



**Public Utilities**

September 12, 2016

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**County Attorney**

Chip Fletcher

**Public Utilities**

PO Box 1110  
Tampa, FL 33601-1110  
Phone: (813) 272-5977  
Fax: (813) 272-5589

Mr. John Morris, P.G.  
Department of Environmental Protection  
Southwest District Office  
13051 Telecom Parkway  
Tampa, FL 33637

Re: **Southeast County Landfill  
Leachate Treatment Plant (WACS Testsite #19864)  
Quarterly Analytical Data Report  
Second Quarter: April - June 2016**

Dear Mr. Morris:

In accordance with Part 9.1.2 of the June 2013 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 the 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.

On April 15, 2016, the County collected the required analytical parameters from the dedicated sampling port at the plant after undergoing renovations over the past eighteen (18) months. The County submitted the findings on July 12, 2016 in a separate letter to the Florida Department of Environmental (FDEP).

County personnel collected the remaining quarterly effluent samples from the designated port at the treatment plant on May 24 and June 22, 2016. Daily pH values recorded by plant personnel over this period of record ranged from 7.66 to 9.28 pH units. It is likely that the pH values, especially in the first part of April 2016 are a direct result from the

Mr. John Morris, P.G.

September 12, 2016

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start-up procedures at the plant. Additionally, the laboratory analytical data exhibited inconsistent Chemical Oxygen (COD) and Biochemical Oxygen Demand (CBOD) levels which also appear to be directly related to the start-up operations. The County believes that as the plant makes the proper operational adjustments, pH, COD, and CBOD should stabilize and be more consistent with the historical data set. The effluent samples collected were analyzed by our contracted laboratory, Advanced Environmental Laboratories, Inc., and the 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, respectively.

Respectfully,



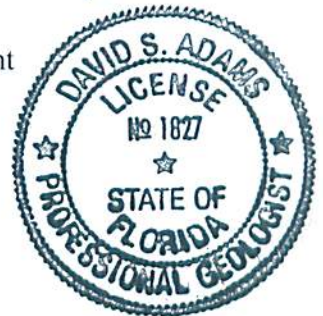
9/12/2016

Michael D. Townsel  
Senior Hydrologist  
Public Utilities Department  
Environmental Services



9/12/2016

David S. Adams, P.G.  
Environmental Manager  
Public Utilities Department  
Environmental Services



DSA/mdt

xc: Kimberly Byer, Division Director, Public Works Dept.  
Larry Ruiz, GM III, Public Works, Dept.  
Jeffrey Greenwell, GMIII, Public Utilities  
Ron Cope, Hillsborough County EPC

TSD\\...\\enviro\\southeast\\scanned reports-docs\\Leachate plant\\SELF2016-2ndQtrEffluent.pdf

Month	PH Calibration Log					
	APRIL 2016					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	4.01	7.05	10.03	7.54	9.00	8.80
2	4.04	7.01	9.96	7.64		8.45
3						
4	4.01	7.00	10.05	7.65	9.26	8.59
5	4.02	6.99	10.06	7.72	9.20	8.91
6	3.95	7.02	10.05	7.45	9.28	8.71
7	4.01	6.98	10.02	7.48	9.18	8.84
8	4.02	7.03	10.04	7.49	9.16	8.88
9	3.88	6.94	10.05	7.39		8.79
10						
11	4.00	7.03	10.04	7.44	8.94	8.81
12	4.01	7.01	10.05	7.45	9.00	8.76
13	4.01	7.06	10.06	7.46	8.85	8.63
14	4.03	7.04	10.03	7.60	8.86	8.56
15	4.01	7.03	10.06	7.65	9.10	8.49
16	4.07	7.02	9.98	7.30		8.33
17						
18	4.01	7.01	10.04	7.48	8.96	8.75
19	4.02	7.02	10.01	7.73	8.92	8.73
20	4.02	7.04	10.04	7.85	8.91	8.63
21	4.05	7.15	10.04	7.89	8.63	8.49
22	4.03	7.00	10.01	7.73	8.36	8.37
23	4.40	7.37	10.21	7.70		8.40
24						
25	4.00	7.04	10.07	7.80	8.34	8.40
26	4.04	7.11	10.20	7.92	8.40	8.41
27	4.02	7.10	10.08	7.87	8.36	8.42
28	4.04	7.08	10.05	7.85	8.37	8.39
29	4.03	7.07	10.12	7.82	8.34	8.38
30						
31						

Month	PH Calibration Log					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1						
2	4.05	7.10	10.03	7.81	8.31	NO SPRAY
3	4.03	7.08	10.01	7.75	8.39	8.41
4	4.01	7.09	10.01	7.65	8.49	NO SPRAY
5	4.02	7.07	10.02	7.62	8.51	NO SPRAY
6	4.01	7.11	10.06	7.71	8.69	8.29
7	3.94	6.99	9.88	7.75	8.48	8.16
8						
9	4.00	6.92	9.97	7.65	8.41	8.52
10	4.01	7.09	10.02	7.70	8.59	8.64
11	4.01	7.07	10.01	7.69	8.53	8.60
12	4.01	7.13	10.06	7.63	8.47	8.59
13	4.01	7.03	10.05	7.74	8.80	8.74
14	4.07	7.00	9.97	7.54	7.66	NO SPRAY
15						
16	4.00	7.00	10.07	7.95	8.32	8.48
17	4.02	7.11	10.07	7.80	8.35	8.44
18	4.04	7.07	10.10	7.90	8.58	NO SPRAY
19	4.02	7.12	10.16	7.78	8.68	No Spray
20	4.02	7.10	9.99	7.77	8.64	No Spray
21	3.95	7.00	10.00	7.63	7.92	NO SPRAY
22						
23	4.01	6.99	10.01	7.62	8.36	8.28
24	4.02	7.09	10.04	7.71	8.49	8.74
25	4.01	6.93	9.96	7.78	8.55	8.69
26	4.00	7.11	10.01	7.67	8.44	8.61
27	4.01	7.14	10.00	7.81	8.39	8.57
28				7.69	8.24	
29						
30						
31	4.05	7.20	10.01	7.48	8.20	

Month	PH Calibration Log					
	JUNE 2016					
Date	PH 4	PH 7	PH 10	INF PH	EFF PH	POND
1	3.94	7.03	10.03	7.77	8.52	8.80
2	4.01	7.09	10.07	7.78	8.54	9.11
3	4.15	7.12	10.06	7.77	8.41	9.10
4						
5						
6	4.02	7.11	10.03	7.90	8.46	No Spray
7	4.03	7.03	10.03	7.72	8.49	No Spray
8	4.04	6.99	10.20	7.79	8.53	No Spray
9	4.01	7.07	10.04	7.70	8.58	No Spray
10	4.05	7.04	9.99	7.98	8.16	No Spray
11	4.57	7.02	10.16	7.54	8.08	
12						
13	4.00	6.92	9.99	7.62	8.45	8.71
14	4.02	7.02	10.13	7.64	8.23	8.92
15	4.05	7.00	10.10	7.63	8.59	8.90
16	4.01	7.02	10.04	7.65	8.42	8.77
17	4.02	7.02	9.99	7.65	8.38	8.61
18	4.07	7.00	9.92	7.49	7.90	7.97
19						
20	4.00	6.96	9.97	7.52	8.28	8.43
21	4.00	7.02	9.99	7.57	8.08	8.41
22	4.01	7.02	10.01	7.82	8.34	8.88
23	4.00	7.06	10.04	7.65	8.27	No SPRAY
24	4.02	7.05	10.04	7.76	8.36	No SPRAY
25	4.06	6.92	9.99	7.59	7.97	8.38
26						
27	4.00	6.14	10.14	7.65	8.21	8.34
28	4.02	7.03	10.04	7.84	8.36	8.72
29	4.04	7.00	10.04	7.69	8.30	8.51
30	4.03	7.00	9.98	7.68	8.17	8.33
31						

June 9, 2016

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

RE: Workorder: T1607171 SELF Plant Effluent

Dear David Adams:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, May 24, 2016. 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  
HBrooks@AELLab.com

Enclosures

### CERTIFICATE OF ANALYSIS

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## SAMPLE SUMMARY

Workorder: T1607171 SELF Plant Effluent

Lab ID	Sample ID	Matrix	Date Collected	Date Received
T1607171001	Leachate Effluent	Water	5/24/2016 11:45	5/24/2016 13:00
T1607171002	Field Blank	Water	5/24/2016 11:35	5/24/2016 13:00

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## ANALYTICAL RESULTS

Workorder: T1607171 SELF Plant Effluent

Lab ID: **T1607171001**  
Sample ID: **Leachate Effluent**

Date Received: 05/24/16 13:00 Matrix: Water  
Date Collected: 05/24/16 11:45

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>FIELD PARAMETERS</b>								
Analysis Desc: Data entry of field measurements			Analytical Method: Field Measurements					
Conductivity	15752		umhos/cm	1			5/24/2016 11:45	
Dissolved Oxygen	4.21		mg/L	1			5/24/2016 11:45	
Temperature	32.55		°C	1			5/24/2016 11:45	
pH	8.31		SU	1			5/24/2016 11:45	
<b>WET CHEMISTRY</b>								
Analysis Desc: COD,E410.4,Water			Analytical Method: EPA 410.4					
Chemical Oxygen Demand	87		mg/L	1	50	24	6/1/2016 14:26	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	7400		mg/L	1.25	12	12	5/31/2016 08:30	T
Analysis Desc: TSS,SM2540D,Water			Analytical Method: SM 2540D					
Total Suspended Solids	72		mg/L	5	5.0	5.0	5/31/2016 07:14	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water			Analytical Method: SM 4500NO3-F					
Nitrate	130		mg/L	25	5.0	4.4	5/25/2016 18:36	T
Analysis Desc: BOD,SM5210B,Water			Analytical Method: SM 5210B					
Biochemical Oxygen Demand	20		mg/L	1	2.0	2.0	5/26/2016 12:11	T

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## ANALYTICAL RESULTS

Workorder: T1607171 SELF Plant Effluent

Lab ID: **T1607171002**

Date Received: 05/24/16 13:00 Matrix: Water

Sample ID: **Field Blank**

Date Collected: 05/24/16 11:35

Sample Description:

Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
<b>WET CHEMISTRY</b>								
Analysis Desc: COD,E410.4,Water			Analytical Method: EPA 410.4					
Chemical Oxygen Demand	<b>41</b>	<b>I</b>	<b>mg/L</b>	<b>1</b>	50	24	6/1/2016 14:26	T
Analysis Desc: Tot Dissolved Solids,SM2540C			Analytical Method: SM 2540 C					
Total Dissolved Solids	<b>12</b>	<b>U</b>	<b>mg/L</b>	<b>1.25</b>	12	12	5/31/2016 08:30	T
Analysis Desc: TSS,SM2540D,Water			Analytical Method: SM 2540D					
Total Suspended Solids	<b>1.0</b>	<b>U</b>	<b>mg/L</b>	<b>1</b>	1.0	1.0	5/31/2016 07:14	T
Analysis Desc: Nitrate,Nitrite SM4500NO3F,Water			Analytical Method: SM 4500NO3-F					
Nitrate	<b>0.18</b>	<b>U</b>	<b>mg/L</b>	<b>1</b>	0.20	0.18	5/25/2016 18:09	T
Analysis Desc: BOD,SM5210B,Water			Analytical Method: SM 5210B					
Biochemical Oxygen Demand	<b>2.0</b>	<b>U</b>	<b>mg/L</b>	<b>1</b>	2.0	2.0	5/26/2016 12:08	T

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## ANALYTICAL RESULTS QUALIFIERS

Workorder: T1607171 SELF Plant Effluent

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### PARAMETER QUALIFIERS

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

### LAB QUALIFIERS

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

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## QUALITY CONTROL DATA

Workorder: T1607171 SELF Plant Effluent

QC Batch: WCAI/3137 Analysis Method: SM 4500NO3-F  
QC Batch Method: SM 4500NO3-F Prepared:  
Associated Lab Samples: T1607171001, T1607171002

METHOD BLANK: 2054988

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

LABORATORY CONTROL SAMPLE: 2054989

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: 2054990 2054991 Original: T1607293001

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	2.1	1	3.0	2.9	89	75	90-110	5	10	J4

QC Batch: WCAI/3143 Analysis Method: SM 2540D  
QC Batch Method: SM 2540D Prepared:  
Associated Lab Samples: T1607171001, T1607171002

METHOD BLANK: 2055701

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

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## QUALITY CONTROL DATA

Workorder: T1607171 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2055702

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	200	190	93	75-125	

SAMPLE DUPLICATE: 2055703

Original: T1607157002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Suspended Solids	mg/L	1.0U	1.0	0	10	
QC Batch:	WCAI/3154		Analysis Method:		SM 2540 C	
QC Batch Method:	SM 2540 C		Prepared:			
Associated Lab Samples:	T1607171001, T1607171002					

METHOD BLANK: 2055933

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

LABORATORY CONTROL SAMPLE: 2055934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	660	660	100	75-125	

SAMPLE DUPLICATE: 2055935

Original: T1607164001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
Total Dissolved Solids	mg/L	460	460	1	10	

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## QUALITY CONTROL DATA

Workorder: T1607171 SELF Plant Effluent

QC Batch: WCAI/3199 Analysis Method: EPA 410.4  
QC Batch Method: EPA 410.4 Prepared:  
Associated Lab Samples: T1607171001, T1607171002

METHOD BLANK: 2057248

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

LABORATORY CONTROL SAMPLE: 2057249

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
Chemical Oxygen Demand	mg/L	500	470	94	90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2057250 2057251 Original: T1607364002

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	70	500	580	580	103	102	90-110	1	10	

QC Batch: WCAI/3227 Analysis Method: SM 5210B  
QC Batch Method: SM 5210B Prepared:  
Associated Lab Samples: T1607171001, T1607171002

METHOD BLANK: 2058171

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

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## QUALITY CONTROL DATA

Workorder: T1607171 SELF Plant Effluent

LABORATORY CONTROL SAMPLE: 2058172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY Biochemical Oxygen Demand	mg/L	200	210	106	84.6-115.4	

SAMPLE DUPLICATE: 2058173

Original: T1607364001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY Biochemical Oxygen Demand	mg/L	7.3	7.2	2	20	

## QUALITY CONTROL DATA QUALIFIERS

Workorder: T1607171 SELF Plant Effluent

### QUALITY CONTROL PARAMETER QUALIFIERS

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

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1607171 SELF Plant Effluent



Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
T1607171001	Leachate Effluent			SM 4500NO3-F	WCA/t/3137
T1607171002	Field Blank			SM 4500NO3-F	WCA/t/3137
T1607171001	Leachate Effluent			SM 2540D	WCA/t/3143
T1607171002	Field Blank			SM 2540D	WCA/t/3143
T1607171001	Leachate Effluent			SM 2540 C	WCA/t/3154
T1607171002	Field Blank			SM 2540 C	WCA/t/3154
T1607171001	Leachate Effluent			EPA 410.4	WCA/t/3199
T1607171002	Field Blank			EPA 410.4	WCA/t/3199
T1607171001	Leachate Effluent			SM 5210B	WCA/t/3227
T1607171002	Field Blank			SM 5210B	WCA/t/3227
T1607171001	Leachate Effluent	Field Measurements	FLD/t/	Field Measurements	FLD/t/

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	Relinquished by	Date	Time	Received by	Date	Time
1		5/10/16			5/25/17	13:00
2						
3						
4						



Revision Date: February 2009





**Advanced  
Environmental Laboratories, Inc.**

6601 Southpoint Parkway  
Jacksonville, Florida 32216  
(904) 363-9350  
FAX (904) 363-9354

QCBatch: **WCAt:3137**  
Method: **SM4500NO3-F**  
PrepMethod:

**I. RECEIPT**

No Exceptions were encountered.

**II. HOLDING TIMES**

Preparation: All holding times were met.  
Analysis: All holding times were met.

**III. PREPARATION**

Sample preparation proceeded normally.

**VI. 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 and Nitrate+Nitrite for T1607293001 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.  
E. Serial Dilution: All acceptance criteria were met.  
F. Samples: Sample analyses proceeded normally.  
G. Other:

I certify that this data package is in compliance with the terms and conditions agreed to by Advanced Environmental Laboratories, Inc. and by the client, both technically and for completeness, except for the conditions detailed above. The Technical Director or his designee, as verified by the following signature, has authorized release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette: