

BOARD OF COUNTY COMMISSIONERS

Kevin Beckner  
Victor D. Crist  
Ken Hagan  
Al Higginbotham  
Lesley "Les" Miller, Jr.  
Sandra L. Murman  
Mark Sharpe



Office of the County Administrator  
Michael S. Merrill

CHIEF ADMINISTRATIVE OFFICER  
Helene Marks

CHIEF FINANCIAL ADMINISTRATOR  
Bonnie M. Wise

DEPUTY COUNTY ADMINISTRATORS  
Lucia E. Garsys  
Sharon D. Subadan

January 9, 2013

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

Dept. Of Environmental Protection

JAN 15 2013

Southwest District

Re: **Southeast County Landfill  
Leachate Treatment Plant  
Effluent Analytical Data – Fourth Quarter (October-December, 2012)**

Dear Mr. Morris:

In accordance with Specific Condition E.9.b(2) of the Southeast County Landfill (SCLF) Operation Permit No. 35435-014-SO/01, the Hillsborough County Public Utilities Department (County), is pleased to provide the laboratory analytical data for the fourth quarter effluent sampling of the leachate treatment plant located at 15960 County Road 672 in Lithia, Florida.

The referenced permit requires the monthly sampling of the leachate treatment plant effluent and the 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), and Nitrate.


The daily pH values recorded by plant personnel during this quarterly period ranged from 7.6 - 8.1 pH units and the monthly analytical samples ranged from 7.67 - 8.29 pH units. These values represent compliance with the State of Florida Secondary Drinking Water Standard (FAC Ch. 62-550.320) for pH. County personnel collected the effluent samples from the dedicated sampling port at the treatment plant on October 2, November 7, and December 6, 2012.

All effluent samples were analyzed by our contracted laboratory, Test America, Inc. and the analytical data reports are provided herein for your technical review. No significant changes in the concentrations of any parameters were noted during this quarterly reporting period.

Mr. John Morris  
January 9, 2013  
Page 2


Should you have any questions or comments concerning the information provided in this submittal, please feel free to contact us at (813) 663-3221 or (813) 663-3222.

Sincerely,



Michael D. Townsel 1/9/2013  
Senior Hydrologist  
Public Utilities Department  
Environmental Services

Sincerely,



David S. Adams, P.G. 1/9/13  
Environmental Manager  
Public Utilities Department  
Environmental Services

DSA/mdt  
Enclosures

xc: Larry Ruiz, Public Utilities  
Andrew Berry, Public Utilities  
Ron Cope, EPC

G:\enviro\self\leachate plant\ltp-effluent-4thqtr2012.doc

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Tampa  
6712 Benjamin Road  
Suite 100  
Tampa, FL 33634  
Tel: (813)885-7427

TestAmerica Job ID: 660-50372-1  
Client Project/Site: Leachate Effluent

For:  
Hillsborough County Public Utilities Dep  
Solid Waste Management Group  
Brandon Support Operations Complex  
332 North Falkenburg Rd, 2nd Floor  
Tampa, Florida 33619

Attn: David Adams



Authorized for release by:  
10/16/2012 4:03:24 PM

Nancy Robertson  
Project Manager II  
nancy.robertson@testamericainc.com

### LINKS

Review your project  
results through

**Total Access**

Have a Question?

**Ask  
The  
Expert**

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Definitions/Glossary . . . . .	5
Detection Summary . . . . .	6
Client Sample Results . . . . .	7
QC Sample Results . . . . .	9
QC Association Summary . . . . .	12
Lab Chronicle . . . . .	14
Method Summary . . . . .	15
Certification Summary . . . . .	16
Chain of Custody . . . . .	18
Receipt Checklists . . . . .	21

## Sample Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-50372-1	LEACHATE EFFLUENT	Water	10/02/12 11:40	10/02/12 14:10
660-50372-2	BLANK EQUIPMENT	Water	10/02/12 11:30	10/02/12 14:10

## Case Narrative

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

---

Job ID: 660-50372-1

---

Laboratory: TestAmerica Tampa

Narrative

Job Narrative  
660-50372-1

### Comments

No additional comments.

### Receipt

The samples were received on 10/2/2012 2:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.2° C.

### General Chemistry

Method SM 5220D: The matrix spike (MS) recovery for batch 252123 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria. The sample is flagged with J3.

No other analytical or quality issues were noted.

## Definitions/Glossary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

### Qualifiers

#### General Chemistry

Qualifier	Qualifier Description
U	Indicates that 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.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
D	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Detection Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

### Client Sample ID: LEACHATE EFFLUENT

Lab Sample ID: 660-50372-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	5100		250	250	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	14		1.0	1.0	mg/L	1		SM 2540D	Total/NA
Chemical Oxygen Demand	530		20	6.3	mg/L	1		SM 5220D	Total/NA
Field pH	8.00				SU	1		Field Sampling	Total/NA
Field Temperature	31.48				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	5.80				mg/L	1		Field Sampling	Total/NA
Specific Conductance	6009				umhos/cm	1		Field Sampling	Total/NA

### Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-50372-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chemical Oxygen Demand	11	I J3	20	6.3	mg/L	1		SM 5220D	Total/NA



## Client Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

**Client Sample ID: LEACHATE EFFLUENT**

**Lab Sample ID: 660-50372-1**

Date Collected: 10/02/12 11:40

Matrix: Water

Date Received: 10/02/12 14:10

### General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	mg/L			10/02/12 20:01	1
Total Dissolved Solids	5100		250	250	mg/L			10/04/12 09:38	1
Total Suspended Solids	14		1.0	1.0	mg/L			10/05/12 08:58	1
Biochemical Oxygen Demand	12	U	12	12	mg/L			10/03/12 08:54	1
Chemical Oxygen Demand	530		20	6.3	mg/L			10/08/12 13:12	1

### Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	8.00				SU			10/02/12 11:40	1
Field Temperature	31.48				Degrees C			10/02/12 11:40	1
Oxygen, Dissolved	5.80				mg/L			10/02/12 11:40	1
Specific Conductance	6009				umhos/cm			10/02/12 11:40	1

## Client Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-50372-2

Date Collected: 10/02/12 11:30

Matrix: Water

Date Received: 10/02/12 14:10

### General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	mg/L			10/02/12 20:01	1
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			10/04/12 09:38	1
Total Suspended Solids	1.0	U	1.0	1.0	mg/L			10/05/12 06:58	1
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			10/03/12 08:54	1
Chemical Oxygen Demand	11	I J3	20	6.3	mg/L			10/08/12 13:12	1

# QC Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

## Method: 353.2 - Nitrate

Lab Sample ID: LCS 660-129850/13

Matrix: Water

Analysis Batch: 129850

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.500	0.502		mg/L		100	90 - 110

Lab Sample ID: 660-50372-1 MS

Matrix: Water

Analysis Batch: 129850

Client Sample ID: LEACHATE EFFLUENT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.16		0.500	0.647		mg/L		98	90 - 110

Lab Sample ID: 660-50372-1 MSD

Matrix: Water

Analysis Batch: 129850

Client Sample ID: LEACHATE EFFLUENT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.16		0.500	0.659		mg/L		101	90 - 110	2	30

Lab Sample ID: LCS 660-129911/4

Matrix: Water

Analysis Batch: 129911

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	1.00	1.01		mg/L		101	90 - 110

Lab Sample ID: 660-50247-A-1 MS

Matrix: Water

Analysis Batch: 129911

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.10	U	1.00	0.908		mg/L		91	90 - 110

Lab Sample ID: 660-50247-A-1 MSD

Matrix: Water

Analysis Batch: 129911

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.10	U	1.00	0.903		mg/L		90	90 - 110	1	30

Lab Sample ID: MB 660-130174/3

Matrix: Water

Analysis Batch: 130174

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	mg/L			10/02/12 20:01	1

Lab Sample ID: MB 660-130233/2

Matrix: Water

Analysis Batch: 130233

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	mg/L			10/02/12 20:01	1

## QC Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

### Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 660-129931/1

Matrix: Water

Analysis Batch: 129931

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			10/04/12 09:38	1

Lab Sample ID: LCS 660-129931/2

Matrix: Water

Analysis Batch: 129931

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	10000	9900		mg/L		99	80 - 120

Lab Sample ID: 640-40555-M-1 DU

Matrix: Water

Analysis Batch: 129931

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	350		336		mg/L		4	20

### Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 660-129974/1

Matrix: Water

Analysis Batch: 129974

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.0	U	1.0	1.0	mg/L			10/05/12 06:58	1

Lab Sample ID: LCS 660-129974/2

Matrix: Water

Analysis Batch: 129974

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	96.8		mg/L		97	80 - 120

Lab Sample ID: 660-50372-1 DU

Matrix: Water

Analysis Batch: 129974

Client Sample ID: LEACHATE EFFLUENT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	14		15.2		mg/L		11	20

### Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 660-129863/2 SCB

Matrix: Water

Analysis Batch: 129863

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			10/03/12 08:54	1

# QC Sample Results

Client Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

## Method: SM 5210B - BOD, 5-Day (Continued)

Lab Sample ID: USB 660-129863/1 USB

Matrix: Water

Analysis Batch: 129863

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			10/03/12 08:54	1

Lab Sample ID: LCS 660-129863/3

Matrix: Water

Analysis Batch: 129863

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	198	185		mg/L		93	85 - 115

Lab Sample ID: 660-50370-C-1 DU

Matrix: Water

Analysis Batch: 129863

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Biochemical Oxygen Demand	1200		1170		mg/L		1	20

## Method: SM 5220D - COD

Lab Sample ID: MB 680-252123/3

Matrix: Water

Analysis Batch: 252123

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	6.3	U	20	6.3	mg/L			10/08/12 13:12	1

Lab Sample ID: LCS 680-252123/4

Matrix: Water

Analysis Batch: 252123

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	100	101		mg/L		101	90 - 110

Lab Sample ID: 660-50372-2 MS

Matrix: Water

Analysis Batch: 252123

Client Sample ID: BLANK EQUIPMENT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	11	I J3	100	84.4	J3	mg/L		74	90 - 110

Lab Sample ID: 660-50372-2 MSD

Matrix: Water

Analysis Batch: 252123

Client Sample ID: BLANK EQUIPMENT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	11	I J3	100	112		mg/L		102	90 - 110	28	30

## QC Association Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

### General Chemistry

#### Analysis Batch: 129850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50372-1 MS	LEACHATE EFFLUENT	Total/NA	Water	353.2	
660-50372-1 MSD	LEACHATE EFFLUENT	Total/NA	Water	353.2	
LCS 660-129850/13	Lab Control Sample	Total/NA	Water	353.2	
MB 660-129850/12	Method Blank	Total/NA	Water	353.2	

#### Analysis Batch: 129863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50370-C-1 DU	Duplicate	Total/NA	Water	SM 5210B	
660-50372-1	LEACHATE EFFLUENT	Total/NA	Water	SM 5210B	
660-50372-2	BLANK EQUIPMENT	Total/NA	Water	SM 5210B	
LCS 660-129863/3	Lab Control Sample	Total/NA	Water	SM 5210B	
SCB 660-129863/2 SCB	Method Blank	Total/NA	Water	SM 5210B	
USB 660-129863/1 USB	Method Blank	Total/NA	Water	SM 5210B	

#### Analysis Batch: 129911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50247-A-1 MS	Matrix Spike	Total/NA	Water	353.2	
660-50247-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	
LCS 660-129911/4	Lab Control Sample	Total/NA	Water	353.2	
MB 660-129911/3	Method Blank	Total/NA	Water	353.2	

#### Analysis Batch: 129931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-40555-M-1 DU	Duplicate	Total/NA	Water	SM 2540C	
660-50372-1	LEACHATE EFFLUENT	Total/NA	Water	SM 2540C	
660-50372-2	BLANK EQUIPMENT	Total/NA	Water	SM 2540C	
LCS 660-129931/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-129931/1	Method Blank	Total/NA	Water	SM 2540C	

#### Analysis Batch: 129974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50372-1	LEACHATE EFFLUENT	Total/NA	Water	SM 2540D	
660-50372-1 DU	LEACHATE EFFLUENT	Total/NA	Water	SM 2540D	
660-50372-2	BLANK EQUIPMENT	Total/NA	Water	SM 2540D	
LCS 660-129974/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 660-129974/1	Method Blank	Total/NA	Water	SM 2540D	

#### Analysis Batch: 130174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50372-1	LEACHATE EFFLUENT	Total/NA	Water	353.2	
MB 660-130174/3	Method Blank	Total/NA	Water	353.2	

#### Analysis Batch: 130233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50372-2	BLANK EQUIPMENT	Total/NA	Water	353.2	
MB 660-130233/2	Method Blank	Total/NA	Water	353.2	

#### Analysis Batch: 252123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50372-1	LEACHATE EFFLUENT	Total/NA	Water	SM 5220D	
660-50372-2	BLANK EQUIPMENT	Total/NA	Water	SM 5220D	
660-50372-2 MS	BLANK EQUIPMENT	Total/NA	Water	SM 5220D	

## QC Association Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

### General Chemistry (Continued)

#### Analysis Batch: 252123 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50372-2 MSD	BLANK EQUIPMENT	Total/NA	Water	SM 5220D	
LCS 660-252123/4	Lab Control Sample	Total/NA	Water	SM 5220D	
MB 660-252123/3	Method Blank	Total/NA	Water	SM 5220D	

### Field Service / Mobile Lab

#### Analysis Batch: 129867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50372-1	LEACHATE EFFLUENT	Total/NA	Water	Field Sampling	

## Lab Chronicle

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

Client Sample ID: LEACHATE EFFLUENT

Lab Sample ID: 660-50372-1

Date Collected: 10/02/12 11:40

Matrix: Water

Date Received: 10/02/12 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5210B		1	129863	10/03/12 08:54	AG	TAL TAM
Total/NA	Analysis	SM 2540C		1	129931	10/04/12 09:38	TO	TAL TAM
Total/NA	Analysis	SM 2540D		1	129974	10/05/12 06:58	TO	TAL TAM
Total/NA	Analysis	353.2		1	130174	10/02/12 20:01	RWF	TAL TAM
Total/NA	Analysis	SM 5220D		1	252123	10/08/12 13:12	TAR	TAL SAV
Total/NA	Analysis	Field Sampling		1	129867	10/02/12 11:40		TAL TAM

Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-50372-2

Date Collected: 10/02/12 11:30

Matrix: Water

Date Received: 10/02/12 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5210B		1	129863	10/03/12 08:54	AG	TAL TAM
Total/NA	Analysis	SM 2540C		1	129931	10/04/12 09:38	TO	TAL TAM
Total/NA	Analysis	SM 2540D		1	129974	10/05/12 06:58	TO	TAL TAM
Total/NA	Analysis	353.2		1	130233	10/02/12 20:01	RWF	TAL TAM
Total/NA	Analysis	SM 5220D		1	252123	10/08/12 13:12	TAR	TAL SAV

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427



## Method Summary

Client: Hillsborough County Public Utilities Dep.  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

Method	Method Description	Protocol	Laboratory
353.2	Nitrate	MCAWW	TAL TAM
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL TAM
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL TAM
SM 5210B	BOD, 5-Day	SM	TAL TAM
SM 5220D	COD	SM	TAL SAV
Field Sampling	Field Sampling	EPA	TAL TAM

### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

## Certification Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

### Laboratory: TestAmerica Tampa

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40610	06-30-13
Florida	NELAC	4	E84282	06-30-13
Georgia	State Program	4	905	11-30-12
USDA	Federal		P330-11-00177	04-20-14

### Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	02-28-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13
California	NELAC	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAC	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-12
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAC	5	200022	11-30-12
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAC	6	30690	06-30-13
Louisiana	NELAC	6	LA100015	12-31-12
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAC	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAC	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAC	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
Rhode Island	State Program	1	LAO00244	12-30-12
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAC	6	T104704185-08-TX	11-30-12
USDA	Federal		SAV 3-04	04-07-14
Vermont	State Program	1	87052	11-16-12
Virginia	NELAC	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13

## Certification Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-50372-1

### Laboratory: TestAmerica Savannah (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

660-50372

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE COC SHEET  
LEACHATE TRUCKS AND TANKS MONITORING PROGRAM

LEACHATE PLANT

PRECLEANED SAMPLE CONTAINERS:

RELINQUISHED BY: Carol McHulley  
ACCEPTED BY: [Signature]

REP. OF CONTRACT LAB.  
REP. OF SOLID WASTE DEPT.

DATE | TIME  
9/25/12 | 1245  
10-2-12 | 2:50

LOCATION: LEACHATE EFFLUENT

SAMPLE MATRIX: WATER OTHER MATRIX: \_\_\_\_\_

PERSONAL ENGAGED IN SAMPLE COLLECTION: ☒ A. Balloon ☒ JL ☐

FIELD PARAMETERS:

BY	TIME	TEMP	COND	PH	DO	TURB
JL AB	31.48	60.9	8	8.00	5.40	N/A
	11:40	31.48	6009			

SAMPLE CONTAINERS

QTY	CONTAINER DESCRIPTION	QTY	CONTAINER DESCRIPTION	PRESERVED
	40 ml VIAL		40 ml VIAL	
	125 ml. PLASTIC		125 ml. PLASTIC	
	125 ml GLASS		125 ml GLASS	
1	250 ml. PLASTIC	1	250 ml. PLASTIC	
	250 ml. GLASS		250 ml. GLASS	
	500 ml. PLASTIC		500 ml. PLASTIC	
	500 ml. GLASS		500 ml. GLASS	
3	LITER PLASTIC		LITER PLASTIC	
	LITER GLASS		LITER GLASS	
	BACTERIAL		BACTERIAL	

5 TOTAL No. OF SAMPLES COLLECTED:

COLORS & SHEENS: YES N/A NO

COLLECTED  
DATE | TIME  
10-2-12 | 11:40

ANALYSIS REQUESTED:

MONTHLY LEACHATE PLANT PARAMETERS BOD TSS NITRATE TDS COD

PRESERVED SAMPLES PH < 2.0 YES SAMPLE STORAGE: COOLER & ICE TO 4.0 c

ABOVE LISTED SAMPLES:

RELINQUISHED BY: AB  
ACCEPTED BY: [Signature]

DATE | TIME  
10-2-12 | 2:10  
10-2-12 | 2:10

COMMENT'S: 120 #0070 5.2% CU-07

660-50372

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE COC SHEET  
LEACHATE TRUCKS AND TANKS MONITORING PROGRAM  
LEACHATE PLANT EQUIPMENT BLANK

PRECLEANED SAMPLE CONTAINERS: \_\_\_\_\_ DATE | TIME  
 RELINQUISHED BY: Caryl McHulley REP. OF CONTRACT LAB. 9/25/12 1245  
 ACCEPTED BY: B. J. REP. OF SOLID WASTE DEPT. 10-2-12 2:50

LOCATION: EQUIPMENT BLANK SAMPLE MATRIX: WATER OTHER MATRIX: \_\_\_\_\_  
 PERSONAL ENGAGED IN SAMPLE COLLECTION: ☒ A. Balloon ☒ J. C. ☐

FIELD PARAMETERS: N/A

SAMPLE CONTAINERS

QTY	CONTAINER DESCRIPTION	QTY	CONTAINER DESCRIPTION	PRESERVED
	40 ml VIAL		40 ml VIAL	
	125 ml. PLASTIC		125 ml. PLASTIC	
	125 ml GLASS		125 ml GLASS	
1	250 ml. PLASTIC	1	250 ml. PLASTIC	
	250 ml. GLASS		250 ml. GLASS	
	500 ml. PLASTIC		500 ml. PLASTIC	
	500 ml. GLASS		500 ml. GLASS	
3	LITER PLASTIC		LITER PLASTIC	
	LITER GLASS		LITER GLASS	
	BACTERIAL		BACTERIAL	

5 TOTAL No. OF SAMPLES COLLECTED:

COLORS & SHEENS: YES N/A NO

COLLECTED  
 DATE | TIME  
10-2-12 11:30

ANALYSIS REQUESTED:

MONTHLY LEACHATE PLANT PARAMETERS BOD TSS NITRATE TDS COD

PRESERVED SAMPLES PH < 2.0 YES SAMPLE STORAGE: COOLER & ICE TO 4.0 C

ABOVE LISTED SAMPLES: \_\_\_\_\_ DATE | TIME  
 RELINQUISHED BY: A. J. REP. OF SOLID WASTE DEPT. 10-2-12 2:10  
 ACCEPTED BY: Emilia Gandy REP. OF CONTRACT LAB. 10-2-12 2:10

COMMENT'S: WO # 0070

Phone (813) 885-7427 Fax (813) 885-7049

**THE LEADER IN ENVIRONMENTAL TESTING**

10/16/2012

## Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-50372-1

Login Number: 50372

List Source: TestAmerica Tampa

List Number: 1

Creator: Snead, Joshua

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $< 6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-50372-1

Login Number: 50372

List Number: 1

Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

List Creation: 10/03/12 10:44 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Tampa  
6712 Benjamin Road  
Suite 100  
Tampa, FL 33634  
Tel: (813)885-7427

TestAmerica Job ID: 660-51039-1  
Client Project/Site: Leachate Effluent

For:  
Hillsborough County Public Utilities Dep  
Solid Waste Management Group  
Brandon Support Operations Complex  
332 North Falkenburg Rd, 2nd Floor  
Tampa, Florida 33619

Attn: David Adams



Authorized for release by:  
11/19/2012 8:47:11 AM

Nancy Robertson  
Project Manager II  
nancy.robertson@testamericainc.com

### LINKS

Review your project  
results through

**Total Access**

Have a Question?

**Ask  
The  
Expert**

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Case Narrative . . . . .	4
Detection Summary . . . . .	5
Client Sample Results . . . . .	6
QC Sample Results . . . . .	8
QC Association Summary . . . . .	11
Lab Chronicle . . . . .	12
Certification Summary . . . . .	13
Method Summary . . . . .	15
Sample Summary . . . . .	16
Chain of Custody . . . . .	17
Receipt Checklists . . . . .	19

## Definitions/Glossary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

### Qualifiers

#### General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
RER	Relative error ratio
DER	Duplicate error ratio (normalized absolute difference)
DLC	Decision level concentration
RL	Reporting Limit or Requested Limit (Radiochemistry only)

## Case Narrative

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

Job ID: 660-51039-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative  
660-51039-1

### Comments

No additional comments.

### Receipt

The samples were received on 11/7/2012 3:32 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

### General Chemistry

Method 353.2: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 131331 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method SM 5210B: The following sample was reported as 240U due to the dilution and analytical requirements for SM5210B.

No other analytical or quality issues were noted.

## Detection Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

**Client Sample ID: BLANK EQUIPMENT**

**Lab Sample ID: 660-51039-1**

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chemical Oxygen Demand	17	I	20	6.3	mg/L	1		SM 5220D	Total/NA

**Client Sample ID: LEACHATE EFFLUENT**

**Lab Sample ID: 660-51039-2**

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	5700		250	250	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	21		1.0	1.0	mg/L	1		SM 2540D	Total/NA
Chemical Oxygen Demand	620		20	6.3	mg/L	1		SM 5220D	Total/NA
Nitrate as N - DL	120		100	20	mg/L	200		353.2	Total/NA
Field pH	7.67				SU	1		Field Sampling	Total/NA
Field Temperature	24.83				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	5.78				mg/L	1		Field Sampling	Total/NA
Specific Conductance	10909				umhos/cm	1		Field Sampling	Total/NA

5

## Client Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-51039-1

Date Collected: 11/07/12 12:20

Matrix: Water

Date Received: 11/07/12 15:32

General Chemistry									
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	mg/L			11/08/12 14:15	1
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			11/09/12 09:19	1
Total Suspended Solids	1.0	U	1.0	1.0	mg/L			11/09/12 06:27	1
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			11/08/12 10:46	1
Chemical Oxygen Demand	17	I	20	6.3	mg/L			11/10/12 11:14	1

# Client Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

Client Sample ID: LEACHATE EFFLUENT

Lab Sample ID: 660-51039-2

Date Collected: 11/07/12 12:30

Matrix: Water

Date Received: 11/07/12 15:32

## General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5700		250	250	mg/L			11/09/12 09:19	1
Total Suspended Solids	21		1.0	1.0	mg/L			11/09/12 06:27	1
Biochemical Oxygen Demand	240	U	240	240	mg/L			11/08/12 10:46	10
Chemical Oxygen Demand	620		20	6.3	mg/L			11/10/12 11:14	1

## General Chemistry - DL

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	120		100	20	mg/L			11/08/12 14:13	200

## Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.67				SU			11/07/12 12:30	1
Field Temperature	24.83				Degrees C			11/07/12 12:30	1
Oxygen, Dissolved	5.78				mg/L			11/07/12 12:30	1
Specific Conductance	10909				umhos/cm			11/07/12 12:30	1

# QC Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

## Method: 353.2 - Nitrate

Lab Sample ID: MB 660-131331/12

Matrix: Water

Analysis Batch: 131331

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	mg/L			11/08/12 14:02	1

Lab Sample ID: LCS 660-131331/13

Matrix: Water

Analysis Batch: 131331

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	1.00	0.992		mg/L		99	90 - 110
Nitrite as N	0.500	0.519		mg/L		104	90 - 110

Lab Sample ID: 660-51017-B-1 MS

Matrix: Water

Analysis Batch: 131331

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.10	U J3	1.00	0.803	J3	mg/L		80	90 - 110
Nitrite as N	0.10	U	0.500	0.452	I	mg/L		90	90 - 110

Lab Sample ID: 660-51017-B-1 MSD

Matrix: Water

Analysis Batch: 131331

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.10	U J3	1.00	0.809	J3	mg/L		81	90 - 110	1	30
Nitrite as N	0.10	U	0.500	0.456	I	mg/L		91	90 - 110	1	30

## Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 660-131312/1

Matrix: Water

Analysis Batch: 131312

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			11/09/12 09:19	1

Lab Sample ID: LCS 660-131312/2

Matrix: Water

Analysis Batch: 131312

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	10000	9930		mg/L		99	80 - 120

Lab Sample ID: 660-51017-A-2 DU

Matrix: Water

Analysis Batch: 131312

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	200		208		mg/L		4	20



# QC Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

## Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 660-131306/1

Matrix: Water

Analysis Batch: 131306

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	1.0	U	1.0	1.0	mg/L			11/09/12 08:27	1

Lab Sample ID: LCS 660-131306/2

Matrix: Water

Analysis Batch: 131306

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				Limits
Total Suspended Solids	100	96.0		mg/L		96	80 - 120

Lab Sample ID: 660-51039-2 DU

Matrix: Water

Analysis Batch: 131306

Client Sample ID: LEACHATE EFFLUENT

Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Result	Qualifier				Limit
Total Suspended Solids	21		22.8		mg/L		7	20

## Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 660-131271/2 SCB

Matrix: Water

Analysis Batch: 131271

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB	SCB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			11/08/12 08:21	1

Lab Sample ID: USB 660-131271/1 USB

Matrix: Water

Analysis Batch: 131271

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB	USB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			11/08/12 08:21	1

Lab Sample ID: LCS 660-131271/3

Matrix: Water

Analysis Batch: 131271

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				Limits
Biochemical Oxygen Demand	198	180		mg/L		91	85 - 115

Lab Sample ID: 660-50986-R-1 DU

Matrix: Water

Analysis Batch: 131271

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Result	Qualifier				Limit
Biochemical Oxygen Demand	3.0	U	3.0	U	mg/L		NC	20

# QC Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

## Method: SM 5220D - COD

Lab Sample ID: MB 680-255914/3

Matrix: Water

Analysis Batch: 255914

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	6.3	U	20	6.3	mg/L			11/10/12 11:14	1

Lab Sample ID: LCS 680-255914/4

Matrix: Water

Analysis Batch: 255914

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	100	105		mg/L		105	90 - 110

Lab Sample ID: 680-84399-K-2 MS

Matrix: Water

Analysis Batch: 255914

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	6.3	U	100	103		mg/L		103	90 - 110

Lab Sample ID: 680-84399-K-2 MSD

Matrix: Water

Analysis Batch: 255914

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	6.3	U	100	105		mg/L		105	90 - 110	2	30

## QC Association Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

### General Chemistry

#### Analysis Batch: 131271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-50986-R-1 DU	Duplicate	Total/NA	Water	SM 5210B	
660-51039-1	BLANK EQUIPMENT	Total/NA	Water	SM 5210B	
660-51039-2	LEACHATE EFFLUENT	Total/NA	Water	SM 5210B	
LCS 660-131271/3	Lab Control Sample	Total/NA	Water	SM 5210B	
SCB 660-131271/2 SCB	Method Blank	Total/NA	Water	SM 5210B	
USB 660-131271/1 USB	Method Blank	Total/NA	Water	SM 5210B	

#### Analysis Batch: 131306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51039-1	BLANK EQUIPMENT	Total/NA	Water	SM 2540D	
660-51039-2	LEACHATE EFFLUENT	Total/NA	Water	SM 2540D	
660-51039-2 DU	LEACHATE EFFLUENT	Total/NA	Water	SM 2540D	
LCS 660-131306/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 660-131306/1	Method Blank	Total/NA	Water	SM 2540D	

#### Analysis Batch: 131312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51017-A-2 DU	Duplicate	Total/NA	Water	SM 2540C	
660-51039-1	BLANK EQUIPMENT	Total/NA	Water	SM 2540C	
660-51039-2	LEACHATE EFFLUENT	Total/NA	Water	SM 2540C	
LCS 660-131312/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-131312/1	Method Blank	Total/NA	Water	SM 2540C	

#### Analysis Batch: 131331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51017-B-1 MS	Matrix Spike	Total/NA	Water	353.2	
660-51017-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	
660-51039-1	BLANK EQUIPMENT	Total/NA	Water	353.2	
660-51039-2 - DL	LEACHATE EFFLUENT	Total/NA	Water	353.2	
LCS 660-131331/13	Lab Control Sample	Total/NA	Water	353.2	
MB 660-131331/12	Method Blank	Total/NA	Water	353.2	

#### Analysis Batch: 255914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51039-1	BLANK EQUIPMENT	Total/NA	Water	SM 5220D	
660-51039-2	LEACHATE EFFLUENT	Total/NA	Water	SM 5220D	
680-84399-K-2 MS	Matrix Spike	Total/NA	Water	SM 5220D	
680-84399-K-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5220D	
LCS 680-255914/4	Lab Control Sample	Total/NA	Water	SM 5220D	
MB 680-255914/3	Method Blank	Total/NA	Water	SM 5220D	

### Field Service / Mobile Lab

#### Analysis Batch: 131321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51039-2	LEACHATE EFFLUENT	Total/NA	Water	Field Sampling	

# Lab Chronicle

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

**Client Sample ID: BLANK EQUIPMENT**

**Lab Sample ID: 660-51039-1**

**Date Collected: 11/07/12 12:20**

**Matrix: Water**

**Date Received: 11/07/12 15:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5210B		1	131271	11/08/12 10:46	AG	TAL TAM
Total/NA	Analysis	SM 2540D		1	131306	11/09/12 06:27	TO	TAL TAM
Total/NA	Analysis	SM 2540C		1	131312	11/09/12 09:19	TO	TAL TAM
Total/NA	Analysis	353.2		1	131331	11/08/12 14:15	KW	TAL TAM
Total/NA	Analysis	SM 5220D		1	255914	11/10/12 11:14	TAR	TAL SAV

**Client Sample ID: LEACHATE EFFLUENT**

**Lab Sample ID: 660-51039-2**

**Date Collected: 11/07/12 12:30**

**Matrix: Water**

**Date Received: 11/07/12 15:32**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5210B		10	131271	11/08/12 10:46	AG	TAL TAM
Total/NA	Analysis	SM 2540D		1	131306	11/09/12 06:27	TO	TAL TAM
Total/NA	Analysis	SM 2540C		1	131312	11/09/12 09:19	TO	TAL TAM
Total/NA	Analysis	353.2	DL	200	131331	11/08/12 14:13	KW	TAL TAM
Total/NA	Analysis	SM 5220D		1	255914	11/10/12 11:14	TAR	TAL SAV
Total/NA	Analysis	Field Sampling		1	131321	11/07/12 12:30		TAL TAM

## Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

## Certification Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

### Laboratory: TestAmerica Tampa

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40610	06-30-13
Florida	NELAC	4	E84282	06-30-13
Georgia	State Program	4	905	11-30-12
USDA	Federal		P330-11-00177	04-20-14

### Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	02-28-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13
California	NELAC	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAC	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-12
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAC	5	200022	11-30-12
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAC	6	30690	06-30-13
Louisiana	NELAC	6	LA100015	12-31-12
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAC	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAC	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAC	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
Rhode Island	State Program	1	LA000244	12-30-12
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAC	6	T104704185-08-TX	11-30-12
USDA	Federal		SAV 3-04	04-07-14
Vermont	State Program	1	87052	11-16-12
Virginia	NELAC	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13

## Certification Summary

Client: Hillsborough County Public Utilities Den  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

### Laboratory: TestAmerica Savannah (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

## Method Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

Method	Method Description	Protocol	Laboratory
353.2	Nitrate	MCAWW	TAL TAM
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL TAM
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL TAM
SM 5210B	BOD, 5-Day	SM	TAL TAM
SM 5220D	COD	SM	TAL SAV
Field Sampling	Field Sampling	EPA	TAL TAM

### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

## Sample Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Effluent

TestAmerica Job ID: 660-51039-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-51039-1	BLANK EQUIPMENT	Water	11/07/12 12:20	11/07/12 15:32
660-51039-2	LEACHATE EFFLUENT	Water	11/07/12 12:30	11/07/12 15:32



660-51039

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE COC SHEET  
**LEACHATE TRUCKS AND TANKS MONITORING PROGRAM**  
**LEACHATE PLANT EQUIPMENT BLANK**

PRECLEANED SAMPLE CONTAINERS:

RELINQUISHED BY: Erika E. Gentry

REP. OF CONTRACT LAB.

DATE | TIME

ACCEPTED BY: AJ

REP. OF SOLID WASTE DEPT.

10/21/12 | 1045  
11-2-12 | 2:00

LOCATION: EQUIPMENT BLANK

SAMPLE MATRIX: WATER OTHER MATRIX: \_\_\_\_\_

PERSONAL ENGAGED IN SAMPLE COLLECTION: ☒ A. Balloon ☒ JLC ☐

FIELD PARAMETERS: N/A

**SAMPLE CONTAINERS**

QTY	CONTAINER DESCRIPTION	QTY	CONTAINER DESCRIPTION	PRESERVED
	40 ml VIAL		40 ml VIAL	
	125 ml. PLASTIC		125 ml. PLASTIC	
	125 ml GLASS		125 ml GLASS	
<u>1</u>	250 ml. PLASTIC	<u>1</u>	250 ml. PLASTIC	
	250 ml. GLASS		250 ml. GLASS	
	500 ml. PLASTIC		500 ml. PLASTIC	
	500 ml. GLASS		500 ml. GLASS	
<u>3</u>	LITER PLASTIC		LITER PLASTIC	
	LITER GLASS		LITER GLASS	
	BACTERIAL		BACTERIAL	

5 TOTAL No. OF SAMPLES COLLECTED:

COLORS & SHEENS: YES N/A NO

COLLECTED

DATE | TIME

11-7-12 | 1220

**ANALYSIS REQUESTED:**

MONTHLY LEACHATE PLANT PARAMETERS

BOD

TSS

NITRATE

TDS

COD

PRESERVED SAMPLES PH < 2.0 YES SAMPLE STORAGE: COOLER & ICE TO 4.0 c

ABOVE LISTED SAMPLES:

RELINQUISHED BY: AJ

REP. OF SOLID WASTE DEPT.

DATE | TIME

ACCEPTED BY: AJ

REP. OF CONTRACT LAB.

11-7-12 | 3:32  
11-7-12 | 3:32

COMMENTS: W04

3.3 cu-07

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE COC SHEET  
LEACHATE TRUCKS AND TANKS MONITORING PROGRAM

LEACHATE PLANT

PRECLEANED SAMPLE CONTAINERS:

RELINQUISHED BY: Emilio Edwards

REP. OF CONTRACT LAB.

DATE | TIME

ACCEPTED BY: A. Balloon

REP. OF SOLID WASTE DEPT.

10/31/12 | 1045  
11-2-12 | 2:00

LOCATION: LEACHATE EFFLUENT

SAMPLE MATRIX: WATER OTHER MATRIX:       

PERSONAL ENGAGED IN SAMPLE COLLECTION: ☒ A. Balloon ☒ A. Clayton ☐       

FIELD PARAMETERS:

BY	TIME	TEMP	COND	PH	DO	TURB
<u>A3</u>	<u>12:30</u>	<u>24.83</u>	<u>10909</u>	<u>7.67</u>	<u>5.78</u>	<u>N/A</u>

SAMPLE CONTAINERS

QTY	CONTAINER DESCRIPTION	QTY	CONTAINER DESCRIPTION	PRESERVED
	40 ml VIAL		40 ml VIAL	
	125 ml. PLASTIC		125 ml. PLASTIC	
	125 ml GLASS		125 ml GLASS	
<u>1</u>	250 ml. PLASTIC	<u>1</u>	250 ml. PLASTIC	
	250 ml. GLASS		250 ml. GLASS	
	500 ml. PLASTIC		500 ml. PLASTIC	
	500 ml. GLASS		500 ml. GLASS	
<u>3</u>	LITER PLASTIC		LITER PLASTIC	
	LITER GLASS		LITER GLASS	
	BACTERIAL		BACTERIAL	

5 TOTAL No. OF SAMPLES COLLECTED:

COLORS & SHEENS: YES N/A NO

COLLECTED  
DATE | TIME

11-7-12 | 12:30

ANALYSIS REQUESTED:

~~MONTHLY LEACHATE PLANT PARAMETERS~~ ~~BOD~~ ~~TSS~~ ~~NITRATE~~ ~~TDS~~ ~~COD~~

PRESERVED SAMPLES PH < 2.0 YES SAMPLE STORAGE: COOLER & ICE TO 4.0 c

ABOVE LISTED SAMPLES:

RELINQUISHED BY: A. Balloon

REP. OF SOLID WASTE DEPT.

DATE | TIME

ACCEPTED BY: A. Balloon

REP. OF CONTRACT LAB.

11-7-12 | 3:32  
11-7-12 | 3:32

COMMENTS: W07-0071

3.3 CU-07

## Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-51039-1

Login Number: 51039

List Source: TestAmerica Tampa

List Number: 1

Creator: McNulty, Carol

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-51039-1

Login Number: 51039

List Number: 1

Creator: Conner, Keaton

List Source: TestAmerica Savannah

List Creation: 11/09/12 10:29 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Tampa  
6712 Benjamin Road  
Suite 100  
Tampa, FL 33634  
Tel: (813)885-7427

TestAmerica Job ID: 660-51577-1  
Client Project/Site: Leachate Plant EFF

For:  
Hillsborough County Public Utilities Dep  
Solid Waste Management Group  
Brandon Support Operations Complex  
332 North Falkenburg Rd, 2nd Floor  
Tampa, Florida 33619

Attn: David Adams



Authorized for release by:  
12/24/2012 1:44:15 PM

Nancy Robertson  
Project Manager II  
nancy.robertson@testamericainc.com

### LINKS

Review your project  
results through  
**Total Access**

Have a Question?

**Ask  
The  
Expert**

Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



## Table of Contents

Cover Page .....	1
Table of Contents .....	2
Sample Summary .....	3
Case Narrative .....	4
Definitions/Glossary .....	5
Detection Summary .....	6
Client Sample Results .....	7
QC Sample Results .....	9
QC Association Summary .....	13
Lab Chronicle .....	15
Method Summary .....	16
Certification Summary .....	17
Chain of Custody .....	19
Receipt Checklists .....	21



## Sample Summary

Client: Hillsborough County Public Utilities Dept  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-51577-1	BLANK EQUIPMENT	Water	12/06/12 09:45	12/06/12 15:50
660-51577-2	LEACHATE EFFLUENT	Water	12/06/12 09:50	12/06/12 15:50

## Case Narrative

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

Job ID: 660-51577-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative  
660-51577-1

### Comments

No additional comments.

### Receipt

The samples were received on 12/6/2012 3:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice.  
The temperature of the cooler at receipt was 2.5° C.

### General Chemistry

No analytical or quality issues were noted.



## Definitions/Glossary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

### Qualifiers

#### General Chemistry

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

5

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☐	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Detection Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

### Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-51577-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	12		5.0	5.0	mg/L	1		SM 2540C	Total/NA

### Client Sample ID: LEACHATE EFFLUENT

Lab Sample ID: 660-51577-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	76		0.50	0.10	mg/L	1		353.2	Total/NA
Total Dissolved Solids	5800		50	50	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	31		1.0	1.0	mg/L	1		SM 2540D	Total/NA
Biochemical Oxygen Demand	19		12	12	mg/L	1		SM 5210B	Total/NA
Chemical Oxygen Demand	920		20	6.3	mg/L	1		SM 5220D	Total/NA
Field pH	8.29				SU	1		Field Sampling	Total/NA
Field Temperature	25.84				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	6.39				mg/L	1		Field Sampling	Total/NA
Specific Conductance	10466				umhos/cm	1		Field Sampling	Total/NA

TestAmerica Tampa

## Client Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-51577-1

Date Collected: 12/06/12 09:45

Matrix: Water

Date Received: 12/06/12 15:50

### General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Oil Fac
Nitrate as N	0.10	U	0.50	0.10	mg/L			12/12/12 07:40	1
Total Dissolved Solids	12		5.0	5.0	mg/L			12/11/12 14:07	1
Total Suspended Solids	1.0	U	1.0	1.0	mg/L			12/11/12 09:01	1
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			12/07/12 06:49	1
Chemical Oxygen Demand	6.3	U	20	6.3	mg/L			12/12/12 16:38	1

TestAmerica Tampa

## Client Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

**Client Sample ID: LEACHATE EFFLUENT**

**Lab Sample ID: 660-51577-2**

Date Collected: 12/06/12 09:50

Matrix: Water

Date Received: 12/06/12 15:50

### General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	76		0.50	0.10	mg/L			12/07/12 07:49	1
Total Dissolved Solids	5800		50	50	mg/L			12/11/12 14:07	1
Total Suspended Solids	31		1.0	1.0	mg/L			12/11/12 09:01	1
Biochemical Oxygen Demand	19		12	12	mg/L			12/07/12 06:49	1
Chemical Oxygen Demand	920		20	6.3	mg/L			12/12/12 16:38	1

### Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	8.29				SU			12/06/12 09:50	1
Field Temperature	25.84				Degrees C			12/06/12 09:50	1
Oxygen, Dissolved	6.39				mg/L			12/06/12 09:50	1
Specific Conductance	10466				umhos/cm			12/06/12 09:50	1

TestAmerica Tampa

# QC Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

## Method: 353.2 - Nitrate

Lab Sample ID: LCS 660-132231/13  
Matrix: Water  
Analysis Batch: 132231

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.500	0.505		mg/L		101	90 - 110

Lab Sample ID: 660-51558-G-7 MS  
Matrix: Water  
Analysis Batch: 132231

Client Sample ID: Matrix Spike  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.10	U	0.500	0.505		mg/L		101	90 - 110

Lab Sample ID: 660-51558-G-7 MSD  
Matrix: Water  
Analysis Batch: 132231

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.10	U	0.500	0.511		mg/L		102	90 - 110	1	30

Lab Sample ID: MB 660-132390/12  
Matrix: Water  
Analysis Batch: 132390

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	mg/L			12/12/12 07:40	1

Lab Sample ID: LCS 660-132390/13  
Matrix: Water  
Analysis Batch: 132390

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	1.00	1.10		mg/L		110	90 - 110
Nitrite as N	0.500	0.492	I	mg/L		98	90 - 110

Lab Sample ID: 660-51558-G-4 MS  
Matrix: Water  
Analysis Batch: 132390

Client Sample ID: Matrix Spike  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.10	U	1.00	0.981		mg/L		98	90 - 110
Nitrite as N	0.10	U	0.500	0.523		mg/L		105	90 - 110

Lab Sample ID: 660-51558-G-4 MSD  
Matrix: Water  
Analysis Batch: 132390

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.10	U	1.00	0.943		mg/L		94	90 - 110	4	30
Nitrite as N	0.10	U	0.500	0.523		mg/L		105	90 - 110	0	30

TestAmerica Tampa

# QC Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

## Method: 353.2 - Nitrate (Continued)

Lab Sample ID: MB 660-132733/2  
Matrix: Water  
Analysis Batch: 132733

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	mg/L			12/07/12 07:49	1

## Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 660-132352/1  
Matrix: Water  
Analysis Batch: 132352

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			12/11/12 14:07	1

Lab Sample ID: LCS 660-132352/2  
Matrix: Water  
Analysis Batch: 132352

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	10000	9910		mg/L		99	80 - 120

Lab Sample ID: 660-51577-2 DU  
Matrix: Water  
Analysis Batch: 132352

Client Sample ID: LEACHATE EFFLUENT  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	5800		5840		mg/L		0.7	20

## Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 660-132330/1  
Matrix: Water  
Analysis Batch: 132330

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.0	U	1.0	1.0	mg/L			12/11/12 09:01	1

Lab Sample ID: LCS 660-132330/2  
Matrix: Water  
Analysis Batch: 132330

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	98.4		mg/L		98	80 - 120

Lab Sample ID: 660-51577-2 DU  
Matrix: Water  
Analysis Batch: 132330

Client Sample ID: LEACHATE EFFLUENT  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	31		31.2		mg/L		0	20

TestAmerica Tampa

# QC Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

## Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 660-132213/2 SCB  
Matrix: Water  
Analysis Batch: 132213

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			12/07/12 06:46	1

Lab Sample ID: USB 660-132213/1 USB  
Matrix: Water  
Analysis Batch: 132213

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			12/07/12 06:46	1

Lab Sample ID: LCS 660-132213/3  
Matrix: Water  
Analysis Batch: 132213

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	197		mg/L		100	85 - 115

Lab Sample ID: 660-51587-G-3 DU  
Matrix: Water  
Analysis Batch: 132213

Client Sample ID: Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Biochemical Oxygen Demand	40	U	40	U	mg/L		NC	20

## Method: SM 5220D - COD

Lab Sample ID: MB 680-259743/3  
Matrix: Water  
Analysis Batch: 259743

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	6.3	U	20	6.3	mg/L			12/12/12 16:38	1

Lab Sample ID: LCS 680-259743/4  
Matrix: Water  
Analysis Batch: 259743

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	100	103		mg/L		103	90 - 110

Lab Sample ID: 660-51549-G-1 MS  
Matrix: Water  
Analysis Batch: 259743

Client Sample ID: Matrix Spike  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	11	I	100	103		mg/L		92	90 - 110

TestAmerica Tampa

## QC Sample Results

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

### Method: SM 5220D - COD (Continued)

Lab Sample ID: 660-51549-G-1 MSD

Matrix: Water

Analysis Batch: 259743

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits			
Chemical Oxygen Demand	11	I	100	103		mg/L		92	90 - 110	0		30



# QC Association Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

## General Chemistry

### Analysis Batch: 132213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51577-1	BLANK EQUIPMENT	Total/NA	Water	SM 5210B	
660-51577-2	LEACHATE EFFLUENT	Total/NA	Water	SM 5210B	
660-51587-G-3 DU	Duplicate	Total/NA	Water	SM 5210B	
LCS 660-132213/3	Lab Control Sample	Total/NA	Water	SM 5210B	
SCB 660-132213/2 SCB	Method Blank	Total/NA	Water	SM 5210B	
USB 660-132213/1 USB	Method Blank	Total/NA	Water	SM 5210B	

### Analysis Batch: 132231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51558-G-7 MS	Matrix Spike	Total/NA	Water	353.2	
660-51558-G-7 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	
LCS 660-132231/13	Lab Control Sample	Total/NA	Water	353.2	
MB 660-132231/12	Method Blank	Total/NA	Water	353.2	

### Analysis Batch: 132330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51577-1	BLANK EQUIPMENT	Total/NA	Water	SM 2540D	
660-51577-2	LEACHATE EFFLUENT	Total/NA	Water	SM 2540D	
660-51577-2 DU	LEACHATE EFFLUENT	Total/NA	Water	SM 2540D	
LCS 660-132330/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 660-132330/1	Method Blank	Total/NA	Water	SM 2540D	

### Analysis Batch: 132352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51577-1	BLANK EQUIPMENT	Total/NA	Water	SM 2540C	
660-51577-2	LEACHATE EFFLUENT	Total/NA	Water	SM 2540C	
660-51577-2 DU	LEACHATE EFFLUENT	Total/NA	Water	SM 2540C	
LCS 660-132352/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-132352/1	Method Blank	Total/NA	Water	SM 2540C	

### Analysis Batch: 132390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51558-G-4 MS	Matrix Spike	Total/NA	Water	353.2	
660-51558-G-4 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	
660-51577-1	BLANK EQUIPMENT	Total/NA	Water	353.2	
LCS 660-132390/13	Lab Control Sample	Total/NA	Water	353.2	
MB 660-132390/12	Method Blank	Total/NA	Water	353.2	

### Analysis Batch: 132733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51577-2	LEACHATE EFFLUENT	Total/NA	Water	353.2	
MB 660-132733/2	Method Blank	Total/NA	Water	353.2	

### Analysis Batch: 259743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51549-G-1 MS	Matrix Spike	Total/NA	Water	SM 5220D	
660-51549-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5220D	
660-51577-1	BLANK EQUIPMENT	Total/NA	Water	SM 5220D	
660-51577-2	LEACHATE EFFLUENT	Total/NA	Water	SM 5220D	
LCS 660-259743/4	Lab Control Sample	Total/NA	Water	SM 5220D	
MB 660-259743/3	Method Blank	Total/NA	Water	SM 5220D	

TestAmerica Tampa

## QC Association Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

### Field Service / Mobile Lab

Analysis Batch: 132286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-51577-2	LEACHATE EFFLUENT	Total/NA	Water	Field Sampling	

## Lab Chronicle

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

**Client Sample ID: BLANK EQUIPMENT**

**Lab Sample ID: 660-51577-1**

Date Collected: 12/06/12 09:45

Matrix: Water

Date Received: 12/06/12 15:50

Prop Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5210B		1	132213	12/07/12 06:49	AG	TAL TAM
Total/NA	Analysis	SM 2540D		1	132330	12/11/12 09:01	TO	TAL TAM
Total/NA	Analysis	SM 2540C		1	132352	12/11/12 14:07	TO	TAL TAM
Total/NA	Analysis	353.2		1	132390	12/12/12 07:40	RWF	TAL TAM
Total/NA	Analysis	SM 5220D		1	259743	12/12/12 16:38	TAR	TAL SAV

**Client Sample ID: LEACHATE EFFLUENT**

**Lab Sample ID: 660-51577-2**

Date Collected: 12/06/12 09:50

Matrix: Water

Date Received: 12/06/12 15:50

Prop Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5210B		1	132213	12/07/12 06:49	AG	TAL TAM
Total/NA	Analysis	SM 2540D		1	132330	12/11/12 09:01	TO	TAL TAM
Total/NA	Analysis	SM 2540C		1	132352	12/11/12 14:07	TO	TAL TAM
Total/NA	Analysis	353.2		1	132733	12/07/12 07:49	RWF	TAL TAM
Total/NA	Analysis	SM 5220D		1	259743	12/12/12 16:38	TAR	TAL SAV
Total/NA	Analysis	Field Sampling		1	132286	12/06/12 09:50		TAL TAM

**Laboratory References:**

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

TestAmerica Tampa

## Method Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

Method	Method Description	Protocol	Laboratory
353.2	Nitrate	MCAWW	TAL TAM
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL TAM
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL TAM
SM 5210B	BOD, 5-Day	SM	TAL TAM
SM 5220D	COD	SM	TAL SAV
Field Sampling	Field Sampling	EPA	TAL TAM

### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

## Certification Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

### Laboratory: TestAmerica Tampa

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40610	06-30-13
Florida	NELAP	4	E84282	06-30-13
Georgia	State Program	4	905	06-30-13
USDA	Federal		P330-11-00177	04-20-14

### Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	02-28-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-12
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-12
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-12
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAP	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
Rhode Island	State Program	1	LA000244	12-30-12
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13

TestAmerica Tampa

## Certification Summary

Client: Hillsborough County Public Utilities Dep  
Project/Site: Leachate Plant EFF

TestAmerica Job ID: 660-51577-1

### Laboratory: TestAmerica Savannah (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

TestAmerica Tampa

660-51577

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE COC SHEET  
**LEACHATE TRUCKS AND TANKS MONITORING PROGRAM**  
**LEACHATE PLANT EQUIPMENT BLANK**

PRECLEANED SAMPLE CONTAINERS:

 RELINQUISHED BY: De Port  
 ACCEPTED BY: ABC

REP. OF CONTRACT LAB.

REP. OF SOLID WASTE DEPT.

DATE | TIME

11-27-12 | 1240

12-5-12 | 3:00

LOCATION: **EQUIPMENT BLANK**SAMPLE MATRIX: **WATER** OTHER MATRIX: \_\_\_\_\_PERSONAL ENGAGED IN SAMPLE COLLECTION: ☒ A. Balloon ☒ JL ☐

FIELD PARAMETERS: N/A

**SAMPLE CONTAINERS**

QTY	CONTAINER DESCRIPTION	QTY	CONTAINER DESCRIPTION	PRESERVED
	40 ml VIAL		40 ml VIAL	
	125 ml. PLASTIC		125 ml. PLASTIC	
	125 ml GLASS		125 ml GLASS	
1	250 ml. PLASTIC	1	250 ml. PLASTIC	
	250 ml. GLASS		250 ml. GLASS	
	500 ml. PLASTIC		500 ml. PLASTIC	
	500 ml. GLASS		500 ml. GLASS	
3	LITER PLASTIC		LITER PLASTIC	
	LITER GLASS		LITER GLASS	
	BACTERIAL		BACTERIAL	

5 .. TOTAL No. OF SAMPLES COLLECTED:

COLORS & SHEENS: YES N/A NO

COLLECTED

DATE | TIME

12-6-12 9:45

**ANALYSIS REQUESTED:****MONTHLY LEACHATE PLANT PARAMETERS****BOD****TSS****NITRATE****TDS****COD**PRESERVED SAMPLES PH < 2.0 YESSAMPLE STORAGE: COOLER & ICE TO 4.0 c

ABOVE LISTED SAMPLES:

 RELINQUISHED BY: ABC  
 ACCEPTED BY: John

 REP. OF SOLID WASTE DEPT.  
 REP. OF CONTRACT LAB.

DATE | TIME

12-6-12 3:50

12-9-12 3:50

COMMENTS: WOT 2071

2.5% Cu-07

660-51577

HILLSBOROUGH COUNTY DEPT. OF SOLID WASTE COC SHEET  
**LEACHATE TRUCKS AND TANKS MONITORING PROGRAM**

**LEACHATE PLANT**

PRECLEANED SAMPLE CONTAINERS:

RELINQUISHED BY: Dr. Rull  
 ACCEPTED BY: AB

REP. OF CONTRACT LAB. 11-27-12 1240  
 REP. OF SOLID WASTE DEPT. 12-5-12 3:00

LOCATION: LEACHATE EFFLUENT

SAMPLE MATRIX: WATER OTHER MATRIX:       

PERSONAL ENGAGED IN SAMPLE COLLECTION: ☒ A. Balloon ☒ JC ☐

**FIELD PARAMETERS:**

BY	TIME	TEMP	COND	PH	DO	TURB
AB JC	9:50	25.84	10466	8.29	4.39	N/A =

**SAMPLE CONTAINERS**

QTY	CONTAINER DESCRIPTION	QTY	CONTAINER DESCRIPTION	PRESERVED
	40 ml VIAL		40 ml VIAL	
	125 ml. PLASTIC		125 ml. PLASTIC	
	125 ml GLASS		125 ml GLASS	
1	250 ml. PLASTIC	2	250 ml. PLASTIC	
	250 ml. GLASS		250 ml. GLASS	
1	500 ml. PLASTIC		500 ml. PLASTIC	
	500 ml. GLASS		500 ml. GLASS	
3	LITER PLASTIC		LITER PLASTIC	
	LITER GLASS		LITER GLASS	
	BACTERIAL		BACTERIAL	

13

5 TOTAL No. OF SAMPLES COLLECTED:

COLORS & SHEENS: YES N/A NO

COLLECTED  
DATE | TIME

12-5-12 9:50

**ANALYSIS REQUESTED:**

MONTHLY LEACHATE PLANT PARAMETERS BOD TSS NITRATE TDS COD

PRESERVED SAMPLES PH < 2.0 YES SAMPLE STORAGE: COOLER & ICE TO 4.0 c

ABOVE LISTED SAMPLES:

RELINQUISHED BY: AB  
 ACCEPTED BY: AB

REP. OF SOLID WASTE DEPT. 12-6-12 3:50  
 REP. OF CONTRACT LAB. 12-6-12 3:50

COMMENT'S: NOTE OUT



## Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-51577-1

Login Number: 51577

List Source: TestAmerica Tampa

List Number: 1

Creator: Snead, Joshua

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-51577-1

Login Number: 51577

List Number: 1

Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

List Creation: 12/07/12 08:46 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	