

SCS ENGINEERS

April 16, 2012
File No. 09210021.10

Mr. John Morris, P.G.
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Parkway
Temple Terrace, Florida 33637-0926

Subject: Citrus County Central Landfill
Quarterly Leachate Sampling – First Quarter 2012
Permit No. 21375-018-SO/01

Dear Mr. Morris:

SCS Engineers (SCS) is providing the First Quarter 2012 Leachate Effluent monitoring results on behalf of the Citrus County Solid Waste Management Division (County) for the Central Landfill located in Citrus County, Florida (the site). This report provides copies of the final laboratory reports, field forms, and a CD containing an electronic copy of this report and the electronic data deliverable (EDD) in the “ADaPT” format provided by TestAmerica Laboratories Inc., (TestAmerica).

The leachate effluent sample was analyzed in compliance with the permit and for the quarterly parameters listed in Specific Condition Part E.9.b.2 (quarterly) of the permit. The resulting data from the quarterly sampling event are included in Attachment 1 (Effluent data is located on pages 5 and 6, of 23 of the laboratory analytical report.) and Table 1, Attachment 3. These concentrations are similar to historic concentrations (Table 1, Attachment 3). With the exception of arsenic, sodium, chloride, and total dissolved solids (TDS), the leachate effluent sample complied with the groundwater standards and minimum criteria referenced in Florida Administrative Code (FAC) Chapters 62-520.420 and 62-520.400, respectively. As per Specific Condition Part E.9.b, arsenic, sodium, chloride, and TDS are not required to meet the groundwater standards and minimum criteria at the discharge point; however, they must comply at monitoring well MW-6 (Table 3, Attachment 3).

First Quarter leachate quality sampling, physical readings and measurements, and leachate quality analyses were performed by TestAmerica. Field work, sampling methodologies, data evaluation, and data Quality Assurance/Quality Control (QA/QC) were conducted in accordance with FAC Chapter 62-160 Standard Operating Procedures (DEP-SOP-001/01) and the TestAmerica quality manual. Laboratory analyses were performed in accordance with Chapter 62-160, FAC DEP-SOP-001/01. TestAmerica is certified by the Florida Department of Health Environmental Laboratory Certification Program (DoH ELCP).

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TestAmerica mobilized to the site on January 18, 2012, to collect leachate samples following the FDEP Standard Operating Procedures (SOPs) as guidance for the collection of these samples. Copies of the laboratory report and field forms are presented in Attachment 1.

Monthly samples of the leachate effluent were analyzed for the parameters listed in Specific Condition Part E.9.b.2 (monthly) of the Permit. The monthly samples are collected by the site and analyzed by their contract laboratory. The analytical laboratory reports from the monthly sampling events for January, February, and March of 2012, are included in Attachment 2 and summarized on Table 2, Attachment 3.

If you have any questions regarding this report, please contact the undersigned at (813) 621-0080.

Sincerely,



Ken Guilbeault, LEP
Project Manager



C. Ed Hilton, P.E. 4/16/12
Vice President

SCS ENGINEERS

KEG/CEH:acl

cc: T. Casey Stephens – Citrus County
Solid Waste Administrator, FDEP - Tallahassee

Attachments

Florida Department of Environmental Protection

Bob Martinez Office Bldg. 2600 Blair Stone Road Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(31), F.A.C

Form Title: Water Quality Monitoring
Certification

Effective Date January 6, 2011

Incorporated in Rule 62-701.510(9), F.A.C.

WATER QUALITY MONITORING CERTIFICATION

PART I GENERAL INFORMATION

(1) Facility Name Citrus County Central Landfill

Address PO BOX 340

City Lecanto

Zip 34460

Telephone Number (352) 527-7670

(2) WACS Facility ID 39859

(3) DEP Permit Number 21375-018-SO/01

(4) Authorized Representative Name Casey Stephens,

Title Director of Solid Waste

Address PO BOX 340

City Lecanto

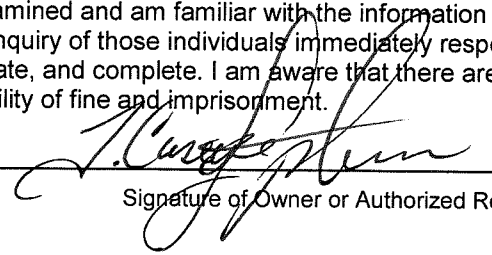
Zip 34460

Telephone Number (352) 527-7670

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submission of false information including the possibility of fine and imprisonment.

Date: 04/16/12


Signature of Owner or Authorized Representative

PART II QUALITY ASSURANCE REQUIREMENTS

Sampling Organization TestAmerica Laboratories, Inc

Analytical Lab NELAC / HRS Certification # NELAP Certifications E84282 and E81005

Lab Name TestAmerica Laboratories, Inc

Address 6712 Benjamin Road, Suite 100, Tampa, FL 33634

Phone Number (813) 885-7427

Email address (if available) nancy.robertson@testamericainc.com

ATTACHMENT 1

LABORATORY ANALYTICAL RESULTS
AND FIELD FORMS

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: 660-45782-1

Client Project/Site: Citrus County Landfill

For:

SCS Engineers
4041 Park Oaks Blvd
Suite 100
Tampa, Florida 33610

Attn: Mr. Ken Guilbeault



Authorized for release by:
1/31/2012 10:49:13 AM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

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Definitions/Glossary

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.

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)

Case Narrative

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Job ID: 660-45782-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative
660-45782-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

No analytical or quality issues were noted.

GC Semi VOA

No analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

General Chemistry

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 120356 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method 300.0: The matrix spike (MS) recovery for batch 120398 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Detection Summary

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Client Sample ID: EFF Leachate

Lab Sample ID: 660-45782-1

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Field pH	7.03				SU	1		Field Sampling	Total/NA
Oxidation Reduction Potential	217.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	2.28				mg/L	1		Field Sampling	Total/NA
Specific Conductance	4526				umhos/cm	1		Field Sampling	Total/NA
Temperature	15.9				Degrees C	1		Field Sampling	Total/NA
Turbidity	8.33				NTU	1		Field Sampling	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromodichloromethane	8.7		1.0	0.35	ug/L	1		8260B	Total/NA
Chloroform	9.9		1.0	0.90	ug/L	1		8260B	Total/NA
Dibromochloromethane	2.4		1.0	0.34	ug/L	1		8260B	Total/NA
Arsenic	31		10	4.0	ug/L	1		6010B	Total Recovera
Sodium - DL	760		5.0	3.1	mg/L	10		6010B	Total Recovera
Chloride	1000		50	20	mg/L	100		300.0	Total/NA
Ammonia as N	1.4		0.020	0.010	mg/L	1		350.1	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	2600		50	50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 660-45782-2

No Detections

Client Sample Results

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Client Sample ID: EFF Leachate

Date Collected: 01/18/12 11:00

Date Received: 01/19/12 08:35

Lab Sample ID: 660-45782-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	ug/L			01/23/12 17:47	1
Bromodichloromethane	8.7		1.0	0.35	ug/L			01/23/12 17:47	1
Bromoform	0.58	U	1.0	0.58	ug/L			01/23/12 17:47	1
Chloroform	9.9		1.0	0.90	ug/L			01/23/12 17:47	1
Dibromochloromethane	2.4		1.0	0.34	ug/L			01/23/12 17:47	1
Ethylbenzene	0.44	U	1.0	0.44	ug/L			01/23/12 17:47	1
Toluene	0.51	U	1.0	0.51	ug/L			01/23/12 17:47	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			01/23/12 17:47	1
Xylenes, Total	0.50	U	3.0	0.50	ug/L			01/23/12 17:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 130					01/23/12 17:47	1
Dibromofluoromethane	100		70 - 130					01/23/12 17:47	1
Toluene-d8 (Surr)	101		70 - 130					01/23/12 17:47	1

Method: 8011 - EDB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.010	U	0.020	0.010	ug/L		01/20/12 10:24	01/20/12 22:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	123		60 - 140				01/20/12 10:24	01/20/12 22:37	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	31		10	4.0	ug/L		01/20/12 06:52	01/20/12 13:19	1

Method: 6010B - Metals (ICP) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	760		5.0	3.1	mg/L		01/20/12 06:52	01/20/12 13:49	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1000		50	20	mg/L			01/27/12 14:53	100
Ammonia as N	1.4		0.020	0.010	mg/L			01/25/12 20:51	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2600		50	50	mg/L			01/20/12 14:58	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.03				SU			01/18/12 11:00	1
Oxidation Reduction Potential	217.8				millivolts			01/18/12 11:00	1
Oxygen, Dissolved	2.28				mg/L			01/18/12 11:00	1
Specific Conductance	4526				umhos/cm			01/18/12 11:00	1
Temperature	15.9				Degrees C			01/18/12 11:00	1
Turbidity	8.33				NTU			01/18/12 11:00	1

Client Sample Results

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Client Sample ID: Trip Blank

Date Collected: 01/18/12 00:00

Date Received: 01/19/12 08:35

Lab Sample ID: 660-45782-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	ug/L			01/23/12 13:11	1
Bromodichloromethane	0.35	U	1.0	0.35	ug/L			01/23/12 13:11	1
Bromoform	0.58	U	1.0	0.58	ug/L			01/23/12 13:11	1
Chloroform	0.90	U	1.0	0.90	ug/L			01/23/12 13:11	1
Dibromochloromethane	0.34	U	1.0	0.34	ug/L			01/23/12 13:11	1
Ethylbenzene	0.44	U	1.0	0.44	ug/L			01/23/12 13:11	1
Toluene	0.51	U	1.0	0.51	ug/L			01/23/12 13:11	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			01/23/12 13:11	1
Xylenes, Total	0.50	U	3.0	0.50	ug/L			01/23/12 13:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		70 - 130		01/23/12 13:11	1
Dibromofluoromethane	99		70 - 130		01/23/12 13:11	1
Toluene-d8 (Surr)	100		70 - 130		01/23/12 13:11	1

Surrogate Summary

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	BFB (70-130)	DBFM (70-130)	TOL (70-130)
660-45782-1	EFF Leachate	100	100	101
660-45782-2	Trip Blank	102	99	100
660-45800-A-1 DU	Duplicate	100	98	102
660-45800-C-2 MS	Matrix Spike	100	100	102
LCS 660-120192/7	Lab Control Sample	101	101	101
MB 660-120192/10	Method Blank	101	99	100
Surrogate Legend				
BFB = 4-Bromofluorobenzene				
DBFM = Dibromofluoromethane				
TOL = Toluene-d8 (Surr)				

Method: 8011 - EDB

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TCEA1 (60-140)		
660-45734-K-2-A MS	Matrix Spike	83		
660-45782-1	EFF Leachate	123		
660-45783-L-4-A DU	Duplicate	104		
LCS 660-120092/2-A	Lab Control Sample	79		
Surrogate Legend				
TCEA = 1,1,1,2-Tetrachloroethane				

Method: 8011 - EDB

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TCEA2 (60-140)		
MB 660-120092/1-A	Method Blank	87		
Surrogate Legend				
TCEA = 1,1,1,2-Tetrachloroethane				

QC Sample Results

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 660-120192/10

Matrix: Water

Analysis Batch: 120192

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	ug/L			01/23/12 12:26	1
Bromodichloromethane	0.35	U	1.0	0.35	ug/L			01/23/12 12:26	1
Bromoform	0.58	U	1.0	0.58	ug/L			01/23/12 12:26	1
Chloroform	0.90	U	1.0	0.90	ug/L			01/23/12 12:26	1
Dibromochloromethane	0.34	U	1.0	0.34	ug/L			01/23/12 12:26	1
Ethylbenzene	0.44	U	1.0	0.44	ug/L			01/23/12 12:26	1
Toluene	0.51	U	1.0	0.51	ug/L			01/23/12 12:26	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			01/23/12 12:26	1
Xylenes, Total	0.50	U	3.0	0.50	ug/L			01/23/12 12:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130		01/23/12 12:26	1
Dibromofluoromethane	99		70 - 130		01/23/12 12:26	1
Toluene-d8 (Surr)	100		70 - 130		01/23/12 12:26	1

Lab Sample ID: LCS 660-120192/7

Matrix: Water

Analysis Batch: 120192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.7		ug/L		99	68 - 134
Bromodichloromethane	20.0	20.6		ug/L		103	70 - 130
Bromoform	20.0	20.3		ug/L		101	65 - 130
Chloroform	20.0	18.6		ug/L		93	68 - 130
Dibromochloromethane	20.0	20.8		ug/L		104	70 - 130
Ethylbenzene	20.0	19.8		ug/L		99	70 - 130
Toluene	20.0	19.8		ug/L		99	70 - 131
Vinyl chloride	20.0	15.3		ug/L		76	48 - 147

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	101		70 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: 660-45800-C-2 MS

Matrix: Water

Analysis Batch: 120192

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
Benzene	110		200	310		ug/L		98	68 - 134
Bromodichloromethane	3.5	U	200	202		ug/L		101	70 - 130
Bromoform	5.8	U	200	191		ug/L		95	65 - 130
Chloroform	9.0	U	200	183		ug/L		92	68 - 130
Dibromochloromethane	3.4	U	200	200		ug/L		100	70 - 130
Ethylbenzene	31		200	235		ug/L		102	70 - 130
Toluene	350		200	565		ug/L		106	70 - 131
Vinyl chloride	5.0	U	200	155		ug/L		77	48 - 147

QC Sample Results

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 660-45800-C-2 MS

Matrix: Water

Analysis Batch: 120192

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	100		70 - 130
Dibromofluoromethane	100		70 - 130
Toluene-d8 (Surr)	102		70 - 130

Lab Sample ID: 660-45800-A-1 DU

Matrix: Water

Analysis Batch: 120192

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Benzene	0.50	U	0.50	U	ug/L		NC	30
Bromodichloromethane	0.35	U	0.35	U	ug/L		NC	30
Bromoform	0.58	U	0.58	U	ug/L		NC	30
Chloroform	0.90	U	0.90	U	ug/L		NC	30
Dibromochloromethane	0.34	U	0.34	U	ug/L		NC	30
Ethylbenzene	0.44	U	0.44	U	ug/L		NC	30
Toluene	0.51	U	0.51	U	ug/L		NC	30
Vinyl chloride	0.50	U	0.50	U	ug/L		NC	30
Xylenes, Total	0.50	U	0.50	U	ug/L		NC	30

Surrogate	DU %Recovery	DU Qualifier	Limits
4-Bromofluorobenzene	100		70 - 130
Dibromofluoromethane	98		70 - 130
Toluene-d8 (Surr)	102		70 - 130

Method: 8011 - EDB

Lab Sample ID: MB 660-120092/1-A

Matrix: Water

Analysis Batch: 120172

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 120092

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.010	U	0.020	0.010	ug/L		01/20/12 10:24	01/20/12 16:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	87		60 - 140	01/20/12 10:24	01/20/12 16:44	1

Lab Sample ID: LCS 660-120092/2-A

Matrix: Water

Analysis Batch: 120171

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 120092

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	0.251	0.217		ug/L		86	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,1,2-Tetrachloroethane	79		60 - 140

QC Sample Results

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Method: 8011 - EDB (Continued)

Lab Sample ID: 660-45734-K-2-A MS

Matrix: Water

Analysis Batch: 120171

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 120092

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	0.0098	U	0.254	0.227		ug/L		90	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,1,1,2-Tetrachloroethane	83		60 - 140						

Lab Sample ID: 660-45783-L-4-A DU

Matrix: Water

Analysis Batch: 120171

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 120092

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ethylene Dibromide	0.0097	U	0.010	U	ug/L		NC	40
Surrogate	DU %Recovery	DU Qualifier	Limits					
1,1,1,2-Tetrachloroethane	104		60 - 140					

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 660-120083/1-A

Matrix: Water

Analysis Batch: 120089

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 120083

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		01/20/12 06:52	01/20/12 12:33	1
Sodium	0.31	U	0.50	0.31	mg/L		01/20/12 06:52	01/20/12 12:33	1

Lab Sample ID: LCS 660-120083/2-A

Matrix: Water

Analysis Batch: 120089

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 120083

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	1040		ug/L		104	75 - 125
Sodium	10.0	9.89		mg/L		99	75 - 125

Lab Sample ID: 660-45779-H-1-B MS

Matrix: Water

Analysis Batch: 120089

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 120083

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.0	U	1000	1050		ug/L		105	75 - 125
Sodium	56		10.0	65.6		mg/L		95	75 - 125

Lab Sample ID: 660-45779-H-1-C MSD

Matrix: Water

Analysis Batch: 120089

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 120083

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	4.0	U	1000	1070		ug/L		107	75 - 125	3	20
Sodium	56		10.0	66.4		mg/L		104	75 - 125	1	20

QC Sample Results

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Method: 300.0 - Chloride

Lab Sample ID: MB 660-120356/10

Matrix: Water

Analysis Batch: 120356

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.20	U	0.50	0.20	mg/L			01/26/12 11:16	1

Lab Sample ID: LCS 660-120356/11

Matrix: Water

Analysis Batch: 120356

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.49		mg/L		95	90 - 110

Lab Sample ID: 660-45781-A-1 MS ^10

Matrix: Water

Analysis Batch: 120356

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
Chloride	250	J3	100	371	J3	mg/L		122	90 - 110

Lab Sample ID: 660-45781-A-1 MSD ^10

Matrix: Water

Analysis Batch: 120356

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
Chloride	250	J3	100	362	J3	mg/L		113	90 - 110	2	30

Lab Sample ID: MB 660-120398/3

Matrix: Water

Analysis Batch: 120398

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.20	U	0.50	0.20	mg/L			01/27/12 09:31	1

Lab Sample ID: LCS 660-120398/4

Matrix: Water

Analysis Batch: 120398

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.4		mg/L		104	90 - 110

Lab Sample ID: 660-45734-G-4 MS

Matrix: Water

Analysis Batch: 120398

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
Chloride	4.4	J3	10.0	13.1	J3	mg/L		87	90 - 110

Lab Sample ID: 660-45734-G-4 MSD

Matrix: Water

Analysis Batch: 120398

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
Chloride	4.4	J3	10.0	14.9		mg/L		105	90 - 110	13	30

QC Sample Results

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 660-120300/3

Matrix: Water

Analysis Batch: 120300

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.010	U	0.020	0.010	mg/L			01/25/12 20:43	1

Lab Sample ID: LCS 660-120300/4

Matrix: Water

Analysis Batch: 120300

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	0.500	0.529		mg/L		106	90 - 110

Lab Sample ID: 660-45783-A-3 MS

Matrix: Water

Analysis Batch: 120300

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
Ammonia as N	1.2		1.00	2.22		mg/L		99	90 - 110

Lab Sample ID: 660-45783-A-3 MSD

Matrix: Water

Analysis Batch: 120300

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
Ammonia as N	1.2		1.00	2.22		mg/L		99	90 - 110	0	30

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

Lab Sample ID: MB 660-120120/1

Matrix: Water

Analysis Batch: 120120

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			01/20/12 14:48	1

Lab Sample ID: LCS 660-120120/2

Matrix: Water

Analysis Batch: 120120

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: 660-45732-A-1 DU

Matrix: Water

Analysis Batch: 120120

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	720		736		mg/L		2	20

QC Association Summary

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

GC/MS VOA

Analysis Batch: 120192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45782-1	EFF Leachate	Total/NA	Water	8260B	
660-45782-2	Trip Blank	Total/NA	Water	8260B	
660-45800-A-1 DU	Duplicate	Total/NA	Water	8260B	
660-45800-C-2 MS	Matrix Spike	Total/NA	Water	8260B	
LCS 660-120192/7	Lab Control Sample	Total/NA	Water	8260B	
MB 660-120192/10	Method Blank	Total/NA	Water	8260B	

GC Semi VOA

Prep Batch: 120092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45734-K-2-A MS	Matrix Spike	Total/NA	Water	8011	
660-45782-1	EFF Leachate	Total/NA	Water	8011	
660-45783-L-4-A DU	Duplicate	Total/NA	Water	8011	
LCS 660-120092/2-A	Lab Control Sample	Total/NA	Water	8011	
MB 660-120092/1-A	Method Blank	Total/NA	Water	8011	

Analysis Batch: 120171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45734-K-2-A MS	Matrix Spike	Total/NA	Water	8011	120092
660-45782-1	EFF Leachate	Total/NA	Water	8011	120092
660-45783-L-4-A DU	Duplicate	Total/NA	Water	8011	120092
LCS 660-120092/2-A	Lab Control Sample	Total/NA	Water	8011	120092

Analysis Batch: 120172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 660-120092/1-A	Method Blank	Total/NA	Water	8011	120092

Metals

Prep Batch: 120083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45779-H-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
660-45779-H-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
660-45782-1	EFF Leachate	Total Recoverable	Water	3005A	
660-45782-1 - DL	EFF Leachate	Total Recoverable	Water	3005A	
LCS 660-120083/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 660-120083/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 120089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45779-H-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	120083
660-45779-H-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	120083
660-45782-1	EFF Leachate	Total Recoverable	Water	6010B	120083
660-45782-1 - DL	EFF Leachate	Total Recoverable	Water	6010B	120083
LCS 660-120083/2-A	Lab Control Sample	Total Recoverable	Water	6010B	120083
MB 660-120083/1-A	Method Blank	Total Recoverable	Water	6010B	120083

QC Association Summary

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

General Chemistry

Analysis Batch: 120120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45732-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
660-45782-1	EFF Leachate	Total/NA	Water	SM 2540C	
LCS 660-120120/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-120120/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 120300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45782-1	EFF Leachate	Total/NA	Water	350.1	
660-45783-A-3 MS	Matrix Spike	Total/NA	Water	350.1	
660-45783-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	
LCS 660-120300/4	Lab Control Sample	Total/NA	Water	350.1	
MB 660-120300/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 120356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45781-A-1 MS ^10	Matrix Spike	Total/NA	Water	300.0	
660-45781-A-1 MSD ^10	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 660-120356/11	Lab Control Sample	Total/NA	Water	300.0	
MB 660-120356/10	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 120398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45734-G-4 MS	Matrix Spike	Total/NA	Water	300.0	
660-45734-G-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
660-45782-1	EFF Leachate	Total/NA	Water	300.0	
LCS 660-120398/4	Lab Control Sample	Total/NA	Water	300.0	
MB 660-120398/3	Method Blank	Total/NA	Water	300.0	

Field Service / Mobile Lab

Analysis Batch: 120160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-45782-1	EFF Leachate	Total/NA	Water	Field Sampling	

Lab Chronicle

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Client Sample ID: EFF Leachate

Date Collected: 01/18/12 11:00

Date Received: 01/19/12 08:35

Lab Sample ID: 660-45782-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	120192	01/23/12 17:47	AP	TAL TAM
Total/NA	Prep	8011			120092	01/20/12 10:24	JB	TAL TAM
Total/NA	Analysis	8011		1	120171	01/20/12 22:37	JB	TAL TAM
Total Recoverable	Prep	3005A			120083	01/20/12 06:52	GF	TAL TAM
Total Recoverable	Analysis	6010B		1	120089	01/20/12 13:19	GF	TAL TAM
Total Recoverable	Prep	3005A	DL		120083	01/20/12 06:52	GF	TAL TAM
Total Recoverable	Analysis	6010B	DL	10	120089	01/20/12 13:49	GF	TAL TAM
Total/NA	Analysis	SM 2540C		1	120120	01/20/12 14:58	TO	TAL TAM
Total/NA	Analysis	350.1		1	120300	01/25/12 20:51	TO	TAL TAM
Total/NA	Analysis	300.0		100	120398	01/27/12 14:53	TS	TAL TAM
Total/NA	Analysis	Field Sampling		1	120160	01/18/12 11:00		TAL TAM

Client Sample ID: Trip Blank

Date Collected: 01/18/12 00:00

Date Received: 01/19/12 08:35

Lab Sample ID: 660-45782-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	120192	01/23/12 13:11	AP	TAL TAM

Laboratory References:

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

Certification Summary

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Tampa	Alabama	State Program	4	40610
TestAmerica Tampa	Florida	NELAC	4	E84282
TestAmerica Tampa	Georgia	State Program	4	905
TestAmerica Tampa	USDA	USDA		P330-11-00177

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL TAM
8011	EDB	EPA	TAL TAM
6010B	Metals (ICP)	SW846	TAL TAM
300.0	Chloride	40CFR136A	TAL TAM
350.1	Nitrogen, Ammonia	MCAWW	TAL TAM
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL TAM
Field Sampling	Field Sampling	EPA	TAL TAM

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

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",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

Sample Summary

Client: SCS Engineers
Project/Site: Citrus County Landfill

TestAmerica Job ID: 660-45782-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-45782-1	EFF Leachate	Water	01/18/12 11:00	01/19/12 08:35
660-45782-2	Trip Blank	Water	01/18/12 00:00	01/19/12 08:35

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6712 Benjamin Road Suite 100

Tampa, FL 33634

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

Chain of Custody Record

TestAmerica.com

THE LEOGORE IN SAND: PART 1. A. WESTIN

[illegible]

Field Calibration Logbook

Name: Shawn Victory / Citrus County (Landfill) Date: 1-15-12 Instrument #: M-1 / T-1 Make/Model: V5F 550 / Hatch 2100P

pH:

	pH Buffer	Element #	Exp. Date	Time	Inst. Response	Calibrated (Y/N)	Type (ICV, CCV)	Temp. (°C)
Initial	7.00	NV04056	1/20/12	758	6.95	Yes	ICV	11.8
	4.00	NV09966	3/20/13	800	4.00	Yes	ICV	11.8
	10.00	NV09961	9/20/12					
Post	7.00	NV04056	1/20/12	1615	6.94	NO	CCV	16.5
	4.00	NV09966	3/20/13	1617	3.99	NO	CCV	16.5
	10.00	NV09961	9/20/12	1619	9.98	NO	CCV	16.6

CONDUCTIVITY STANDARD:

	Conductivity (uS/cm)	Element #	Exp. Date	Time	Inst. Response	Calibrated (Y/N)	Type (ICV, CCV)
Initial	100	NV06839	3-1-13	807	100	Yes	ICV
	1000						
	10000						
Post	100	NV06839	3-1-13	814	98	NO	CCV
	1000						
	10000						

DISSOLVED OXYGEN: (Reference Table FS2200-2)*

Temperature Probe Annual Calibration: Date:

NIST Therm. ID#:

	Temp. (°C)	DO* (mg/L)	Time	Inst. Response	Calibrated (Y/N)	Type (ICV, CCV)
Initial	11.7		755	11.7/10.92	Yes	ICV
Post	16.1	9.84	1612	16.1/9.55	NO	CCV

ORP: (Reference Table 6.2 Zobell Solution Values)*

	ORP (milliVolts)*	Element #	Exp. Date	Time	Temp. (°C)	Inst. Response	Calibrated (Y/N)	Type (ICV, CCV)
Initial	250.5	NV08063	5-20-12	905	8.2	250.1	NO	CCV
Post	250.5	NV08063	5-20-12	1630	8.5	250.1	NO	CCV

TURBIDITY:

	Turbidity (NTU)	Element #	Exp. Date	Time	Inst. Response	Calibrated (Y/N)	Type (ICV, CCV)
Initial	<0.10	NV03786	4-20-12	809	.19	NO	CCV
	20				20		
	100				101		
	800				796		
Post	<0.10	NV03786	4-20-12	1610	.19	NO	CCV
	20				21		
	100				101		
	800				795		

Acceptance Criteria: 1-10 NTU=10%, 11-40 NTU=8%, 41-100 NTU=6.5%, >100 NTU=5%

Calibrated only in Calibrate Mode

ICV- Initial Calibration Verification (perform only in Run Mode)

CCV- Continuing Calibration Verification (perform only in Run Mode)

Signature: Shawn VictoryDate: 1-15-12

FieldCal-SV00

Page 61 of 100

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 660-45782-1

Login Number: 45782

List Source: TestAmerica Tampa

List Number: 1

Creator: Edwards, Erricka

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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	2.8c CU-07
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

ATTACHMENT 2

MONTHLY LEACHATE QUALITY
ANALYTICAL RESULTS FOR
JANUARY, FEBRUARY, AND MARCH 2012

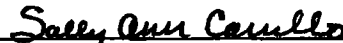
S.A.C. ENVIRONMENTAL LABORATORY INC
FLDOH CERTIFICATION #84492
ANALYTICAL REPORT

SOLID WASTE MANAGEMENT
PO BOX 340
LECANTO FL 34460

Invoice Number 12114

Client	CITRUS COUNTY UTILITIES	Sample Number	E120009
Project	LANDFILL LEACHATE PLANT	Date/Time Sampled	01/04/12 1045 HRS
Sample Description	WWTP/EFF	Date/Time Received	01/04/12 1215 HRS

Method	Analytes	Units	Results	MDL	Analyst	Analysis Date/Time
SM5210-B	CBOD	mg/L	1.75	0.30 mg/L	SJL	01/04/12 1450 HRS
SM2540-D	TSS	mg/L	5.00	1.00 mg/L	SJL	01/06/12 0924 HRS
SM4500-NO3-E	NITRATE	mg/L	7.48	0.06 mg/L	SJL	01/04/12 1400 HRS


Laboratory Manager

These results relate only to this sample.

For all results qualified with an I, the PQL is defined to be 4 times the MDL

5376 S SUNCOAST BOULEVARD HOMOSASSA FL 34446 352.621.3513 FAX 352.621.3514

S.A.C. ENVIRONMENTAL LABORATORY INC
FLDOH CERTIFICATION #84492
ANALYTICAL REPORT

SOLID WASTE MANAGEMENT
PO BOX 340
LECANTO FL 34460

Invoice Number 12166

Client CITRUS COUNTY UTILITIES **Sample Number** E120122
Project LANDFILL LEACHATE PLANT **Date/Time Sampled** 2/1/12 0930 HRS
Sample Description WWTP/EFF **Date/Time Received** 2/1/12 1009 HRS

Method	Analytes	Units	Results	MDL	Analyst	Analysis Date/Time
SM5210-B	CBOD	mg/L	2.38	0.30 mg/L	SJL	2/7/12 0933 HRS
SM2540-D	TSS	mg/L	7.50	1.00 mg/L	SJL	2/3/12 0950 HRS
SM4500-NO3-E	NITRATE	mg/L	5.02	0.06 mg/L	SJL	2/1/12 1030 HRS

Sally Ann Casillo
Laboratory Manager

These results relate only to this sample.

For all results qualified with an I, the PQL is defined to be 4 times the MDL

5376 S SUNCOAST BOULEVARD HOMOSASSA FL 34446 352.621.3513 FAX 352.621.3514

S.A.C. ENVIRONMENTAL LABORATORY INC

ANALYTICAL RESULTS

SOLID WASTE MANAGEMENT
PO BOX 340
LECANTO FL 34460

Workorder: CITRUS COUNTY UTILITIES

Project: LANDFILL LEACHATE

Lab ID: E120348
Sample ID: EFFLUENT

Date Collected: 3/27/12 0920
Date Received: 3/27/12 1052

Sample Description:

Location: WWTP

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc:					Analytical Method:			
CBOD	8.70	mg/L			SM5210-B	0.30	3/28/12 1348	
NITRATE	2.62	mg/L			SM4500 NO3-E	0.60	3/28/12 0900	
TSS	3.50	mg/L			SM2540-D	1.00	3/28/12 0940	

Sally Ann Canillo
QA Officer



5376 S SUNCOAST BOULEVARD HOMOSASSA FL 34446 352.621.3513 FAX 352.621.3514

ATTACHMENT 3

TABLES

Table 1. Summary of Leachate Effluent Quality Analytical Results
Citrus County Central Landfill

Parameter	Standard	MCL	Units	Leachate Effluent																
				10/15/2008	1/27/2009	4/20/2009	7/21/2009	9/9/2009	10/14/2009	1/26/2010	5/12/2010	7/27/2010	9/9/2010	10/27/2010	1/19/2011	4/28/2011	5/25/2011	7/20/2011	10/19/2011	1/18/2012
Volatile Organics								Resample					Resample				Resample			
Acetone	GCTL	6300	ug/L	---	---	---	21	---	---	---	---	40	15 I	---	---	---	---	9.9 U J3	---	---
Benzene	PDWS	1	ug/L	0.5 U	1 U	0.5 U	0.5 U	---	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	---	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	PDWS	3	ug/L	---	---	---	1 U	---	---	---	---	1.2	0.45 I	---	---	---	---	0.42 U	---	---
Chlorobromomethane	GCTL	91	ug/L	---	---	---	0.58 U	0.58 U	---	---	---	5.7	0.58 U	---	---	---	---	0.58 U	---	---
Chloromethane	GCTL	2.7	ug/L	---	---	---	1 U	---	---	---	---	2.4 I	1.0 U	---	---	---	---	1.0 U	---	---
Dibromomethane	GCTL	70	ug/L	---	---	---	0.41 U	---	---	---	---	5.8	0.41 U	---	---	---	---	0.41 U	---	---
Ethylbenzene	SDWS	30	ug/L	0.5 U	1 U	0.5 U	0.44 U	---	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44U	0.44 U	0.44 U	---	0.44 U	0.44 U	0.44 U
Ethylene Dibromide	PDWS	0.02	ug/L	0.0061 U	0.0064 U	0.0064 U	0.5 U	---	0.0061 U	0.0098 U	0.0096 U	0.010 U	---	0.010 U	0.0097 U	0.011 U	---	0.010 U	0.010 U	0.010 U
Toluene	SDWS	40	ug/L	0.5 U	1 U	0.5 U	0.51 U	---	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	---	0.51 U	0.51 U	0.51 U
Vinyl chloride	PDWS	1	ug/L	0.53 U	1.1 U	0.53 U	0.5 U	---	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	---	0.50 U	0.5 U	0.5 U
Xylenes, Total	SDWS	20	ug/L	1 U	2.1 I	1 U	0.5 U	---	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	---	0.50 U	0.5 U	0.5 U
Trihalomethanes																				
Bromodichloromethane	See Total THMs		ug/L	---	14	---	410	0.35 U	---	13	---	870	170	0.35 U	0.35 U	---	---	30	---	8.7
Bromoform	See Total THMs		ug/L	---	2.9	---	71	0.58 U	---	7	---	190	36	0.58 U	0.58 U	---	---	8.5	---	0.58 U
Chloroform	See Total THMs		ug/L	---	11	---	370	0.90 U	---	8.3	---	900	110	0.90 U	0.9 U	---	---	25	---	9.9
Dibromochloromethane	See Total THMs		ug/L	---	6.9	---	280	0.58 U	---	9.7	---	670	110	0.34 U	0.34 U	---	---	19	---	2.4
Total THMs	Permit	100	ug/L	---	34.8	---	1131	Not Detected	---	38	---	2630	426	Not Detected	Not Detected	---	---	82.5	---	21
Metals																				
Antimony	PDWS	0.006	mg/L	---	---	---	---	---	---	---	---	0.0031 I	---	---	---	---	---	0.0092 U	---	---
Arsenic	PDWS	0.01	mg/L	---	---	---	0.0091 I	---	---	---	---	0.025	0.02	0.034	0.012	0.036	---	0.046	0.035	0.031
Barium	PDWS	2	mg/L	---	---	---	0.058	---	---	---	---	0.081	---	---	---	---	---	0.011	---	---
Cobalt	GCTL	0.14	mg/L	---	---	---	0.011	---	---	---	---	0.019	---	---	---	---	---	0.022	---	---
Chromium	PDWS	0.1	mg/L	---	---	---	0.0058 I	---	---	---	---	0.0066	---	---	---	---	---	0.0063	---	---
Copper	SDWS	1	mg/L	---	---	---	0.014	---	---	---	---	0.024	---	---	---	---	---	0.0027	---	---
Lead	PDWS	0.015	mg/L	---	---	---	0.002 U	---	---	---	---	0.0031	---	---	---	---	---	0.00020 U	---	---
Nickel	PDWS	0.1	mg/L	---	---	---	0.046	---	---	---	---	0.071	---	---	---	---	---	0.077	---	---
Iron	SDWS	0.3	mg/L	---	---	---	0.068 I	---	---	---	---	0.058 I	---	---	---	---	---	0.076 I	---	---
Zinc	SDWS	5	mg/L	---	---	---	0.020 I	---	---	---	---	0.031	---	---	---	---	---	0.03	---	---
General Chemistry																				
Ammonia, Total	GCTL	2.8	mg/L	0.094	1.1	0.19	0.16	---	0.010 U	0.086	0.17	0.09	---	0.013 I	0.01	10	0.7	0.3	0.22	1.4
Chloride	SDWS	250	mg/L	940	1300	1500	710	---	910	1000	1200	1300	---	1000	750	960	---	1200	970	1000
Cyanide	PDWS	0.2	mg/L	---	---	---	0.014	---	---	---	---	---	---	---	---	---	---	---	---	---
Sodium	PDWS	160	mg/L	570	800	820	430	---	570	580	750	830	---	670	400	630	---	800	590	760
TDS	SDWS	500	mg/L	2400	2800	3000	1800	---	2000	2200	2900	1500	---	2500	1600	2400	---	2800	1600	2600
TOC	NS	NS	mg/L	---	---	---	---	---	---	---	---	---	---	140	---	---	---	---	---	---
General Field Parameters																				
Conductivity	NS	NS	umhos/cm	3929	4907	4820	3462	2786	3772	3475	4752	4617	4167	4358	3176	3780	4701	3963	3675	4526
Dissolved Oxygen	NS	NS	mg/L	2.96	0.93	2.78	1.34	0.3	0.72	7.01	0.75	1.22	1.42	1.36	6.01	8.38	0.14	1.81	1.21	2.28
pH	SDWS	6.5-8.5	pH Units	7.87	7.79	7.68	7.49	7.94	7.83	7.27	7.52	7.37	7.69	8.1	7.52	8.13	7.81	7.65	8.32	7.03
Oxygen Reduction Potential	NS	NS	mV	---	---	---	---	---	---	228	25.8	350.7	-1.8	164.3	40.2	197.6	216.7	109.4	182.2	217.8
Temperature, Water	NS	NS	deg C	26.55	17.35	24.83	31.5	27.9	27.9	17.1	27.2	28.5	29.4	26.2	---	27.3	27.5	29.1	25.3	15.9
Turbidity	NS	NS	NTU	1.07	1.65	5	---	6.67	4.73	1.84	7.94	3.4	2.71	4.55	---	10.8	7.04	2.69	5.36	8.33

Notes

1. PDWS = Primary Drinking Water Standard (62-550 F.A.C.).
2. SDWS = Secondary Drinking Water Standard (62-550 F.A.C.).
3. GCTL = Groundwater Clean-up Target Level (62-777 F.A.C.).
4. THMs = Trihalomethanes
5. NS = No numeric standard has been set for this analyte.
6. --- = Parameter not analyzed.
7. mg/l: milligrams per liter.
8. ug/l: micrograms per liter.
9. NTU: nephelometric turbidity units.
10. Yellow Shaded values indicate parameter concentrations exceeded primary, secondary Drinking Water Standards or groundwater cleanup target levels.
11. I = Analyte detected below quantitation limits.
12. U = Analyte concentration was below the laboratory detection limit (value shown).
13. J3 = Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

Table 2. Twelve Month Summary of Leachate Effluent Monthly Analytical Results
Citrus County Central Landfill

Parameter	Standard	MCL	Units												
				4/14/2011	5/10/2011	6/16/2011	7/6/2011	8/3/2011	9/8/2011	10/11/2011	11/1/2011	12/15/2011	1/4/2012	2/1/2012	3/27/2012
CBOD	Permit	20	mg/L	4.42	3.74	2.50	3.17	2.43	6.72	1.66	2.33	2.43	1.75	2.38	8.70
TSS	Permit	20	mg/L	7.50	2.50	3.50	4.00	4.50	8.50	2.00	3.00	5.50	5.00	7.50	3.50
Nitrate	Permit	10	mg/L	0.28	0.24	0.94	4.60	3.84	4.09	1.39	0.59	3.01	7.48	5.02	2.62

- Notes
- 1. mg/l: milligrams per liter.
 - 2. ug/l: micrograms per liter.
 - 3. Yellow Shaded values indicate parameter concentrations exceeded Permit MCL levels.
 - 4. **I** = Analyte detected below quantitation limits.
 - 5. **U** = Analyte concentration was below the laboratory detection limit (value shown).

**Table 3. 2010, 2011, and 2012 Summary of Monitoring Well MW-6
for Arsenic, Sodium, Chloride, and TDS Citrus County Central Landfill**

Parameter	Standard	MCL	Units	MW-6				
				1/26/2010	7/27/2010	1/19/2011	7/20/2011	1/19/2012
Arsenic	PDWS	10	mg/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Sodium	PDWS	160	mg/L	120	100	100	90	110
Chloride	SDWS	250	mg/L	220	220	220	13	250 J
TDS	SDWS	500	mg/L	400	400	380	370	350

Notes

1. PDWS = Primary Drinking Water Standard (62-550 F.A.C.).
2. SDWS = Secondary Drinking Water Standard (62-550 F.A.C.).
3. mg/l: milligrams per liter.
4. ug/l: micrograms per liter.
5. Yellow Shaded values indicate parameter concentrations exceeded primary or secondary Drinking Water Standards.
6. I = Analyte detected below quantitation limits.
7. U = Analyte concentration was below the laboratory detection limit (value shown).
8. J = Estimated value; value may not be accurate.

ATTACHMENT 4

COMPACT DISK CONTAINING
REPORT IN PDF FORMAT AND
ADaPT FILE