Hillsborough County Florida

PUBLIC UTILITIES
PO Box 1110
Tampa, FL 33601-1110

September 1, 2017

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

SUBJECT: Southeast County Class I Landfill
WACS Facility ID No. 41193
Supplemental Groundwater Sampling Report – February/March 2017
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. These water quality sampling events were conducted at the Southeast County Landfill (SCLF) in February and March to address impacts to the surficial aquifer on the east side of the Phase II area.

The County conducted the supplemental sampling event on February 8, 2017 and collected representative groundwater samples from monitoring wells TH-20B, TH-38B, TH-66A, TH-67, and TH-79 for Total Dissolved Solids (TDS), chloride, sodium, and ammonia. Each of the groundwater samples were analyzed by our contract laboratory, Advanced Environmental Laboratories, Inc. (AEL).

On March 9-10, 2017, three (3) additional groundwater monitoring wells identified as TH-80, TH-81, and TH-82 were installed as part of the ongoing assessment activities. Each of the wells were installed by Tierra, Inc. utilizing the hollow stem auger method into the surficial aquifer, and were designed to collect representative groundwater samples. In accordance with Florida

Department of Environmental Protection (FDEP) standard operating procedures (SOPs), well completion reports under FDEP Form 62-701.900(3) for each of these groundwater monitoring wells is provided as part of this submittal. Representative groundwater samples were collected from these three (3) locations on March 29, 2017 and the analytical results are also included. The following paragraphs provide a brief discussion of the parameter-specific water quality observations from the sampling of the eight monitoring wells located down gradient of Phase II at the SCLF.

Water Quality Observations (February 8, 2017)

pH

Each of the five (5) surficial aquifer monitoring wells continue to exhibit pH values below the Secondary Drinking Water Standard (SDWS) acceptable range of 6.5 to 8.5 pH units. The pH values in the surficial aquifer across the SCLF have historically been observed below the acceptable range. Background water quality recorded prior to construction and operation of the landfill established these pH values within the surficial aquifer at and around the landfill. The pH values during this monitoring event range from 5.45 to 6.44 pH units, and the data remains consistent with the historical data set and background water quality.

Conductivity

The conductivity observed within the surficial aquifer at these sampling locations ranged from 101 to 4,980 umhos/cm, with elevated values of 3,830 and 4,980 umhos/cm recorded at TH-67 and TH-79, respectively. These elevated levels are indicative of leachate overtopping the berm and impacting the surficial aquifer in the southeast corner of Phase II.

Total Dissolved Solids (TDS)

TDS values from these five monitoring wells ranged from 57 to 2,700 mg/l. Surficial aquifer monitoring wells, TH-67 and TH-79, exhibited elevated TDS with values of 2,000 and 2,700 mg/l, respectively. Both continue to exceed the SDWS of 500 mg/l.

Chloride

Chloride values observed in the five (5) wells ranged from 8.2 to 1,200 mg/l. TH-67 and TH-79 exhibited concentrations of 990 and 1,200 mg/l, respectively. Both continue to exceed the SDWS value of 250 mg/l.

Sodium

Sodium values range from 3.6 to 650 mg/l, and surficial aquifer monitoring wells TH-67 and TH-79 exhibited concentrations of sodium at 330 and 650 mg/l, which are both well above the Primary Drinking Water Standard (PDWS) of 160 mg/l.

Water Quality Observations (March 29, 2017)

pH

The three (3) new surficial aquifer groundwater monitoring wells identified as TH-80, TH-81, and TH-82, exhibited pH values below the Secondary Drinking Water Standard (SDWS) acceptable range of 6.5 to 8.5 pH units. The pH values in the three new wells were observed at 5.67, 6.00, and 5.69 pH units, respectively. The pH values in the surficial aquifer across the SCLF have historically been observed below the acceptable range.

Conductivity

The conductivity values in TH-80, TH-81, and TH-82 were observed at 889, 2,723, and 239 umhos/cm, respectively. TH-81 is located approximately fifty (50) feet east of monitoring well TH-67 which has consistently exhibited elevated conductivity values since February 2016. The apparent impacts observed in TH-81 are likely associated with the plume of impacted groundwater east of Phase II, and matches with the geophysical map of the area conducted in June of 2016. The low conductivity value of 239 uhmos/cm observed in TH-82, supports the position that the plume of impacted groundwater has not moved beyond the road way east of the landfill. The County will continue to monitor and evaluate the conductivity values from these locations.

Total Dissolved Solids (TDS)

TDS values from monitoring wells TH-80, TH-81, and TH-82 were observed at 500, 2,000, and 130 mg/l, respectively. The elevated TDS value observed in TH-81 exceeds the SDWS of 500 mg/l. The plume appears to extend to this point east of the landfill. The very low value observed in TH-82 further supports the position that the plume is limited in extent and does not extend beyond the roadway east of the landfill in this area.

Chloride

Chloride values observed in the three new wells were observed at 130, 810, and 25 mg/l, respectively. TH-81 exhibited a concentration 810 mg/l, which is above the SDWS, and is consistent with the other parameters observed in this well. The plume appears to extend to at

least this point east of the landfill. The very low value observed in TH-82 further supports the position that the plume does not extend beyond the roadway east of the landfill in this area.

Sodium

Sodium values in the three new wells were observed at 37, 250, and 11 mg/l, respectively. TH-81 concentration of sodium at 250 mg/l, which is above the Primary Drinking Water Standard (PDWS) of 160 mg/l. The plume appears to extend to this point east of the landfill. The very low value observed in TH-82 further supports the position that the plume does not extend beyond the roadway east of the landfill in this area.

Groundwater Elevations and Flow Direction

Groundwater elevations were recorded prior to sampling the five (5) surficial aquifer groundwater monitoring wells on February 8, 2017. A surficial aquifer groundwater flow diagram for this sampling event was prepared to evaluate the general direction of flow at and around the affected area. The direction of flow in the surficial aquifer continues to flow radially to the east of the landfill, which is relatively consistent with the historical evaluations of flow within this area at the Southeast County Landfill. However, it should be noted that the groundwater elevations and the directions of flow in this area are affected by the seasonal infiltration of storm water in the topographically low area surrounding TH-67 and the close proximity of Mine Cut-1 and the storm water basins to the south. With the fluctuations in surface water elevations in Mine Cut 1 and the storm water basins, we have observed the direction of flow turn more to the north northwest. Although these may be artifacts of perched groundwater in the clayey sediments of the former phosphate mine, the County continues to evaluate the directions of flow utilizing the available data from this area.

Conclusions

The water quality observed in the surficial aquifer monitoring wells TH-67, TH-79, and TH-81 along the east side of Phase II indicates impacts from leachate originating from the landfill. Concentrations of pH, TDS, chloride, and sodium exceeding their respective drinking water standards continued to be observed. The plume appears to extend to a line somewhere between the two detection wells TH-67 and TH-79 and the road way to the east. The area of impacted groundwater appears to have been delineated by the installation of the additional monitoring wells, and the water quality observed in the three new wells aligns well with the 2016 geophysical investigation which depicts a limited area of groundwater impacts. The Supplemental Sampling of these eight surficial aquifer monitoring wells will continue on the quarterly schedule as required.

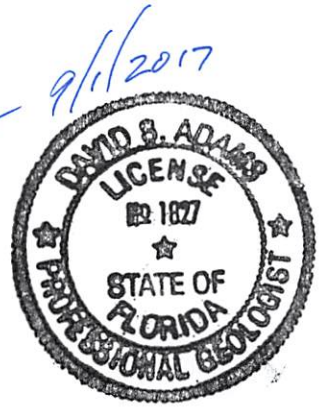
Enclosed for your review please find a detailed site location map, a data summary table of the five (5) groundwater monitoring wells sampled in February 2017, a data summary table of the three (3) groundwater monitoring wells sampled in March 2017, an elevation data summary table, a February 2017 surficial aquifer groundwater elevation and contour diagram, historical data tables through February 2017, monitoring well completion reports for wells TH-80, TH-81, and TH-82, 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) 663-3221.

Respectfully submitted,

Michael D. Townsel 9/1/2017
Senior Hydrologist
Environmental Services
Public Utilities Department

David S. Adams 9/1/2017
David S. Adams, P.G.
Environmental Manager
Environmental Services
Public Utilities Department



DSA/mdt
j:\operations\environmental\solid waste\enviro\Southeast\TH-67 Evaluation\Reports\SELF Eval Report Feb-Mar 17.pdf

xc: Kim Byer, Director, Solid Waste Management Division
Larry Ruiz, Landfill Manager, Solid Waste Management Division
Jeffry Greenwell, GMIII, Public Utilities, Environmental Services Section
Joe O'Neill, Professional Engineer II, Solid Waste Management Division
Ernest Ely, Manager, WMI, Southeast County Landfill
Clark Moore, Florida Department of Environmental Protection
Andy Schipfer, HC Environmental Protection Commission
Bruce Clark, SCS Engineers
Bob Curtis, SCS Engineers, Inc.

SOUTHEAST COUNTY LANDFILL

GROUNDWATER MONITORING WELL LOCATION MAP

2016 AERIAL PHOTO

Legend

- Existing Monitoring Wells
- Direction Of Flow

Hillsborough County Florida

Southeast County Landfill
Supplemental Site Assessment Data
February 8, 2017

General Parameters Detected	Surficial Aquifer Wells					MCL Standard
	TH-20B	TH-38B	TH-66A	TH-67	TH-79	
well type	Background	Background	Detection	Detection	Detection	
conductivity (umhos/cm) (field)	427	103	580	3830	4980	NS
dissolved oxygen (mg/l) (field)	0.18	2.02	0.64	2.13	1.73	NS
ORP (mV)	-41.7	6.2	-69.2	-41.7	-20.3	NS
temperature (°C) (field)	23.77	23.93	23.68	24.52	21.77	NS
turbidity (NTU) (field)	3.77	16.5	1.06	8.72	60.2	NS
pH (SU) (field)	**5.82**	**5.45**	**6.18**	**6.44**	**6.40**	(6.5 - 8.5)**
ammonia nitrogen (mg/l as N)	1.2	1.4	0.5	14	35	NS
chloride (mg/l)	83	8.2	78	**990**	**1200**	250**
total dissolved solids (mg/l)	230	57	300	**2000**	**2700**	500**
Metals Detected (mg/l)						MCL Standard
sodium	31	3.6	21	**330**	**650**	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.

5.82 Exceeds Standard

NTU=Nephelometric Turbidity Units

i = reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
March 29, 2017

General Parameters Detected	Surficial Aquifer Wells			MCL Standard
	TH-80	TH-81	TH-82	
well type	Detection	Detection	Background	
conductivity (umhos/cm) (field)	889	2723	239	NS
dissolved oxygen (mg/l) (field)	0.38	0.53	0.23	NS
ORP (mV)	-10.7	24.9	-147.1	NS
temperature (°C) (field)	24.49	23.70	26.16	NS
turbidity (NTU) (field)	16	16.1	ND	NS
pH (SU) (field)	5.67	6.00	5.69	(6.5 - 8.5)**
ammonia nitrogen (mg/l as N)	1.5	4.1	4.9	NS
chloride (mg/l)	130 j4	810	25	250**
total dissolved solids (mg/l)	500	2000	130	500**
Metals Detected (mg/l)				**MCL Standard**
sodium	37	250	11	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.

***=Groundwater Cleanup Target Levels as per Chapter 62-777, FAC

5.67 Exceeds Standard

NTU=Nephelometric Turbidity Units

i = reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

u = parameter was analyzed but not detected.

j4 = estimated value

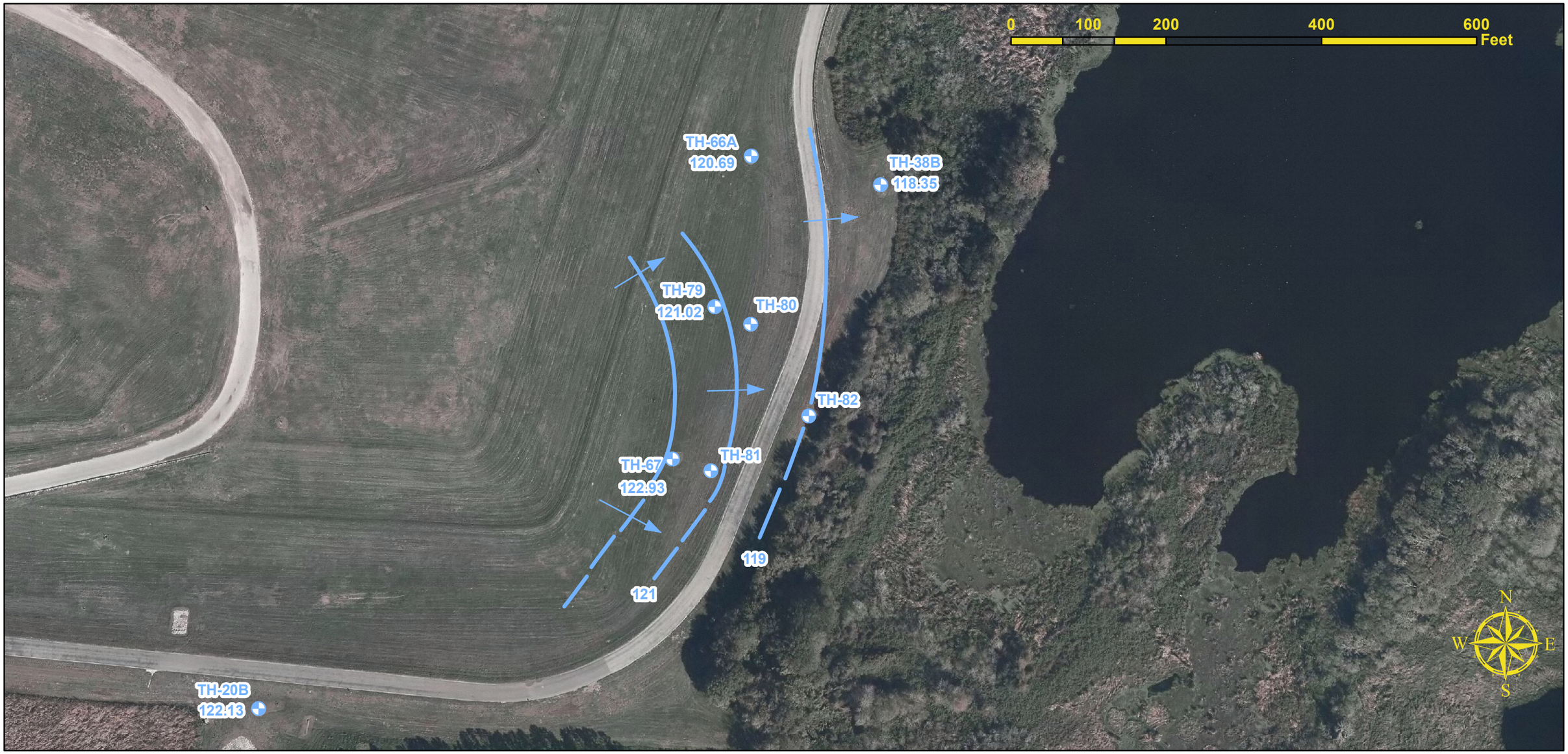
ug/l=micrograms per liter

mg/l=milligrams per liter

mV = millivolts

Southeast County Landfill
Surficial Aquifer Groundwater Elevations
February 8, 2017

Measuring Point I.D.	T.O.C. Elevations (NGVD)	W.L. B.T.O.C.	W.L. (NGVD)
TH-20B	132.57	10.44	122.13
TH-38B	131.81	13.46	118.35
TH-66A	130.66	9.97	120.69
TH-67	129.51	6.58	122.93
TH-79	129.60	8.58	121.02
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 8, 2017

2016 AERIAL PHOTO

Legend

- Existing Monitoring Wells
- Direction Of Flow

Hillsborough County Florida
EST. 1834
SM

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

Field Parameters	May-16	Nov-16	Feb-17	MCL Standard
conductivity (umhos/cm) (field)	473	332	427	NS
dissolved oxygen (mg/l) (field)	0.23	0.27	0.18	NS
ORP (mV)	-9.6	-31.2	-41.7	NS
temperature (°C) (field)	23.47	25.47	23.77	NS
turbidity (NTU) (field)	2.39	4.14	3.77	NS
pH (field)	**5.67**	**5.43**	**5.82**	(6.5 - 8.5)**
General Parameters				**MCL Standard**
total dissolved solids (mg/l)	310	200	230	500**
chloride (mg/l)	92	63	83	250**
ammonia nitrogen (mg/l as N)	2.2	1.5	1.2	NS
Metals Detected (mg/l)				**MCL Standard**
sodium	35	15	31	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 Geodedic Vertical Datum

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

Field Parameters	May-16	Nov-16	Feb-17	MCL Standard
conductivity (umhos/cm) (field)	70	61	103	NS
dissolved oxygen (mg/l) (field)	1.5	0.76	2.02	NS
ORP (mV)	175.5	-22.9	6.2	NS
temperature (°C) (field)	24.78	25.37	23.93	NS
turbidity (NTU) (field)	8.75	16	16.5	NS
pH (field)	**4.95**	**4.73**	**5.45**	(6.5 - 8.5)**
General Parameters				**MCL Standard**
total dissolved solids (mg/l)	65	45	57	500**
chloride (mg/l)	4.2 i	4.2 i	8.2	250**
ammonia nitrogen (mg/l as N)	0.79	0.66	1.4	NS
Metals Detected (mg/l)				**MCL Standard**
sodium	2.8	3	3.6	160*

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

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

Field Parameters	Aug-15	Feb-16	May-16	Nov-16	Feb-17	MCL Standard
conductivity (umhos/cm) (field)	295	313	334	512	580	**NS**
dissolved oxygen (mg/l) (field)	0.38	0.5	0.65	0.33	0.64	**NS**
ORP (mV)	ND	ND	69.7	-3	-69.2	**NS**
temperature (°C) (field)	27.01	21.5	24.55	25.44	23.68	**NS**
turbidity (NTU) (field)	3.17	1.35	0.86	0.49	1.06	**NS**
pH (field)	**6.00**	**6.12**	**6.03**	**5.82**	**6.18**	**(6.5 - 8.5)****
General Parameters						**MCL Standard**
total dissolved solids (mg/l)	180	180	180	320	300	**500****
chloride (mg/l)	4.9 i	15	15	92	78	**250****
ammonia nitrogen (mg/l as N)	0.22	0.12	0.34	0.44	0.5	**NS**
Metals Detected (mg/l)						**MCL Standard**
sodium	5.7	8.7	9.5	21	21	**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 Geodedic Vertical Datum

Southeast County Landfill
Historical Supplemental Assessment Groundwater Data
TH-67

Field Parameters	Aug-15	Feb-16	May-16	Nov-16	Feb-17	MCL Standard
conductivity (umhos/cm) (field)	429	1780	3973	2166	3830	NS
dissolved oxygen (mg/l) (field)	0.55	1.05	0.42	3.04	2.13	NS
ORP (mV)	ND	ND	-7.9	-100	-41.7	NS
temperature (°C) (field)	28.32	20.81	24.63	25.23	24.52	NS
turbidity (NTU) (field)	1.13	10.11	7.64	5.29	8.72	NS
pH (field)	**6.41**	**5.98**	**6.18**	**6.21**	**6.44**	(6.5 - 8.5)**
General Parameters						**MCL Standard**
total dissolved solids (mg/l)	220	**1600**	**2200**	**1400**	**2000**	500**
chloride (mg/l)	29	**620**	**910**	**600**	**990**	250**
ammonia nitrogen (mg/l as N)	0.12	1.5	36	11	14	NS
Metals Detected (mg/l)						**MCL Standard**
sodium	8.7	120	**360**	49	**330**	160*

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

Southeast County Landfill
Historical Supplemental Assessment Groundwater Data
TH-79

General Parameters	Nov-16	Feb-17	MCL Standard
conductivity (umhos/cm) (field)	2740	4980	NS
dissolved oxygen (mg/l) (field)	0.25	1.73	NS
ORP (mV)	1.4	-20.3	NS
temperature (°C) (field)	24.03	21.77	NS
turbidity (NTU) (field)	27.6	60.2	NS
pH (field)	**6.09**	**6.40**	(6.5 - 8.5)**
Field Parameters			**MCL Standard**
total dissolved solids (mg/l)	**1500**	**2700**	500**
chloride (mg/l)	500	**1200**	250**
ammonia nitrogen (mg/l as N)	30	35	NS
Metals Detected (mg/l)			**MCL Standard**
sodium	140	**650**	160*

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

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(30)
Form Title: Monitoring Well Completion Report
Effective Date: January 6, 2010
Incorporated in Rule 62-701.510(3), F.A.C.

MONITORING WELL COMPLETION REPORT

DATE: 5/31/2017

FACILITY NAME: Southeast County Landfill

DEP PERMIT NO.: 35435-022-SO/01 WACS FACILITY ID NO.: 41193

WACS MONITORING SITE NUM.: 41193 WACS WELL NO.: 30172

WELL TYPE: BACKGROUND ☐ DETECTION ☒ COMPLIANCE ☐

LATITUDE: 27° 46' 18.275" LONGITUDE: -82° 10' 39.107"

(see back for LAT / LONG requirements):

Coordinate Accuracy 3' Datum NAD 83/90 Elevation Datum NAD 1929

Collection Method GPS Collection Date 3/13/2017

Collector Name Deborah L. Peavey Collector Affiliation Peavey and Associates

AQUIFER MONITORED: Surficial Aquifer

DRILLING METHOD: Hollow Stem Auger DATE INSTALLED: 3/9/2017

INSTALLED BY: Tierra, Inc.

BORE HOLE DIAMETER: 6.625 " TOTAL DEPTH: 15.43 (BLS)

CASING TYPE: Schedule 40 PVC CASING DIAMETER: 2" CASING LENGTH: 8.65'

SCREEN TYPE: Schedule 40 PVC SCREEN SLOT SIZE: 0.010 SCREEN LENGTH: 10'

SCREEN DIAMETER: 2" SCREEN INTERVAL: 18.65 TO 8.65 (BLS)

FILTER PACK TYPE: Silica Sand FILTER PACK GRAIN SIZE: 20/30

INTERVAL COVERED: 18.65 TO 7.65 (BLS)

SEALANT TYPE: 6/20 Silica Sand SEALANT INTERVAL: 7.65 TO 6.65 (BLS)

GROUT TYPE: Neat Cement GROUT INTERVAL: 6.65 TO 0.0 (BLS)

TOP OF CASING ELEVATION (NGVD): 129.52 GROUND SURFACE ELEVATION (NGVD): 126.30

DESCRIBE WELL DEVELOPMENT: Electrical Submersible Pump

POST DEVELOPMENT WATER LEVEL ELEVATION (NGVD): N/A

DATE AND TIME MEASURED: N/A

REMARKS: TH-80

NAME OF PERSON PREPARING REPORT: Michael D. Townsel

Michael D. Townsel, Senior Hydrologist, Hillsborough County Public Utilities Department, (813) 663-3332

(Name, Organization, Phone No., E-mail)

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(30)
Form Title: Monitoring Well Completion Report
Effective Date: January 6, 2010
Incorporated in Rule 62-701.510(3), F.A.C.

MONITORING WELL COMPLETION REPORT

DATE: 5/31/2017

FACILITY NAME: Southeast County Landfill

DEP PERMIT NO.: 35435-022-SO/01 WACS FACILITY ID NO.: 41193

WACS MONITORING SITE NUM.: 41193 WACS WELL NO.: 30173

WELL TYPE: BACKGROUND ☐ DETECTION ☒ COMPLIANCE ☐

LATITUDE: 27° 46' 16.392" LONGITUDE: -82° 10' 39.657"

(see back for LAT / LONG requirements):

Coordinate Accuracy 3' Datum NAD 83/90 Elevation Datum NAD1929

Collection Method GPS Collection Date 3/13/2017

Collector Name Deborah L. Peavey Collector Affiliation Peavey and Associates

AQUIFER MONITORED: Surficial Aquifer

DRILLING METHOD: Hollow Stem Auger DATE INSTALLED: 3/9/2017

INSTALLED BY: Tierra, Inc.

BORE HOLE DIAMETER: 6.625 " TOTAL DEPTH: 13.48 (BLS)

CASING TYPE: Schedule 40 PVC CASING DIAMETER: 2" CASING LENGTH: 6.94'

SCREEN TYPE: Schedule 40 PVC SCREEN SLOT SIZE: 0.010 SCREEN LENGTH: 10'

SCREEN DIAMETER: 2" SCREEN INTERVAL: 16.94 TO 6.94 (BLS)

FILTER PACK TYPE: Silica Sand FILTER PACK GRAIN SIZE: 20/30

INTERVAL COVERED: 16.94 TO 5.94 (BLS)

SEALANT TYPE: 6/20 Silica Sand SEALANT INTERVAL: 5.94 TO 4.94 (BLS)

GROUT TYPE: Neat Cement GROUT INTERVAL: 4.94 TO 0.0 (BLS)

TOP OF CASING ELEVATION (NGVD): 130.26 GROUND SURFACE ELEVATION (NGVD): 126.80

DESCRIBE WELL DEVELOPMENT: Electrical Submersible Pump

POST DEVELOPMENT WATER LEVEL ELEVATION (NGVD): N/A

DATE AND TIME MEASURED: N/A

REMARKS: TH-81

NAME OF PERSON PREPARING REPORT: Michael D. Townsel

Michael D. Townsel, Senior Hydrologist, Hillsborough County Public Utilities Department, (813) 663-3332

(Name, Organization, Phone No., E-mail)

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(30)
Form Title: Monitoring Well Completion Report
Effective Date: January 6, 2010
Incorporated in Rule 62-701.510(3), F.A.C.

MONITORING WELL COMPLETION REPORT

DATE: 5/31/2017

FACILITY NAME: Southeast County Landfill

DEP PERMIT NO.: 35435-022-SO/01 WACS FACILITY ID NO.: 41193

WACS MONITORING SITE NUM.: 41193 WACS WELL NO.: 30174

WELL TYPE: BACKGROUND ☐ DETECTION ☒ COMPLIANCE ☐

LATITUDE: 27° 46' 17.120" LONGITUDE: -82° 10' 38.284"

(see back for LAT / LONG requirements):

Coordinate Accuracy 3' Datum NAD 83/90 Elevation Datum NAD1929

Collection Method GPS Collection Date 3/13/2017

Collector Name Deborah L. Peavey Collector Affiliation Peavey and Associates

AQUIFER MONITORED: Surficial Aquifer

DRILLING METHOD: Hollow Stem Auger DATE INSTALLED: 3/9/2017

INSTALLED BY: Tierra, Inc.

BORE HOLE DIAMETER: 6.625 " TOTAL DEPTH: 15.60 (BLS)

CASING TYPE: Schedule 40 PVC CASING DIAMETER: 2" CASING LENGTH: 5.3'

SCREEN TYPE: Schedule 40 PVC SCREEN SLOT SIZE: 0.010 SCREEN LENGTH: 10'

SCREEN DIAMETER: 2" SCREEN INTERVAL: 18.94 TO 8.94 (BLS)

FILTER PACK TYPE: Silica Sand FILTER PACK GRAIN SIZE: 20/30

INTERVAL COVERED: 18.94 TO 7.94 (BLS)

SEALANT TYPE: 6/20 Silica Sand SEALANT INTERVAL: 7.94 TO 6.94 (BLS)

GROUT TYPE: Neat Cement GROUT INTERVAL: 6.94 TO 0.0 (BLS)

TOP OF CASING ELEVATION (NGVD): 131.24 GROUND SURFACE ELEVATION (NGVD): 127.90

DESCRIBE WELL DEVELOPMENT: Electrical Submersible Pump

POST DEVELOPMENT WATER LEVEL ELEVATION (NGVD): N/A

DATE AND TIME MEASURED: N/A

REMARKS: TH-82

NAME OF PERSON PREPARING REPORT: Michael D. Townsel

Michael D. Townsel, Senior Hydrologist, Hillsborough County Public Utilities Department, (813) 663-3332

(Name, Organization, Phone No., E-mail)

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

March 10, 2017

David Adams
Hillsborough Co Public Utilites
332 North Falkenburg Rd
Tampa, FL 33619

RE: Workorder: T1702409 SELF Supplemental Site Assessm

Dear David Adams:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, February 08, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Heidi Parker - Project Manager
HParker@AELLab.com

Enclosures

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

SAMPLE SUMMARY

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1702409001	Field Blank	Water	2/8/2017 10:35	2/8/2017 16:40
T1702409002	TH-66A	Water	2/8/2017 09:45	2/8/2017 16:40
T1702409003	TH-79	Water	2/8/2017 11:12	2/8/2017 16:40
T1702409004	TH-67	Water	2/8/2017 12:03	2/8/2017 16:40
T1702409005	TH-20B	Water	2/8/2017 13:12	2/8/2017 16:40
T1702409006	TH-38B	Water	2/8/2017 13:41	2/8/2017 16:40
T1702409007	TH-71A	Water	2/8/2017 14:04	2/8/2017 16:40
T1702409008	Duplicate	Water	2/8/2017 00:00	2/8/2017 16:40

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: **T1702409001** Date Received: 02/08/17 16:40 Matrix: Water

Sample ID: **Field Blank** Date Collected: 02/08/17 10:35

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**0.19**	**I**	**mg/L**	**1**	0.20	0.042	2/13/2017 15:16	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**0.07**	**I**	**mg/L**	**1**	0.10	0.02	2/10/2017 14:50	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**12**	**U**	**mg/L**	**1.25**	12	12	2/15/2017 17:54	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**2.6**	**I**	**mg/L**	**1**	5.0	2.6	2/16/2017 16:23	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: **T1702409002** Date Received: 02/08/17 16:40 Matrix: Water

Sample ID: **TH-66A** Date Collected: 02/08/17 09:45

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**580**		**umhos/cm**	**1**			2/8/2017 09:45	
Dissolved Oxygen	**0.64**		**mg/L**	**1**			2/8/2017 09:45	
ORP-2580BW	**-69.2**		**mV**	**1**			2/8/2017 09:45	
Temperature	**23.68**		**°C**	**1**			2/8/2017 09:45	
Turbidity	**1.06**		**NTU**	**1**			2/8/2017 09:45	
pH	**6.18**		**SU**	**1**			2/8/2017 09:45	
METALS								
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**21**		**mg/L**	**1**	0.20	0.042	2/13/2017 15:20	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**0.50**		**mg/L**	**1**	0.10	0.02	2/10/2017 14:50	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**300**		**mg/L**	**1.25**	12	12	2/15/2017 17:54	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**78**		**mg/L**	**1**	5.0	2.6	2/16/2017 16:26	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: **T1702409003** Date Received: 02/08/17 16:40 Matrix: Water

Sample ID: **TH-79** Date Collected: 02/08/17 11:12

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**4980**		**umhos/cm**	**1**			2/8/2017 11:12	
Dissolved Oxygen	**1.73**		**mg/L**	**1**			2/8/2017 11:12	
ORP-2580BW	**-20.3**		**mV**	**1**			2/8/2017 11:12	
Temperature	**21.77**		**°C**	**1**			2/8/2017 11:12	
Turbidity	**60.2**		**NTU**	**1**			2/8/2017 11:12	
pH	**6.4**		**SU**	**1**			2/8/2017 11:12	
METALS								
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**650**		**mg/L**	**10**	2.0	0.42	2/13/2017 15:31	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**35**		**mg/L**	**10**	1.00	0.25	2/10/2017 14:50	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**2700**		**mg/L**	**1.25**	12	12	2/15/2017 17:54	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**1200**		**mg/L**	**26.6667**	130	68	2/16/2017 17:24	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: **T1702409004** Date Received: 02/08/17 16:40 Matrix: Water

Sample ID: **TH-67** Date Collected: 02/08/17 12:03

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**3830**		**umhos/cm**	**1**			2/8/2017 12:03	
Dissolved Oxygen	**2.13**		**mg/L**	**1**			2/8/2017 12:03	
ORP-2580BW	**-41.7**		**mV**	**1**			2/8/2017 12:03	
Temperature	**24.52**		**°C**	**1**			2/8/2017 12:03	
Turbidity	**8.72**		**NTU**	**1**			2/8/2017 12:03	
pH	**6.44**		**SU**	**1**			2/8/2017 12:03	
METALS								
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**330**		**mg/L**	**10**	2.0	0.42	2/13/2017 15:40	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**14**		**mg/L**	**5**	0.50	0.12	2/10/2017 14:50	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**2000**		**mg/L**	**1.25**	12	12	2/15/2017 17:54	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**990**		**mg/L**	**26.6667**	130	68	2/16/2017 17:25	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: **T1702409005** Date Received: 02/08/17 16:40 Matrix: Water

Sample ID: **TH-20B** Date Collected: 02/08/17 13:12

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**427**		**umhos/cm**	**1**			2/8/2017 13:12	
Dissolved Oxygen	**0.18**		**mg/L**	**1**			2/8/2017 13:12	
ORP-2580BW	**-41.7**		**mV**	**1**			2/8/2017 13:12	
Temperature	**23.77**		**°C**	**1**			2/8/2017 13:12	
Turbidity	**3.77**		**NTU**	**1**			2/8/2017 13:12	
pH	**5.82**		**SU**	**1**			2/8/2017 13:12	
METALS								
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**31**		**mg/L**	**1**	0.20	0.042	2/13/2017 16:16	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**1.2**		**mg/L**	**1**	0.10	0.02	2/10/2017 14:50	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**230**		**mg/L**	**1.25**	12	12	2/15/2017 17:54	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**83**		**mg/L**	**1**	5.0	2.6	2/16/2017 16:28	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: **T1702409006** Date Received: 02/08/17 16:40 Matrix: Water

Sample ID: **TH-38B** Date Collected: 02/08/17 13:41

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**103**		**umhos/cm**	**1**			2/8/2017 13:41	
Dissolved Oxygen	**2.02**		**mg/L**	**1**			2/8/2017 13:41	
ORP-2580BW	**6.2**		**mV**	**1**			2/8/2017 13:41	
Temperature	**23.93**		**°C**	**1**			2/8/2017 13:41	
Turbidity	**16.5**		**NTU**	**1**			2/8/2017 13:41	
pH	**5.45**		**SU**	**1**			2/8/2017 13:41	
METALS								
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**57**		**mg/L**	**1.25**	12	12	2/15/2017 17:54	T
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**3.6**		**mg/L**	**1**	0.20	0.042	2/13/2017 16:28	T
METALS								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**1.4**		**mg/L**	**1**	0.10	0.02	2/10/2017 14:50	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**8.2**		**mg/L**	**1**	5.0	2.6	2/16/2017 16:28	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: **T1702409007** Date Received: 02/08/17 16:40 Matrix: Water

Sample ID: **TH-71A** Date Collected: 02/08/17 14:04

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**1578**		**umhos/cm**	**1**			2/8/2017 14:04	
Dissolved Oxygen	**0.2**		**mg/L**	**1**			2/8/2017 14:04	
ORP-2580BW	**-42.8**		**mV**	**1**			2/8/2017 14:04	
Temperature	**24.73**		**°C**	**1**			2/8/2017 14:04	
Turbidity	**5.65**		**NTU**	**1**			2/8/2017 14:04	
pH	**6.22**		**SU**	**1**			2/8/2017 14:04	
METALS								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**1.8**	**J4**	**mg/L**	**1**	0.10	0.02	2/10/2017 14:50	T
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**41**		**mg/L**	**1**	0.20	0.042	2/13/2017 16:32	T
WET CHEMISTRY								
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**790**		**mg/L**	**1.25**	12	12	2/15/2017 17:54	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**290**		**mg/L**	**5**	25	13	2/16/2017 17:05	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: **T1702409008** Date Received: 02/08/17 16:40 Matrix: Water

Sample ID: **Duplicate** Date Collected: 02/08/17 00:00

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**700**		**mg/L**	**10**	2.0	0.42	2/13/2017 16:43	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**37**		**mg/L**	**10**	1.00	0.25	2/15/2017 11:44	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**2600**		**mg/L**	**1.25**	12	12	2/15/2017 17:54	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**1100**		**mg/L**	**26.6667**	130	68	2/16/2017 17:26	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS QUALIFIERS

Workorder: T1702409 SELF Supplemental Site Assessm

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

LAB QUALIFIERS

T	DOH Certification #E84589(AEL-T)(FL NELAC Certification)
T^	Not Certified

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1702409 SELF Supplemental Site Assessm

QC Batch: DGMt/2515 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 02/10/2017 11:00
Associated Lab Samples: T1702409001, T1702409002, T1702409003, T1702409004

METHOD BLANK: 2270143

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Sodium	mg/L	0.042	0.042	U

LABORATORY CONTROL SAMPLE: 2270144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
METALS						
Sodium	mg/L	50	59	118	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2270145 2270146 Original: T1702153022

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Sodium	mg/L	0.035	50	58	59	116	118	75-125	2	20	

QC Batch: DGMt/2516 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 02/10/2017 11:00
Associated Lab Samples: T1702409005, T1702409006, T1702409007, T1702409008

METHOD BLANK: 2270156

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Sodium	mg/L	0.042	0.042	U

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1702409 SELF Supplemental Site Assessm

LABORATORY CONTROL SAMPLE: 2270157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
METALS						
Sodium	mg/L	50	60	120	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2270158 2270159 Original: T1702409005

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Sodium	mg/L	31	50	89	90	115	116	75-125	1	20	

QC Batch: WCAt/7008 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Prepared:
Associated Lab Samples: T1702409001, T1702409002, T1702409003, T1702409004, T1702409005, T1702409006, T1702409007

METHOD BLANK: 2270293

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Ammonia (N)	mg/L	0.02	0.02	U

LABORATORY CONTROL SAMPLE: 2270294

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Ammonia (N)	mg/L	0.5	0.52	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2270295 2270296 Original: T1702296002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Ammonia (N)	mg/L	0	1	0.92	0.90	92	90	90-110	2	10	

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1702409 SELF Supplemental Site Assessm

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2270297 2270298 Original: T1702409007

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Ammonia (N)	mg/L	1.8	1	2.6	2.6	79	82	90-110	1	10	J4

QC Batch: WCAt/7077 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Prepared:
Associated Lab Samples: T1702409008

METHOD BLANK: 2273416

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Ammonia (N)	mg/L	0.02	0.02	U

LABORATORY CONTROL SAMPLE: 2273417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Ammonia (N)	mg/L	0.5	0.54	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2273418 2273419 Original: T1702153034

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Ammonia (N)	mg/L	0	1	1.0	1.0	100	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2273420 2273421 Original: T1702458002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Ammonia (N)	mg/L	0.03	1	1.1	1.0	102	101	90-110	1	10	

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1702409 SELF Supplemental Site Assessm

QC Batch: WCAt/7094 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T1702409001, T1702409002, T1702409003, T1702409004, T1702409005, T1702409006, T1702409007, T1702409008

METHOD BLANK: 2274175

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

LABORATORY CONTROL SAMPLE: 2274176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	610	93	75-125	

SAMPLE DUPLICATE: 2274177 Original: T1702153027

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	300	310	1	10	

SAMPLE DUPLICATE: 2274178 Original: T1702409006

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	57	55	4	10	

QC Batch: WCAt/7120 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Prepared:
Associated Lab Samples: T1702409001, T1702409002, T1702409003, T1702409004, T1702409005, T1702409006, T1702409007, T1702409008

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1702409 SELF Supplemental Site Assessm

METHOD BLANK: 2275590

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

LABORATORY CONTROL SAMPLE: 2275591

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chloride	mg/L	50	53	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2275592 2275593 Original: T1702153030

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	870	50	860	820	-4	-88	90-110	5	10	J4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2275594 2275595 Original: T1702409001

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	2.6	50	55	53	104	102	90-110	2	10	

QUALITY CONTROL DATA QUALIFIERS

Workorder: T1702409 SELF Supplemental Site Assessm

QUALITY CONTROL PARAMETER QUALIFIERS

U The compound was analyzed for but not detected.

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

J4 Estimated Result

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1702409001	Field Blank	SW-846 3010A	DGMt/2515	SW-846 6010	ICPt/1938
T1702409002	TH-66A	SW-846 3010A	DGMt/2515	SW-846 6010	ICPt/1938
T1702409003	TH-79	SW-846 3010A	DGMt/2515	SW-846 6010	ICPt/1938
T1702409004	TH-67	SW-846 3010A	DGMt/2515	SW-846 6010	ICPt/1938
T1702409005	TH-20B	SW-846 3010A	DGMt/2516	SW-846 6010	ICPt/1939
T1702409006	TH-38B	SW-846 3010A	DGMt/2516	SW-846 6010	ICPt/1939
T1702409007	TH-71A	SW-846 3010A	DGMt/2516	SW-846 6010	ICPt/1939
T1702409008	Duplicate	SW-846 3010A	DGMt/2516	SW-846 6010	ICPt/1939
T1702409001	Field Blank			EPA 350.1	WCAt/7008
T1702409002	TH-66A			EPA 350.1	WCAt/7008
T1702409003	TH-79			EPA 350.1	WCAt/7008
T1702409004	TH-67			EPA 350.1	WCAt/7008
T1702409005	TH-20B			EPA 350.1	WCAt/7008
T1702409006	TH-38B			EPA 350.1	WCAt/7008
T1702409007	TH-71A			EPA 350.1	WCAt/7008
T1702409008	Duplicate			EPA 350.1	WCAt/7077
T1702409001	Field Blank			SM 2540 C	WCAt/7094
T1702409002	TH-66A			SM 2540 C	WCAt/7094
T1702409003	TH-79			SM 2540 C	WCAt/7094
T1702409004	TH-67			SM 2540 C	WCAt/7094
T1702409005	TH-20B			SM 2540 C	WCAt/7094
T1702409006	TH-38B			SM 2540 C	WCAt/7094
T1702409007	TH-71A			SM 2540 C	WCAt/7094
T1702409008	Duplicate			SM 2540 C	WCAt/7094
T1702409001	Field Blank			SM 4500-Cl-E	WCAt/7120
T1702409002	TH-66A			SM 4500-Cl-E	WCAt/7120
T1702409003	TH-79			SM 4500-Cl-E	WCAt/7120
T1702409004	TH-67			SM 4500-Cl-E	WCAt/7120

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1702409005	TH-20B			SM 4500-Cl-E	WCAt/7120
T1702409006	TH-38B			SM 4500-Cl-E	WCAt/7120
T1702409007	TH-71A			SM 4500-Cl-E	WCAt/7120
T1702409008	Duplicate			SM 4500-Cl-E	WCAt/7120
T1702409002	TH-66A	Field Measurements	FLDt/	Field Measurements	FLDt/
T1702409003	TH-79	Field Measurements	FLDt/	Field Measurements	FLDt/
T1702409004	TH-67	Field Measurements	FLDt/	Field Measurements	FLDt/
T1702409005	TH-20B	Field Measurements	FLDt/	Field Measurements	FLDt/
T1702409006	TH-38B	Field Measurements	FLDt/	Field Measurements	FLDt/
T1702409007	TH-71A	Field Measurements	FLDt/	Field Measurements	FLDt/

Advanced Environmental Laboratories, Inc.

☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597
☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639
☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354
☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.2286 • Fax 954.889.2281
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 850.219.6274 • Fax 850.219.6275
☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

TDN 2409

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

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	PRESERVATION	ANALYSIS REQUIRED: Total Ammonia-N	Sodium	Chloride	TDS	LABORATORY I.D. NUMBER
	Field Blank	—	2/8/17	1035	DI	3		x	x	x	x	001
	TH-66A	G	2/8/17	945	GW	3		x	x	x	x	002
	TH-79	G	2/8/17	1112	GW	3		x	x	x	x	003
	TH-67	G	2/8/17	1203	GW	3		x	x	x	x	004
	TH-20B	G	2/8/17	1312	GW	3		x	x	x	x	005
	TH-38B	G	2/8/17	1341	GW	3		x	x	x	x	006
	TH-71A	G	2/8/17	1404	GW	3		x	x	x	x	007
	Duplicate	G	2/8/17	—	GW	3		x	x	x	x	008
	~~Trip Blank~~	MDT	2/8/17		DI	2						

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

Preservation Code: I = ice H=(HCl) S = (H_2SO_4) N = (HNO_3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☐ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received 4.0 (in degrees celcius)

Form revised 09/19/2012

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

	Relinquished by:	Date	Time	Received by:	Date	Time
1		2/8/17	1640		2/8/17	1640
2						
3				7		
4						

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

PWS ID:
Contact Person: Phone:
Supplier of Water:
Site-Address:

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, Florida	
WELL NO: Field Blank	SAMPLE ID: Field Blank	DATE: 2/8/17

PURGING DATA

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

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

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

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

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

MDT 2/8/17

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: J. Fuller / m. Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1035	SAMPLING ENDED AT: 1038
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (N) Dedicated	TUBING Y (N replaced) Dedicated	DUPLICATE: Y (N)	

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

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

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

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

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

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

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

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: 2/8/17

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):	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 – 9.97 feet) X 0.16 gallons/foot = 0.86 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: 928	PURGING ENDED AT: 945	TOTAL VOLUME PURGED (gallons): 1.19

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)
~~941~~ 959	0.91	0.91	0.07	11.45	6.18	23.63	580	0.73	2.38	Clear	None
~~943~~ 1001	0.14	1.05	0.07	11.45	6.19	23.66	580	0.69	1.18	Clear	None
~~945~~ 1003	0.14	1.19	0.07	11.45	6.18	23.68	580	0.64	1.06	Clear	None

MDT 2/8/17

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: J. Fuller / M. Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 945	SAMPLING ENDED AT: 951
PUMP OR TUBING DEPTH IN WELL (feet): 14.37	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N) Dedicated TUBING Y (N) (replaced) Dedicated		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			

MDT MDT MDT

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP: ~~959~~ 941 (-60.6) ~~1001~~ 943 (-64) ~~1003~~ 945 (-69.2)

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: 2/8/17

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):	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)

= (17.80 feet – 8.58 feet) X 0.16 gallons/foot = 1.48 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): 16.80	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 16.80	PURGING INITIATED AT: 1044	PURGING ENDED AT: 1112	TOTAL VOLUME PURGED (gallons): 3.08

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)
1058	1.54	1.54	0.11	9.30	6.41	21.74	4983	2.04	23	Slightly Cloudy	None
1100	0.22	1.76	0.11	9.30	6.41	21.70	4982	2.01	32	Slightly Cloudy	None
1102	0.22	1.98	0.11	9.30	6.41	21.70	4982	1.99	37.9	Slightly Cloudy	None
1104	0.22	2.20	0.11	9.30	6.41	21.71	4983	2.08	38.5	Slightly Cloudy	None
1106	0.22	2.42	0.11	9.30	6.40	21.67	4977	2.11	47	Slightly Cloudy	None
1108	0.22	2.64	0.11	9.30	6.40	21.67	4974	1.86	61	Cloudy	None
1110	0.22	2.86	0.11	9.30	6.40	21.74	4979	1.81	60.6	Cloudy	None
1112	0.22	3.08	0.11	9.30	6.40	21.77	4980	1.73	60.2	Cloudy	None
					MDT	2/8/17					

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: J. Fuller / M. Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1112	SAMPLING ENDED AT: 1119
PUMP OR TUBING DEPTH IN WELL (feet): 16.80	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N) Dedicated	TUBING Y N (replaced) Dedicated	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			
							1110 (-23.1) 1112 (-20.3)		
							1104 (-33.5) 1106 (-29.6) 1108 (-26)		

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP 1058 (-38.8) 1100 (-37.9) 1102 (-36.5)

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-67	SAMPLE ID: TH-67	DATE: 2/8/17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.5	WELL SCREEN INTERVAL DEPTH: 5.25 ft to 15.25 ft	STATIC DEPTH TO WATER (feet):	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)

= (15.25 feet – 6.58 feet) X 0.16 gallons/foot = 1.39 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): 14.25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.25	PURGING INITIATED AT: 1131	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

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)
1149	1.44	1.44	0.08	8.15	6.43	24.36	3809	1.45	27.1	Slightly cloudy	Leachate None (MDT)
1151	0.16	1.60	0.08	8.15	6.43	24.38	3812	1.36	24	Slightly cloudy	Leachate
1153	0.16	1.76	0.08	8.15	6.42	24.38	3815	1.28	22.9	Slightly cloudy	Leachate
1155	0.16	1.92	0.08	8.15	6.41	24.39	3818	1.16	20.1	Slightly cloudy	Leachate
1157	0.16	2.08	0.08	8.15	6.41	24.46	3827	1.21	9.12	Clear	Leachate
1159	0.16	2.24	0.08	8.15	6.42	24.46	3828	2.29	5.59	Clear	Leachate
1201	0.16	2.40	0.08	8.15	6.44	24.52	3836	2.09	3.91	Clear	Leachate
1203	0.16	2.56	0.08	8.15	6.44	24.52	3830	2.13	8.72	Clear	Leachate
					MDT		2/8/17				

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: J. Fuller / M. Townsel	SAMPLER(S) SIGNATURE(S)	SAMPLING INITIATED AT: 1203	SAMPLING ENDED AT: 1215
PUMP OR TUBING DEPTH IN WELL (feet): 14.25	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N) Dedicated	TUBING Y (N) (replaced) Dedicated	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			
							1201 (-41.8) 1203 (-41.7)		
							1155 (-42) 1157 (-42.2) 1159 (-42.6)		

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP 1149 (-41.7) 1151 (-41.6) 1153 (-41.8)

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

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

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

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

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

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: 2/8/17

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): 10.44	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)

gallons = (22.8 feet – 10.44 feet) X 0.16 gallons/foot = 1.98

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: 1258	PURGING ENDED AT: 1312	TOTAL VOLUME PURGED (gallons): 2.94

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)
1308	2.10	2.10	0.21	12.12	5.82	23.76	mS 423	0.24	5.33	Clear	None
1310	0.42	2.52	0.21	12.12	5.82	23.77	425	0.22	4.36	Clear	None
1312	0.42	2.94	0.21	12.12	5.82	23.77	427	0.18	3.77	Clear	None
					MDT		2/8/17				

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: J. Fuller / MJ Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1312	SAMPLING ENDED AT: 1316
PUMP OR TUBING DEPTH IN WELL (feet): 21.8	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N) Dedicated	TUBING Y (N) replaced Dedicated	DUPLICATE: Y (N)	

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

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP: 1308 (-35.2) 1310 (-38.1) 1312 (-41.7)

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

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

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

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, Florida	
WELL NO: TH-38B	SAMPLE ID: TH-38B	DATE: 2/8/17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 5.42 ft to 15.42 Ft	STATIC DEPTH TO WATER (feet): 13.46	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)

= (15.42 feet – 13.46 feet) X 0.16 gallons/foot = 0.31 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): 14.42	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.42	PURGING INITIATED AT: 1325	PURGING ENDED AT: 1341	TOTAL VOLUME PURGED (gallons): 1.65

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)
1329	0.33	0.33	0.11	13.46	5.57	23.79	134	2.74	23.5 (mod)	Slightly Cloudy Clear	None
1331	0.22	0.55	0.11	13.46	5.54	23.74	129	2.68	26.1	Slightly Cloudy	None
1333	0.22	0.77	0.11	13.46	5.52	23.85	117	2.10	19.4	Slightly Cloudy	None
1335	0.22	0.99	0.11	13.46	5.50	23.91	113	2.29	16.7	Clear	None
1337	0.22	1.21	0.11	13.46	5.48	23.98	109	2.16	16.3	Clear	None
1339	0.22	1.43	0.11	13.46	5.45	23.96	104	2.35	15.6	Clear	None
1341	0.22	1.65	0.11	13.46	5.45	23.93	103	2.02	16.5	Clear	None
						(mDT)					
							2/8/17				

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: J. Fuller / M. Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1341	SAMPLING ENDED AT: 1345
PUMP OR TUBING DEPTH IN WELL (feet): 14.42	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (N) Dedicated	TUBING Y ~~N (replaced)~~ Dedicated	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			
						1341 (4.2)			
						1335 (21.4)	1337 (14.3)	1339 (8.4)	

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP: 1329 (49) 1331 (38.6) 1333 (30.4)

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-71A	SAMPLE ID: TH-71A	DATE: 2/8/17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.5	WELL SCREEN INTERVAL DEPTH: 22.78 ft to 37.78 ft	STATIC DEPTH TO WATER (feet): 27.60	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)

= (37.78 feet – 27.60 feet) X 0.16 gallons/foot = 1.63 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): 36.78	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 36.78	PURGING INITIATED AT: 1355	PURGING ENDED AT: 1404	TOTAL VOLUME PURGED (gallons): 3.06

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)
1400	1.70	1.70	0.34	27.93	6.23	24.76	1577	0.44	14.3	Clear	None
1402	0.68	2.38	0.34	27.93	6.22	24.75	1578	0.35	7.06	Clear	None
1404	0.68	3.06	0.34	27.93	6.22	24.73	1578	0.20	5.65	Clear	None
							MDT	2/8/17			

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: J. Fuller / M. Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1404	SAMPLING ENDED AT: 1408
PUMP OR TUBING DEPTH IN WELL (feet): 36.78	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (N) Dedicated	TUBING Y N (replaced) Dedicated	DUPLICATE: Y (N)	

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

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP: 1400 (-34.2) 1402 (-39.2) 1404 (-42.8)

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

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

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

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

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

Advanced Environmental Laboratories, Inc.

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

Project No.: T1702409

Client Name: Hillsborough County Public Utilities

ProjectID: SELF Supplemental Site Assessm

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: EPA 350.1

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) recoveries of NH3 for T1702409001 (MS 79% & MSD 81%) were outside control criteria. Recovery in the Laboratory Control Sample (LCS) and %RPD was acceptable, which indicates the analytical batch was in control. The matrix spike outliers suggest a potential low bias in this matrix. The affected sample is qualified to indicate matrix interference. Acceptable criteria is 90-110%.

E. Serial Diluion: 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:

_____

Advanced Environmental Laboratories, Inc.

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

Project No.: T1702409

Client Name: Hillsborough County Public Utilities

ProjectID: SELF Supplemental Site Assessm

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 control criteria for matrix spike recoveries of Chloride for T1702153030 are not applicable. The analyte concentration in the sample was greater than 4 times the added spike concentrations, preventing accurate evaluation of the spike recovery. No further corrective action was required.

E. Serial Diluion: 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:

_____

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

April 14, 2017

David Adams
Hillsborough Co Public Utilites
332 North Falkenburg Rd
Tampa, FL 33619

RE: Workorder: T1705391 SE Landfill Supplemental

Dear David Adams:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, March 29, 2017. 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

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

SAMPLE SUMMARY

Workorder: T1705391 SE Landfill Supplemental

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1705391001	Field Blank	Water	3/29/2017 12:10	3/29/2017 15:20
T1705391002	TH-80	Water	3/29/2017 13:23	3/29/2017 15:20
T1705391003	TH-81	Water	3/29/2017 12:38	3/29/2017 15:20
T1705391004	TH-82	Water	3/29/2017 13:59	3/29/2017 15:20

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1705391 SE Landfill Supplemental

Lab ID: **T1705391001** Date Received: 03/29/17 15:20 Matrix: Water

Sample ID: **Field Blank** Date Collected: 03/29/17 12:10

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
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	3/31/2017 20:57	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**0.02**	**U**	**mg/L**	**1**	0.10	0.02	3/31/2017 10:48	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**12**	**U**	**mg/L**	**1.25**	12	12	3/31/2017 21:45	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	3/31/2017 20:57	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1705391 SE Landfill Supplemental

Lab ID: **T1705391002** Date Received: 03/29/17 15:20 Matrix: Water

Sample ID: **TH-80** Date Collected: 03/29/17 13:23

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**889**		**umhos/cm**	**1**			3/29/2017 13:23	
Dissolved Oxygen	**0.38**		**mg/L**	**1**			3/29/2017 13:23	
ORP-2580BW	**-10.7**		**mV**	**1**			3/29/2017 13:23	
Temperature	**24.49**		**°C**	**1**			3/29/2017 13:23	
Turbidity	**16**		**NTU**	**1**			3/29/2017 13:23	
pH	**5.67**		**SU**	**1**			3/29/2017 13:23	
METALS								
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**130**	**J4**	**mg/L**	**5**	25	13	3/31/2017 21:26	T
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**37**		**mg/L**	**1**	0.20	0.17	3/31/2017 21:19	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**1.5**		**mg/L**	**1**	0.10	0.02	3/31/2017 10:48	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**500**		**mg/L**	**1.25**	12	12	3/31/2017 21:45	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1705391 SE Landfill Supplemental

Lab ID: **T1705391003** Date Received: 03/29/17 15:20 Matrix: Water

Sample ID: **TH-81** Date Collected: 03/29/17 12:38

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**2723**		**umhos/cm**	**1**			3/29/2017 12:38	
Dissolved Oxygen	**0.53**		**mg/L**	**1**			3/29/2017 12:38	
ORP-2580BW	**24.9**		**mV**	**1**			3/29/2017 12:38	
Temperature	**23.7**		**°C**	**1**			3/29/2017 12:38	
Turbidity	**16.1**		**NTU**	**1**			3/29/2017 12:38	
pH	**6**		**SU**	**1**			3/29/2017 12:38	
METALS								
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**250**		**mg/L**	**5**	1.0	0.85	4/3/2017 14:56	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**4.1**		**mg/L**	**1**	0.10	0.02	3/31/2017 10:48	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**2000**		**mg/L**	**1.25**	12	12	3/31/2017 21:45	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**810**		**mg/L**	**26.6667**	130	68	3/31/2017 21:38	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1705391 SE Landfill Supplemental

Lab ID: **T1705391004** Date Received: 03/29/17 15:20 Matrix: Water

Sample ID: **TH-82** Date Collected: 03/29/17 13:59

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**239**		**umhos/cm**	**1**			3/29/2017 13:59	
Dissolved Oxygen	**0.23**		**mg/L**	**1**			3/29/2017 13:59	
ORP-2580BW	**-147.1**		**mV**	**1**			3/29/2017 13:59	
Temperature	**26.16**		**°C**	**1**			3/29/2017 13:59	
Turbidity	**-18**		**NTU**	**1**			3/29/2017 13:59	
pH	**5.69**		**SU**	**1**			3/29/2017 13:59	
METALS								
Analysis Desc: SW846 6010B Analysis,Water	Preparation Method: SW-846 3010A Analytical Method: SW-846 6010							
Sodium	**11**		**mg/L**	**2**	0.40	0.34	3/31/2017 21:26	T
WET CHEMISTRY								
Analysis Desc: Ammonia,E350.1,Water	Analytical Method: EPA 350.1							
Ammonia (N)	**4.9**		**mg/L**	**2**	0.20	0.05	3/31/2017 10:48	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**130**		**mg/L**	**1.25**	12	12	3/31/2017 21:45	T
Analysis Desc: Chlorides,SM4500-Cl-E,Water	Analytical Method: SM 4500-Cl-E							
Chloride	**25**		**mg/L**	**1**	5.0	2.6	3/31/2017 21:10	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS QUALIFIERS

Workorder: T1705391 SE Landfill Supplemental

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

LAB QUALIFIERS

T	DOH Certification #E84589(AEL-T)(FL NELAC Certification)
T^	Not Certified

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1705391 SE Landfill Supplemental

QC Batch: WCAt/7815 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Prepared:
Associated Lab Samples: T1705391001, T1705391002, T1705391003, T1705391004

METHOD BLANK: 2312524

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
Ammonia (N)	mg/L	0.02	0.02	U

LABORATORY CONTROL SAMPLE: 2312525

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Ammonia (N)	mg/L	0.5	0.55	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2312526 2312527 Original: T1705271003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Ammonia (N)	mg/L	0.13	1	1.1	1.1	101	100	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2312528 2312529 Original: T1705431002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Ammonia (N)	mg/L	0	1	1.0	1.0	102	101	90-110	1	10	

QC Batch: DGMt/2758 Analysis Method: SW-846 6010
QC Batch Method: SW-846 3010A Prepared: 03/31/2017 12:15
Associated Lab Samples: T1705391001, T1705391002, T1705391003, T1705391004

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1705391 SE Landfill Supplemental

METHOD BLANK: 2312893

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

LABORATORY CONTROL SAMPLE: 2312894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
METALS						
Sodium	mg/L	50	48	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2312895 2312896 Original: T1705258001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Sodium	mg/L	7.8	50	55	55	93	93	75-125	0	20	

QC Batch: WCAt/7830 Analysis Method: SM 2540 C

QC Batch Method: SM 2540 C Prepared:

Associated Lab Samples: T1705391001, T1705391002, T1705391003, T1705391004

METHOD BLANK: 2313401

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

LABORATORY CONTROL SAMPLE: 2313402

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	720	109	75-125	

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1705391 SE Landfill Supplemental

SAMPLE DUPLICATE: 2313404 Original: T1705341001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	31340	32000	2	5	

QC Batch: WCAt/7847 Analysis Method: SM 4500-Cl-E

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

Associated Lab Samples: T1705391001

METHOD BLANK: 2313875

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

LABORATORY CONTROL SAMPLE: 2313876

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chloride	mg/L	50	49	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2313877 2313878 Original: T1704914004

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	24	50	71	72	95	97	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2313879 2313880 Original: T1705391001

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	0.2	50	49	49	98	98	90-110	1	10	

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1705391 SE Landfill Supplemental

QC Batch: WCAt/7848 Analysis Method: SM 4500-Cl-E

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

Associated Lab Samples: T1705391002, T1705391003, T1705391004

METHOD BLANK: 2313886

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

LABORATORY CONTROL SAMPLE: 2313887

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chloride	mg/L	50	49	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2313888 2313889 Original: T1705391002

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	130	50	170	170	70	75	90-110	1	10	J4

QUALITY CONTROL DATA QUALIFIERS

Workorder: T1705391 SE Landfill Supplemental

QUALITY CONTROL PARAMETER QUALIFIERS

U The compound was analyzed for but not detected.

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

J4 Estimated Result

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1705391 SE Landfill Supplemental

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1705391001	Field Blank			EPA 350.1	WCAt/7815
T1705391002	TH-80			EPA 350.1	WCAt/7815
T1705391003	TH-81			EPA 350.1	WCAt/7815
T1705391004	TH-82			EPA 350.1	WCAt/7815
T1705391001	Field Blank	SW-846 3010A	DGMt/2758	SW-846 6010	ICPt/2096
T1705391002	TH-80	SW-846 3010A	DGMt/2758	SW-846 6010	ICPt/2096
T1705391003	TH-81	SW-846 3010A	DGMt/2758	SW-846 6010	ICPt/2096
T1705391004	TH-82	SW-846 3010A	DGMt/2758	SW-846 6010	ICPt/2096
T1705391001	Field Blank			SM 2540 C	WCAt/7830
T1705391002	TH-80			SM 2540 C	WCAt/7830
T1705391003	TH-81			SM 2540 C	WCAt/7830
T1705391004	TH-82			SM 2540 C	WCAt/7830
T1705391001	Field Blank			SM 4500-Cl-E	WCAt/7847
T1705391002	TH-80			SM 4500-Cl-E	WCAt/7848
T1705391003	TH-81			SM 4500-Cl-E	WCAt/7848
T1705391004	TH-82			SM 4500-Cl-E	WCAt/7848
T1705391002	TH-80	Field Measurements	FLDt/	Field Measurements	FLDt/
T1705391003	TH-81	Field Measurements	FLDt/	Field Measurements	FLDt/
T1705391004	TH-82	Field Measurements	FLDt/	Field Measurements	FLDt/

T1705391

Page ____ of ____

Advanced Environmental Laboratories, Inc.
Florida's Largest Laboratory Network

☐ Altamonte Springs: 380 Northlake Blvd., Ste. 1048 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597
☐ Jacksonville: 6981 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354
☐ Tallahassee: 2639 North Monroe St., Suite D, Tallahassee, FL 32303 • 850.219.6274 • Fax 850.219.8275
☐ Gainesville: 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639
☐ Miramar: 10200 USA Today Way, Miramar, FL 33025 • 954.889.2288 • Fax 954.889.2281
☐ Tampa: 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

Client Name: Hillsborough County Public Utilities
Address: 332 N. Falkenburg
Phone: (813) 663-3222
FAX: —
Contact: Michael Townsel
Sampled By: Josh Fuller/M. Townsel
Turn Around Time: ☒ STANDARD ☐ RUSH
AEL Profile #:

Project Name: Southeast Landfill Supplemental Assessment
Project Number: —
PO Number: —
FDEP Facility No: —
FDEP Facility Address: —
Special Instructions:
☒ ADaPT ☐ EQuIS ☐ Other

ANALYSIS REQUIRED

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	BOTTLE SIZE & TYPE	Preservation	Field-Filtered?	TDS	Sodium	Chloride	Ammonia	LABORATORY I.D. NUMBER
	Field Blank	~~G~~ FMOT	3/29/17	1210	DI	4				X	X	X	X	01
	TH-80	G	3/29/17	1323	GW	4				X	X	X	X	02
	TH-81	G	3/29/17	1238	GW	4				X	X	X	X	03
	TH-82	G	3/29/17	1359	GW	4				X	X	X	X	04

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge
Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on ice ☒ Yes ☐ No ☐ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked
Temp. when received (observed) 9.0 °C Temp. when received (corrected) ____ °C

DCN: AD-051 Form last revised 11/17/16
Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 (T: 10A) A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	[signature]	3/29/17	1520	[signature]	3/29/17	1520
2						
3						
4						

FOR DRINKING WATER USE:
(When PWS information not otherwise supplied) PWS ID: _____
Contact Person: _____ Phone: _____
Supplier of Water: _____
Site-Address: _____

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-80	SAMPLE ID: TH-80	DATE: 3/29/17

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): 9.73	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)
= (18.65 feet – 9.73 feet) X 0.16 gallons/foot = 1.43 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): 17.65	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 17.65	PURGING INITIATED AT: 1250	PURGING ENDED AT: 1323	TOTAL VOLUME PURGED (gallons): 4.28

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)
1259	1.44	1.44	0.16	10.28	5.68	24.65	956	0.43	52.6	Cloudy	None
1308	1.44	2.88	0.16	10.70	5.66	24.40	927	0.16	36.8	Cloudy	None
1317	1.44	3.32	0.16	10.70	5.66	24.40	906	0.13	22.7	Clear	None
1319	0.32	3.64	0.16	10.70	5.66	24.42	896	0.20	18.3	Clear	None
1321	0.32	3.96	0.16	10.70	5.66	24.46	894	0.30	16.4	Clear	None
1323	0.32	4.28	0.16	10.70	5.67	24.49	889	0.38	16.0	Clear	None
						MDT					
						3/29/17					

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: J. Fuller / M. Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1323	SAMPLING ENDED AT: 1327
PUMP OR TUBING DEPTH IN WELL (feet): 17.65	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N (Dedicated) TUBING Y N (replaced) (Dedicated)		DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
						1321 (-5.4)	1323 (-10.7)		
						1317 (-1.3)	1319 (-6.1)		

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** **ORP:** 1259 (34.5) 1308 (10.7)

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

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

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

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: 3/29/17

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): 9.92	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)

= (16.94 feet – 9.92 feet) X 0.16 gallons/foot = 1.12 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): 15.94	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15.94	PURGING INITIATED AT: 1205 ~~1159~~ MDT	PURGING ENDED AT: 1238	TOTAL VOLUME PURGED (gallons): 5.28

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or ~~mS/cm~~	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1212	1.12	1.12	0.16	10.58	6.02	23.96	2735	1.04	51.1	Slightly cloudy	None ~~Slo~~ MDT
1214	0.32	1.44	0.16	10.58	6.02	23.89	2713	1.07	48.3	Slightly cloudy	None
1216	0.32	1.76	0.16	10.58	6.02	23.85	2704	~~2~~ 1.04	48	Slightly cloudy	None
1218	0.32	2.08	0.16	10.58	6.02	23.83	2700	0.91	42.1	Slightly cloudy	None
1220	0.32	2.40	0.16	10.58	6.02	23.83	2700	0.89	36.2	Slightly cloudy	None
1227	1.12	3.52	0.16	10.58	6.00	23.78	2715	0.86	24.4	Slightly cloudy	None
1234	1.12	4.64	0.16	10.58	6.00	23.77	2726	0.70	17.8	Clear	None
1236	0.32	4.96	0.16	10.58	6.00	23.74	2725	0.59	18.4	Clear	None
1238	0.32	5.28	0.16	10.58	6.00	23.70	2723	0.53	16.1	Clear	None
					MDT						

3/29/17

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: J. Fuller / M. Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1238	SAMPLING ENDED AT: 1245
PUMP OR TUBING DEPTH IN WELL (feet): 15.94	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y N Dedicated TUBING Y N (replaced) Dedicated 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			

1234 (24.9) 1236 (24.7) 1238 (24.9)
1218 (36.7) 1220 (36.1) 1227 (28.4)

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** **ORP:** 1212 (37.2) 1214 (36.3) 1216 (36.2)

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: 3/29/17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 8.02 ft to 18.94 Ft	STATIC DEPTH TO WATER (feet): 11.64	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)
= (18.94 feet – 11.64 feet) X 0.16 gallons/foot = 1.17 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): 17.94	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 17.94	PURGING INITIATED AT: 1335	PURGING ENDED AT: 1359	TOTAL VOLUME PURGED (gallons): 3.84

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)
1343	1.28	1.28	0.16	12.10	5.72	26.36	238	0.35	-20	Cloudy	None
1351	1.28	2.56	0.16	12.10	5.71	26.29	240	0.28	-17	Cloudy	None
1359	1.28	3.84	0.16	12.10	5.69	26.16	239	0.23	-18	Cloudy Brown	None
									↑		
									Water Quality upsetting Turbidity. Checked and recalibrated meter. Results still the same (-) numbers. Sample turbid.		
								√ok →			

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: J. Fuller / M. Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1359	SAMPLING ENDED AT: 1403
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 Dedicated	TUBING Y N (replaced) Dedicated	DUPLICATE: Y (N)	

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

REMARKS: SEE C.O.C. FOR SAMPLE ANALYSIS **ORP:** 1343 (-115) 1351 (-133.2) 1359 (-147.1)

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)

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: 3/29/17

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	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

Field Blank 3/29/17

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: J. Fuller / M. Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1210	SAMPLING ENDED AT: 1213
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (N) Dedicated	TUBING Y (N) (replaced) Dedicated	DUPLICATE: Y (N)	

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

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

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

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

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

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

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

Advanced Environmental Laboratories, Inc.

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

Queue: WCAt

Batch Number: 7848

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 control criteria for matrix spike recoveries of Chloride for T1705391002 are not applicable. The analyte concentration in the sample was greater than 4 times the added spike concentrations, preventing accurate evaluation of the spike recovery. No further corrective action was required.

E. Serial Diluion: 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: