

PUBLIC UTILITIES PO Box 1110 Tampa, FL 33601-1110 COMMISSIONERS Victor D. Crist Ken Hagan Al Higginbotham Pat Kemp Lesley "Les" Miller, Jr. Sandra L. Murman Stacy R. White COUNTY ADMINISTRATOR Michael S. Merrill COUNTY ATTORNEY Chip Fletcher INTERNAL AUDITOR Peggy Caskey

BOARD OF COUNTY

September 1, 2017

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

CHIEF DEVELOPMENT & INFRASTRUCTURE SERVICES ADMINISTRATOR Lucia E. Garsys

SUBJECT: Southeast County Class I Landfill WACS Facility ID No. 41193 Supplemental Groundwater Sampling Report – 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

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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)

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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.

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<u>Sodium</u>

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)

<u>рН</u>

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

Mr. Steve Tafuni September 1, 2017 Page 4 of 5

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.

<u>Sodium</u>

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.

Mr. Steve Tafuni September 1, 2017 Page 5 of 5

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, P.G. Environmental Manager Environmental Services Public Utilities Department



DSA/mdt

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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

Concerned Devicements are Destantioned	Surfici	al Aquifer We	MCL Standard			
General Parameters Detected	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	ce Concentrations	s, FDEP 2012				
NS=No Standard						
MCL=Maximum Contaminant Level (Gro	oundwater Stand	ards)				
*= Primary Drinking Water Standards as	per Cahpter 62-	550.310 <i>,</i> F.A.C.				
**=Secondary Drinking Water Standard	s as per Chapter	62-550.320, F.A.O	2.			
5.82	Exceeds Standar	ď				
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/I=milligrams per liter						
mV = millivolts						

Southeast County Landfill Supplemental Site Assessment Data March 29, 2017

	Surf	icial Aquifer V	Vells	MCL Standard
General Parameters Detected	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 Guidanc	e Concentrations	s, FDEP 2012		
NS=No Standard				
MCL=Maximum Contaminant Level (Gro	undwater Standa	ards)		
*= Primary Drinking Water Standards as	per Cahpter 62-5	550.310, F.A.C.		
**=Secondary Drinking Water Standards	s as per Chapter 6	52-550.320, F.A.C	• ••	
***=Groundwater Cleanup Target Level	s as per Chapter 6	62-777, FAC		
5.67	Exceeds Standar	d		
NTU=Nephelometric Turbidity Units				
i = reported value is between the labora	tory method det	ection limit and t	he laboratory pra	actical quantitation limit.
u = parameter was analyzed but not det	ected.			
j4 = estimated value				
ug/I=micrograms per liter				
mg/l=milligrams per liter				
mV = millivolts				

Southeast County Landfill Surficial Aquifer Groundwater Elevations February 8, 2017

Measuring Point	T.O.C. Elevations	W.L.	W.L.		
I.D.	(NGVD)	B.T.O.C.	(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 V	/ertical Datum			
Т.О.С.	= 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

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 Guic	Jance Concentra	itions		
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 Guid	lance Concentra	tions			
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 Guid	ance Concentrat	tions				
NS = No Standard						
MCL = Maximum Contaminant Level						
* = Primary Drinking Water Standard						
** = Secondary Drinking Water Standa	ard					
6.00 = Exceeds Standard						
mV = millivolts	-					
NTU = Nephelometric Turbidity Units						
mg/l = milligrams per liter						
NGVD = National Geodedic Vertical Da	atum					

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 Guid	ance Concentra	tions				
NS = No Standard						
MCL = Maximum Contaminant Level						
* = Primary Drinking Water Standard						
** = Secondary Drinking Water Standa	ird					
6.18 = Exceeds Standard						
mV = millivolts						
NTU = Nephelometric Turbidity Units						
mg/l = milligrams per liter						
NGVD = National Geodedic Vertical Da	ntum					

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 Guid NS = No Standard	ance Concentra	tions	
MCL = Maximum Contaminant Level			
* = Primary Drinking Water Standard			
** = Secondary Drinking Water Standa	rd		
6.09 = Exceeds Standard			
mV = millivolts			
NTU = Nephelometric Turbidity Units			
mg/l = milligrams per liter			
NGVD = National Geodedic Vertical Da	itum		



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:		
FACILITY NAME: Southeast County Landfill	·····	
DEP PERMIT NO.: _35435-022-SO/01 WACS FACILI	TY ID NO.: 41193	
WACS MONITORING SITE NUM.: _41193WACS WELL I	NO.:_30172	
WELL TYPE: BACKGROUND DETECTION 🕵		
LATITUDE: 27° 46' 18.275" LONGITUDE:	-82°	<u>07</u> "
(see back for LAT / LONG requirements):		
Coordinate Accuracy 3' Datum NAD 83/90	Elevation DatumNAD 192	<u>29</u>
Collection Method _GPS Collection Da	ite <u>3/13/2017</u>	
Collector Name Deborah L. Peavey Collector Affiliation	Peavey and Associates	
AQUIFER MONITORED: Surficial Aquifer	x - x - x	
DRILLING METHOD: Hollow Stem Auger DATE	INSTALLED: <u>3/9/2017</u>	
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	TO8.65(BI	LS)
FILTER PACK TYPE: Silica Sand FILTER PACK GRAIN	SIZE: 20/30	
INTERVAL COVERED: <u>18.65</u> TO <u>7.65</u> (BLS))	
SEALANT TYPE: <u>6/20 Silica Sand</u> SEALANT INTERVAL: 7.65	TO_ <u>6.65</u> (BL	.S)
GROUT TYPE: Neat Cement GROUT INTERVAL: 6.65	TO0.0 (BL	.S)
TOP OF CASING ELEVATION (NGVD): 129.52 GROUND SURFACE	ELEVATION (NGVD): 126.30)
DESCRIBE WELL DEVELOPMENT: Electrical Submersible Pump	<u></u>	
POST DEVELOPMENT WATER LEVEL ELEVATION (NGVD):		
DATE AND TIME MEASURED: _N/A		<u> </u>
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)

Northwest District 160 Government Center Pensacola, FL 32501-5794 850-595-8360

Central District Orlando, FL 32803-3767 407-894-7555

Southwest District Temple Terrace, FL 813-632-7600

South District 2295 Victoria Ave., Ste. 364 Fort Myers, FL 33901-3881 239-332-6975

Southeast District 400 North Congress Ave. West Palm Beach, FL 33401 561-681-6600



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:
FACILITY NAME: Southeast County Landfill
DEP PERMIT NO.: <u>35435-022-SO/01</u> WACS FACILITY ID NO.: <u>41193</u>
WACS MONITORING SITE NUM.: 41193 WACS WELL NO.: 30173
WELL TYPE: BACKGROUND DETECTION COMPLIANCE
LATITUDE: <u>27°</u> <u>46'</u> <u>16.392''</u> LONGITUDE: <u>-82°</u> <u>10'</u> <u>39.657''</u>
(see back for LAT / LONG requirements):
Coordinate Accuracy 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:
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: <u>2</u> " SCREEN INTERVAL: <u>16.94</u> TO <u>6.94</u> (BLS)
FILTER PACK TYPE: Silica Sand FILTER PACK GRAIN SIZE: 20/30
INTERVAL COVERED: <u>16.94</u> TO <u>5.94</u> (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): <u>130.26</u> GROUND SURFACE ELEVATION (NGVD): <u>126.80</u>
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)

Northwest District 160 Government Center Pensacola, FL 32501-5794 850-595-8360

Northeast District Jacksonville, FL 32256-7590 904-807-3300

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Southwest District Temple Terrace, FL 813-632-7600

South District 2295 Victoria Ave., Ste. 364 Fort Myers, FL 33901-3881 239-332-6975

Southeast District 400 North Congress Ave. West Palm Beach, FL 33401 561-681-6600



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: <u>5/31/2017</u>	
FACILITY NAME: <u>Southeast County Landfill</u>	
DEP PERMIT NO.: _35435-022-SO/01	WACS FACILITY ID NO.: 41193
WACS MONITORING SITE NUM.: _41193	WACS WELL NO.: 30174
WELL TYPE: BACKGROUND DETECTI	
LATITUDE: 27° 46' 17.120"	LONGITUDE: -82° 10' 38.284"
(see back for LAT / LONG requirements):	
Coordinate Accuracy <u>3</u> Datum	NAD 83/90 Elevation Datum NAD1929
Collection MethodGPS	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 D	EPTH: <u>15.60</u> (BLS)
CASING TYPE: Schedule 40 PVC CASING DIAMET	ER: 2"CASING LENGTH: 5.3'
SCREEN TYPE: Schedule 40 PVC SCREEN SLOT S	IZE: 0.010 SCREEN LENGTH: 10'
SCREEN DIAMETER: 2"SCREEN	INTERVAL: 18.94 TO 8.94 (BLS)
FILTER PACK TYPE: Silica Sand Fi	ILTER PACK GRAIN SIZE: 20/30
INTERVAL COVERED: <u>18.94</u> TO <u></u>	7.94 (BLS)
SEALANT TYPE: 6/20 Silica Sand SEALANT INTER	VAL: <u>7.94</u> TO <u>6.94</u> (BLS)
GROUT TYPE: Neat Cement GROUT INTER	VAL: <u>6.94</u> TO <u>0.0</u> (BLS)
TOP OF CASING ELEVATION (NGVD): 131.24	GROUND SURFACE ELEVATION (NGVD): <u>127.90</u>
DESCRIBE WELL DEVELOPMENT: _Electrical Submo	ersible Pump
POST DEVELOPMENT WATER LEVEL ELEVATION	(NGVD): <u>N/A</u>
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)

Northwest District 160 Government Center Pensacola, FL 32501-5794 850-595-8360

Southwest District Temple Terrace, FL 813-632-7600

South District 2295 Victoria Ave., Ste. 364 Fort Myers, FL 33901-3881 239-332-6975

Southeast District 400 North Congress Ave. West Palm Beach, FL 33401 561-681-6600



Advanced Environmental Laboratories, Inc 9610 Princess Palm Ave Tampa, FL 33619 Payments: PO. 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,

o Parker

Heidi Parker - Project Manager HParker@AELLab.com

Enclosures

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Advanced Environmental Laboratories, Inc 9610 Princess Palm Ave Tampa, FL 33619 Payments: PO. 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

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ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: Sample ID:	T1702409001 Field Blank				Date Received: Date Collected:	02/08/17 16:40 02/08/17 10:35	Matrix:	Water	
Sample Desci	iption:				Location:				
Parameters		Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS									
Analysis Desc Analysis,Wate	: SW846 6010B r	Prepa Analy	aration N	Method: S	SW-846 3010A /-846 6010				
Sodium		0.19	I	mg/L	1	0.20	0.042	2/13/2017 15:16	Т
WET CHEMIS	STRY								
Analysis Desc	: Ammonia,E350.1,Water	Analy	rtical Me	thod: EP	A 350.1				
Ammonia (N)		0.07	I	mg/L	1	0.10	0.02	2/10/2017 14:50	Т
Analysis Desc Solids,SM254	: Tot Dissolved 0C	Analy	rtical Me	ethod: SN	2540 C				
Total Dissolve	d Solids	12	U	mg/L	1.25	12	12	2/15/2017 17:54	Т
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Analy	rtical Me	thod: SN	I 4500-CI-E				
Chloride		2.6	I	mg/L	1	5.0	2.6	2/16/2017 16:23	Т

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ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: Sample ID:	T1702409002 TH-66A				Date Received: Date Collected:	02/08/17 16:40 02/08/17 09:45	Matrix:	Water	
Sample Descr	ription:				Location:				
						Adjusted	Adjusted		
Parameters		Results	Qual	Units	DF	PQL	MDL	Analyzed	Lab
FIELD PARA	METERS								
Analysis Desc measurements	:: Data entry of field s	Anal	ytical Me	thod: Field	d Measurements				
Conductivity Dissolved Oxy ORP-2580BW Temperature Turbidity pH	/gen /	580 0.64 -69.2 23.68 1.06 6.18		umhos/e mg/L mV °C NTU SU	cm 1 1 1 1 1 1			2/8/2017 09:45 2/8/2017 09:45 2/8/2017 09:45 2/8/2017 09:45 2/8/2017 09:45 2/8/2017 09:45	
METALS									
Analysis Desc Analysis,Wate	:: SW846 6010B r	Prep Anal	aration Nytical Me	Method: SN ethod: SW-	N-846 3010A 846 6010				
Sodium		21		mg/L	1	0.20	0.042	2/13/2017 15:20	Т
WET CHEMIS	STRY								
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	thod: EPA	350.1				
Ammonia (N)		0.50		mg/L	1	0.10	0.02	2/10/2017 14:50	т
Analysis Desc Solids,SM254	:: Tot Dissolved 0C	Anal	ytical Me	thod: SM	2540 C				
Total Dissolve	d Solids	300		mg/L	1.25	12	12	2/15/2017 17:54	Т
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Anal	ytical Me	thod: SM	4500-CI-E				
Chloride		78		mg/L	1	5.0	2.6	2/16/2017 16:26	Т

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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 Desci	ription:				Location:				
						Adjusted	Adjusted		
Parameters		Results	Qual	Units	DF	PQL	MDL	Analyzed	Lab
FIELD PARA	METERS								
Analysis Desc measurement	:: Data entry of field s	Anal	ytical Me	ethod: Fiel	d Measurements				
Conductivity Dissolved Oxy ORP-2580BW Temperature Turbidity pH	/gen /	4980 1.73 -20.3 21.77 60.2 6.4		umhos/ mg/L mV °C NTU SU	/cm 1 1 1 1 1 1			2/8/2017 11:12 2/8/2017 11:12 2/8/2017 11:12 2/8/2017 11:12 2/8/2017 11:12 2/8/2017 11:12	
METALS									
Analysis Desc	: SW846 6010B	Prep	aration N	Method: S	W-846 3010A				
Analysis,Wate	9 1	Anal	ytical Me	ethod: SW	-846 6010				
Sodium		650		mg/L	10	2.0	0.42	2/13/2017 15:31	Т
WET CHEMIS	STRY								
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	ethod: EP/	A 350.1				
Ammonia (N)		35		mg/L	10	1.00	0.25	2/10/2017 14:50	Т
Analysis Desc Solids,SM254	:: Tot Dissolved 0C	Anal	ytical Me	ethod: SM	2540 C				
Total Dissolve	d Solids	2700		mg/L	1.25	12	12	2/15/2017 17:54	Т
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Anal	ytical Me	ethod: SM	4500-CI-E				
Chloride		1200		mg/L	26.6667	130	68	2/16/2017 17:24	Т

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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 Desci	ription:				Location:				
						Adjusted	Adjusted		
Parameters		Results	Qual	Units	DF	PQL	MDL	Analyzed	Lab
FIELD PARA	METERS								
Analysis Desc measurement	:: Data entry of field s	Anal	ytical Me	ethod: Fiel	d Measurements				
Conductivity Dissolved Oxy ORP-2580BW Temperature Turbidity pH	/gen /	3830 2.13 -41.7 24.52 8.72 6.44		umhos/ mg/L mV °C NTU SU	cm 1 1 1 1 1 1			2/8/2017 12:03 2/8/2017 12:03 2/8/2017 12:03 2/8/2017 12:03 2/8/2017 12:03 2/8/2017 12:03	
METALS									
Analysis Desc	: SW846 6010B	Prep	aration N	Method: S	W-846 3010A				
Analysis,Wate	9 1	Anal	ytical Me	ethod: SW	-846 6010				
Sodium		330		mg/L	10	2.0	0.42	2/13/2017 15:40	Т
WET CHEMIS	STRY								
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	ethod: EPA	350.1				
Ammonia (N)		14		mg/L	5	0.50	0.12	2/10/2017 14:50	Т
Analysis Desc Solids,SM254	:: Tot Dissolved 0C	Anal	ytical Me	ethod: SM	2540 C				
Total Dissolve	d Solids	2000		mg/L	1.25	12	12	2/15/2017 17:54	Т
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Anal	ytical Me	ethod: SM	4500-CI-E				
Chloride		990		mg/L	26.6667	130	68	2/16/2017 17:25	Т

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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 Descr	iption:				Location:				
						Adjusted	Adjusted		
Parameters		Results	Qual	Units	DF	PQL	MDL	Analyzed	Lab
FIELD PARA	METERS								
Analysis Desc measurements	: Data entry of field s	Anal	ytical Me	thod: Fiel	d Measurements				
Conductivity Dissolved Oxy ORP-2580BW Temperature Turbidity pH	/gen	427 0.18 -41.7 23.77 3.77 5.82		umhos/ mg/L mV °C NTU SU	cm 1 1 1 1 1 1			2/8/2017 13:12 2/8/2017 13:12 2/8/2017 13:12 2/8/2017 13:12 2/8/2017 13:12 2/8/2017 13:12	
METALS									
Analysis Desc	: SW846 6010B	Prep	aration I	Method: S	W-846 3010A				
Analysis,Wate	r	Anal	ytical Me	thod: SW	-846 6010				
Sodium		31		mg/L	1	0.20	0.042	2/13/2017 16:16	Т
WET CHEMIS	STRY								
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	thod: EPA	350.1				
Ammonia (N)		1.2		mg/L	1	0.10	0.02	2/10/2017 14:50	Т
Analysis Desc Solids,SM254	: Tot Dissolved 0C	Anal	ytical Me	thod: SM	2540 C				
Total Dissolve	d Solids	230		mg/L	1.25	12	12	2/15/2017 17:54	Т
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Anal	ytical Me	thod: SM	4500-CI-E				
Chloride		83		mg/L	1	5.0	2.6	2/16/2017 16:28	Т

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ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: Sample ID:	T1702409006 TH-38B				Date Received: Date Collected:	02/08/17 16:40 02/08/17 13:41	Matrix:	Water	
Sample Desci	ription:				Location:				
						Adjusted	Adjusted		
Parameters		Results	Qual	Units	DF	PQL	MDL	Analyzed	Lab
FIELD PARA	METERS								
Analysis Desc measurement	:: Data entry of field s	Anal	ytical Me	thod: Fiel	d Measurements				
Conductivity Dissolved Oxy ORP-2580BW Temperature Turbidity pH	/gen /	103 2.02 6.2 23.93 16.5 5.45		umhos/ mg/L mV °C NTU SU	7cm 1 1 1 1 1 1			2/8/2017 13:41 2/8/2017 13:41 2/8/2017 13:41 2/8/2017 13:41 2/8/2017 13:41 2/8/2017 13:41	
METALS									
Analysis Desc Solids,SM254	:: Tot Dissolved 0C	Anal	ytical Me	ethod: SM	2540 C				
Total Dissolve	d Solids	57		mg/L	1.25	12	12	2/15/2017 17:54	Т
Analysis Desc	: SW846 6010B	Prep	aration N	Method: S	W-846 3010A				
Analysis,Wate	r	Anal	ytical Me	thod: SW	-846 6010				
Sodium		3.6	-	mg/L	1	0.20	0.042	2/13/2017 16:28	Т
METALS									
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	thod: EPA	350.1				
Ammonia (N)		1.4		mg/L	1	0.10	0.02	2/10/2017 14:50	Т
Analysis Desc E,Water	: Chlorides,SM4500-CI-	Anal	ytical Me	thod: SM	4500-CI-E				
Chloride		8.2		mg/L	1	5.0	2.6	2/16/2017 16:28	Т

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Advanced Environmental Laboratories, Inc 9610 Princess Palm Ave Tampa, FL 33619 Payments: PO. 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 Desci	ription:				Location:				
						Adjusted	Adjusted		
Parameters		Results	Qual	Units	DF	PQL	MDL	Analyzed	Lab
FIELD PARA	METERS								
Analysis Desc measurement	: Data entry of field s	Anal	ytical Me	ethod: Field	d Measurements				
Conductivity		1578		umhos/	cm 1			2/8/2017 14:04	
Dissolved Oxy	/gen	0.2		mg/L	1			2/8/2017 14:04	
ORP-2580BW	1	-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	
рН		6.22		SU	1			2/8/2017 14:04	
METALS									
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	ethod: EPA	350.1				
Ammonia (N)		1.8	J4	mg/L	1	0.10	0.02	2/10/2017 14:50	Т
Analysis Desc	:: SW846 6010B	Prep	aration I	Method: SV	V-846 3010A				
Analysis,Wate	er	Anal	ytical Me	ethod: SW-	846 6010				
Sodium		41		mg/L	1	0.20	0.042	2/13/2017 16:32	Т
WET CHEMIS	STRY								
Analysis Desc Solids,SM254	:: Tot Dissolved 0C	Anal	ytical Me	ethod: SM	2540 C				
Total Dissolve	d Solids	790		mg/L	1.25	12	12	2/15/2017 17:54	Т
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Anal	ytical Me	ethod: SM	4500-CI-E				
Chloride		290		mg/L	5	25	13	2/16/2017 17:05	Т

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ANALYTICAL RESULTS

Workorder: T1702409 SELF Supplemental Site Assessm

Lab ID: Sample ID:	T1702409008 Duplicate				Date Received: Date Collected:	02/08/17 16:40 02/08/17 00:00	Matrix:	Water	
Sample Desci	ription:				Location:				
Parameters		Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS									
Analysis Desc	:: SW846 6010B	Prep	aration N	Method: S	SW-846 3010A				
Analysis, wate	۲.	Anal	ytical Me	ethod: SV	V-846 6010				
Sodium		700		mg/L	10	2.0	0.42	2/13/2017 16:43	Т
WET CHEMIS	STRY								
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	thod: EP	A 350.1				
Ammonia (N)		37		mg/L	10	1.00	0.25	2/15/2017 11:44	Т
Analysis Desc Solids,SM254	:: Tot Dissolved 0C	Anal	ytical Me	ethod: SN	1 2540 C				
Total Dissolve	d Solids	2600		mg/L	1.25	12	12	2/15/2017 17:54	Т
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Anal	ytical Me	thod: SN	1 4500-CI-E				
Chloride		1100		mg/L	26.6667	130	68	2/16/2017 17:26	Т

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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

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Workorder: T1702409	9 SELF Su	pplementa	al Site Asse	ssm								
QC Batch:	DGMt/25	15			Analysis M	ethod:	SW-8	46 6010				
QC Batch Method:	SW-846 3	010A			Prepared:		02/10	/2017 11:00)			
Associated Lab Samp	les: T1	70240900	1, T170240	09002, T170	02409003, T ²	1702409004	4					
METHOD BLANK: 22	70143											
Parameter		Units		Blank Result	Reporting Limit	Qualifiers						
METALS												
Sodium		mg/L		0.042	0.042	U						
LABORATORY CONT	ROL SAM	PLE: 22	70144									
			ç	Spike	LCS	L	CS	% Rec				
Parameter	I	Jnits	C	Conc.	Result	% R	ec	Limits C	ualifiers			
METALS				-0	-0		10	00.400				
Sodium	I	ng/L		50	59	1	18	80-120				
MATRIX SPIKE & MA	TRIX SPI		CATE: 227	70145	22701	146	Origi	nal: T170	2153022			
Parameter	I	Jnits	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD Qua	lifiers
METALS												
Sodium	I	ng/L	0.035	50	58	59	116	118	75-125	2	20	
QC Batch:	DGMt/25	16			Analysis M	ethod:	SW-8	46 6010				
QC Batch Method:	SW-846 3	010A			Prepared:		02/10	/2017 11:00)			
Associated Lab Samp	les: T1	70240900	5, T170240	09006, T170	02409007, T ²	170240900	8					
METHOD BLANK: 22	70156											
Parameter		Units		Blank Result	Reporting Limit	Qualifiers						
METALS												
Sodium		mg/L		0.042	0.042	U						

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LABORATORY CON	ITROL SAMPLE:	2270157									
Parameter	Units	Sp Co	bike bnc.	LCS Result	L % F	CS Rec	% Rec Limits C	Qualifiers			
METALS Sodium	mg/L		50	60	1	120	80-120				
MATRIX SPIKE & M	ATRIX SPIKE DUP	LICATE: 2270	158	2270	159	Orig	inal: T170	2409005			
Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers	3
METALS Sodium	mg/L	31	50	89	90	115	116	75-125	1	20	
QC Batch: QC Batch Method: Associated Lab San	WCAt/7008 EPA 350.1 Iples: T1702409	0001, T1702409	002, T17	Analysis M Prepared: 02409003, T	lethod: 170240900	EPA (350.1 09005, T17	02409006	6, T17	02409007	
METHOD BLANK: 2	2270293										
Parameter	Units	। न	Blank Result	Reporting Limit	Qualifiers						
WET CHEMISTRY Ammonia (N)	mg/L		0.02	0.02	U						
	ITROL SAMPLE:	2270294									
Parameter	Units	Sp Co	oike onc.	LCS Result	L % F	CS Rec	% Rec Limits C	Qualifiers			
WET CHEMISTRY Ammonia (N)	mg/L		0.5	0.52	1	104	90-110				
MATRIX SPIKE & M	ATRIX SPIKE DUP	LICATE: 2270	295	22702	296	Orig	inal: T170	2296002			
Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD Qualifiers	6
WET CHEMISTRY Ammonia (N)	mg/L	0	1	0.92	0.90	92	90	90-110	2	10	
Report ID: 470530										Pa	ae 13 of

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Workorder: T1702409 SELF Supplemental Site Assessm

MATRIX SPIKE & MATRI	X SPIKE DUPL	SPIKE DUPLICATE: 2270297			298	Origi	nal: T170	2409007			
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: W0	CAt/7077			Analysis M	ethod:	EPA 3	50.1				
QC Batch Method: EP Associated Lab Samples	A 350.1 : T17024090	08		Prepared:							
METHOD BLANK: 22734	16										
Parameter	Units	I	Blank Result	Reporting Limit	Qualifiers						
WET CHEMISTRY Ammonia (N)	mg/L		0.02	0.02	U						
LABORATORY CONTRC	DL SAMPLE: 2	273417									
Parameter	Units	S Co	oike onc.	LCS Result	L % F	CS Rec	% Rec Limits C	aulifiers			
WET CHEMISTRY Ammonia (N)	mg/L		0.5	0.54		109	90-110				
MATRIX SPIKE & MATRI	X SPIKE DUPL	ICATE: 2273	3418	22734	419	Origi	nal: T170	2153034			
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 & MATRI	X SPIKE DUPL	ICATE: 2273	3420	22734	121	Origi	nal: T170	2458002			
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	

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Workorder: T1702409 SELF Supplemental Site Assessm

OC Patabi			Apolycia Mothod:		SM 2540 C		
QC Batch Mothod:	SM 2540 C		Analysis Methou.		SIVI 2540 C		
QC Batch Methou.	Sivi 2540 C	T1702400002 T1	702400003 T170240	0004 7	T1702400005 T1	702400006 T1702400007	T1702400008
	pies. 11702409001	11702409002, 11	702409003, 1170240	9004, 1	11702409005, 11	702409000, 11702409007	, 11702409008
METHOD BLANK: 2	274175						
Parameter	Units	Blank Result	Reporting Limit Qualifi	ers			
WET CHEMISTRY							
Total Dissolved Solid	s mg/L	10	10 U				
LABORATORY CON	TROL SAMPLE: 2274	4176					
		Spike	LCS	LCS	% Rec		
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
WET CHEMISTRY Total Dissolved Solid	s mg/L	660	610	93	75-125		
	-						
SAMPLE DUPLICAT	E: 2274177		Original: T1702153	3027			
		Original	DUP		Max		
Parameter	Units	Result	Result	RPD	RPD	Qualifiers	
WET CHEMISTRY							
Total Dissolved Solid	s mg/L	300	310	1	10		
SAMPLE DUPLICAT	E: 2274178		Original: T1702409	9006			
		Original	DUP		Мах		
Parameter	Units	Result	Result	RPD	RPD	Qualifiers	
WET CHEMISTRY							
Total Dissolved Solid	s mg/L	57	55	4	10		
QC Batch:	WCAt/7120		Analysis Method:		SM 4500-CI-E		
QC Batch Method:	SM 4500-CI-E		Prepared:				
Associated Lab Sam	ples: T1702409001	T1702409002, T1	702409003, T170240	9004, 1	F1702409005, T1	702409006, T1702409007	7, T1702409008

Report ID: 470530

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Workorder: T1702409 S	ELF Supplemen	tal Site Asses	sm									
METHOD BLANK: 2275	590											
Parameter	Units	F	Blank Result	Reporting Limit	Qualifiers							
WET CHEMISTRY Chloride	mg/L		2.6	2.6	U							
LABORATORY CONTRO	DL SAMPLE: 2	275591										
Parameter	Units	SI Co	oike onc.	LCS Result	L % F	CS Rec	% Rec Limits C	aulifiers				
WET CHEMISTRY Chloride	mg/L		50	53		105	90-110					
MATRIX SPIKE & MATR	IX SPIKE DUPL	ICATE: 2275	5592	22755	93	Origi	nal: T170	2153030				
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 & MATR	IX SPIKE DUPL	ICATE: 2275	5594	22755	95	Origi	nal: T170	2409001				
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

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Report ID: 470530
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CERTIFICATE OF ANALYSIS





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-CI-E	WCAt/7120
T1702409002	TH-66A			SM 4500-CI-E	WCAt/7120
T1702409003	TH-79			SM 4500-CI-E	WCAt/7120
T1702409004	TH-67			SM 4500-CI-E	WCAt/7120

Report ID: 470530

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CERTIFICATE OF ANALYSIS





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-CI-E	WCAt/7120
T1702409006	TH-38B			SM 4500-CI-E	WCAt/7120
T1702409007	TH-71A			SM 4500-CI-E	WCAt/7120
T1702409008	Duplicate			SM 4500-CI-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/

Report ID: 470530

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Address: 332 North Fallenburg Rd. Commencies (NA. Commenci	Client Name: 1	Hills. Co. Public Utilities	Project Name:	SELF Sup	plemental	Site Asses	sment	3d/ 8 32						٤
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Risk (813) 274-8801 Contract Minical Townsei Fricula Bloak - Fricula Bloak - Fricula Bloak - Rame - Fricula Bloak - TH+ - LeT 6 TH+ - LeT 6 TH+ - LeT 6 TH+ - 2a68 6 TH+ - 2a69	Phone: (81	3) 663-3222		TEMARKSISPECI	AL INSTRUCT	SNOL		N						N
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TH-38B C 3[8]/1 [34/1 [54/2 X X X X X X N TH-38B C 3[8]/1 Hord Gu 3 X X X X X N N Th-71A C Jalin Hord Gu 3 X X X X X N N Duple code G Jalin Hord Gu 3 X X X X N N Math. Code: Under sequence Gu Jalin M A X X X X X X X Math. Code: War extender: SW = guide math of the code Guide math of the code A A A A A Math. Code: War extender: SW = guide math of the code A = ar SO = col A = ar SO = col A = ar A		Sac - HT	U	ri 8)c	1312	39	m	×	y	×	×			cus
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Matrix code: WW = wastewater SW = sufface water GW = ground water DM = air SO = soil SL = sludge Preservation Code: I = (H-IC) S = (H2SC4) N = (HNO3) T = (Sodium Thosulfate) Received on Ice Presi No Termp tram premp from blank		Has Blan	2 A	E Clar	11/8	#	4	non ta taliy					_	
Matrix code: Ww = waistewater Sw = surface water GW = ground water D = drinking water D = sin So = soil SL = sludge Preservation Code: I = lot I = lot <thi< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td></thi<>								1						
Notification Date Time Received by: Date Time Notification Notification Notification Notification 1 Notification 1 Notification 2 1 1 1 3 1 1 1	Matrix Code: WW Received on Ice	e wastewater SW = surface water GW = Tves □ No ⁺ □Terrip laken from san	ground water DW	= drinking wate from blank D	r 0 = 0il	A = air SO	= soil St Temo by a	.= sludge	Prese here require or (circle IR	rvation Co sd. pH cher temp oun	de: 1=10e 1 Xed Xed J: 94	Temperature when receive	$\frac{(HNO3)}{d} T = (Sodium)$	n Thiosulfate) grees celoius) S: 1V
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2 Contact Person Phone: 3 7 Supplier of Water:		28/17 1640	dh -			2/1/2	1640		PWS ID.	J				
3 Supplier of Water	2		~					8	ntact Perso			Phone:		
	e		-					Sup	plier of Wal	GC:				

NAME Southeast County Landfill Location: Lithia, Florida WeLL NO: Field Blank DATE 2/8/11 WELL RO: TUBINO DEVENDATE FURCE PURPER PURCE PURPER WELL RO: TUBINO DEPTH NAR 1: 50 AR TOTATIC DEPTH PURCE PURPER WELL CARACITY (Selects) WELL SCREEN INTERVAL TOWATER device. N/A palense: N/A WELL CARACITY (Selects) WELL SCREEN INTERVAL TOTATIC DEPTH OR BALER: N/A WELL CARACITY (Selects) WELL SCREEN INTERVAL TOTATIC DEPTH TUBINO PURCE N/A Compression WELL CARACITY WELL CARACITY N/A palense N/A Compression WELL CARACITY (Selects) WELL CARACITY (Selects) N/A palense TOTAL VOLUME TWRE PURCE PURCE PURCE PURCE PURCE PURCE PURCE PURCE TWRE PURCE PURC	SITE		SITE					
WELL NO. Field Blank DATE 2/9/17 PURGING DATA PURGING DATA PURGE PUMP TYPE OR BALER: N/A PURGE PUMP TYPE OR BALER: N/A DIMATER (mohs): N/A DEALETR: (mohs): N/A DEALETR: (mohs): N/A DEALETR: (mohs): N/A PURGE PUMP TYPE OR BALER: N/A DIMATER (mohs): N/A DEALETR: (mohs): N/A DEALETR: (mohs): N/A DEALETR: (mohs): N/A PURGE PUMP TYPE OR BALER: N/A EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL - PUMP VOLUME + (TOBING CAPACITY N/A pailons = N/A pailons EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL - PUMP OR TUBING - N/A pailons N/A pailons EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL - PUMP OR TUBING FINAL PUMP OR TUBING DEPTH IN VELL (det): N/A pailons = N/A pailons DIMTAL PUMP OR TUBING CUMUL PUNCED DEPTH IN VELL (det): N/A pailons N/A pailons TIME VOLUME CUMUL PURCED RATE WELE PUMP OR TUBING COLOR DOSOLED TOTAL VOLUME PURCED PURCED COLOR PURCED PURCED PURCED PURCED PURCED PURCED <	NAME: Southeast County Land	Fill	LOCATION: Lithia,	Florida				
PURGING DATA VAL VILING VILING <th c<="" td=""><td>WELL NO: Field Blank</td><td>SAMPLE ID: F</td><td>ield Blank</td><td>DATE:</td><td>2/8/17</td></th>	<td>WELL NO: Field Blank</td> <td>SAMPLE ID: F</td> <td>ield Blank</td> <td>DATE:</td> <td>2/8/17</td>	WELL NO: Field Blank	SAMPLE ID: F	ield Blank	DATE:	2/8/17		
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DAMETER (Inches): N/A DAMETE	WELL TUBING	WELL SCRE	EEN INTERVAL ST/	ATIC DEPTH	PURGE PUMP TYPE			
(inty fill out amplicable) = (N/A teol - N/A teol - N/A gallons/fill out Augustation EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOLUME + CIUBING CAPACITY x N/A gallons/foot = N/A gallons EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOLUME + CIUBING CAPACITY x N/A gallons = N/A gallons INITIAL PUMP OR TUBING ENAL PUMP OR TUBING ENAL PUMP OR TUBING PURCING	DIAMETER (inches): N/A DIAMETER (inch	1es): N/A DEPTH: N/			OR BAILER: N/A			
e (N/A teel N/A teel N/A teel N/A galonstot = N/A galons tubing Capacity (Callor Purper Volume Purper Volume + (Tubing Capacity X Tubing Length) + RLow Cell Volume (only fill out if applicable) = N/A galons + (N/A galonstot X N/A teel + N/A galons = N/A galons INITAL PUMP OR TUBING FINAL PUMP OR TUBING DEPTH IN WELL (ree): N/A Depth INITATED AT: N/A PungeD + N/A galons = N/A galons DEPTH IN WELL (ree): N/A DEPTH IN WELL (ree): N/A DEPTH IN WELL (ree): N/A Depth I galons (ree) w/A (ree): N/A Depth I galons + (N/A galonstot X N/A teel + N/A galons = N/A galons = N/A galons DEPTH IN WELL (ree): N/A DEPTH IN WELL (ree): N/A (ree): N/A (ree): N/A (ree): N/A DEPTH IN WELL (ree): N/A (ree): N/A DEPTH IN WELL (ree): N/A (ree): N/A (ree): N/A DEPTH IN WELL (ree): N/A (ree): N/A DEPTH IN WELL (ree): N/A	(only fill out if applicable)	(IUTAL WELL DEPTH -	STATIC DEPTH TO WATER	R) X WELL CAPACITY				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PURV VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (with and the purplexable) = N/A galons + (N/A galons/cot X N/A freet) + N/A galons = N/A galons INTULE PURVE OR TUBING FINAL PURVP OR TUBING FINAL PURVP OR TUBING PURGING PURGING TOTAL VOLUME PURGING / PURGING TOTAL VOLUME PURGING / PURGED (galons), N/A TIME VOLUME VOLUME / PURGE / CUMUL, (equiting (gandard (=	(N/A feet –	N/A feet) X	N/A gallons/for	ot = N/A gallons			
INTAL PUMP OR TUBING INTAL PUMP OR TUBING INTAL PUMP OR TUBING INTAL PUMP OR TUBING DEPTH IN WELL (red): N/A	EQUIPMENT VOLUME PURGE: 1 EQUIPMENT	VOL. = PUMP VOLUME + ((TUBING CAPACITY X	TUBING LENGTH) + FLOV	V CELL VOLUME			
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A TIME PURCED RURAL VOLUME CUMUL (galions) PURCED PURCE (galions) PURCED (galions): N/A TIME PURCED (galions) PURCED (galions): N/A TIME PURCED PURCED (galions): N/A TIME PURCED PURCED (galions): N/A TIME PURCED PURCED (galions): N/A TIME PURCED PURCED (galions): N/A DISSOLVER N/A (galions) PURCED (galions): N/A DISSOLVER N/A PURCED (galions): N/A PURCED (galions): PURCED (galions): N/A PURCED (galions): PURCED (galions): N/A PURCED (galions): PURCED (galions): N/A PURCED (galions): PURCE PURCED PURCED (galions): PURCE PURCED (galions): PURCED (galions): N/A PE Blader (galions): PURCED (galions): PURCED (galions): PURCED (galions): PURCED (galions): PURCED (galions): N/A PURCED (galions): PURCED (galions): PURCED (galions): PURCED (galions): PURCED (galions): N/A PE Blader (galions): PURCED (galions): PURCED (galions): PURCED (galions		= N/A gallons t	+ (N/A gallons/foot		A = N/A college			
DEPTH IN WELL (teet): N/A DEPTH IN WELL (teet): N/A INITIATED AT: N/A ENDED AT: N/A PURGED (galons): N/A TIME VOLUME PURGED CUMUL PURGED PURGE (galons) PURGE PURGED PURGE RATE PURGE (galons) PURGE PURGED PURGE RATE PURGE (galons) PURGE PURGED PURGED	INITIAL PUMP OR TUBING FINAL	PUMP OR TUBING	PURGING	PURGING	TOTAL VOLUME			
TIME CUMUL PURGED (gallons) CUMUL PURGED (gallons) PURCE PURGED (gallons) DEPTH RATE (gpm) PH (standard units) PH (standard units) COND (cicle units) gr µSrcm DiSSOLVED (cicle units) gr µSrcm TURBIDITY (RTUS) COLOR (describe) ODOR (describe) water (gen) (gen) <td< td=""><td>DEPTH IN WELL (feet): N/A DEPT</td><td>H IN WELL (feet): N/A</td><td>INITIATED AT: N</td><td>/A ENDED AT: N/A</td><td>PURGED (gallons): N/A</td></td<>	DEPTH IN WELL (feet): N/A DEPT	H IN WELL (feet): N/A	INITIATED AT: N	/A ENDED AT: N/A	PURGED (gallons): N/A			
TIME VOLUME (gallons) PURGED (gallons) PURGE (gallons) TO (gallons)	CUMUL.	DEPTH	CONE	D. DISSOLVED				
(galons)	TIME VOLUME VOLUME PUR TIME PURGED BURGED BA	RE TO P⊓	ard TEMP. (circle un	nits) (circle units) TUR	BIDITY COLOR ODOR			
WELL CAPACITY (Galons 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 WELL CAPACITY (Galons 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 WELL CAPACITY (Galons Per Foot): 0.75" = 0.02; 1" = 0.004; 1.44" = 0.0026; 5/6" = 0.004; 3/8" = 0.005; 3/8" = 0.005; 3/8" = 0.005; 3/8" = 0.006; 3/8" = 0.006; 1/2" = 0.58 5/8" = 0.016; 5/8" = 0	(gallons) (gallons) (gp	m) (feet) units	s) (C) μ μ σ μ S/c	cm mg/L <u>or</u> (N				
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 VUBING INSIDE DIA. CAPACITY (Gall/FL): 118" = 0.0006; 316" = 0.004; 316" = 0.004; 316" = 0.004; 316" = 0.004; 316" = 0.004; 316" = 0.004; 316" = 0.004; 316" = 0.006;								
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 WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1/" = 0.04; 1.25" = 0.06; 2" = 0.16; 3/16" = 0.0026; 5/16" = 0.04; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; P = Peristatilic Pump; O = Other (Specify) SAMPLE D BY (PRINT) / AFFILIATION: SAMPLER(S) SIGNATURE(S) T-F_u Ver / m Toucose! Tubing PUMP OR TUBING TUBING FIELD FULTERED: Y SAMPLE (set): N/A MATERIAL CODE: N/A SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION SAMPLE CONTAINERS VOLUME VOLUME PRESERVATION SAMPLE CONTAINERS SAMPLE PRESERVATION SAMPLE CONTAINERS VOLUME VOLUME PRESERVATION SAMPLE CONTAINERS SAMPLE PRESERVATION								
WELL CAPACITY (Galions Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.85; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal/FL): 1.18" = 0.0006; 3/16" = 0.0014; 1.4" = 0.026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal/FL): 1.18" = 0.0006; 3/16" = 0.0014; 1.14" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 5.88 PURING RUIPMENT CODES: B = Bailder, BP = Bladder Pump; ESP = Electric Submersible Pump; P = Peristatic Pump; 0 = Other (Specify) SAMPLED BY (PRINT) / AFFILIATION: Image: SamPLing Image: SamPLic Pump; FILD-FILITERED: Y FILITER SIZE:								
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WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.86 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" = 5.86 PUBING INSIDE DIA: CAPACITY (Gall/FL): 1/8" = 0.006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 3/16" = 0.016 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; P = Peristaltic Pump; 0 = Other (Specify) SAMPLE DSY (PRINT) / AFFILIATION: J. F. Lier / m. Tournel TUBING SAMPLER(S) SIGNAPTURE(S) SAMPLING SAMPLING PUMP OR TUBING TUBING TUBING TUBING FILELD-FILTERED: Y FILTER SIZE: µm FIELD DECONTAMINATION: PUMP Y TUBING Y TOTAL VOL FINAL PUPLICATE: Y SAMPLE MATERIAL CODE: N TENDED SAMPLING SAMPLE PUMP FLOW RATE FLOW RATE <t< td=""><td></td><td></td><td></td><td></td><td></td></t<>								
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/FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0226; 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) SAMPLED BY (PRINT) / AFFILIATION: SAMPLER(S) SIGNAPTIRE(S) SAMPLING SAMPLING SAMPLING J. F. Mer / m. Toworkel TUBING TUBING SAMPLER(S) SAMPLER(S) SAMPLERES SAMPLING PUMP OR TUBING TUBING TUBING FIELD-FILTERED: Y FILTER SIZE: µm FIELD DECONTAMINATION: PUMP Y Deal code TUBING FILTER SIZE: µm SAMPLE # MATERIAL CODE: N/A FILTER SIZE: µm SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION INTENDED SAMPLING SAMPLE PUMP			Mp Dala					
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" = 5.86 TUBING INSIDE DIA. CAPACITY (Gallors Per Foot): 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) SAMPLED BY (PRINT) / AFFILIATION: J. F. Ver / m. Toward PUMP OR TUBING DEPTH IN WELL (feet): N/A TUBING MATERIAL CODE: N/A FIELD FRILTERED: Y SAMPLE CONTAINER SPECIFICATION SAMPLE # MATERIAL CODE VA SAMPLE CONTAINER SPECIFICATION SAMPLE # MATERIAL USED ADDED IN FIELD (mL) PRESERVATIVE TOTAL VOL PHE HER CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE WELL CODE VALUE PRESERVATIVE TOTAL VOL PHE HER MATERIAL VOLUME VESED ADDED IN FIELD (mL) PH			3/8	401				
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/FL): 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 = Biadder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; 0 = Other (Specify) SAMPLED BY (PRINT) / AFFILIATION: SAMPLER(S) SIGNATORE(S) SAMPLING INITIATED AT: 1035 SAMPLING ENDED AT: 1036 DUP OR TUBING TUBING TUBING FIELD-FILTERED: Y FILTER SIZE: µm FIELD DECONTAMINATION: PUMP Y Precisered TUBING Y FIELD PRESERVATION FILTER SIZE: µm SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION SAMPLE PRESERVATION INTENDED SAMPLER SAMPLE PUMP SAMPLE CONTAINERS VOLUME PRESERVATIVE TOTAL VOL FINAL ADDED IN FIELD (mL) FINAL SAMPLE PUMP ID CODE VOLUME PRESERVATIVE TOTAL VOL FINAL ADDED IN FIELD (mL) FINAL ANALYSIS AND/OR COUPE CODE C								
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 (Gall/FL): 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) SAMPLED BY (PRINT) / AFFILIATION: J.F.L.Ver / m.T.Buschel PUMP OR TUBING SAMPLER (S) SIGNATURE(S) SAMPLER BY (PRINT) / AFFILIATION: J.F.L.Ver / m.T.Buschel PUMP OR TUBING TUBING SAMPLER(S) SIGNATURE(S) SAMPLER BY (PRINT) / AFFILIATION: J.F.L.Ver / m.T.Buschel TUBING TUBING SAMPLER (S) SIGNATURE(S) SAMPLE DY (PRINT) / AFFILIATION: J. TUBING TUBING TUBING SAMPLE (PRINT) / AFFILIATION: J. TUBING SAMPLE (CONTAMINATION: PUMP CONTAMINATION: SA								
WELL CAPACITY (Galions 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./FL): 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; 0 = Other (Specify) SAMPLED BY (PRINT) / AFFILIATION: J. F. 1/er / m : Toward TUBING PUMP OR TUBING DETH IN WELL (feet): N/A FILED FILTERED: Y SAMPLE CONTAMINATION: PUMP Y DEL. CODE: N/A FILED FILTERED: Y SAMPLE CONTAMINATION: PUMP Y DEL. CODE: N/A FILED PRESERVATION SAMPLE CONTAINER SPECIFICATION SAMPLE WATER PRESERVATION INTENDED SAMPLE # MATERIAL VOL WE WEED NIFIELD (mL) OTAL VOL ADED IN FIELD (mL) PUMP OR TUBING SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATIVE OTAL VOL								
TUBING INSIDE DIA. CAPACITY (Gal./F1.): 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; 0 = Other (Specify) SAMPLED BY (PRINT) / AFFILIATION: SAMPLER(S) SIGNATURE(S) SAMPLING INTIATED AT: 1035 SAMPLING ENDED AT: 1038 JUMP OR TUBING TUBING TUBING FIELD-FILTERED: Y FILTER SIZE: µm FIELD DECONTAMINATION: PUMP Y Ded.code J TUBING Y Field Preservation SAMPLE PRESErvation INTENDED ANALYSIS AND/OR SAMPLE PUMP FLOW RATE (ML) PHONE Y SAMPLE # MATERIAL CODE VOLUME PRESERVATIVE TOTAL VOL ADDED IN FIELD (mL) FINAL PHOD SAMPLE PUMP FLOW RATE (mL) per minute) SAMPLE # MATERIAL VOLUME PRESERVATIVE TOTAL VOL ADDED IN FIELD (mL) FINAL PHOD SAMPLING EQUIPMENT CODE MATERIAL (mL) per minute)	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	2° 6 " = 1.47 12 " = 5.88			
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristatic Pump; O = Other (Specify) SAMPLED BY (PRINT) / AFFILIATION: SAMPLER(S) SIGNAPURE(S) SAMPLING INITIATED AT: 1035 SAMPLING ENDED AT: 1038 J.F.LIPT IN WELL (feet): N/A TUBING TUBING MATERIAL CODE: N/A FILED-FILTERED: Y FILTER SIZE: µm FIELD DECONTAMINATION: PUMP Y Dedicated TUBING Y FILTER SIZE: µm SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION INTENDED SAMPLE PUMP; SAMPLE PUMP SAMPLE CODE VOLUME PRESERVATIVE TOTAL VOL FINAL MATERIAL SAMPLE PUMP ID CODE CONTAINERS VOLUME PRESERVATIVE TOTAL VOL FINAL MATERIAL SAMPLE PUMP ID CODE CONTAINERS VOLUME PRESERVATIVE TOTAL VOL FINAL MATERIAL SAMPLE PUMP ID CODE CONTAINERS ID CODE VOLUME ID CODE ID CODE VOLUME ID CODE ID CODE <td< td=""><td>TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8"</td><td>= 0.0006; 3/16" = 0.0014</td><td>4; 1/4" = 0.0026; 5/16</td><td>5" = 0.004; 3/8" = 0.006;</td><td>1/2" = 0.010; 5/8" = 0.016</td></td<>	TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8"	= 0.0006; 3/16" = 0.0014	4; 1/4" = 0.0026; 5/16	5 " = 0.004; 3 / 8 " = 0.006;	1/2" = 0.010; 5/8" = 0.016			
SAMPLING DATA SAMPLING INITIATED AT: 1035 SAMPLING INITIATED AT: 1035 PUMP OR TUBING TUBING TUBING MATERIAL CODE: N/A FILED-FILTERED: Y FILTER SIZE:µm FILTER SIZE:µm SAMPLE CONTAMINATION: PUMP Y Ded.code TUBING Y PUBED RECONTAINER SPECIFICATION SAMPLE PRESERVATION INTENDED SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATIVE TOTAL VOL ADDED IN FIELD (mL) FINAL PRESERVATIVE TOTAL VOL ADDED IN FIELD (mL) FINAL PHONE SAMPLE PUMP FLOW RATE (mL per minute) SAMPLE Y OUTOR SAMPLE PUMP FLOW RATE (mL per minute) SAMPLE & VOLUME PRESERVATIVE TOTAL VOL ADDED IN FIELD (mL) FINAL PRESERVATIVE TOTAL VOL ADDD PHONE ADDED IN FIELD (m	PURGING EQUIPMENT CODES: B = Bailer;	BP = Bladder Pump;	ESP = Electric Submersib	ble Pump; PP = Peristaltic	Pump; O = Other (Specify)			
J.Fuller / m.Tousal Sampling PUMP OR TUBING TUBING DEPTH IN WELL (feet): N/A FIELD DECONTAMINATION: PUMP Y Dedicated TUBING FIELD-FILTERED: SAMPLE CONTAINER SPECIFICATION SAMPLE PRESErVATION SAMPLE # MATERIAL CODE: Dipole MATERIAL CODE: VOLUME PRESERVATIVE USED ADDED IN FIELD (mL) PH MATERIAL CODE VOLUME PRESERVATIVE VOLUME PRESERVATIVE ADDED IN FIELD (mL) FINAL PH PH	SAMPLED BY (PRINT) / AFFILIATION	SAMPLER(S) SIGNAZ	TIRE(SV					
PUMP OR TUBING DEPTH IN WELL (feet): N/A TUBING MATERIAL CODE: N/A TUBING FIELD-FILTERED: Y FIELD-FILT	J.Fuller / m. Toward			INITIATED AT:	SAMPLING			
DEPTH IN WELL (feet): N/A MATERIAL CODE: N/A Filtration Equipment Type: FIELD DECONTAMINATION: PUMP PUMP<	PUMP OR TUBING	TUBING	COLOR IF		FILTER SIZE			
FIELD DECONTAMINATION: PUMP Y Deducated TUBING Deducated Deducated Deducated TUBING Deducated Deducated <thd< td=""><td>DEPTH IN WELL (feet): N/A</td><td>MATERIAL CODE: N</td><td>I/A F</td><td>Filtration Equipment Type:</td><td></td></thd<>	DEPTH IN WELL (feet): N/A	MATERIAL CODE: N	I/A F	Filtration Equipment Type:				
SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION INTENDED ANALYSIS AND/OR PRESERVATIVE CODE SAMPLE PRESERVATION SAMPLE ID CODE # CONTAINERS MATERIAL CODE VOLUME PRESERVATIVE USED TOTAL VOL ADDED IN FIELD (mL) FINAL PH ANALYSIS AND/OR METHOD SAMPLE PUMP FLOW RATE (mL per minute) ID CODE INTENDED CONTAINERS MATERIAL CODE VOLUME PRESERVATIVE USED TOTAL VOL ADDED IN FIELD (mL) FINAL PH INTENDED ANALYSIS AND/OR METHOD SAMPLE PUMP FLOW RATE (mL per minute) ID CODE INTENDED CODE INTENDED INTENDED INTENDED ANALYSIS AND/OR METHOD SAMPLE PUMP FLOW RATE (mL per minute) ID CODE INTENDED CODE INTENDED	FIELD DECONTAMINATION: PUMP Y	Ded. coted TUBIN	IG Y N (replaced)	DUPLICATE: Y	(P)			
SAMPLE ID CODE # CONTAINERS MATERIAL CODE VOLUME PRESERVATIVE USED TOTAL VOL ADDED IN FIELD (mL) FINAL pH ANALYSIS AND/OR METHOD EQUIPMENT CODE FLOW RATE (mL per minute)	SAMPLE CONTAINER SPECIFICATION	SAMPLE	E PRESERVATION	INTENDED	SAMPLING SAMPLE PUMP			
ID CODE CONTAINERS CODE OSED ADDED IN FIELD (mL) pH Interview CODE (m. point midle) ID CODE	SAMPLE # MATERIAL VOLUME		TOTAL VOL FIN	ANALYSIS AND/OR METHOD	EQUIPMENT FLOW RATE CODE (mL per minute)			
	ID CODE CONTAINERS CODE	USED AL		DH				
					·····			
		+ //	/					
REMARKS: SEE C.O.C. FOR SAMPLE ANALYSIS	REMARKS: SEE C.O.C. FOR SAL	MPLE ANALYSI	S					
			Delvethulens: DD D		Teller O Otto			
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump: B = Bailer: BP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)	SAMPLING EQUIPMENT CODES: APP = Affa	Peristaltic Pump P = -	Bailer: BP = Pladdor Du	imp: ESP = Electric Sub-	= Letion; U = Other (Specify)			
Control Lation Control Contro	RFPP = Re	verse Flow Peristaltic Pump;	; SM = Straw Method (Tu	ubing Gravity Drain); $O = O$	ther (Specify)			

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

SITE					S	ITE						
NAME: S	Southeas	t County	Landfill			DCATION:	₋ithia, Floi	rida				
WELL NO	TH-66A	<u>i</u>		SAMPLE	EID: TH-	66A			DATE:	2/9	8/17	
					PUR	GING DA	TA				<u> </u>	
WELL	0	TUBIN	G	WE	LL SCREEN	INTERVAL	STATIC I	DEPTH		PURGE		-
	R (inches): Z		TER (inches)							OR BAI	ILER: BP	
(only fill ou	ut if applicable)	. I WILL VO			-111 - 314	IC DEPTH	IOWATER) A	VVELL CAPAC	/ Y			
			= (15.37	feet -	9.97 fee	et) X 0.1	16 g	allons/foo	t =	0.86	gallons
(only fill ou	INT VOLUME F It if applicable)	URGE: 1 EQU	JIPMENT VO	L. = PUMP VOL	LUME + (TUE	SING CAPACI	ΙΤΥ Χ ΤΙ	UBING LENGTH) + FLOW	/ CELL \	VOLUME	
		10			allons + (1		ons/foot X N	A feet)+ N	IA	gallons = 🏾	JA gallons
DEPTH IN	WELL (feet):	14.37	DEPTH IN	WELL (feet):	, 14.37	PURGIN INITIATE	IG ED AT: 92 8	PURGING ENDED AT:	949	T(P)	OTAL VOLUN URGED (gallo	IE ons): 1, 19
	1	CUMUL.	1	DEPTH			COND.	DISSOLVED	11.	J		
TIME	VOLUME PURGED		PURGE RATE		pH (standard	TEMP.	(circle units)	OXYGEN (circle units)	TURB	IDITY	COLOR	ODOR
3	(gallons)	(gallons)	(gpm)	(feet)	units)	(0)	or aS/cm	mg/D or % saturation		US)	(describe)	(describe)
95.9	0.91	0.91	0.07	11.45	10.18	23.63	580	0.73	2.2	38	Clear	Non.
loot	D.14	1.05	0.07	11.45	6.19	23.64	580	0,69	1.1	8	Clerr	Nous
4003	0.14	1.19	0.07	11.45	6.18	23.68	580	0.64	1.0	16	Clear	NONR.
\												100700
							-					
					(mDi	2/2	8/11					
		Des Frank		4"								
TUBING IN	ISIDE DIA. CA	PACITY (Gal./F	$f(75^{\circ} = 0.02)$ f(.): 1/8'' = 0.02	1" = 0.04; 0006; 3/16 "	1.25 " = 0.06 = 0.0014;	5; 2" = 0.16 1/4" = 0.002	5; 3" = 0.37; 6; 5/16" = 0.0	4" = 0.65; 004; 3/8" = 0	5" = 1.02; .006;	6" = 1/2" = 0	= 1.47; 12" 0.010; 5/8 "	= 5.88 ' = 0.016
PURGING	EQUIPMENT (ODES: B	= Bailer;	BP = Bladder P	ump; E	SP = Electric	Submersible Pur	np; PP = P€	eristaltic P	ump;	O = Other	(Specify)
SAMPLED					SAMP	LING-DA	ATA	T				
T. Ful	loc / m	FILIATION.		SAMPLER(S)	SIGNATURE	(0):		SAMPLING	- auc		SAMPLING	001
PUMP OR	TUBING		isei	TUBING	lna	<u>Dr</u>	FIELD					13/
DEPTH IN	WELL (feet):	14.37		MATERIAL CO	DDE: T		Filtratio	n Equipment Typ	pe:	Г	ILIER SIZE.	µm
FIELD DEC	ONTAMINATIO	DN: PUMI		Dedicated	TUBING	Y N (re	ptaged) Dedic	DUPLICATE:	Y	\langle	N	
SAMF	PLE CONTAINE	R SPECIFICA	TION	:	SAMPLE PR	ESERVATION	N	INTENDE	ED	SAMF	PLING SA	MPLE PUMP
SAMPLE	# CONTAINERS	MATERIAL CODE	VOLUME				FINAL	ANALYSIS AN METHOI	ND/OR	EQUIP CO	MENT F	LOW RATE L per minute)
10 0002	oonnaneno	UUDL		0020)			
												
										anna a an		
				4		(m)	The	mos	5		San	, }
REMARKS:	SEE C.	O.C. FOI	R SAMP		LYSIS	ORP: Q	54 (- 60	.6) 1004	(· 4)	1007 /	-1.0 9
MATERIAL	CODES:	AG = Amber G	lass: CG =	Clear Glass	PE = Polye	thylene I	P = Polypropyle	943	по [.] Т –		945	5 07.6
SAMPLING	EQUIPMENT	CODES: AF	PP = After Pe	istaltic Pump:	B = Baile	er; BP = F	Bladder Pump	ESP = Flectri		sible Pu	u - Otner	(эреспу)
		RF	PP = Revers	e Flow Peristalti	ic Pump;	SM = Straw N	Aethod (Tubing C	Gravity Drain);	0 = Oth	ner (Spe	ecify)	
01ES: 1.	The above	do not const	itute all of f	he information	on require	d by Chante	ar 62-160 E A	C				

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

SITE	SITE										
NAME: S	Southeast	County La	ndfill			OCATION:	ithia, Flori.	ida			
WELL NO	: IH-79			SAMPLE	E ID: TH-	79			DATE: 2/8	117	
		TUDING			PUR	GING DA	TA				
	R (inches) 2		; FR (inches)		ILL SCREEN PTH: 7.80 ft	INTERVAL to 17.80 Ft	TO WAT	DEPTH ER (feet):	PUR		
WELL VO		: 1 WELL VOL	UME = (TC	TAL WELL DE	PTH – STA	TIC DEPTH	OWATER) X	WELL CAPAC	TY I UK B	AILER: DF	
(only fill ou	it if applicable)		- (17.80	0	50		16		1.110	
EQUIPME	NT VOLUME P	URGE: 1 EQU	IPMENT VO	L. = PUMP VOI		BING CAPAC	TY X T	UBING LENGTH	+ FLOW CEL	LVOLUME	allons
(only fill ou	it if applicable)			= N/A a	allons + (📭		ons/foot X	la feet)	+		
INITIAL PU	JMP OR TUBIN	IG	FINAL PL	IMP OR TUBIN	G	PURGIN	G	PURGING	NA		F
DEPTH IN	WELL (feet):	16.80	DEPTH IN	WELL (feet):	16.80		DAT: 1044	ENDED AT:	1112	PURGED (gallo	ns): 3.08
TIME		CUMUL. VOLUME	PURGE	DEPTH TO	pH (standard	TEMP.	COND. (circle units)	DISSOLVED OXYGEN (circle units)	TURBIDITY	COLOR	ODOR
	(gallons)	(gallons)	(gpm)	(feet)	`units)	(50)	or uS/cm	mg/D or % saturation	(NTUs)	(describe)	(describe)
105B	1.54	1.54	0.11	9.30	6.41	21.74	4983	2.04	23	Slightly Cloydy	None
1100	0.22	1.76	0.11	9.30	6.41	21.70	4982	2.01	32	Slightly Cloudy	None
1102	0.22	1.18	0.11	9.30	6.41	21.70	4982	1.99	37.9	Slightly	None
1104	0.22	2.20	0.11	9.30	6.41	21.71	4983	2.08	38.5	Slightly	None
1106	0,22	2.42	0.11	9.30	6.40	21.67	4977	2.11	47	Slightly	None
1108	0.22	2.64	0.11	9.30	6.40	21.67	4974	1.86	61	Cloudy	None
[]10	0:22	2.86	0.11	9.30	6.40	21.74	4979	1.81	60.6	Cloudy	None
1112	0.22	3.08	0.1(9.30	6.40	21.77	4980	1.73	60.2	· Cloudy	None
	<u></u>										
					mpi		<u>efic</u>				
WELL CAF	PACITY (Gallon	s Per Foot): 0.		1" = 0.04;	1.25" = 0.06	b; 2" = 0.16	; 3" = 0.37;	4" = 0.65; 5	" = 1.02; 6'	'= 1.47; 12 "	= 5.88
	SIDE DIA. CAP	PACITY (Gal./Ft): 1/8" = 0	.0006; 3/16"	= 0.0014;	1/4" = 0.0020	6; 5/16'' = 0.	004; 3/8" = 0.	006; 1/2" =	0.010; 5/8"	= 0.016
1 OKGING		ОDE3. В-	- Dallel,	BP = Bladder P		SP = Electric :		mp; PP = Pe	istaltic Pump;	0 = Other (Specify)
SAMPLED	BY (PRINT) / A	FFILIATION:		SAMPLER(S)	SIGNATURE	(S):		SAMPLING		SAMPLINC	
J. Full	er (m.:	Townse		No. Contraction of the second	1_101	-rat		INITIATED AT	1112	ENDED AT:	1119
PUMP OR		16.80		TUBING	т		FIELD-	FILTERED: Y	B	FILTER SIZE:	μm
					DDE: I	NC NU	Filtratic	on Equipment Typ	e:		
SAMP				Vedicat			iaged) Decli	DUPLICATE:	Y	<u></u>	
SAMPLE	#	MATERIAL .		PRESERVATI			FINAL	INTENDEI ANALYSIS AN	D SAN D/OR EQU	1PLING SAM IPMENT FL	/IPLE PUMP .OW RATE
ID CODE	CONTAINERS	CODE	/OLUME	USED	ADDE	D IN FIELD (m	L) pH	METHOD	С	ODE (mL	. per minute)
							A & D ~	(-72 .)		2	
							1110	(-22.1)	1112(-	20.3)	R
REMARKS:	SEE C.C	D.C. FOR	SAMF		LYSIS	00 A A	1164 (-3	<u> 55.5)</u>	1106 (- 2	29.6)	108(-21
MATERIAL	CODES	AG - Ambor O				OKY	1038 (-	28.8)	1100 (-	37.9)	102 (-36,5
SAMPLING	EQUIPMENT	CODES: AP	ASS; CG =	ristaltic Pump	PE = Polye	r RD-D	'P = Polypropyle	ESP - Electric	e; T = Teflor	$\mathbf{O} = \text{Other}$	Specify)
		RFI	PP = Revers	e Flow Peristalt	ic Pump;	SM = Straw N	lethod (Tubing (Gravity Drain);	0 = Other (Sp	becify)	
OTES: 1.	ES: 1. The above do not constitute all of the information required by Chapter 62-160 E A C										

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

SITE	Southeast	Count	/ Landfill		S		ithia Elo	rida			
WELL NO	- TH-67	oounty	Lanum	SAMPL		67	_11114, 1 101			-	
					PIIR		ΤΔ			<u>r [l l</u>	
WELL		тиві	NG	WF			STATIC	DEPTH	PURG		
DIAMETE	R (inches): 2	DIAM	ETER (inches): 0.5 DE	PTH: 5.25 f	t to 15.25 ft	TO WAT	ER (feet):	OR BA		
WELL VC	LUME PURGE	1 WELL V	OLUME = (TO	TAL WELL DE	PTH – STA	TIC DEPTH	TO WATER) X	WELL CAPACI	TY		
(only fill o	ut if applicable)		= (15 25 fe	not_/ CO	feet) X	0.16	gallons/foot	- 120	collops	
EQUIPME	NT VOLUME P	URGE: 1 EC		L. = PUMP VO	LUME + (TUE	BING CAPAC	ITY X T	UBING LENGTH)	+ FLOW CELL	VOLUME	
(only fill o	ut if applicable)			و مام=	allons + (N A gallo	ons/foot X	seet)	+	gallons =	🗛 gallons
INITIAL P	UMP OR TUBIN	IG	FINAL PU	JMP OR TUBIN	G	PURGIN	IG	PURGING		TOTAL VOLUM	E
DEPTH IN	WELL (feet):	14.25	DEPTH II	WELL (feet):	14.25		ED AT: 1131	ENDED AT:	F	PURGED (gallo	ns):
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGEE (gallons)	E PURGE) RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^o C)	COND. (circle units) µmhos/cm <u>or</u> @ 5/o m	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	Leachate
1151	0.16	1.60	0.08	3 8.15	6.43	24.38	3812	1.36	24	Slightly	Learhale
1153	0.14	1.76	0.0	8 8.15	6.42	24.38	3815	1.28	22.9	Slightly	Leachate
1155	0.16	1.92	0.0	3 8.15	6.41	24.39	3818	1.16	20.1	Slightly	Leachate
1157	0.16	2.08	0.08	3 8.15	6.41	24.46	3827	1.2.1	9.12	Clean	1 Pachate
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	Guy	24.52	3830	2.12	8.72	Clean	Leachate
\sim					4.71	~1.7 @		25. ° ° 428	0.10	orcar	
							18/17				
WELL CA TUBING I	PACITY (Gallon	s Per Foot): PACITY (Gal	0.75" = 0.02; /Ft.): 1/8" = 0	1 " = 0.04; 0.0006; 3/16 "	1.25 " = 0.06 ' = 0.0014;	6; 2" = 0.1 1/4" = 0.002	6; 3" = 0.37; 6; 5/16" = 0.	4" = 0.65; 5 004; 3/8" = 0.1	" = 1.02; 6 " 006; 1/2 " =	= 1.47; 12" 0.010; 5/8"	= 5.88 = 0.016
PURGING	EQUIPMENT C	ODES:	B = Bailer;	BP = Bladder F	Pump; E	SP = Electric	Submersible Pu	mp; PP = Pe	ristaltic Pump;	O = Other	(Specify)
				1	SAMP	LING DA	TA				
SAMPLED	BY (PRINT) / A	FFILIATION:		SAMPLER(S)	SIGNATURE	(S)		SAMPLING	10	SAMPLING	
PLIMPOR	TUBING	Town	nsel	TURINO	_fft	S		INITIATED AT	1203	ENDED AT:	.215
	WELL (feet)	14 25					FIELD	-FILTERED: Y		FILTER SIZE:	μm
)N [.] PUI				Y NDE	nlacad		v (N	
SAM		R SPECIEIC		3 Lea care			Viedi	INTENDE			
SAMPLE	#	MATERIAL		PRESERVAT			FINAL	ANALYSIS AN	D/OR EQUI	PMENT F	LOW RATE
ID CODE	CONTAINERS	CODE	VOLUME	USED	ADDE	D IN FIELD (n	nL) pH	METHOD		ODE (m	L per minute)
						and the second secon	_				
				/	/		1201 (-6	11.8) 12	.03 (-41.		
				4			1155 (.	42)	1157 (-1	42.2)	1159 (-42.
REMARKS	SEE C.	O.C. FC	R SAMI	PLE ANA	LYSIS	ORP	1149/-41.	1) 1151 (-41.6)	1153 L	41.8
MATERIAL	CODES	AG = Amber	Glass; CG	= Clear Glass;	PE = Polye	ethylene; I	PP = Polypropyle	ene; S = Silicon	e; T = Teflon	; 0 = Other	(Specify)
SAMPLING	GEQUIPMENT	CODES:	APP = After Pe	eristaltic Pump;	B = Baile	er; BP = I	Bladder Pump;	ESP = Electric	Submersible P	ump;	
10750 4	The shares		RFPP = Rever	se Flow Peristal	tic Pump;	SM = Straw I	Method (Tubing	Gravity Drain);	O = Other (Sp	ecify)	

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)

SITE	outhood	County	Londfill		SI	TE	ithia El	rido			
NAME: 3		. County	Lanumi			200	.iuiia, Fic	Jilua		- 1 - 1	
WELL NO:	ТП-200			SAMPLE			ТЛ		DATE.	218/17	
WELL		TUBIN	IG	WEL	L SCREEN	INTERVAL	STATIO	DEPTH	P	URGE PUMP TY	ΈE
DIAMETER	(inches): 2	DIAME	TER (inches):	1/2 DEP	тн: 12.80	ft to 22.80	ft TO WA	TER (feet): 10	44 0	R BAILER: BP	
(only fill out	UME PURGE	: 1 WELL VO	DLUME = (TOT	AL WELL DEP	TH – STA	TIC DEPTH	TO WATER)	X WELL CAPA	CITY		
			= (22.8	feet -	10.44	feet) >	0.16	gal	lons/foot =	.98
gallons EQUIPMEN	NT VOLUME P	URGE: 1 EQ	UIPMENT VOL	= PUMP VOLU	JME + (TUE	BING CAPAC	ITY X	TUBING LENGT	H) + FLOW (CELL VOLUME	
(only fill out	if applicable)			=N _ gal	llons + (ons/foot X 💦	fee	t) + N	n gallons	Sallons
INITIAL PU	MP OR TUBIN	IG 04 0	FINAL PUN	IP OR TUBING	04.0	PURGIN		PURGING	1915	TOTAL VOL	UME
DEPTH IN	WELL (feet):	21.0	DEPTH IN	WELL (feet):	21.0		COND	DISSOLVED	1316	PURGED (g	allons): 2.94
TIME	VOLUME PURGED (gallons)	VOLUME PURGED (gallons)	PURGE RATE (gpm)	WATER (feet)	pH (standard units)	TEMP. (^o C)	(circle units) μmhos/cm	OXYGEN (circle units)	TURBID (NTU:	DITY COLOF s) (describ	R ODOR e) (describe)
1308	2.10	2.10	0.21	12.12	5.82	23.76	8 423	0 · 2 4	5.3	3 (100	- 2000
1310	0.42	2.52	15.0	12.12	5.82	23.77	425	0.22	4.3	6 Clea	- None
1312	0.42	2.94	0.21	12.12	5.82	23.77	427	0.18	3.7	17 Clea	r None
					m	1	2/01				
			And the Control of th			P	218/1	7			
WELL CAP TUBING IN	ACITY (Gallor SIDE DIA. CA	is Per Foot): PACITY (Gal./	0.75" = 0.02; Ft.): 1/8" = 0.	1" = 0.04; 0006; 3/16" =	1.25" = 0.06 = 0.0014;	6; 2" = 0.1 1/4" = 0.002	6; 3" = 0.37 6; 5/16" =	7; 4" = 0.65; 0.004; 3/8" =	5" = 1.02; 0.006; 1 /	6" = 1.47; /2" = 0.010; {	12" = 5.88 5/8" = 0.016
PURGING E	EQUIPMENT C	ODES: E	s = Bailer;	BP = Bladder Pu	ump; E	SP = Electric	Submersible F	Pump; PP = F	Peristaltic Pu	imp; O = Ot	ner (Specify)
SAMPLED	BY (PRINT) / A	FFILIATION		SAMPLER(S) S	SAMP	LING DA	AIA				
J.FU	uer 1	Mito	unsel		nC	AT-			т: 1317		1316
		21.9					FIEL	D-FILTERED: Y		FILTER SI	ΖΕ: μm
FIELD DEC		DN: PUN	1PY	Dedicated	TUBING	Y Nore	placed)		; Y	(A)	****
SAMP	LE CONTAINE	R SPECIFIC	ATION	S	SAMPLE PR	ESERVATIO	N	INTEND	ED	SAMPLING	SAMPLE PUMP
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIV USED	/E T ADDE	OTAL VOL D IN FIELD (r	FINAL mL) pH	ANALYSIS A	ND/OR	EQUIPMENT CODE	FLOW RATE (mL per minute)
								Martine Contractor Contractor			
					+						
	·····			Le							
REMARKS:	SEE C.	0.C. F0	R SAMP	LE ANAL	YSIS	ORP: 1	308 (-3	15.2) 131	0 (-38	.1) (31	2(-41.7)
MATERIAL	CODES:	AG = Amber	Glass; CG =	Clear Glass;	PE = Poly	ethylene;	PP = Polyprop	ylene; S = Silic	one; T = T	Teflon; O = Ot	her (Specify)
SAMPLING	EQUIPMENT	CODES: A	APP = After Per RFPP = Revers	istaltic Pump; e Flow Peristalti	B = Bail c Pump;	er; BP = SM = Straw	Bladder Pump Method (Tubir	; ESP = Elect g Gravity Drain);	ric Submersi O = Othe	ible Pump; er (Specify)	

IOTES: 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)

SITE	Coutbooot	County	ondfill		S	TE	ithia Ela	rido			
NAME: C		County	Lanum			200	.itma, F101	liua			
WELL NC): I П- ЗОД			SAMPLE			ΤA		DATE. 2	8/17	
			<u>`</u>				STATIC		PUPC		
DIAMETE	R (inches): 2	DIAME	FER (inches):	1/2 DEF	21 30 KEEN 21 H: 5.42 ft	to 15.42 Ft	TO WAT	ER (feet): 3,	CR BA	ILER: BP	
WELL VC	LUME PURGE:	1 WELL VOI	UME = (TOT)	AL WELL DEP	TH – STA	TIC DEPTH T	O WATER) X	WELL CAPACI	ΤY		
	, ,		= (15	.42 feet -	. 12	.46 f	eet) X C).16 gallons/	foot = 0.	31 gallons	5
EQUIPME (only fill or	ENT VOLUME P ut if applicable)	URGE: 1 EQU	IPMENT VOL.	= PUMP VOL	UME + (TUE	BING CAPACI	түх т	UBING LENGTH)	+ FLOW CELL	VOLUME	atla u
INITIAL P	UMP OR TUBIN	G	FINAL PUM		allons + (+ NA		N A gallons
DEPTH IN	WELL (feet):	14.42		VELL (feet):	14.42	INITIATE	ED AT: 1326	ENDED AT:	1341 F	VIRGED (gallo	ns): /-65
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^o C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/b or % saturation	TURBIDITY (NTUs)	COLOR (describe) Slichtly	ODOR (describe)
1329	0.33	0.33	0.11	13.46	5.57	23.79	134	2.74	23.5	Derear	None
1331	0.22	0.55	0.11	13.46	5.54	23.74	129	2.68	26.1	Slightly Cloudy	Non
1333	0.22	0.77	0.11	13.46	5.52	23.85	117	2.10	19.4	Slightyu 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
		Noncolasti Constanti anno anno anno	Alter and an and a set of the constant of the			(mpt)) din			<u> </u>	
						\leq	Helil				
WELL CA TUBING II	PACITY (Gallon	s Per Foot): 0 • ACITY (Gal./F	.75" = 0.02; t.): 1/8" = 0.0	1" = 0.04; 006; 3/16"	1.25" = 0.00	6; 2 " = 0.16 1/4" = 0.0026	6; 3'' = 0.37; 6; 5/16'' = 0.	4" = 0.65; 5 .004; 3/8" = 0.	5" = 1.02; 6" 006; 1/2" =	= 1.47; 12" 0.010; 5/8"	= 5.88 = 0.016
PURGING	EQUIPMENT C	ODES: B	= Bailer; B	P = Bladder P	ump; E	SP = Electric	Submersible Pu	mp; PP = Pe	ristaltic Pump;	O = Other	(Specify)
					SAMP	LING DA	TA				
SAMPLED	BY (PRINT) / A	FFILIATION:		SAMPLER(S)	SIGNATURE	-(S):		SAMPLING	. 1241	SAMPLING	1245
PUMPOR	TUBING	iownsei		TUBING		134	FIELD				
DEPTH IN	WELL (feet):	14.42		MATERIAL CO	DE: T		Filtrati	on Equipment Typ	pe:	TIETER OIZE.	μm
FIELD DE	CONTAMINATIO	ON: PUM	Y N	Dedicated	TUBING	Y 🚽 (fe	placed) Loci:	DUPLICATE:	Y	Ś	
SAM	PLE CONTAINE	R SPECIFICA	ΓΙΟΝ		Sample Pr	ESERVATIO	N		D SAN	IPLING SA	MPLE PUMP
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATI USED	VE T ADDE	OTAL VOL D IN FIELD (n	FINAL nL) pH	METHO		ODE (m	LOW RATE L per minute)
								/			
						Constanting Contraction Constanting					
						12	ul/	\			
						13	11 (4.2			/	
	orr o					13	35 (21.4	r) 1357 (14.3	1334 (8.4
REMARKS	SEE C.	U.L. FUI	K JAWP	_C ANA	LIJZ	ORP: 13	529(49) 1331 (38.6)	1353 (3	0.4)
MATERIAL	CODES:	AG = Amber G	lass; CG = 0	Clear Glass;	PE = Poly	ethylene; I	PP = Polypropyl	ene; S = Silicor	ne; T = Teflor	n; O = Other	(Specify)
SAMPLING	GEQUIPMENT	CODES: AI	PP = After Peri PP = Reverse	staltic Pump; Flow Peristalt	B = Bail ic Pump;	er; BP = I SM = Straw I	Bladder Pump; Vlethod (Tubing	ESP = Electric Gravity Drain);	Submersible F O = Other (Sp	Pump; pecify)	

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)

SITE			1.0111		SI	TE .	• • • • • • • • • • • • • • • • • • • •	• •			
NAME: S	outheast	County I	Landfill		LC	DCATION: L	ithia, Floi	rida			
WELL NO:	TH-71A			SAMPLE	ID: TH-	71A			DATE: 2	18/17	
					PURC	SING DA	ТА				
WELL		TUBING	6		LL SCREEN	INTERVAL ft to 37 78 ft	STATIC TO WAT	DEPTH FR (feet) [,]	PUR		E
WELL VOI	LUME PURGE:	: 1 WELL VOL	UME = (TOT.	AL WELL DEP	TH – STA	TIC DEPTH T	OWATER) X	WELL CAPACI	TY		
(only fill ou	t if applicable)		= (3	37.78 _{feet}	- 27	.60	feet) X	0.16 gallon:	s/foot = \•	UB gallo	ns
EQUIPME (only fill ou	NT VOLUME P t if applicable)	URGE: 1 EQU	IPMENT VOL	. = PUMP VOL	UME + (TUE	BING CAPACI	тү х т	UBING LENGTH)	+ FLOW CEL		18
INITIAL PL		IG	FINAL PUM		allons + (ons/foot X		+ N/A		
DEPTH IN	WELL (feet):	36.78	DEPTH IN V	WELL (feet):	36.78		DAT: 1355	ENDED AT:	1404	PURGED (gall	ons): 3.06
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (^o C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) (mg)L or % saturation	TURBIDIT` (NTUs)	Y 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	0.48	2.38	0.34	27.93	6.2.2	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
								0	-		
						(mpi	> 28	17			
	-								[
WELL CAP TUBING IN	PACITY (Gallor	I ns Per Foot): 0 PACITY (Gal./F	.75" = 0.02; (1.): 1/8" = 0.0	1" = 0.04; 0006; 3/16"	1.25" = 0.00	5; 2" = 0.1 1/4" = 0.002	6; 3" = 0.37; 6; 5/16" = 0	4" = 0.65; .004; 3/8" = 0	5" = 1.02; (.006; 1/2 "	6" = 1.47; 12 = 0.010; 5/8	" = 5.88 " = 0.016
PURGING	EQUIPMENT (CODES: B	= Bailer; E	BP = Bladder F	ump; E	SP = Electric	Submersible Pu	ump; PP = Pe	eristaltic Pump	; O = Othe	r (Specify)
					SAMP	LING DA	TA				
SAMPLED	BY (PRINT) / A	AFFILIATION:	0.1	SAMPLER(S)	SIGNATOR	-(0):		SAMPLING	: 1404	SAMPLING ENDED AT:	1408
PUMP OR	TUBING	100013	~	TUBING	1 131		FIELD)-FILTERED: Y		FILTER SIZE	<u>. um</u>
DEPTH IN	WELL (feet):	36.78		MATERIAL CO	DDE: T		Filtrati	ion Equipment Ty	pe:	\sim	··· F'
FIELD DEC	CONTAMINATI	ON: PUM	Р Ү <u>О</u> Я	Dedicate	TUBING	Y N-(re	placed) Dod:	DURLICATE:	Y	<u> </u>	
SAME	PLE CONTAINE	ER SPECIFICA	TION		SAMPLE PF	RESERVATIO	N	INTENDE ANALYSIS AN	ED SA ND/OR EQ	AMPLING S UIPMENT	AMPLE PUMP FLOW RATE
SAMPLE ID CODE	# CONTAINERS	CODE	VOLUME	USED	ADDE	D IN FIELD (r	nL) pH	METHO	D	CODE (I	mL per minute)
REMARKS	SEE C.	O.C. FO	R SAMP		LYSIS	ORP:	1400 (-3	4.2) 140	21-29	2.) 140L	11-42.8
MATERIAI	CODES	AG = Amber (Glass: CG =	Clear Glass	PE = Polv	ethylene:	PP = Polvpropv	lene; S = Silico	ne; T = Tef	lon; O = Othe	er (Specify)
SAMPLING	EQUIPMENT	CODES: A	PP = After Per	istaltic Pump; e Flow Peristal	B = Bai	ler; BP = SM = Straw	Bladder Pump; Method (Tubing	ESP = Electri Gravity Drain):	c Submersible 0 = Other	e Pump; (Specifv)	
NOTES: 1	The above	do not cons	titute all of t	he informat	ion require	d by Chant	or 62-160 E	A C			

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



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

Π.

	No Exceptions were encountered.
Holding Times	
Preparation:	All holding times were met.
Analysis:	All holding times were met.

III. Method

Analysis:	EPA 350.1
Preparation:	None

IV. Preparation

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:



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

Π.

	No Exceptions were encountered.
Holding Times	
Preparation:	All holding times were met.
Analysis:	All holding times were met.

III. Method

Analysis:	SM 4500-CI-E
Preparation:	None

IV. Preparation

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.
C Other	

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 9610 Princess Palm Ave Tampa, FL 33619 Payments: PO. 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,

o Parker

Heidi Parker - Project Manager HParker@AELLab.com

Enclosures

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CERTIFICATE OF ANALYSIS





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

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ANALYTICAL RESULTS

Workorder: T1705391 SE Landfill Supplemental

Lab ID: Sample ID:	T1705391001 Field Blank				Date Received: Date Collected:	03/29/17 15:20 03/29/17 12:10	Matrix:	Water	
Sample Descr	ription:				Location:				
Parameters		Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								, ,	
Analysis Desc: SW846 6010B Preparation Method: SW-846 3010A Analysis,Water Analytical Method: SW-846 6010									
Sodium		0.17	U	mg/L	1	0.20	0.17	3/31/2017 20:57	Т
WET CHEMIS	STRY								
Analysis Desc	nalysis 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	Т
Analysis Desc: Tot Dissolved Analytical Method: SM 2540 C Solids,SM2540C									
Total Dissolve	d Solids	12	U	mg/L	1.25	12	12	3/31/2017 21:45	Т
Analysis Desc: Chlorides,SM4500-Cl- Analytical Method: SM 4500-Cl-E E,Water									
Chloride		2.6	U	mg/L	1	5.0	2.6	3/31/2017 20:57	Т

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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 Desc	ription:				Location:				
						Adjusted	Adjusted		
Parameters		Results	Qual	Units	DF	PQL	MDL	Analyzed	Lab
FIELD PARA	METERS								
Analysis Desc measurement	: Data entry of field s	Anal	ytical Me	ethod: Fiel	d Measurements				
Conductivity Dissolved Oxy ORP-2580BW Temperature Turbidity pH	/gen /	889 0.38 -10.7 24.49 16 5.67		umhos/ mg/L mV °C NTU SU	/cm 1 1 1 1 1 1			3/29/2017 13:23 3/29/2017 13:23 3/29/2017 13:23 3/29/2017 13:23 3/29/2017 13:23 3/29/2017 13:23	
METALS									
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Anal	ytical Me	ethod: SM	4500-CI-E				
Chloride		130	J4	mg/L	5	25	13	3/31/2017 21:26	Т
Analysis Desc	: SW846 6010B	Prep	aration I	Method: S	W-846 3010A				
Analysis,Wate	er	Anal	Analytical Method: SW-846 6010						
Sodium		37		mg/L	1	0.20	0.17	3/31/2017 21:19	Т
WET CHEMIS	STRY								
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	ethod: EPA	A 350.1				
Ammonia (N)		1.5		mg/L	1	0.10	0.02	3/31/2017 10:48	Т
Analysis Desc Solids,SM254	: Tot Dissolved 0C	Anal	ytical Me	ethod: SM	2540 C				
Total Dissolve	d Solids	500		mg/L	1.25	12	12	3/31/2017 21:45	Т

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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 Descr	iption:				Location:				
						Adjusted	Adjusted		
Parameters		Results	Qual	Units	DF	PQL	MDL	Analyzed	Lab
FIELD PARA	METERS								
Analysis Desc measurements	: Data entry of field s	Anal	ytical Me	thod: Fiel	d Measurements				
Conductivity		2723		umhos/	cm 1			3/29/2017 12:38	
Dissolved Oxy	rgen	0.53		mg/L	1			3/29/2017 12:38	
Temperature		24.9 23.7		mv °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	
	· SW046 6010D	Dron	aration N	Acthod: S	W 946 2010A				
Analysis Desc	r	Fiep	aration	vietriou. S	W-040 30 10A				
- , ,		Anal	ytical Me	ethod: SW	-846 6010				
Sodium		250		mg/L	5	1.0	0.85	4/3/2017 14:56	Т
WET CHEMIS	TRY								
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	thod: EPA	350.1				
Ammonia (N)		4.1		mg/L	1	0.10	0.02	3/31/2017 10:48	Т
Analysis Desc Solids,SM254	: Tot Dissolved 0C	Anal	ytical Me	ethod: SM	2540 C				
Total Dissolve	d Solids	2000		mg/L	1.25	12	12	3/31/2017 21:45	Т
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Anal	ytical Me	thod: SM	4500-CI-E				
Chloride		810		mg/L	26.6667	130	68	3/31/2017 21:38	Т

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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 Descr	ription:				Location:				
						Adjusted	Adjusted		
Parameters		Results	Qual	Units	DF	PQL	MDL	Analyzed	Lab
FIELD PARA	METERS								
Analysis Desc measurement	:: Data entry of field s	Anal	ytical Me	thod: Field	Measurements				
Conductivity		239		umhos/c	m 1			3/29/2017 13:59	
Dissolved Oxy	/gen	0.23		mg/L	1			3/29/2017 13:59	
ORP-2580BW	1	-147.1		mV °C	1			3/29/2017 13:59	
Turbidity		20.10 _18			1			3/29/2017 13:59	
nH		5 69		SU	1			3/29/2017 13:59	
pri		0.00			•			0.2012011 10.00	
METALS									
Analysis Desc	:: SW846 6010B	Prep	aration I	Method: SW	/-846 3010A				
Analysis, Wate	۲ ۲	Anal	ytical Me	thod: SW-8	346 6010				
Sodium		11		mg/L	2	0.40	0.34	3/31/2017 21:26	Т
WET CHEMIS	STRY								
Analysis Desc	: Ammonia,E350.1,Water	Anal	ytical Me	thod: EPA	350.1				
Ammonia (N)		4.9		mg/L	2	0.20	0.05	3/31/2017 10:48	т
Analysis Desc Solids,SM254	:: Tot Dissolved 0C	Anal	ytical Me	ethod: SM 2	540 C				
Total Dissolve	d Solids	130		mg/L	1.25	12	12	3/31/2017 21:45	Т
Analysis Desc E,Water	: Chlorides,SM4500-Cl-	Anal	ytical Me	ethod: SM 4	500-CI-E				
Chloride		25		mg/L	1	5.0	2.6	3/31/2017 21:10	Т

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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

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CERTIFICATE OF ANALYSIS





Workorder: T17053	91 SE L	andfill Supple.	emental										
QC Batch: QC Batch Method: Associated Lab Sam	WCA EPA : nples:	t/7815 350.1 T17053910	01, T1705391	002, T170	Analysis M Prepared: 05391003, T	lethod: 170539100	EPA 3	350.1					
METHOD BLANK: 2	312524	ŀ											
Parameter		Units	F	Blank Result	Reporting Limit	Qualifiers							
WET CHEMISTRY Ammonia (N)		mg/L		0.02	0.02	U							
LABORATORY CON	ITROL	SAMPLE: 2	312525										
Parameter		Units	SI Co	oike onc.	LCS Result	L0 % F	CS lec	% Rec Limits C	aulifiers				
WET CHEMISTRY Ammonia (N)		mg/L		0.5	0.55	1	09	90-110					
MATRIX SPIKE & M	ATRIX	SPIKE DUPL	CATE: 2312	2526	2312	527	Orig	nal: T170	5271003				
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 & M	ATRIX	SPIKE DUPL	ICATE: 2312	2528	2312	529	Orig	nal: T170	5431002				
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: QC Batch Method:	DGM SW-8	t/2758 346 3010A			Analysis M Prepared:	lethod:	SW-8 03/31	46 6010 /2017 12:1	5				
Associated Lab Sam	ples:	T17053910	01, T1705391	002, T170)5391003, T	170539100	4						

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Workorder: T1705391 SE Landfill Supplemental

METHOD BLANK: 231289	93										
Parameter	Units	F	Blank Result	Reporting Limit	Qualifiers						
METALS Sodium	mg/L		0.17	0.17	U						
LABORATORY CONTROL	SAMPLE: 2	312894									
Parameter	Units	SI Co	oike onc.	LCS Result	LC % R	CS ec	% Rec Limits C	ualifiers			
METALS Sodium	mg/L		50	48		94	80-120				
MATRIX SPIKE & MATRIX	SPIKE DUPLI	CATE: 2312	2895	23128	96	Oriç	ginal: T170	5258001			
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: WC	At/7830			Analysis M	ethod:	SM 2	2540 C				
QC Batch Method: SM Associated Lab Samples:	2540 C T170539100	01. T1705391	002. T17(Prepared: 05391003. T1	705391004	1					
METHOD BLANK: 231340)1	- ,									
Parameter	Units	F	Blank Result	Reporting Limit	Qualifiers						
WET CHEMISTRY Total Dissolved Solids	mg/L		10	10	U						
LABORATORY CONTROL	SAMPLE: 2	313402									
Parameter	Units	SI Co	oike onc.	LCS Result	LC % R	CS ec	% Rec Limits C	ualifiers			
WET CHEMISTRY Total Dissolved Solids	mg/L		660	720	1	09	75-125				
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Workorder: T1705391 SE Landfill Supplemental

SAMPLE DUPLICAT	MPLE DUPLICATE: 2313404 rameter Units				Original: T1	170534100	1							
Parameter		Units	Oriç Re	ginal esult	DUP Result	F	RPD		Max RPD G	Qualifiers				
WET CHEMISTRY Total Dissolved Solid	s	mg/L	31	340	32000		2		5					
QC Batch:	WCAt/7	847			Analysis M	lethod:	5	SM 45	500-CI-E					
QC Batch Method:	SM 450	0-CI-E			Prepared:									
Associated Lab Sam	ples:	Г170539100	1											
METHOD BLANK: 2	313875													
				Blank	Reporting									
Parameter		Units		Result	Limit	Qualifiers								
WET CHEMISTRY Chloride		mg/L		2.6	2.6	U								
LABORATORY CON	TROL SA	MPLE: 23	13876											
Parameter		Units	s C	pike onc.	LCS Result	ا %	_CS Rec		% Rec Limits C	Qualifiers				
WET CHEMISTRY Chloride		mg/L		50	49		97		90-110					
MATRIX SPIKE & M	ATRIX SP		ATE: 231	3877	2313	878		Origir	nal: T170	4914004				
Parameter		Units	Original Result	Spike Conc.	MS Result	MSD Result	% F	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 & MA	ATRIX SP		ATE: 231	3879	2313	880		Origir	nal: T170	5391001				
			Original	Spike	MS	MSD		MS	MSD	% Rec		Max		
Parameter		Units	Result	Conc.	Result	Result	% F	Rec	% Rec	Limit	RPD	RPD	Qualifiers	
WET CHEMISTRY Chloride		mg/L	0.2	50	49	49		98	98	90-110	1	10		

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Workorder: T1705391 SE Landfill Supplemental

QC Batch:	WCAt/7848				Analysis M	lethod:	SM 4	4500-CI-E				
QC Batch Method:	SM 4500-C	-E			Prepared:							
Associated Lab Sam	nples: T170	5391002	, T1705391	003, T170)5391004							
METHOD BLANK: 2	2313886											
Parameter	ι	Jnits	F	Blank Result	Reporting Limit	Qualifiers						
WET CHEMISTRY Chloride	ſ	ng/L		2.6	2.6	U						
LABORATORY CON	ITROL SAMP	_E: 231	3887									
Parameter	Un	its	Sp Co	oike onc.	LCS Result	L % F	.CS Rec	% Rec Limits C	aulifiers			
WET CHEMISTRY Chloride	mg	J/L		50	49		99	90-110				
MATRIX SPIKE & M	ATRIX SPIKE	DUPLIC	ATE: 2313	888	23138	389	Orię	ginal: T170	5391002			
Parameter	Un	its	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY Chloride	mç	ı/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

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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-CI-E	WCAt/7847
T1705391002	TH-80			SM 4500-CI-E	WCAt/7848
T1705391003	TH-81			SM 4500-CI-E	WCAt/7848
T1705391004	TH-82			SM 4500-CI-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/

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Infutured Inflation Softwares Software Software Softwares Software Softwares Software Softwares Softw	Page Page Ansults: A random construction Calineerille: esses 4 rad Box : cleaneae, r. 2000 Assume random construction Manuer random construction And a random construction Manuer random construction And a random construction And a random construction And a random constreconstruction And a random construction
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NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

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

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

Form FD 9000-24 GROUNDWATER SAMPLING LOG

SITE	outboact (County La	ndfill			SI		ithia Flori	da					
NAME: 5	NAME: Solutileast County Landini Location: Littina, Honda Well No: TH-80 Sample ID: TH-80 DATE: 3 29/17													
WELL NO:	10-00			SA				ΤΛ		BRITE.	Ja	7/1/		
		TUBING			W/FLL	SCREEN		STATIC	DEPTH		PURG	E PUMP TYPE		
	R (inches): 2	DIAMET	ER (inches):	1/2	DEPTH	1:8.65 f	t to 18.65 Ft	TO WAT	ER (feet): 9.	73	OR BA	ILER: BP		
WELL VOL	UME PURGE:	1 WELL VOL	UME = (TOTA	AL WEL	L DEPTH	I – STA	TIC DEPTH T	OWATER) X	WELL CAPA	CITY				
	(іт арріїсаріе)		= (1	8.65	feet	9.7	13 f	eet) X (D.16 g	gallons/foo	t =	1.43 ga	allons	
EQUIPMEN	NT VOLUME PI	JRGE: 1 EQUI	PMENT VOL.	= PUMI	> VOLUN	/IE + (TUE	SING CAPACI	тү х т	UBING LENGTI	H) + FLOW	/ CELL	VOLUME	A	
(011) 111 000				= N	A gallo	ns + (ns/foot X	N/A fee	t) + N/	A	gallons =N	A gallons	
INITIAL PU		G 17 65			JBING	7 65		G :dat· //ว ///	PURGING	132	3 T 3 F	OTAL VOLUM	E ns): 4,28	
DEPTHIN	VVELL (feet):	17.00				1.00		COND	DISSOLVED	1.000				
TIME	VOLUME	VOLUME	PURGE			pH brebnets	TEMP.	(circle units)	OXYGEN (circle units)	TURB	IDITY	COLOR	ODOR	
	PURGED (gallons)	PURGED (gallons)	(gpm)	WAT (fee	ER (` et)	units)	(OC)	µmhos/cm	mg/ or	(NT	Us)	(describe)	(describe)	
1759	1.44	t.uu	0.16	10.	28 5	.68	24.65	956	0.43	62.	6	Claudy	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	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														
1323 0.32 4.28 0.16 10.10 5.61 24.44 884 0.38 16.0 Crear None														
						(MOTA	<u> </u>						
							3	29/19						
				411 0		051 - 0.0	0"-04	21 - 0.07	4" = 0.0E	E" = 1.00		- 1 47: 49	- 5 00	
TUBING IN	SIDE DIA. CA	s Per Foot): 0. PACITY (Gal./Ft	/ 5 ⁷ = 0.02; :.): 1/8" = 0.0	1" = 0. 006;	04; 1. 3/16" =	25 = 0.0 0.0014;	1/4'' = 0.002	6; 5/16'' = 0.37;	4 = 0.65, 0.004; 3/8" =	o = 1.02 0.006;	., o 1/2" =	0.010; 5/8	= 0.016	
PURGING	EQUIPMENT C	ODES: B =	Bailer; E	P = Bla	dder Pun	np; E	SP = Electric	Submersible Pu	ump; PP = F	Peristaltic F	^{>} ump;	O = Other	(Specify)	
						SAMP	LING DA				T			
SAMPLED	BY (PRINT) / A	FFILIATION:	1	SAMPL	=R(S) 51				SAMPLING	т: 132	13	SAMPLING ENDED AT:	1227	
PUMP OR	TUBING	IOWNSC		TUBING		11/2				(()	~~	FILTER SIZE	13×1	
DEPTH IN 1	WELL (feet):	17.65		MATER	AL COD	e: T		Filtrat	ion Equipment T	ype:			µm	
FIELD DEC	ONTAMINATIO	DN: PUMF	YN	Dedi	ated)	UBING	Y N (re	placed) Ded:	DUPLICATE	:: Y	(R		
SAMF	PLE CONTAINE	R SPECIFICAT	ION		SA	MPLE PF	ESERVATIO	N	INTEND	ED	SAN			
SAMPLE	#	MATERIAL .	VOLUME	PRESE			OTAL VOL	FINAL	METH	DD DD	EQU C	ODE (m	LOW RATE	
IDCODE	CONTAINENG	CODE		00										
									- C 11	1 12	22	(101)	
								13211	- 2.4		42			
						A P		1317	(-1.3)	319	(-6.1)	
REMARKS	SEE C.C	D.C. FOR	SAMPLE	E ANA	ALYS	IS	ORF): 1259	(34.5	-)	130	08(10	1)	
MATERIAL	CODES:	AG = Amber G	lass; CG =	Clear G	ass;	PE = Poly	ethylene;	PP = Polypropy	lene; S = Silic	one; T:	= Teflor	n; O = Other	(Specify)	
SAMPLING	EQUIPMENT	CODES: AF	P = After Per	istaltic P	ump;	B = Bai	ler; BP =	Bladder Pump; Method (Tubing	ESP = Elec	tric Subme	ersible F	Pump;		
		Kr	FF - Reveise		enstallic	i unip,	Jim - SlidW		, Gravity Draill),	0-0		PC013/		

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

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

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

Form FD 9000-24 GROUNDWATER SAMPLING LOG

SITE	Coutboact	County L	andfill		S	ITE	ithia Elari	da						
NAME: C						DCATION: L	.itilia, Fiori	ua		!				
WELL NO	: IH-01			SAMP			8029 p.		DATE: 3/	29/17	-			
			~		PUR	JING DA	AIA							
	R (inches) 2		J TER (inches)	1/2 D	ELL SCREEN EPTH: 6.94 f	The TERVAL	t TO WAT	DEPTH ER (feet): 9.9			:			
WELL VO		: 1 WELL VO	LUME = (TOT)	AL WELL DE	EPTH – STA	TIC DEPTH	TO WATER) X	WELL CAPACI	TY					
(only fill ou	ut if applicable)		- (1	691 6	. 99	2) 16	11 16 t	112				
EQUIPME	NT VOLUME P	URGE: 1 EQU	JIPMENT VOL.	= PUMP V	DLUME + (TUE	SING CAPAC		UBING LENGTH)	+ FLOW CELI	VOLUME	allons			
(only fill ou	it if applicable)			= NIA	gallons + (👔	JA gall	ons/foot X 🔊	A feet)	+ NA	gallons = 🔊				
INITIAL PU	JMP OR TUBIN	IG	FINAL PUN	IP OR TUBI	NG	PURGIN	IG 1205	PURGING		TOTAL VOLUM	IE			
DEPTH IN	WELL (feet):	15.94		WELL (feet):	15.94	INITIAT	ED AT: 1459	ENDED AT:	1238	PURGED (gallo	ns): 5. 2.8			
	VOLUME	CUMUL.	PURGE	DEPTH	рН	TEMP	COND.	DISSOLVED OXYGEN			0000			
TIME	PURGED	PURGED	RATE	WATER	(standard units)	(°C)	μmhos/cm	(circle units)	(NTUs)	(describe)	(describe)			
	(galions)	(gallons)	(gpm)	(feet)			or astron	% saturation		Ch. Julia	Now			
1212	1.12	1.12	0.16	10.50	6.02	23.96	2735	1.04	51.1	Side	Cle and			
1219	0.32	1.44	0.1b	10.58	6.02	23.89	2713	1.07	48.3	Cloudy	None			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														
1218 0.32 2.08 0.16 10.58 6.02 23.83 2700 0.91 42.1 Slightly None 1220 0.32 2.40 0.16 10.58 6.02 23.83 2700 0.89 36.2 Slightly None														
1220 0.32 2.40 0.16 10.58 6.02 2383 2700 0.89 36.2 Slightly None. 1227 1.12 3.52 0.16 10.58 6.00 23.78 2715 0.86 24.4 Slightly None														
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														
1224	1221 1.12 7.52 5.16 10.58 6.00 23.18 2115 0.86 24.4 clady None 1234 1.12 4.64 0.16 10.58 6.00 23.77 2726 0.70 17.8 Clear None													
1238	0.32	528	0.16	10.50	6.00	23.70	2722	0.57	18.4	Clear	None			
1	0.72	2.20		20-20			-10	0.03	19.1	Clear	None.			
					tom	51 3	5 29 17			ine increased and the second				
	ACITY (Gallon	s Per Foot): 0	.75" = 0.02;	1" = 0.04;	1.25" = 0.06	3; 2'' = 0.1	6; 3" = 0.37;	4" = 0.65; 5	;" = 1.02; 6"	' = 1.47; 12 "	= 5.88			
PURGING	EQUIPMENT C	ODES: B	= Bailer; B	P = Bladder	Pump; E	SP = Electric	Submersible Pur	mp; PP = Pe	ristaltic Pump;	0.010, 5/6 0 = Other	(Specify)			
					SAMP	LINGDA	TA	<u> </u>						
SAMPLED	BY (PRINT) / A	FFILIATION:		SAMPLER(S	SIGNATURE	(S):		SAMPLING	1778	SAMPLING	10.11-			
J. G.I	Iler/m.	Townse	1		10	n D		INITIATED AT	1230	ENDED AT:	1245			
DEPTH IN	WELL (feet):	15.94		MATERIAL (CODE: T		FIELD- Filtratio	-FILTERED: Y on Equipment Typ	e:	FILTER SIZE:	μm			
FIELD DEC	CONTAMINATIO	DN: PUM	PY N'	Dedicate	TUBING	Υ Ν (Γε	placed Dod:	DURICATE:	Y	N				
SAMF	PLE CONTAINE	R SPECIFICA	TION	Georgeour	SAMPLE PR	ESERVATIO	N	INTENDE	D SAN	IPLING SA	MPLE PUMP			
SAMPLE	# CONTAINERS	MATERIAL	VOLUME	PRESERVA	TIVE T		FINAL	ANALYSIS AN	D/OR EQU	IPMENT F ODE (m	LOW RATE			
IDCODE	CONTAINEND	CODL		USLD	ADDE		пс) рп							
								1	10.11	-) 10-				
							1234 (2	4.9 12	36 (24.	1) 123	8(24.9)			
							1218 (3	16.7) 12	.20 (36.		227 284			
REMARKS:	SEE C.C	D.C. FOR	SAMPLE	ANAL	/SIS	ORP	: 1212/2	7.a.) 1211	1/212	1-9 1-2				
MATERIAI	CODES	AG = Amber G		Clear Glass.	PF = Poly			ana: S - Silicon	• (36 · 3	J 1616	(36.)			
SAMPLING		CODES: A	PP = After Peri	staltic Pump	B = Bail	er; BP =	Bladder Pump:	ESP = Electric	Submersible F	r, U – Otner Pump;	(Specily)			
		RI	PP = Reverse	Flow Perista	altic Pump;	SM = Straw	Viethod (Tubing (Gravity Drain);	O = Other (S	pecify)				

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

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

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: all readings \leq 20% saturation (see Table FS 2200-2); optionally, \pm 0.2 mg/L or \pm 10% (whichever is greater) Turbidity: all readings \leq 20 NTU; optionally \pm 5 NTU or \pm 10% (whichever is greater) Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE	Southeast (County L	andfill		SI	TE DCATION: L	ithia, Flori	da			
WELL NO	TH-82			SAMPLE	EID: TH-8	32	,	-	DATE: 3	129/17	
WELL NO					PURC		ТА				
WELL	<u></u>	TUBIN	G	WE		INTERVAL	STATICI	DEPTH	PUF	RGE PUMP T	YPE
DIAMETE	R (inches): 2	DIAME	TER (inches)	: 1/2 DEI	PTH: 8.02 ft	to 18.94 Ft	TO WAT	ER (feet): / / . 6	4 OR	BAILER: B	P
WELL VO	LUME PURGE:	1 WELL VO	LUME = (TC	TAL WELL DEI	PTH – STA	TIC DEPTH T	O WATER) X	WELL CAPACI	ΤY		
(only fill ou	it if applicable)		= (18.94 feet	- 11.	64 f	eet) X ().16 ga	llons/foot =	1.17	gallons
EQUIPME (only fill ou	INT VOLUME P It if applicable)	URGE: 1 EQI	JIPMENT VC		LUME + (TUE		ΓΥ Χ Τ ns/foot Χ ⊶ /	UBING LENG I H)	+ FLOW CE		= MA gallons
		G	FINAL PL		G						
DEPTH IN	WELL (feet):	17.94	DEPTH II	N WELL (feet):	17.94		DAT: 133	S ENDED AT:	1359	PURGED (gallons): 3.84
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	E DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm	OXYGEN (circle units)	TURBIDIT (NTUs)	Y COLC (descrit	PR ODOR be) (describe)
1343	1.28	1.28	0,14	12.10	5.72	26.36	238	0.35	- 20	Clove	by None
1351	1.28	2.56	0.16	12.10	5.71	26.29	240	0-28	-17	Clou	dy None
1359	1.28	3.84	0.16	12.10	5.69	26.16	239	0.23	-18	Clou	dy None
										Bra	0
									\uparrow		
									Water 1	ald:ty	upsetting
									Turbic	lity. 7	hecked and
								106->	recalik	orailed m	eter: Resul
								V	still +	the san	R (-) number
									Sample	z turbic	L.
WELL CA	PACITY (Gallon	s Per Foot):	0.75" = 0.02; Ft): 1/8" = 1	1" = 0.04; 0.0006: 3/16'	1.25" = 0.0 " = 0.0014 ⁻	6; 2" = 0.16 1/4" = 0.002	6; 3" = 0.37; 6: 5/16" = 0	4" = 0.65; 4 .004: 3/8" = 0	5" = 1.02; .006: 1/2 "	6" = 1.47; ' = 0.010;	12 " = 5.88 5/8 " = 0.016
PURGING	EQUIPMENT C	ODES: E	s = Bailer;	BP = Bladder I	Pump; 🧲	SP = Electric	Submersible Pu	imp; PP = Pe	ristaltic Pum	p; O = O	ther (Specify)
					SAMP	LING DA	TA				
SAMPLED	BY (PRINT) / A	FFILIATION:		SAMPLER(S)	SIGNATURI	E(S):	<u> </u>	SAMPLING		SAMPLIN	IG
J. Full	ler/mi	Towns	e			T 11	1-71	INITIATED AT	: 1359	ENDED A	T: 1403
PUMP OR	TUBING	17 94		TUBING MATERIAL C	ODE: T	<u></u>	FIELD Filtrati	-FILTERED: Y on Equipment Typ	De:	FILTER S	ilZE:μm
FIELD DE	CONTAMINATIO	DN: PUN	1P Y	NDJ	TUBING	Y N (re	placed)	DURLICATE:	Y	CN	
SOM				Lecitcan	SAMPLE PE	RESERVATIO	V	INTENDE	D S	AMPLING	SAMPLE PUMP
SAMPLE	#	MATERIAL		PRESERVAT	IVE	TOTAL VOL	FINAL	- ANALYSIS AN	D/OR EC		FLOW RATE
ID CODE	CONTAINERS	CODE	VOLUME	USED	ADDE	D IN FIELD (r	nL) pH	METHO		CODE	
		-					1007				1
REMARKS	SEE C.(D.C. FOR	R SAMPI	E ANALY	/SIS	ORI	D: /343	(-115) (35)	(-133.1	-) 1359(-1
REMARKS	S: SEE C.C	D.C. FOR	SAMPI	E ANALY		ORI //ethylene:	P : /343 PP = Polypropy	(-115) lene; S = Silico) 1351 ne; T = Te	(-133,1 flon; 0 = 0	-) 1359(-1
REMARKS	S: SEE C.(L CODES: G EQUIPMENT	D.C. FOR AG = Amber CODES:	SAMPI Glass; CG	E ANALY = Clear Glass; Peristaltic Pump;	SIS PE = Poly B = Bai	Vethylene; iler; BP =	P: 1343 PP = Polypropy Bladder Pump;	$\frac{-115}{\text{lene; } S = Silico}$ ESP = Electric) 1351 ne; T = Te c Submersibl	(-133.2 flon; 0 = 0	-) 1359(-1 Dther (Specify)

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

SITE	2 11 1	0 1 1	10.11			SIT	E .			1					
NAME:	Southeast	County L	andrill			LOC	CATION: L	.ithia	i, Floric	la					
WELL NO	: Field Blar	1k		SAI	MPLE ID:	Field	Blank				DATE:	3/2	9/17		
					P	URG	ING DA	TA					-		
WELL DIAMETE	ER (inches): N	/A DIAMI	IG ETER (inches):	N/A	WELL SCI DEPTH: N	REEN IN I/A ft to	iterval N/A		STATIC D TO WATE	EPTH R (feet): N/A		PURG OR BA	EPUMPT	ype /A	
WELL VO		: 1 WELL VO	DLUME = (TOT	AL WELL	DEPTH -	- STATI	IC DEPTH T	O WA	TER) X	WELL CAPAC	CITY				
			= (V/A fee	et – N/	A feet) X (0.16	; <u>ç</u>	gallons/foot =		N/A	gallor	S	
(only fill o	ut if applicable)	URGE: 1 EQ	UIPMENT VOL	. = PUMF		+ (TUBIN		IY Kaat V		JBING LENGTH	i) + FLO'	W CELL			
INITIAL F	UMP OR TUBIN	١G	FINAL PUN	1P OR TL	JBING	(14		G	14/7		IN/ ya			gano LIME	IIS
DEPTH I	N WELL (feet):	N/A	DEPTH IN	WELL (fe	et): N/A	4	INITIATE	ED AT:	N/A	ENDED AT	N/A	F	PURGED (gallons)): N/A
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEP TC WAT (fee	TH p BR (star t) un	H ndard its)	TEMP. (°C)	Co (circl) µmh <u>or</u>	OND. le units) hos/cm μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TUR (N	BIDITY TUs)	COLC (descril	R be)	ODOR (describe)
													-		
						ρ									
						ie	Id BI		1						
								an	K	3/201					
										-514	7				
WELL CA	PACITY (Gallor	Is Per Foot):	0.75" = 0.02;	1" = 0.0	04; 1.25 "	= 0.06;	2" = 0.16	3: 3	" = 0.37:	4" = 0.65	5" = 1.0	2 [.] 6"	= 1 47.	12" = {	5.88
TUBING I	NSIDE DÍA. CA	PACITY (Gal.	Ft.): 1/8" = 0.0	006; 3	3/16'' = 0.00	14; 1	/4" = 0.0026	3;	5/16'' = 0.0	004; 3/8" = 0	0.006;	1/2" =	0.010;	5/8" = (J.016
PURGING	EQUIPMENT C	CODES: E	s = Bailer; E	SP = Blad	der Pump;	ESF	P = Electric	Subme	ersible Pum	np; PP = P	eristaltic	Pump;	0 = 0	ther (Sp	oecify)
SAMPLER						MPL	ING DA	A							
T. Fu	Ner (orivite e	n(o) down	HORE					т. 121	0	SAMPLIN	G T: 17	13
PUMP OR	TUBING	· 1001	ise	TURING	1	NK	S	1-						1. (6	
DEPTH IN	WELL (feet):	N/A		MATERIA	L CODE:	N/A			FIELD-F	n Equipment Ty	pe:)	FILTERS	ZE:	μm
FIELD DE	CONTAMINATIO	ON: PUN	IP Y (N)	Dech	ater TUB	ING	Y (N)(rej	placed	Dech	DUPLICATE:	Y		<u>B</u>		
SAM	PLE CONTAINE	ER SPECIFIC	ATION	-	SAMPI	LE PRES	SERVATION	1		INTEND	ED	SAN	IPLING	SAMP	LE PUMP
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESER USE	VATIVE ED A	TO ADDED I	TAL VOL IN FIELD (m	nL)	FINAL pH	METHO	ND/OR D	EQUI C	DMENT ODE	FLO (mL p	W RATE er minute)
				The second second second second										•	
				-		K									
REMARKS	SEE C.	U.C. FO	K SAMP	LE AI	NALYS	SIS									
MATERIA	_ CODES:	AG = Amber	Glass: CG =	Clear Gla	SS: PF =	= Polveth	vlene: F	P = P	olvpronvlei	ne: S = Silico	ne T	= Teflon	0=0	ther (Sr	
SAMPLING	G EQUIPMENT	CODES: A	PP = After Peri	staltic Pu	mp; B	= Bailer;	BP = E	Bladde	r Pump;	ESP = Electr	ic Subme	ersible P	ump;		//////////////////////////////////////
NOTES: 1	The above	R do not cons	FPP = Reverse	Flow Per	ristaltic Pum	np; S	M = Straw N	lethod	I (Tubing G	Gravity Drain);	0 = C	ther (Sp	becify)		

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



WCAt

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

Batch	Number:	7848

١. Receipt

Queue:

		No Exceptions were encountered.
II.	Holding Times	
	Preparation:	All holding times were met.
	Analysis:	All holding times were met.
III.	Method	
	Analysis:	SM 4500-CI-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: