE as \_\_\_\_\_

LABORATORY I.D. NUMBER



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List 15

**Form FD 9000-24**  
**GROUNDWATER SAMPLING LOG**

SITE NAME: Southeast County Landfill				SITE LOCATION: Lithia, Florida							
WELL NO: Field Blank		SAMPLE ID: Field Blank				DATE: 2-7-16					
<b>PURGING DATA</b>											
WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A	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 0.16 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 = Baler; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											
<b>SAMPLING DATA</b>											
SAMPLED BY (PRINT) / AFFILIATION: <i>T. Aguilar J. Fuller</i>			SAMPLER(S) SIGNATURE(S): <i>O. Smith</i>				SAMPLING INITIATED AT: 9:43		SAMPLING ENDED AT: 9:45		
PUMP OR TUBING DEPTH IN WELL (feet): N/A			TUBING MATERIAL CODE: N/A			FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/> Filtration Equipment Type:		FILTER SIZE: _____ μm			
FIELD DECONTAMINATION: PUMP Y <input checked="" type="radio"/> N				TUBING Y <input checked="" type="radio"/> N (replaced)				DUPLICATE: Y <input checked="" type="radio"/> 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 = Baler; 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:  $\pm$  0.2 units Temperature:  $\pm$  0.2 °C Specific Conductance:  $\pm$  5% Dissolved Oxygen: all readings  $\leq$  20% saturation (see Table FS 2200-2); optionally,  $\pm$  0.2 mg/L or  $\pm$  10% (whichever is greater) Turbidity: all readings  $\leq$  20 NTU; optionally  $\pm$  5 NTU or  $\pm$  10% (whichever is greater)

**Form FD 9000-24**  
**GROUNDWATER SAMPLING LOG**

SITE NAME: Southeast County Landfill		SITE LOCATION: Lithia, Florida	
WELL NO: TH-66A		SAMPLE ID: TH-66A	
		DATE: 2-7-18	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 5.37 ft to 15.37 ft	STATIC DEPTH TO WATER (feet): 9.70	PURGE PUMP TYPE OR BAILER: BP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)											
= ( 15.37 feet - 9.70 feet ) X 0.16 gallons/foot = 0.91 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): 14.37	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.37	PURGING INITIATED AT: 9:38	PURGING ENDED AT: 9:52	TOTAL VOLUME PURGED (gallons): 10.4							
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)
9:48	10.0	10.0	0.1	11.74	5.85	22.6	318.2	0.65	1.11	Clear	None
9:50	0.2	10.2	0.1	11.74	5.87	22.5	316.4	0.50	0.94	Clear	None
9:52	0.2	10.4	0.1	11.74	5.87	22.5	315.6	0.46	0.89	Clear	None
DIA 2-7-18											
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. Aquilino J. Fuller		SAMPLER(S) SIGNATURE(S): O. P. Agency			SAMPLING INITIATED AT: 9:52	SAMPLING ENDED AT: 9:55			
PUMP OR TUBING DEPTH IN WELL (feet): 14.37		TUBING MATERIAL CODE: T		FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>	FILTER SIZE: _____ μm Filtration Equipment Type:				
FIELD DECONTAMINATION: PUMP Y <input checked="" type="radio"/> N		TUBING Y <input checked="" type="radio"/> N (replaced)		DUPPLICATE: Y <input checked="" type="radio"/> 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: 9:48(-35.6), 9:50(-39.0), 9:52(-43.6)					
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	SITE LOCATION: Lithia, Florida	
WELL NO: TH-79	SAMPLE ID: TH-79	DATE: 3-7-18

## PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 7.80 ft to 17.80 Ft	STATIC DEPTH TO WATER (feet): 7.57	PURGE PUMP TYPE OR BAILER: BP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
(only fill out if applicable)

$$= (17.80 \text{ feet} - 7.75 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.61 \text{ gallons}$$

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

$$= \frac{W}{A} \text{ gallons} + (\frac{W}{A} \text{ gallons/foot} \times \frac{L}{A} \text{ feet}) + \frac{W}{A} \text{ gallons} = \frac{W}{A} \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	16.80	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	16.80	PURGING INITIATED AT:	10:03	PURGING ENDED AT:	10:36	TOTAL VOLUME PURGED (gallons):	1.98
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**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

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

**ORP:**  $10:30 (-36.0)$ ,  $10:32 (-24.4)$ ,  $10:34 (-21.6)$ ,  $10:36 (-15.0)$

**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:  $\pm$  0.2 units Temperature:  $\pm$  0.2 °C Specific Conductance:  $\pm$  5% Dissolved Oxygen: all readings  $\leq$  20% saturation (see Table FS 2200-2); optionally,  $\pm$  0.2 mg/L or  $\pm$  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		SITE LOCATION: Lithia, Florida	
WELL NO: TH-80	SAMPLE ID: TH-80		DATE: 2-7-18

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 8.65 ft to 18.65 Ft	STATIC DEPTH TO WATER (feet): 8.87	PURGE PUMP TYPE OR BAIRER: BP							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)											
= ( 18.65 feet - 8.87 feet ) X 0.16 gallons/foot = 1.57 gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
= ~1/2 gallons + ( ~1/2 gallons/foot X N/A feet ) + ~1/4 gallons = N/A gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 17.65		FINAL PUMP OR TUBING DEPTH IN WELL (feet): 17.65	PURGING INITIATED AT: 10:48	PURGING ENDED AT: 11:08							
TOTAL VOLUME PURGED (gallons): 2.0											
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)
11:04	1.6	1.6	0.1	9.03	5.69	24.8	732	0.79	2.50	Clear	None
11:06	0.2	1.8	0.1	9.03	5.69	24.8	733	0.79	2.59	Clear	None
11:08	0.2	2.0	0.1	9.03	5.69	24.9	733	0.79	2.49	Clear	None
<i>JTA 2-7-18</i>											
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: <i>T. Aguilar J. Fuller</i>		SAMPLER(S) SIGNATURE(S): <i>T. Aguilar J. Fuller</i>		SAMPLING INITIATED AT: 11:08	SAMPLING ENDED AT: 11:11				
PUMP OR TUBING DEPTH IN WELL (feet): 17.65		TUBING MATERIAL CODE: T		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Filtration Equipment Type:	FILTER SIZE: _____ $\mu\text{m}$				
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N		TUBING Y <input type="checkbox"/> N (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>					
SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION						
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
REMARKS: SEE C.O.C. FOR SAMPLE ANALYSIS      ORP: 11:04(17.9), 11:06(15.6), 11:08(13.8)									
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)									
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)									

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

**Form FD 9000-24**  
**GROUNDWATER SAMPLING LOG**

SITE NAME: Southeast County Landfill		SITE LOCATION: Lithia, Florida	
WELL NO: TH-81	SAMPLE ID: TH-81	DATE: 2-7-18	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 6.94 ft to 16.94 Ft	STATIC DEPTH TO WATER (feet): 8.12	PURGE PUMP TYPE OR BAIRER: BP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
(only fill out if applicable)

$$= (16.94 \text{ feet} - 8.12 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.41 \text{ gallons}$$

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 15.94		FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15.94		PURGING INITIATED AT: 11:18	PURGING ENDED AT: 11:37	TOTAL VOLUME PURGED (gallons): 1.9					
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)

11:33 1.5 1.5 0.1 8.19 6.15 22.1 190.3 2.26 19.5 Clear None

11:35 0.2 1.7 0.1 8.19 6.16 22.1 193.2 2.18 16.2 Clear None

11:37 0.2 1.9 0.1 8.19 6.15 22.1 194.9 2.12 14.5 Clear None

DFA 2-7-18

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: <i>J. Aquilar J. Fuller</i>	SAMPLER(S) SIGNATURE(S): <i>John Wagon</i>	SAMPLING INITIATED AT: 11:37	SAMPLING ENDED AT: 11:40						
PUMP OR TUBING DEPTH IN WELL (feet): 15.94	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/> Filtration Equipment Type:	FILTER SIZE: _____ μm						
FIELD DECONTAMINATION: PUMP Y <input checked="" type="radio"/> N	TUBING Y <input type="radio"/> N (replaced) <i>Prepared</i>	DUPLICATE: Y <input checked="" type="radio"/> N							
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION							
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

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

ORP: 11:33(73.4), 11:35(72.2), 11:37(71.7)

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

**Form FD 9000-24**  
**GROUNDWATER SAMPLING LOG**

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

Form FD 9000-24

**GROUNDWATER SAMPLING LOG**

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, Florida
WELL NO: TH-83	SAMPLE ID: TH-83

## PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 5.47 ft to 15.47 Ft	STATIC DEPTH TO WATER (feet): 9.16	PURGE PUMP TYPE OR BAILER: BP
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**WELL VOLUME PURGE:** 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
(only fill out if applicable)

$$= (15.47 \text{ feet} - 9.16 \text{ feet}) \times 0.16 \text{ gallons/foot} = 10.01 \text{ gallons}$$

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

$$= \frac{W}{A} \text{ gallons} + (\frac{W}{A} \text{ gallons/foot} \times \frac{L}{A} \text{ feet}) + \frac{H}{A} \text{ gallons} = \frac{W}{A} \text{ gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	14.47	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	14.47	PURGING INITIATED AT:	12:38	PURGING ENDED AT:	12:49	TOTAL VOLUME PURGED (gallons):	1.76
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## SAMPLING DATA

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 (s)

Turbidity: all readings  $\leq$  20 NTU; optionally  $\pm$  5 NTU or  $\pm$  10% (whichever is greater)

**Form FD 9000-24**  
**GROUNDWATER SAMPLING LOG**

SITE NAME: Southeast County Landfill				SITE LOCATION: Lithia, Florida							
WELL NO: DUPLICATE		SAMPLE ID: DUPLICATE		DATE: 2-7-16							
<b>PURGING DATA</b>											
WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: N/A ft to N/A	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 0.16 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)
<i>Duplicate 2-7-16 TA</i>											
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 = Baler; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											
<b>SAMPLING DATA</b>											
SAMPLED BY (PRINT) / AFFILIATION: <i>T. Aguilar J. Fuller</i>			SAMPLER(S) SIGNATURE(S): <i>T. Aguilar</i>				SAMPLING INITIATED AT: N/A		SAMPLING ENDED AT: N/A		
PUMP OR TUBING DEPTH IN WELL (feet): N/A			TUBING MATERIAL CODE: T			FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/> Filtration Equipment Type:		FILTER SIZE: _____ μm			
FIELD DECONTAMINATION: PUMP Y <input checked="" type="radio"/> N <input type="radio"/>				TUBING Y <input type="radio"/> N (replaced) <input checked="" type="radio"/>				DUPLICATE: Y <input type="radio"/> N <input checked="" type="radio"/>			
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					
<i>SEE C.O.C. FOR SAMPLE ANALYSIS</i>											
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 = Baler; 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:  $\pm$  0.2 units Temperature:  $\pm$  0.2 °C Specific Conductance:  $\pm$  5% Dissolved Oxygen: all readings  $\leq$  20% saturation (see Table FS 2200-2); optionally,  $\pm$  0.2 mg/L or  $\pm$  10% (whichever is greater) Turbidity: all readings  $\leq$  20 NTU; optionally  $\pm$  5 NTU or  $\pm$  10% (whichever is greater)

Form FD 9000-24  
GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill		SITE LOCATION: Lithia, Florida	
WELL NO: TH-20B		SAMPLE ID: TH-20B	
		DATE: 2-8-18	

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 12.80 ft to 22.80 ft	STATIC DEPTH TO WATER (feet): 10.17	PURGE PUMP TYPE OR BAILER: BP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)				
= ( 22.8 feet - 10.17 feet ) X 0.16 gallons/foot = 2.02				
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): 21.8		FINAL PUMP OR TUBING DEPTH IN WELL (feet): 21.8	PURGING INITIATED AT: 9:42	PURGING ENDED AT: 9:54
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)
9:50	2.08	2.08	0.26	11.86
9:52	0.52	2.60	0.26	11.86
9:54	0.52	3.12	0.26	11.86
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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: <i>T. Aguilar J. Fuller</i>			SAMPLER(S) SIGNATURE(S) <i>T. Aguilar J. Fuller</i>			SAMPLING INITIATED AT: 9:54	SAMPLING ENDED AT: 9:57	
PUMP OR TUBING DEPTH IN WELL (feet): 21.8			TUBING MATERIAL CODE: T		FIELD-FILTERED: Y <input checked="" type="checkbox"/> Filtration Equipment Type:	FILTER SIZE: _____ μm		
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/>			TUBING Y <input checked="" type="checkbox"/> (replaced)		DUPPLICATE: Y <input checked="" type="checkbox"/>			
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: 9:50(3.5), 9:52(0.4), 9:54(-2.4)								
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	SITE LOCATION: Lithia, Florida	
WELL NO: TH-82	SAMPLE ID: TH-82	DATE: 2-8-18

**PURGING DATA**

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 8.94 ft to 18.94 Ft	STATIC DEPTH TO WATER (feet): 10.73	PURGE PUMP TYPE OR BAILER: BP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  
(only fill out if applicable)

$$= (18.94 \text{ feet} - 10.73 \text{ feet}) \times 0.16 \text{ gallons/foot} = 1.31 \text{ gallons}$$

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 17.94	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 17.94	PURGING INITIATED AT: 10:04	PURGING ENDED AT: 10:35	TOTAL VOLUME PURGED (gallons): 4.96
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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)
10:13	1.44	1.44	0.16	10.98	5.26	24.3	275.0	0.40	6.50	clear	none
10:15	0.32	1.76	0.16	10.98	5.16	24.2	234.6	0.59	6.88	clear	none
10:17	0.32	2.08	0.16	10.98	5.13	24.1	217.4	0.66	6.00	clear	none
10:19	0.32	2.40	0.16	10.98	5.12	24.1	205.8	0.75	5.45	clear	none
10:21	0.32	2.72	0.16	10.98	5.11	24.0	201.1	0.80	5.53	clear	none
10:23	0.32	3.04	0.16	10.98	5.11	24.1	194.0	0.88	5.63	clear	none
10:31	1.28	4.32	0.16	10.98	5.06	24.0	167.0	1.17	5.06	clear	none
10:33	0.32	4.64	0.16	10.98	5.05	24.1	170.8	1.19	4.51	clear	none
10:35	0.32	4.96	0.16	10.98	5.07	24.1	174.3	1.17	4.56	clear	none

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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: <i>T. Aguilar &amp; J. Fuller</i>	SAMPLER(S) SIGNATURE(S): <i>T. Aguilar</i>	SAMPLING INITIATED AT: 10:35	SAMPLING ENDED AT: 10:38
PUMP OR TUBING DEPTH IN WELL (feet): 17.94	TUBING MATERIAL CODE: T	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		
							ORP: 10:19 (113.8)	
							10:21 (111.9)	
							10:23 (110.6)	
							10:31 (111.3)	
							10:33 (110.0)	
							10:35 (107.3)	

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

ORP: 10:13 (104.9), 10:15 (111.6), 10:17 (113.9)

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**

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:  $\pm$  0.2 units Temperature:  $\pm$  0.2 °C Specific Conductance:  $\pm$  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  $\pm$  5 NTU or  $\pm$  10% (whichever is greater)