Hillsborough County Florida

PUBLIC UTILITIES
PO Box 1110 Tampa, FL 33601-1110

May 8, 2017

Mr. John Morris, P.G.
Florida Department of Environmental Protection
Waste Permitting Section
13051 Telecom Parkway
Temple Terrace, FL 33637

RE: **Southeast County Landfill**
Leachate Treatment Plant (WACS Testsite #19864)
Quarterly Analytical Data Report
First Quarter (January – March, 2017)

Dear Mr. Morris:

In accordance with Part 9.1.2 of the November 2015 Southeast County Landfill (SCLF) Leachate Management Plan (LMP), the Hillsborough County Public Utilities Department (County), is pleased to provide the quarterly laboratory analytical data for the sampling of effluent at the leachate treatment plant, located at the SCLF at 15960 County Road 672 in Lithia, Florida.

The referenced plan requires monthly sampling of the leachate treatment plant effluent and the daily recording of the plant pH values. Monthly effluent samples are collected by the County and analyzed for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Total Dissolved Solids (TDS), Nitrate, and five (5) field parameters. County personnel collected effluent samples from the designated sampling port at the treatment plant on January 4, February 15, and March 14, 2017.

The daily pH values recorded by plant personnel ranged from 7.72 to 8.29 pH units, and the monthly analytical samples ranged from 7.64 to 8.18 pH units. These values are within the State of Florida Secondary Drinking Water Standard (SDWS), FAC Ch. 62-550.320 of 6.5 to 8.5 pH units.

The monthly pH logs from the treatment plant are included within this submittal. Additionally, the effluent samples collected were analyzed by our contract laboratory, Advanced Environmental Laboratories, Inc., and the complete results are provided for your technical review. Should you have any questions or comments concerning the information provided in this submittal, please feel free to contact us at (813) 663-3222 or (813) 663-3221.

Respectfully,

Michael D. Townsel 5/8/2017
Senior Hydrologist
Public Utilities Department
Environmental Services

David S. Adams 5/8/2017
David S. Adams, P.G.
Environmental Manager
Public Utilities, Department
Environmental Services

DAVID S. ADAMS LICENSE NO 1827 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

DSA/mdt
TSD\... \enviro\southeast\scanned reports-docs\Leachate plant\SELF2017-1stQtrEffluent.pdf

xc: Kimberly Byer, Solid Waste Division Director, Public Works Dept.
Larry Ruiz, GM III SCLF, Public Works, Dept.
Tom Gormley, Plant Operator SCLF, Public Works Dept.
Cindy Pelley, GM II SCLF, Public Works Dept.
Jeffry Greenwell, GMIII, Public Utilities
Ron Cope, Hillsborough County EPC

PH Calibration Log

Month	JAN. 2017					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1						
2	4.00	6.99	10.01	7.78	7.82	8.64
3	4.01	7.00	10.01	7.70	7.84	8.68
4	4.04	7.02	10.04	7.78	7.93	
5	4.01	7.02	10.01	7.71	7.97	8.79
6	4.01	7.01	10.00	7.80	8.00	8.76
7	4.00	7.06	10.01	7.69	7.86	
8						
9	4.00	7.00	10.01	7.72	7.88	8.68
10	4.02	7.02	10.01	7.85	7.99	8.95
11	4.00	7.00	10.00	7.77	7.88	8.85
12	4.01	7.02	9.99	7.68	7.75	8.63
13	4.01	7.01	9.99	7.69	7.78	8.76
14	4.01	7.01	10.01	7.71	7.76	
15						
16						8.25
17	4.00	6.98	10.00	7.65	7.78	8.25
18	4.00	7.01	10.01	7.71	8.02	8.19
19	4.00	7.01	10.01	7.80	8.27	8.27
20	4.01	7.01	10.02	7.73	8.25	8.29
21	3.99	7.01	10.01	7.67	8.19	
22						
23	4.01	7.01	10.00	7.66	8.28	8.38
24	4.01	7.01	10.01	7.74	8.26	8.61
25	4.02	7.03	10.07	7.75	8.11	
26	4.02	7.01	9.99	7.69	8.15	8.43
27	4.01	7.01	9.99	7.69	8.09	8.10
28	4.00	7.02	10.02	7.70	7.96	
29						
30	4.00	7.01	10.02	7.76	8.21	8.15
31	4.00	7.01	10.01	7.75	8.01	7.95

PH Calibration Log

Month	FEB. 2017					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.01	7.02	10.00	7.82	8.03	8.24
2	4.01	7.02	10.03	7.71		8.27
3	4.01	6.99	9.99	7.66		8.35
4	4.01	7.01	10.02	7.63		7.77
5						
6	4.00	6.99	9.99	7.70	8.12	8.07
7	4.00	7.00	10.00	7.70	7.95	7.97
8	4.02	7.01	10.01	7.63	8.01	8.06
9	4.01	7.01	10.00	7.72	8.10	8.14
10	4.00	7.03	10.01	7.77	8.04	8.13
11	4.00	7.02	10.01	7.64	7.96	7.85
12						
13	4.01	7.01	10.01	7.80	7.72	7.95
14	4.01	7.02	10.01	7.77	8.03	8.00
15	4.02	7.00	10.00	7.60	7.82	7.82
16	4.01	7.01	10.00	7.69	7.89	8.05
17	4.00	7.01	10.01	7.73	7.83	8.00
18	4.00	7.02	10.03	7.69	7.89	7.66
19						
20	4.00	7.01	10.00	7.77	8.19	8.08
21	4.00	7.00	10.01	7.91	8.05	8.00
22	4.00	7.00	10.00	7.83	8.13	8.15
23	4.01	7.00	10.00	7.83	8.05	8.17
24	4.01	7.01	10.01	7.67	8.25	8.19
25	4.00	7.01	10.01	7.66	7.94	
26						
27	4.00	7.01	10.01	7.81	8.11	8.26
28	4.01	7.01	10.00	7.79	8.14	8.20

PH Calibration Log

Month	MARCH '17					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.01	7.00	9.97	7.70	7.98	8.17
2	4.00	7.00	10.00	7.79	8.22	8.05
3	4.00	7.01	10.00	7.87	8.13	8.10
4	4.00	7.02	10.00	7.76	7.93	
5						
6	4.00	7.00	10.00	7.86	7.77	8.18
7	4.00	7.01	10.02	7.76	8.01	8.09
8	4.01	7.01	10.00	7.95	8.07	8.17
9	4.00	7.01	10.01	7.68	7.86	8.18
10	4.00	7.01	10.00	7.78	7.99	8.27
11	4.00	7.00	10.00	7.63	7.78	
12						
13	4.00	7.00	10.00	7.74	7.91	8.32
14	4.00	7.01	9.99	7.60	7.78	8.37
15	4.05	7.03	10.04	7.69	7.80	
16	4.02	7.03	10.02	7.70	8.04	8.34
17	4.00	7.04	9.99	7.74	8.24	
18	4.00	7.02	10.02	7.69	8.02	8.27
19						
20	4.01	7.02	10.00	7.58	7.91	8.44
21	4.00	7.01	10.01	7.62	7.94	8.24
22	**4.01**	**7.07**	**10.03**	**7.60**	**7.97**	**8.26**
23	4.01	7.02	10.00	7.79	7.98	8.17
24	4.01	7.01	10.00	7.57	7.99	8.08
25	4.00	7.01	10.03	7.65	7.79	8.19
26						
27	4.00	7.00	10.03	7.80	8.05	8.42
28	4.01	7.00	10.01	7.81	8.14	8.27
29	4.00	7.00	10.00	7.66	8.11	No Spray
30	4.00	7.01	10.01	7.74	8.20	No Spray
31	4.02	7.00	10.02	7.74	8.29	8.49

Advanced Environmental Laboratories, Inc.

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

January 26, 2017

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

RE: Workorder: T1700156 SELF Plant Effluent

Dear David Adams:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, January 04, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

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

Sincerely,

Heidi Brooks - Project Manager
HBrooks@AELLab.com

Enclosures

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

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

SAMPLE SUMMARY

Workorder: T1700156 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1700156001	Leachate	Water	1/4/2017 09:53	1/4/2017 12:36
T1700156002	Field Blank	Water	1/4/2017 09:35	1/4/2017 12:36

Advanced Environmental Laboratories, Inc.

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

ANALYTICAL RESULTS

Workorder: T1700156 SELF Plant Effluent

Lab ID: **T1700156001** Date Received: 01/04/17 12:36 Matrix: Water

Sample ID: **Leachate** Date Collected: 01/04/17 09:53

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**16891**		**umhos/cm**	**1**			1/4/2017 09:53	
Dissolved Oxygen	**5.61**		**mg/L**	**1**			1/4/2017 09:53	
ORP-2580BW	**106**		**mV**	**1**			1/4/2017 09:53	
Temperature	**26.66**		**°C**	**1**			1/4/2017 09:53	
pH	**8.18**		**SU**	**1**			1/4/2017 09:53	
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**1500**		**mg/L**	**5**	250	120	1/10/2017 13:32	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**8600**		**mg/L**	**1.25**	12	12	1/6/2017 17:16	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**400**		**mg/L**	**20**	20	20	1/10/2017 07:50	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**250**		**mg/L**	**25**	5.0	4.4	1/5/2017 16:15	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**840**		**mg/L**	**1**	2.0	2.0	1/5/2017 15:50	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

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

ANALYTICAL RESULTS

Workorder: T1700156 SELF Plant Effluent

Lab ID: **T1700156002**
Sample ID: **Field Blank**

Date Received: 01/04/17 12:36 Matrix: Water
Date Collected: 01/04/17 09:35

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**24**	**U**	**mg/L**	**1**	50	24	1/10/2017 13:32	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**12**	**U**	**mg/L**	**1.25**	12	12	1/6/2017 17:16	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	1/10/2017 07:50	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	1/5/2017 15:40	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	1/5/2017 16:04	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

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

ANALYTICAL RESULTS QUALIFIERS

Workorder: T1700156 SELF Plant Effluent

PARAMETER QUALIFIERS

U	The compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

LAB QUALIFIERS

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

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

QUALITY CONTROL DATA

Workorder: T1700156 SELF Plant Effluent

QC Batch: WCAt/6498 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T1700156001, T1700156002

METHOD BLANK: 2238552

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

LABORATORY CONTROL SAMPLE: 2238553

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	220	111	84.6-115.4	

SAMPLE DUPLICATE: 2238554 Original: T1700154001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	85	81	5	20	

QC Batch: WCAt/6504 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T1700156001, T1700156002

METHOD BLANK: 2239422

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

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

QUALITY CONTROL DATA

Workorder: T1700156 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2239423

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	600	91	75-125	

SAMPLE DUPLICATE: 2239424 Original: T1700196001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	70000	72000	2	10	

SAMPLE DUPLICATE: 2239425 Original: T1700156001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	8600	9000	5	10	

QC Batch: WCAt/6512 Analysis Method: SM 4500NO3-F

QC Batch Method: SM 4500NO3-F Prepared:

Associated Lab Samples: T1700156001, T1700156002

METHOD BLANK: 2239799

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

LABORATORY CONTROL SAMPLE: 2239800

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate	mg/L	1	1.1	106	90-110	

CERTIFICATE OF ANALYSIS

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

QUALITY CONTROL DATA

Workorder: T1700156 SELF Plant Effluent

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2240298 2240299 Original: T1700218001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate	mg/L	1.4	1	2.3	2.4	96	99	90-110	1	10	

QC Batch: WCAt/6535 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T1700156001, T1700156002

METHOD BLANK: 2241242

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

LABORATORY CONTROL SAMPLE: 2241243

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	200	99	75-125	

SAMPLE DUPLICATE: 2241244 Original: T1700103003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	1000	1000	1	10	

SAMPLE DUPLICATE: 2241245 Original: T1700166003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	1.0U	1.0	0	10	

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

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

QUALITY CONTROL DATA

Workorder: T1700156 SELF Plant Effluent

QC Batch: WCAt/6545 Analysis Method: EPA 410.4

QC Batch Method: EPA 410.4 Prepared:

Associated Lab Samples: T1700156001, T1700156002

METHOD BLANK: 2241492

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

LABORATORY CONTROL SAMPLE: 2241493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	480	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2241495 2241496 Original: T1700017001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Chemical Oxygen Demand	mg/L	660	500	1000	1000	77	76	90-110	0	10	J4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2241499 2241500 Original: T1700423002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Chemical Oxygen Demand	mg/L	620	500	1200	1200	107	109	90-110	1	10	

Advanced Environmental Laboratories, Inc.

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

QUALITY CONTROL DATA QUALIFIERS

Workorder: T1700156 SELF Plant Effluent

QUALITY CONTROL PARAMETER QUALIFIERS

U	The compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J4	Estimated Result

Advanced Environmental Laboratories, Inc.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1700156 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1700156001	Leachate			SM 5210B	WCAt/6498
T1700156002	Field Blank			SM 5210B	WCAt/6498
T1700156001	Leachate			SM 2540 C	WCAt/6504
T1700156002	Field Blank			SM 2540 C	WCAt/6504
T1700156001	Leachate			SM 4500NO3-F	WCAt/6512
T1700156002	Field Blank			SM 4500NO3-F	WCAt/6512
T1700156001	Leachate			SM 2540D	WCAt/6535
T1700156002	Field Blank			SM 2540D	WCAt/6535
T1700156001	Leachate			EPA 410.4	WCAt/6545
T1700156002	Field Blank			EPA 410.4	WCAt/6545
T1700156001	Leachate	Field Measurements	FLDt/	Field Measurements	FLDt/

Advanced Environmental Laboratories, Inc.

☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597
☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639
☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354
☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.2288 • Fax 954.889.2281
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 850.219.6274 • Fax 850.219.6275
☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

T1700156

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

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	PRESERVATION	BOTTLE SIZE & TYPE	ANALYSIS REQUIRED: COD -	BOD	TDS -	TSS -	Nitrate -						LABORATORY I.D. NUMBER
	Leachate Effluent		1/4/17	9:53	WW	5			X	X	X	X	X						01
	Field Blank		1/4/17	9:35	—	5			X	X	X	X	X						02

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

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

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

Form revised 09/19/2012

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

	Relinquished by:	Date	Time	Received by:	Date	Time
1		1/4/17	1235		01-04	12:36
2						
3						
4						

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SELF Plant Effluent	SITE LOCATION: SOUTHEAST LANDFILL	
WELL NO: PLANT EFFLUENT	SAMPLE ID: PLANT EFFLUENT	DATE: 1/4/17

PURGING DATA

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

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (N/A feet – N/A feet) X ~~0.16~~ N/A gallons/foot = N/A gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= N/A gallons + (N/A gallons/foot X N/A feet) + N/A gallons = N/A gallons

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

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
9:53	N/A	N/A	N/A	N/A	8.18	26.66	16891	5.61	N/A	Light Brown	leachate
					MDT		1/4/17				

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: ~~Andrew Balloon~~ J. Fuller / Michael Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 9:53	SAMPLING ENDED AT: 10:01
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP ~~Y~~ ~~N~~ (MDT 1/4/17) TUBING ~~Y~~ ~~N (replaced)~~		DUPLICATE: Y (N)	

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

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP 953 (106)

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

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

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SCLF Plant Effluent	SITE LOCATION: Southeast Landfill	
WELL NO: Field Blank	SAMPLE ID: Field Blank	DATE: 1/4/17

PURGING DATA

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

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

= (N/A feet – N/A feet) X ~~0.16~~ N/A gallons/foot = N/A gallons

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

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

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

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

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Andrew Balloon / Michael Townsel J. Fuller	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 9:35	SAMPLING ENDED AT: 9:38
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP ~~Y~~ ~~N~~ (MDT 1/4/17) TUBING ~~Y~~ ~~N (replaced)~~		DUPLICATE: Y (N)	

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

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

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

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

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

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

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

Advanced Environmental Laboratories, Inc.

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

Queue: WCAt

Batch Number: 6545

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: EPA 410.4

Preparation: None

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Duplicates: All acceptance criteria were met.

D. Spikes: The matrix spike recoveries of COD forT1700017001 were outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential low bias in this matrix. The affected sample is qualified to indicate matrix interference. MS recovery was 76.8% and MSD recovery was 76.4%, acceptable recoveries are 90-110%.

E. Serial Diluion: All acceptance criteria were met.

F. Samples: Sample analyses proceeded normally.

G. Other:

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

Advanced Environmental Laboratories, Inc.

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

March 6, 2017

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

RE: Workorder: T1702777 SELF Plant Effluent

Dear David Adams:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, February 15, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

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

Sincerely,

Heidi Parker - Project Manager
HParker@AELLab.com

Enclosures

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

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

SAMPLE SUMMARY

Workorder: T1702777 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1702777001	Leachate	Water	2/15/2017 10:10	2/15/2017 12:30
T1702777002	Field Blank	Water	2/15/2017 09:54	2/15/2017 12:30

CERTIFICATE OF ANALYSIS

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

ANALYTICAL RESULTS

Workorder: T1702777 SELF Plant Effluent

Lab ID: **T1702777001** Date Received: 02/15/17 12:30 Matrix: Water

Sample ID: **Leachate** Date Collected: 02/15/17 10:10

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**16329**		**umhos/cm**	**1**			2/15/2017 10:10	
Dissolved Oxygen	**4.74**		**mg/L**	**1**			2/15/2017 10:10	
Temperature	**26.4**		**°C**	**1**			2/15/2017 10:10	
pH	**7.8**		**SU**	**1**			2/15/2017 10:10	
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**1800**		**mg/L**	**5**	250	120	2/21/2017 15:58	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**9100**		**mg/L**	**1.25**	12	12	2/22/2017 10:00	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**280**		**mg/L**	**10**	10	10	2/22/2017 10:26	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**220**		**mg/L**	**25**	5.0	4.4	2/17/2017 08:16	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**230**	**L**	**mg/L**	**1**	2.0	2.0	2/16/2017 18:52	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

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

ANALYTICAL RESULTS

Workorder: T1702777 SELF Plant Effluent

Lab ID: **T1702777002**
Sample ID: **Field Blank**

Date Received: 02/15/17 12:30 Matrix: Water
Date Collected: 02/15/17 09:54

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**24**	**U**	**mg/L**	**1**	50	24	2/21/2017 15:58	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**12**	**U**	**mg/L**	**1.25**	12	12	2/22/2017 10:00	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	2/22/2017 10:26	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	2/17/2017 08:14	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	2/16/2017 18:28	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

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

ANALYTICAL RESULTS QUALIFIERS

Workorder: T1702777 SELF Plant Effluent

PARAMETER QUALIFIERS

U	The compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
L	Off-scale high. Actual value could be more than the value given.

LAB QUALIFIERS

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

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

QUALITY CONTROL DATA

Workorder: T1702777 SELF Plant Effluent

QC Batch: WCAt/7113 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T1702777001, T1702777002

METHOD BLANK: 2275487

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

LABORATORY CONTROL SAMPLE: 2275488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	190	95	84.6-115.4	

SAMPLE DUPLICATE: 2275489 Original: T1702884002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	280	290	4	20	

QC Batch: WCAt/7158 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T1702777001, T1702777002

METHOD BLANK: 2276916

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

CERTIFICATE OF ANALYSIS

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

QUALITY CONTROL DATA

Workorder: T1702777 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2276917

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate	mg/L	1	0.92	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2276918 2276919 Original: T1702873001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate	mg/L	0.011	1	0.99	1.0	99	104	90-110	5	10	

QC Batch: WCAt/7170 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T1702777001, T1702777002

METHOD BLANK: 2277763

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

LABORATORY CONTROL SAMPLE: 2277764

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

SAMPLE DUPLICATE: 2277765 Original: T1702777001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	9100	9500	4	10	

CERTIFICATE OF ANALYSIS

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

QUALITY CONTROL DATA

Workorder: T1702777 SELF Plant Effluent

SAMPLE DUPLICATE: 2277766 Original: T1702905002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	230	230	1	10	

QC Batch: WCAt/7186 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Prepared:
Associated Lab Samples: T1702777001, T1702777002

METHOD BLANK: 2278452

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

LABORATORY CONTROL SAMPLE: 2278453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Chemical Oxygen Demand	mg/L	500	520	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2278459 2278460 Original: T1702776002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Chemical Oxygen Demand	mg/L	7	500	500	500	99	99	90-110	0	10	

QC Batch: WCAt/7192 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T1702777001, T1702777002

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

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

QUALITY CONTROL DATA

Workorder: T1702777 SELF Plant Effluent

METHOD BLANK: 2279022

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

LABORATORY CONTROL SAMPLE: 2279023

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	200	98	75-125	

SAMPLE DUPLICATE: 2279024 Original: T1702828001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	1.0U	1.0	0	10	

SAMPLE DUPLICATE: 2279025 Original: T1702777001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	280	310	9	10	

CERTIFICATE OF ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1702777 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1702777001	Leachate			SM 5210B	WCAt/7113
T1702777002	Field Blank			SM 5210B	WCAt/7113
T1702777001	Leachate			SM 4500NO3-F	WCAt/7158
T1702777002	Field Blank			SM 4500NO3-F	WCAt/7158
T1702777001	Leachate			SM 2540 C	WCAt/7170
T1702777002	Field Blank			SM 2540 C	WCAt/7170
T1702777001	Leachate			EPA 410.4	WCAt/7186
T1702777002	Field Blank			EPA 410.4	WCAt/7186
T1702777001	Leachate			SM 2540D	WCAt/7192
T1702777002	Field Blank			SM 2540D	WCAt/7192
T1702777001	Leachate	Field Measurements	FLDt/	Field Measurements	FLDt/

Advanced Environmental Laboratories, Inc.

☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597
☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639
☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354
☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.2288 • Fax 954.889.2281
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 850.219.6274 • Fax 850.219.6275
☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

TW 2777

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

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	PRESERVATION	ANALYSIS REQUIRED: COD	BOD	TDS	TSS	Nitrate						LABORATORY I.D. NUMBER
	Leachate Effluent	G	2/15/17	10:10	WW	5		X	X	X	X	X						CW1
	Field Blank	—	2/15/17	9:54	—	5		X	X	X	X	X						CW2

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

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

Received on Ice: ☑ Yes ☐ No ☐ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received: 4°C (in degrees celcius)

Form revised: 09/19/2012

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

	Relinquished by	Date	Time	Received by	Date	Time
1	[signature]	2/15/17	1155	[signature]	2/16/17	12:30
2						
3						
4						

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

PWS ID: _____

Contact Person: _____ Phone: _____

Supplier of Water: _____

Site-Address: _____

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, Florida	
WELL NO: Plant Effluent	SAMPLE ID: Plant Effluent	DATE: 2/15/17

PURGING DATA

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

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

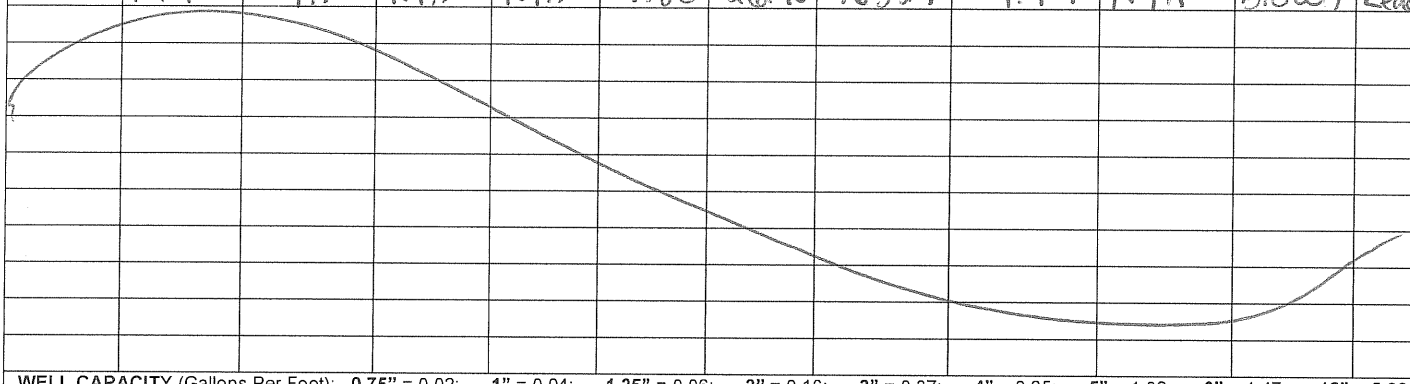
= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

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

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

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

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:10	N/A	N/A	N/A	N/A	7.80	26.40	16329	4.74	N/A	Brown	Leachate



WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Fuller	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 10:10	SAMPLING ENDED AT: 10:14
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: ~~PUMP Y N~~ 2/15/17 ~~TUBING Y N (replaced)~~		DUPLICATE: Y (N)	

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

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

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

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

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, Florida	
WELL NO: Field Blank	SAMPLE ID: Field Blank	DATE: 2/15/17

PURGING DATA

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

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

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

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

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

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

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

Field Blank J 2/15/17

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Fuller	SAMPLER(S) SIGNATURE(S): Josh Fuller	SAMPLING INITIATED AT: 9:54	SAMPLING ENDED AT: 9:59
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: ~~PUMP~~ Y N J 2/15/17 TUBING Y N (replaced)		DUPLICATE: Y (N)	

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

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

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

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

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

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

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

Advanced Environmental Laboratories, Inc.

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

Queue: WCAt

Batch Number: 7113

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: SM 5210B

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: All acceptance criteria were met.

E. Serial Diluion: All acceptance criteria were met.

F. Samples: All of the aliquots for the BOD analysis in T1702777001 have over-depleted the required range of depletion. The actual concentration for the BOD is higher than the value reported. The sample is qualified with an L to indicate the estimation.

G. Other:

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

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

March 31, 2017

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

RE: Workorder: T1704437 SELF Plant Effluent

Dear David Adams:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, March 14, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

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

Sincerely,

Heidi Parker - Project Manager
HParker@AELLab.com

Enclosures

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

SAMPLE SUMMARY

Workorder: T1704437 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1704437001	Leachate	Water	3/14/2017 10:18	3/14/2017 13:11
T1704437002	Field Blank	Water	3/14/2017 10:12	3/14/2017 13:11

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1704437 SELF Plant Effluent

Lab ID: **T1704437001** Date Received: 03/14/17 13:11 Matrix: Water

Sample ID: **Leachate** Date Collected: 03/14/17 10:18

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
FIELD PARAMETERS								
Analysis Desc: Data entry of field measurements	Analytical Method: Field Measurements							
Conductivity	**15485**		**umhos/cm**	**1**			3/14/2017 10:18	
Dissolved Oxygen	**4.44**		**mg/L**	**1**			3/14/2017 10:18	
ORP-2580BW	**319**		**mV**	**1**			3/14/2017 10:18	
Temperature	**25.29**		**°C**	**1**			3/14/2017 10:18	
pH	**7.64**		**SU**	**1**			3/14/2017 10:18	
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**1600**		**mg/L**	**5**	250	120	3/21/2017 14:07	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**8100**		**mg/L**	**1.25**	12	12	3/20/2017 08:53	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**670**		**mg/L**	**31.25**	31	31	3/20/2017 09:53	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	3/16/2017 10:10	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**540**		**mg/L**	**1**	2.0	2.0	3/15/2017 16:18	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS

Workorder: T1704437 SELF Plant Effluent

Lab ID: **T1704437002** Date Received: 03/14/17 13:11 Matrix: Water

Sample ID: **Field Blank** Date Collected: 03/14/17 10:12

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
WET CHEMISTRY								
Analysis Desc: COD,E410.4,Water	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**24**	**U**	**mg/L**	**1**	50	24	3/21/2017 14:07	T
Analysis Desc: Tot Dissolved Solids,SM2540C	Analytical Method: SM 2540 C							
Total Dissolved Solids	**12**	**U**	**mg/L**	**1.25**	12	12	3/20/2017 08:53	T
Analysis Desc: TSS,SM2540D,Water	Analytical Method: SM 2540D							
Total Suspended Solids	**1.0**	**U**	**mg/L**	**1**	1.0	1.0	3/20/2017 09:53	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water	Analytical Method: SM 4500NO3-F							
Nitrate	**0.18**	**U**	**mg/L**	**1**	0.20	0.18	3/15/2017 10:44	T
Analysis Desc: BOD,SM5210B,Water	Analytical Method: SM 5210B							
Biochemical Oxygen Demand	**2.0**	**U**	**mg/L**	**1**	2.0	2.0	3/15/2017 16:23	T

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

ANALYTICAL RESULTS QUALIFIERS

Workorder: T1704437 SELF Plant Effluent

PARAMETER QUALIFIERS

U	The compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

LAB QUALIFIERS

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

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1704437 SELF Plant Effluent

QC Batch: WCAt/7560 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Prepared:
Associated Lab Samples: T1704437001, T1704437002

METHOD BLANK: 2298649

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

LABORATORY CONTROL SAMPLE: 2298650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	200	180	90	84.6-115.4	

SAMPLE DUPLICATE: 2298651 Original: T1704481001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Biochemical Oxygen Demand	mg/L	1500	1700	15	20	

QC Batch: WCAt/7565 Analysis Method: SM 4500NO3-F
QC Batch Method: SM 4500NO3-F Prepared:
Associated Lab Samples: T1704437002

METHOD BLANK: 2298730

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

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1704437 SELF Plant Effluent

METHOD BLANK: 2298763

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

LABORATORY CONTROL SAMPLE: 2298731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate	mg/L	1	1.1	105	90-110	

LABORATORY CONTROL SAMPLE: 2298762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate	mg/L	1	1.1	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2298735 2298736 Original: T1704417001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate	mg/L	0.69	1	1.7	1.6	99	93	90-110	3	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2298747 2298748 Original: T1704472001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate	mg/L	0	1	1.1	1.0	107	104	90-110	3	10	

QC Batch: WCAt/7575 Analysis Method: SM 4500NO3-F

QC Batch Method: SM 4500NO3-F Prepared:

Associated Lab Samples: T1704437001

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1704437 SELF Plant Effluent

METHOD BLANK: 2299764

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

METHOD BLANK: 2299777

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

LABORATORY CONTROL SAMPLE: 2299763

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate	mg/L	1	1.0	104	90-110	

LABORATORY CONTROL SAMPLE: 2299776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Nitrate	mg/L	1	1.1	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2299761 2299762 Original: T1704533001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate	mg/L	0.035	1	2.1	2.1	206	207	90-110	0	10	J4

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2299765 2299766 Original: T1704560001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Nitrate	mg/L	0.38	1	1.4	1.3	98	96	90-110	1	10	

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1704437 SELF Plant Effluent

QC Batch: WCAt/7590 Analysis Method: SM 2540 C
QC Batch Method: SM 2540 C Prepared:
Associated Lab Samples: T1704437001, T1704437002

METHOD BLANK: 2300704

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

LABORATORY CONTROL SAMPLE: 2300705

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	690	105	75-125	

SAMPLE DUPLICATE: 2300706 Original: T1704425001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	880	870	1	5	

SAMPLE DUPLICATE: 2301304 Original: T1704437002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	12U	12	0	5	

QC Batch: WCAt/7593 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Prepared:
Associated Lab Samples: T1704437001, T1704437002

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1704437 SELF Plant Effluent

METHOD BLANK: 2301169

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

LABORATORY CONTROL SAMPLE: 2301170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	190	97	75-125	

SAMPLE DUPLICATE: 2301172 Original: T1704504001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	1.2	1.2	0	10	

QC Batch: WCAt/7634 Analysis Method: EPA 410.4

QC Batch Method: EPA 410.4 Prepared:

Associated Lab Samples: T1704437001, T1704437002

METHOD BLANK: 2302776

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

LABORATORY CONTROL SAMPLE: 2302777

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

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA

Workorder: T1704437 SELF Plant Effluent

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2302779 2302780 Original: T1704437002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
WET CHEMISTRY											
Chemical Oxygen Demand	mg/L	0	500	550	550	110	110	90-110	0	10	

QUALITY CONTROL DATA QUALIFIERS

Workorder: T1704437 SELF Plant Effluent

QUALITY CONTROL PARAMETER QUALIFIERS

U The compound was analyzed for but not detected.

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

J4 Estimated Result

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
9610 Princess Palm Ave Tampa, FL 33619
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (813)630-9616
Fax: (813)630-4327

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1704437 SELF Plant Effluent

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1704437001	Leachate			SM 5210B	WCAt/7560
T1704437002	Field Blank			SM 5210B	WCAt/7560
T1704437002	Field Blank			SM 4500NO3-F	WCAt/7565
T1704437001	Leachate			SM 4500NO3-F	WCAt/7575
T1704437001	Leachate			SM 2540 C	WCAt/7590
T1704437002	Field Blank			SM 2540 C	WCAt/7590
T1704437001	Leachate			SM 2540D	WCAt/7593
T1704437002	Field Blank			SM 2540D	WCAt/7593
T1704437001	Leachate			EPA 410.4	WCAt/7634
T1704437002	Field Blank			EPA 410.4	WCAt/7634
T1704437001	Leachate	Field Measurements	FLDt/	Field Measurements	FLDt/

Advanced Environmental Laboratories, Inc.

☐ **Altamonte Springs:** 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597
☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639
☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354
☐ **Miramar:** 10200 USA Today Way, Miramar, FL 33025 • 954.889.2288 • Fax 954.889.2281
☐ **Tallahassee:** 1288 Cedar Center Drive, Tallahassee, FL 32301 • 850.219.6274 • Fax 850.219.6275
☐ **Tampa:** 9610 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

T17443?

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

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO COUNT	PRESERVATION	ANALYSIS REQUIRED: COD	BOD	TDS	TSS	Nitrate						LABORATORY I.D. NUMBER
	Leachate Effluent	G	3/14/17	10:10	WW	5		X	X	X	X	X						01
	Field Blank	–	3/14/17	10:12	DI	5		X	X	X	X	X						02

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

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

Form revised: 09/19/2012 Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 1A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	[signature]	3/14/17	1311	[signature]	3/14/17	13:11
2						
3						
4						

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, Florida	
WELL NO: Plant Effluent	SAMPLE ID: Plant Effluent	DATE: 3/14/2017

PURGING DATA

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

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (N/A feet – N/A feet) X N/A gallons/foot = N/A gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= N/A gallons + (N/A gallons/foot X N/A feet) + N/A gallons = N/A gallons

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

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or ~~µS/cm~~	DISSOLVED OXYGEN (circle units) ~~mg/L~~ or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:18	N/A	N/A	N/A	N/A	7.64	25.29	15485	4.44	N/A	LT BROWN	LEACHATE

MJF 3/14/17

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
J. Fuller / M. Townsel		10:18	10:21

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

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

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

REMARKS: **SEE C.O.C. FOR SAMPLE ANALYSIS** ORP: 10:18 (319)

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

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

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, Florida	
WELL NO: Field Blank	SAMPLE ID: Field Blank	DATE: 3/14/2017

PURGING DATA

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

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

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

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

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

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

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

Field Blank MDT 3/14/17

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: J.Fuller / M.Townsel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 10:12	SAMPLING ENDED AT: 10:15
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: N/A	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ µm
FIELD DECONTAMINATION: PUMP Y (N) Dedicated	TUBING Y N (replaced) Dedicated	DUPLICATE: Y (N)	

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

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

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

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

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

Advanced Environmental Laboratories, Inc.

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

Queue: WCAt

Batch Number: 7575

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: SM 4500NO3-F

Preparation: None

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Duplicates: All acceptance criteria were met.

D. Spikes: The matrix spike recoveries of Nitrate (MS 206% MSD 207%) and Nitrite (MS 10% MSD 11%) for T1704533001 were outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The affected sample is qualified to indicate matrix interference.

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: