

SCS ENGINEERS

January 17, 2011
File No. 09210021.03

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 – Fourth Quarter 2010
Permit No. 21375-008-SO/01

Dear Mr. Morris:

SCS Engineers (SCS) is providing the Fourth Quarter 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. Additionally, samples were collected from the leachate influent monitoring locations and the leachate plant supply well in order to verify detections (arsenic and total trihalomethane) from the third quarter and Annual monitoring event. Samples from the leachate influent were laboratory analyzed for total organic carbon, arsenic, and total trihalomethane.

The resulting data from the quarterly sampling event are included in Attachment 1 (Effluent data is located on pages 4, 11, and 12 of 38 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, sodium, chloride, and TDS are not required to meet the groundwater standards and minimum criteria at the discharge point; however they must comply at the edge of the zone of discharge along the western boundary. Due to the arsenic exceedance in the leachate effluent, the County halted discharge of the leachate effluent to the leachate effluent ponds. The County is in the process of preparing a minor permit modification to address the arsenic concentrations in the leachate effluent.

The resulting data from the leachate influent (Master Lift Influent and Phase 2 Influent) and water supply water are included in Attachment 1 and Table 3, Attachment 3.



Fourth 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).

TestAmerica mobilized to the site on October 27, 2010, 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 October, November, and December of 2010, 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
Senior Project Professional



C. Ed Hilton, P.E. 1/17/11
Vice President
SCS ENGINEERS

KEG/CEH:keg

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

Attachments



Florida Department of Environmental Protection

Bob Martinez Center
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, 2010
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 County Citrus
 Telephone Number (352) 527-7670
- (2) WACS Facility ID 39859
- (3) DEP Permit Number 21375-008-SO/01
- (4) Authorized Representative's Name Casey Stephens Title Director of Solid Waste
 Address PO Box 340
 City Lecanto Zip 34460 County Citrus
 Telephone Number (352) 527-7670
 Email address (if available) Casey.Stephens@bocc.citrus.fl.us

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.

1/18/11
(Date)

[Signature]
(Owner or Authorized Representative's Signature)

PART II QUALITY ASSURANCE REQUIREMENTS

- Sampling Organization TestAmerica Laboratories, Inc.
- Analytical Lab NELAC / HRS Certification # NELAP Certification 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

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

Northeast District
7825 Baymeadows Way, Ste. 200 B
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Temple Terrace, FL
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33902-2549
239-332-6975

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

ATTACHMENT 1
LABORATORY ANALYTICAL RESULTS
AND FIELD FORMS

ANALYTICAL REPORT

Job Number: 660-37947-1

Job Description: Citrus County October Sampling

For:

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

Attention: Mr. Ken Guilbeault



Approved for release.
Nancy Robertson
Project Manager II
11/5/2010 1:16 PM

Nancy Robertson
Project Manager II
nancy.robertson@testamericainc.com
11/05/2010

Methods: FDEP, DOH Certification #: E84282, E81005 These test results meet all the requirements of NELAC unless specified in the case narrative. All questions regarding this test report should be directed to the TestAmerica Project Manager who signed this test report. The estimated uncertainty associated with these reported results is available upon request. The results contained in this test report relate only to these samples included herein.

Job Narrative
660-37947-1

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

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 102114 were outside control limits for Na. The associated laboratory control sample (LCS) recovery met acceptance criteria. Data is flagged with J3.

No other analytical or quality issues were noted.

General Chemistry

Method SM 5310C: The matrix spike duplicate (MSD) recovery and RPD in batch 74591 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria. Data is flagged with J3.

No other analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: SCS Engineers

Job Number: 660-37947-1

Lab Sample ID	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
660-37947-1	LEACHATE STORAGE TANK (INF)				
Field pH		7.98		SU	Field Sampling
Field Temperature		25.1		Degrees C	Field Sampling
Oxygen, Dissolved		1.98		mg/L	Field Sampling
Sheen		No		SU	Field Sampling
Specific Conductance		5991		umhos/cm	Field Sampling
Turbidity		36.8		NTU	Field Sampling
Oxidation Reduction Potential		55.7		millivolts	Field Sampling
Total Organic Carbon		180	20	mg/L	5310 C
Total Recoverable					
Arsenic		48	10	ug/L	6010B
660-37947-2	PHASE 2 PRIMARY PUMP (INF)				
Field pH		6.80		SU	Field Sampling
Field Temperature		31.4		Degrees C	Field Sampling
Oxygen, Dissolved		0.74		mg/L	Field Sampling
Sheen		No		SU	Field Sampling
Specific Conductance		4620		umhos/cm	Field Sampling
Turbidity		144		NTU	Field Sampling
Oxidation Reduction Potential		-66.1		millivolts	Field Sampling
Total Organic Carbon		120	20	mg/L	5310 C
Total Recoverable					
Arsenic		50	10	ug/L	6010B
660-37947-3	LEACHATE PLANT WATER SUPPLY WELL				
Field pH		6.27		SU	Field Sampling
Field Temperature		25.7		Degrees C	Field Sampling
Oxygen, Dissolved		1.60		mg/L	Field Sampling
Sheen		No		SU	Field Sampling
Specific Conductance		461		umhos/cm	Field Sampling
Turbidity		0.35		NTU	Field Sampling
Oxidation Reduction Potential		32.7		millivolts	Field Sampling
Total Organic Carbon		0.35	1.0	mg/L	5310 C

EXECUTIVE SUMMARY - Detections

Client: SCS Engineers

Job Number: 660-37947-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
660-37947-4	EFFLUENT				
Field pH		8.10		SU	Field Sampling
Field Temperature		26.2		Degrees C	Field Sampling
Oxygen, Dissolved		1.36		mg/L	Field Sampling
Sheen		No		SU	Field Sampling
Specific Conductance		4358		umhos/cm	Field Sampling
Turbidity		4.55		NTU	Field Sampling
Oxidation Reduction Potential		164.3		millivolts	Field Sampling
Chloride		1000	50	mg/L	300.0
Ammonia as N		0.013 I	0.020	mg/L	350.1
Total Organic Carbon		140	20	mg/L	5310 C
Total Dissolved Solids		2500	17	mg/L	SM 2540C
<i>Total Recoverable</i>					
Arsenic		34	10	ug/L	6010B
Sodium		670	5.0	mg/L	6010B

METHOD SUMMARY

Client: SCS Engineers

Job Number: 660-37947-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL TAM	SW846 8260B	
Purge and Trap	TAL TAM		SW846 5030B
EDB	TAL TAM	EPA 8011	
Microextraction	TAL TAM		SW846 8011
Arsenic	TAL TAM	SW846 6010B	
Metals (ICP)	TAL TAM	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL TAM		SW846 3005A
Preparation, Total Recoverable or Dissolved Metals	TAL TAM		SW846 3005A
Chloride	TAL TAM	40CFR136A 300.0	
Nitrogen, Ammonia	TAL TAM	MCAWW 350.1	
Total Organic Carbon - SM 20th Ed.	TAL TAL	SM20 5310 C	
Solids, Total Dissolved (TDS)	TAL TAM	SM SM 2540C	
Field Sampling	TAL TAM	EPA Field Sampling	

Lab References:

TAL TAL = TestAmerica Tallahassee

TAL TAM = TestAmerica Tampa

Method 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",

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

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

METHOD / ANALYST SUMMARY

Client: SCS Engineers

Job Number: 660-37947-1

Method	Analyst	Analyst ID
SW846 8260B	Campbell, Ed	EC
EPA 8011	Ballard, James	JB
SW846 6010B	Ramos, Salvador	SR
EPA Field Sampling	Sampler, Field	FS
40CFR136A 300.0	Steward, Tiffany	TS
MCAWW 350.1	Office, Trey	TO
SM20 5310 C	Kelley, Susan R	SRK
SM SM 2540C	Oonnoony, Thomas	TO

SAMPLE SUMMARY

Client: SCS Engineers

Job Number: 660-37947-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
660-37947-1	Leachate Storage Tank (Inf)	Water	10/27/2010 0925	10/27/2010 1530
660-37947-2	Phase 2 Primary Pump (INF)	Water	10/27/2010 0900	10/27/2010 1530
660-37947-3	Leachate Plant Water Supply Well	Water	10/27/2010 0845	10/27/2010 1530
660-37947-4	Effluent	Water	10/27/2010 0835	10/27/2010 1530
660-37947-5	Trip Blank	Water	10/27/2010 0000	10/27/2010 1530

Mr. Ken Guilbeault
 SCS Engineers
 4041 Park Oaks Blvd
 Suite 100
 Tampa, FL 33610

Job Number: 660-37947-1
 Lab Sample Id: 660-37947-1
 Client Matrix: Water
 Date Sampled: 10/27/2010 0925
 Date Received: 10/27/2010 1530

Client Sample ID: Leachate Storage Tank (Inf)

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
GC/MS VOA							
Bromoform	0.58	U	ug/L	0.58	8260B	10/29/2010 1404	10/29/2010 1404 1.0
Chlorodibromomethane	0.34	U	ug/L	0.34	8260B	10/29/2010 1404	10/29/2010 1404 1.0
Chloroform	0.90	U	ug/L	0.90	8260B	10/29/2010 1404	10/29/2010 1404 1.0
Dichlorobromomethane	0.35	U	ug/L	0.35	8260B	10/29/2010 1404	10/29/2010 1404 1.0
Surrogate	Acceptance Limits						
4-Bromofluorobenzene	98	%		8260B	70 - 130		
Dibromofluoromethane	106	%		8260B	70 - 130		
Toluene-d8 (Surr)	100	%		8260B	70 - 130		
METALS							
Arsenic	48	ug/L	4.0	6010B - Total Recoverable	11/02/2010 0804	11/03/2010 1018	1.0
FIELD SERVICE / MOBILE LAB							
Field pH	7.98	SU		Field Sampling		10/27/2010 0925	1.0
Field Temperature	25.1	Degrees C		Field Sampling		10/27/2010 0925	1.0
Oxygen, Dissolved	1.98	mg/L		Field Sampling		10/27/2010 0925	1.0
Sheen	No	SU		Field Sampling		10/27/2010 0925	1.0
Specific Conductance	5991	umhos/cm		Field Sampling		10/27/2010 0925	1.0
Turbidity	36.8	NTU		Field Sampling		10/27/2010 0925	1.0
Oxidation Reduction Potential	55.7	millivolts		Field Sampling		10/27/2010 0925	1.0
GENERAL CHEMISTRY							
Total Organic Carbon	180	mg/L	7.0	5310 C		11/01/2010 0529	20

Mr. Ken Guilbeault
 SCS Engineers
 4041 Park Oaks Blvd
 Suite 100
 Tampa, FL 33610

Job Number: 660-37947-1
 Lab Sample Id: 660-37947-2
 Client Matrix: Water
 Date Sampled: 10/27/2010 0900
 Date Received: 10/27/2010 1530

Client Sample ID: Phase 2 Primary Pump (INF)

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
GC/MS VOA							
Bromoform	0.58	U	ug/L	0.58	8260B	10/29/2010 1420	10/29/2010 1420 1.0
Chlorodibromomethane	0.34	U	ug/L	0.34	8260B	10/29/2010 1420	10/29/2010 1420 1.0
Chloroform	0.90	U	ug/L	0.90	8260B	10/29/2010 1420	10/29/2010 1420 1.0
Dichlorobromomethane	0.35	U	ug/L	0.35	8260B	10/29/2010 1420	10/29/2010 1420 1.0
Surrogate	Acceptance Limits						
4-Bromofluorobenzene	99	%		8260B	70 - 130		
Dibromofluoromethane	104	%		8260B	70 - 130		
Toluene-d8 (Surr)	101	%		8260B	70 - 130		
METALS							
Arsenic	50	ug/L	4.0	6010B - Total Recoverable	11/02/2010 0804	11/03/2010 1028	1.0
FIELD SERVICE / MOBILE LAB							
Field pH	6.80	SU		Field Sampling		10/27/2010 0900	1.0
Field Temperature	31.4	Degrees C		Field Sampling		10/27/2010 0900	1.0
Oxygen, Dissolved	0.74	mg/L		Field Sampling		10/27/2010 0900	1.0
Sheen	No	SU		Field Sampling		10/27/2010 0900	1.0
Specific Conductance	4620	umhos/cm		Field Sampling		10/27/2010 0900	1.0
Turbidity	144	NTU		Field Sampling		10/27/2010 0900	1.0
Oxidation Reduction Potential	-66.1	millivolts		Field Sampling		10/27/2010 0900	1.0
GENERAL CHEMISTRY							
Total Organic Carbon	120	mg/L	7.0	5310 C		11/01/2010 0546	20

Mr. Ken Guilbeault
 SCS Engineers
 4041 Park Oaks Blvd
 Suite 100
 Tampa, FL 33610

Job Number: 660-37947-1
 Lab Sample Id: 660-37947-3
 Client Matrix: Water
 Date Sampled: 10/27/2010 0845
 Date Received: 10/27/2010 1530

Client Sample ID: Leachate Plant Water Supply Well

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution	
GC/MS VOA								
Bromoform	0.58	U	ug/L	0.58	8260B	10/29/2010 1438	10/29/2010 1438	1.0
Chlorodibromomethane	0.34	U	ug/L	0.34	8260B	10/29/2010 1438	10/29/2010 1438	1.0
Chloroform	0.90	U	ug/L	0.90	8260B	10/29/2010 1438	10/29/2010 1438	1.0
Dichlorobromomethane	0.35	U	ug/L	0.35	8260B	10/29/2010 1438	10/29/2010 1438	1.0
Surrogate	Acceptance Limits							
4-Bromofluorobenzene	101	%			8260B	70 - 130		
Dibromofluoromethane	104	%			8260B	70 - 130		
Toluene-d8 (Surr)	99	%			8260B	70 - 130		
METALS								
Arsenic	4.0	U	ug/L	4.0	6010B - Total Recoverable	11/02/2010 0804	11/03/2010 1031	1.0
FIELD SERVICE / MOBILE LAB								
Field pH	6.27		SU		Field Sampling	10/27/2010 0845		1.0
Field Temperature	25.7		Degrees C		Field Sampling	10/27/2010 0845		1.0
Oxygen, Dissolved	1.60		mg/L		Field Sampling	10/27/2010 0845		1.0
Sheen	No		SU		Field Sampling	10/27/2010 0845		1.0
Specific Conductance	461		umhos/cm		Field Sampling	10/27/2010 0845		1.0
Turbidity	0.35		NTU		Field Sampling	10/27/2010 0845		1.0
Oxidation Reduction Potential	32.7		millivolts		Field Sampling	10/27/2010 0845		1.0
GENERAL CHEMISTRY								
Total Organic Carbon	0.35	I	mg/L	0.35	5310 C		11/02/2010 0006	1.0

Mr. Ken Guilbeault
 SCS Engineers
 4041 Park Oaks Blvd
 Suite 100
 Tampa, FL 33610

Job Number: 660-37947-1
 Lab Sample Id: 660-37947-4
 Client Matrix: Water
 Date Sampled: 10/27/2010 0835
 Date Received: 10/27/2010 1530

Client Sample ID: Effluent

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
GC/MS VOA							
Benzene	0.50	U	ug/L	0.50	8260B	10/29/2010 1454	10/29/2010 1454 1.0
Bromoform	0.58	U	ug/L	0.58	8260B	10/29/2010 1454	10/29/2010 1454 1.0
Chlorodibromomethane	0.34	U	ug/L	0.34	8260B	10/29/2010 1454	10/29/2010 1454 1.0
Chloroform	0.90	U	ug/L	0.90	8260B	10/29/2010 1454	10/29/2010 1454 1.0
Dichlorobromomethane	0.35	U	ug/L	0.35	8260B	10/29/2010 1454	10/29/2010 1454 1.0
Ethylbenzene	0.44	U	ug/L	0.44	8260B	10/29/2010 1454	10/29/2010 1454 1.0
Toluene	0.51	U	ug/L	0.51	8260B	10/29/2010 1454	10/29/2010 1454 1.0
Vinyl chloride	0.50	U	ug/L	0.50	8260B	10/29/2010 1454	10/29/2010 1454 1.0
Xylenes, Total	0.50	U	ug/L	0.50	8260B	10/29/2010 1454	10/29/2010 1454 1.0
Surrogate						Acceptance Limits	
4-Bromofluorobenzene	100	%		8260B		70 - 130	
Dibromofluoromethane	103	%		8260B		70 - 130	
Toluene-d8 (Surr)	98	%		8260B		70 - 130	
GC SEMI VOA							
Ethylene Dibromide	0.010	U	ug/L	0.010	8011	11/02/2010 1324	11/02/2010 1813 1.0
Surrogate						Acceptance Limits	
1,1,1,2-Tetrachloroethane	79	%		8011		60 - 140	
METALS							
Arsenic	34		ug/L	4.0	6010B - Total Recoverable	11/02/2010 0804	11/03/2010 1034 1.0
Sodium - DL2	670		mg/L	3.1	6010B - Total Recoverable	11/02/2010 0804	11/03/2010 1120 10
FIELD SERVICE / MOBILE LAB							
Field pH	8.10		SU		Field Sampling	10/27/2010 0835	1.0
Field Temperature	26.2		Degrees C		Field Sampling	10/27/2010 0835	1.0
Oxygen, Dissolved	1.36		mg/L		Field Sampling	10/27/2010 0835	1.0
Sheen	No		SU		Field Sampling	10/27/2010 0835	1.0

Mr. Ken Guilbeault
 SCS Engineers
 4041 Park Oaks Blvd
 Suite 100
 Tampa, FL 33610

Job Number: 660-37947-1
 Lab Sample Id: 660-37947-4
 Client Matrix: Water
 Date Sampled: 10/27/2010 0835
 Date Received: 10/27/2010 1530

Client Sample ID: Effluent

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
FIELD SERVICE / MOBILE LAB							
Specific Conductance	4358	umhos/cm		Field Sampling		10/27/2010 0835	1.0
Turbidity	4.55	NTU		Field Sampling		10/27/2010 0835	1.0
Oxidation Reduction Potential	164.3	millivolts		Field Sampling		10/27/2010 0835	1.0
GENERAL CHEMISTRY							
Chloride	1000	mg/L	20	300.0		10/29/2010 1630	100
Ammonia as N	0.013	I mg/L	0.010	350.1		10/28/2010 1402	1.0
Total Organic Carbon	140	mg/L	7.0	5310 C		11/01/2010 0603	20
Total Dissolved Solids	2500	mg/L	17	SM 2540C		10/28/2010 1239	1.0

Mr. Ken Guilbeault
 SCS Engineers
 4041 Park Oaks Blvd
 Suite 100
 Tampa, FL 33610

Job Number: 660-37947-1
 Lab Sample Id: 660-37947-5
 Client Matrix: Water
 Date Sampled: 10/27/2010 0000
 Date Received: 10/27/2010 1530

Client Sample ID: Trip Blank

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
GC/MS VOA							
Benzene	0.50	U	ug/L	0.50	8260B	10/29/2010 1148	10/29/2010 1148 1.0
Bromoform	0.58	U	ug/L	0.58	8260B	10/29/2010 1148	10/29/2010 1148 1.0
Chlorodibromomethane	0.34	U	ug/L	0.34	8260B	10/29/2010 1148	10/29/2010 1148 1.0
Chloroform	0.90	U	ug/L	0.90	8260B	10/29/2010 1148	10/29/2010 1148 1.0
Dichlorobromomethane	0.35	U	ug/L	0.35	8260B	10/29/2010 1148	10/29/2010 1148 1.0
Ethylbenzene	0.44	U	ug/L	0.44	8260B	10/29/2010 1148	10/29/2010 1148 1.0
Toluene	0.51	U	ug/L	0.51	8260B	10/29/2010 1148	10/29/2010 1148 1.0
Vinyl chloride	0.50	U	ug/L	0.50	8260B	10/29/2010 1148	10/29/2010 1148 1.0
Xylenes, Total	0.50	U	ug/L	0.50	8260B	10/29/2010 1148	10/29/2010 1148 1.0
Surrogate						Acceptance Limits	
4-Bromofluorobenzene	100	%		8260B	70 - 130		
Dibromofluoromethane	105	%		8260B	70 - 130		
Toluene-d8 (Surr)	100	%		8260B	70 - 130		

DATA REPORTING QUALIFIERS

Client: SCS Engineers

Job Number: 660-37947-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Indicates that the compound was analyzed for but not detected.
GC Semi VOA		
	U	Indicates that the compound was analyzed for but not detected.
Metals		
	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.
General Chemistry		
	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.
	I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Method Blank - Batch: 660-102031

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 660-102031/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 0813
Date Prepared: 10/29/2010 0813

Analysis Batch: 660-102031
Prep Batch: N/A
Units: ug/L

Instrument ID: BVMK5972
Lab File ID: 1KJ2906.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	PQL
Benzene	0.50	U	0.50	1.0
Bromoform	0.58	U	0.58	1.0
Chlorodibromomethane	0.34	U	0.34	1.0
Chloroform	0.90	U	0.90	1.0
Dichlorobromomethane	0.35	U	0.35	1.0
Ethylbenzene	0.44	U	0.44	1.0
Toluene	0.51	U	0.51	1.0
Vinyl chloride	0.50	U	0.50	1.0
Xylenes, Total	0.50	U	0.50	3.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	99	70 - 130
Dibromofluoromethane	104	70 - 130
Toluene-d8 (Surr)	98	70 - 130

Lab Control Sample - Batch: 660-102031

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 660-102031/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 0729
Date Prepared: 10/29/2010 0729

Analysis Batch: 660-102031
Prep Batch: N/A
Units: ug/L

Instrument ID: BVMK5972
Lab File ID: 1KJ2904.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	20.0	19.8	99	68 - 134	
Bromoform	20.0	16.1	80	65 - 130	
Chlorodibromomethane	20.0	18.7	93	70 - 130	
Chloroform	20.0	17.5	87	68 - 130	
Dichlorobromomethane	20.0	19.5	98	70 - 130	
Ethylbenzene	20.0	19.4	97	70 - 130	
Toluene	20.0	19.4	97	70 - 131	
Vinyl chloride	20.0	20.7	103	48 - 147	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	100	70 - 130
Dibromofluoromethane	101	70 - 130
Toluene-d8 (Surr)	101	70 - 130

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Matrix Spike - Batch: 660-102031

Method: 8260B
Preparation: 5030B

Lab Sample ID: 660-37960-A-1 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 0931
Date Prepared: 10/29/2010 0931

Analysis Batch: 660-102031
Prep Batch: N/A
Units: ug/L

Instrument ID: BVMK5972
Lab File ID: 1KJ2909.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Sample	Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	0.50	U	20.0	17.5	87	68 - 134	
Bromoform	0.58	U	20.0	17.1	86	65 - 130	
Chlorodibromomethane	0.34	U	20.0	19.9	99	70 - 130	
Chloroform	0.90	U	20.0	16.5	82	68 - 130	
Dichlorobromomethane	0.35	U	20.0	19.2	96	70 - 130	
Ethylbenzene	0.44	U	20.0	16.2	81	70 - 130	
Toluene	0.51	U	20.0	16.6	83	70 - 131	
Vinyl chloride	0.50	U	20.0	12.1	60	48 - 147	
Surrogate		% Rec				Acceptance Limits	
4-Bromofluorobenzene		100				70 - 130	
Dibromofluoromethane		104				70 - 130	
Toluene-d8 (Surr)		100				70 - 130	

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Duplicate - Batch: 660-102031

Method: 8260B
Preparation: 5030B

Lab Sample ID: 660-37960-C-1 DU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 0910
Date Prepared: 10/29/2010 0910

Analysis Batch: 660-102031
Prep Batch: N/A
Units: ug/L

Instrument ID: BVMK5972
Lab File ID: 1KJ2908.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Sample	Result/Qual	Result	RPD	Limit	Qual
Benzene	0.50	U	0.50	NC	30	U
Bromoform	0.58	U	0.58	NC	30	U
Chlorodibromomethane	0.34	U	0.34	NC	30	U
Chloroform	0.90	U	0.90	NC	30	U
Dichlorobromomethane	0.35	U	0.35	NC	30	U
Ethylbenzene	0.44	U	0.44	NC	30	U
Toluene	0.51	U	0.51	NC	30	U
Vinyl chloride	0.50	U	0.50	NC	30	U
Xylenes, Total	0.50	U	0.50	NC	30	U
Surrogate		% Rec		Acceptance Limits		
4-Bromofluorobenzene		99		70 - 130		
Dibromofluoromethane		107		70 - 130		
Toluene-d8 (Surr)		100		70 - 130		

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Method Blank - Batch: 660-102143

Lab Sample ID: MB 660-102143/1-A
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 11/02/2010 1610
 Date Prepared: 11/02/2010 1324

Analysis Batch: 660-102213
 Prep Batch: 660-102143
 Units: ug/L

**Method: 8011
 Preparation: 8011**

Instrument ID: BSGU
 Lab File ID: 1K02U013.D
 Initial Weight/Volume: 34.8608 g
 Final Weight/Volume: 2.0 mL
 Injection Volume: 4 uL
 Column ID: PRIMARY

Analyte	Result	Qual	MDL	PQL
Ethylene Dibromide	0.010	U	0.010	0.020
Surrogate	% Rec		Acceptance Limits	
1,1,1,2-Tetrachloroethane	94		60 - 140	

Lab Control Sample - Batch: 660-102143

Lab Sample ID: LCS 660-102143/2-A
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 11/02/2010 1631
 Date Prepared: 11/02/2010 1324

Analysis Batch: 660-102213
 Prep Batch: 660-102143
 Units: ug/L

**Method: 8011
 Preparation: 8011**

Instrument ID: BSGU
 Lab File ID: 1K02U014.D
 Initial Weight/Volume: 34.8430 g
 Final Weight/Volume: 2.0 mL
 Injection Volume: 4 uL
 Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ethylene Dibromide	0.251	0.245	97	60 - 140	

Matrix Spike - Batch: 660-102143

Lab Sample ID: 640-30722-U-23-A MS
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 11/02/2010 1712
 Date Prepared: 11/02/2010 1324

Analysis Batch: 660-102213
 Prep Batch: 660-102143
 Units: ug/L

**Method: 8011
 Preparation: 8011**

Instrument ID: BSGU
 Lab File ID: 1K02U016.D
 Initial Weight/Volume: 34.6646 g
 Final Weight/Volume: 2.0 mL
 Injection Volume: 4 uL
 Column ID: PRIMARY

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Ethylene Dibromide	0.010 U	0.252	0.212	84	60 - 140	

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Duplicate - Batch: 660-102143

Lab Sample ID: 640-30785-E-1-A DU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/02/2010 1753
Date Prepared: 11/02/2010 1324

Analysis Batch: 660-102213
Prep Batch: 660-102143
Units: ug/L

Method: 8011 Preparation: 8011

Instrument ID: BSGU
Lab File ID: 1K02U018.D
Initial Weight/Volume: 33.8245 g
Final Weight/Volume: 2.0 mL
Injection Volume: 4 uL
Column ID: PRIMARY

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Ethylene Dibromide	0.010 U	0.010	NC	40	U
Surrogate	% Rec		Acceptance Limits		
1,1,1,2-Tetrachloroethane	78		60 - 140		

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Method Blank - Batch: 660-102114

Lab Sample ID: MB 660-102114/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/03/2010 0949
Date Prepared: 11/02/2010 0804

Analysis Batch: 660-102204
Prep Batch: 660-102114
Units: mg/L

Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPC
Lab File ID: 10K03C.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	PQL
Sodium	0.31	U	0.31	0.50

Method Blank - Batch: 660-102114

Lab Sample ID: MB 660-102114/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/03/2010 0949
Date Prepared: 11/02/2010 0804

Analysis Batch: 660-102204
Prep Batch: 660-102114
Units: ug/L

Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPC
Lab File ID: 10K03C.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	PQL
Arsenic	4.0	U	4.0	10

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Lab Control Sample - Batch: 660-102114

Lab Sample ID: LCS 660-102114/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/03/2010 0952
Date Prepared: 11/02/2010 0804

Analysis Batch: 660-102204
Prep Batch: 660-102114
Units: mg/L

Method: 6010B
Preparation: 3005A
Total Recoverable

Instrument ID: ICPC
Lab File ID: 10K03C.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sodium	10.0	10.1	101	75 - 125	

Lab Control Sample - Batch: 660-102114

Lab Sample ID: LCS 660-102114/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/03/2010 0952
Date Prepared: 11/02/2010 0804

Analysis Batch: 660-102204
Prep Batch: 660-102114
Units: ug/L

Method: 6010B
Preparation: 3005A
Total Recoverable

Instrument ID: ICPC
Lab File ID: 10K03C.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1000	972	97	75 - 125	

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 660-102114**

**Method: 6010B
Preparation: 3005A
Total Recoverable**

MS Lab Sample ID: 660-37941-B-1-B MS Analysis Batch: 660-102204
Client Matrix: Water Prep Batch: 660-102114
Dilution: 1.0
Date Analyzed: 11/03/2010 1002
Date Prepared: 11/02/2010 0804

Instrument ID: ICPC
Lab File ID: 10K03C.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 660-37941-B-1-C MSD Analysis Batch: 660-102204
Client Matrix: Water Prep Batch: 660-102114
Dilution: 1.0
Date Analyzed: 11/03/2010 1005
Date Prepared: 11/02/2010 0804

Instrument ID: ICPC
Lab File ID: 10K03C.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Sodium	-73373	-73375	75 - 125	1	20	J3	J3

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 660-102114**

**Method: 6010B
Preparation: 3005A
Total Recoverable**

MS Lab Sample ID: 660-37941-B-1-B MS Analysis Batch: 660-102204
Client Matrix: Water Prep Batch: 660-102114
Dilution: 1.0
Date Analyzed: 11/03/2010 1002
Date Prepared: 11/02/2010 0804

Instrument ID: ICPC
Lab File ID: 10K03C.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 660-37941-B-1-C MSD Analysis Batch: 660-102204
Client Matrix: Water Prep Batch: 660-102114
Dilution: 1.0
Date Analyzed: 11/03/2010 1005
Date Prepared: 11/02/2010 0804

Instrument ID: ICPC
Lab File ID: 10K03C.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Arsenic	100	100	75 - 125	0	20		

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Method Blank - Batch: 660-102071

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 660-102071/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 0929
Date Prepared: N/A

Analysis Batch: 660-102071
Prep Batch: N/A
Units: mg/L

Instrument ID: DIONEX 1
Lab File ID: 10.0000.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	PQL
Chloride	0.20	U	0.20	0.50

Lab Control Sample - Batch: 660-102071

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 660-102071/11
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 0947
Date Prepared: N/A

Analysis Batch: 660-102071
Prep Batch: N/A
Units: mg/L

Instrument ID: DIONEX 1
Lab File ID: 11.0000.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	10.0	10.4	104	90 - 110	

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 660-102071**

Method: 300.0
Preparation: N/A

MS Lab Sample ID: 660-37849-B-1 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 1427
Date Prepared: N/A

Analysis Batch: 660-102071
Prep Batch: N/A

Instrument ID: DIONEX 1
Lab File ID: 27.0000.d
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL
1 uL

MSD Lab Sample ID: 660-37849-B-1 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 1445
Date Prepared: N/A

Analysis Batch: 660-102071
Prep Batch: N/A

Instrument ID: DIONEX 1
Lab File ID: 28.0000.d
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL
1 uL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	102	101	90 - 110	0	30		

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Method Blank - Batch: 660-102118

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 660-102118/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 1508
Date Prepared: N/A

Analysis Batch: 660-102118
Prep Batch: N/A
Units: mg/L

Instrument ID: DIONEX2
Lab File ID: 10.0000.d
Initial Weight/Volume: 1 mL
Final Weight/Volume: 1 mL

Analyte	Result	Qual	MDL	PQL
Chloride	0.20	U	0.20	0.50

Lab Control Sample - Batch: 660-102118

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 660-102118/11
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/29/2010 1534
Date Prepared: N/A

Analysis Batch: 660-102118
Prep Batch: N/A
Units: mg/L

Instrument ID: DIONEX2
Lab File ID: 11.0000.d
Initial Weight/Volume: 1 mL
Final Weight/Volume: 1 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	10.0	10.4	104	90 - 110	

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Method Blank - Batch: 660-101965

Method: 350.1
Preparation: N/A

Lab Sample ID: MB 660-101965/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/28/2010 1326
Date Prepared: N/A

Analysis Batch: 660-101965
Prep Batch: N/A
Units: mg/L

Instrument ID: LACHAT
Lab File ID: 10.28.10.NH3.B.txt
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	MDL	PQL
Ammonia as N	0.010	U	0.010	0.020

Lab Control Sample - Batch: 660-101965

Method: 350.1
Preparation: N/A

Lab Sample ID: LCS 660-101965/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/28/2010 1328
Date Prepared: N/A

Analysis Batch: 660-101965
Prep Batch: N/A
Units: mg/L

Instrument ID: LACHAT
Lab File ID: 10.28.10.NH3.B.txt
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ammonia as N	0.500	0.522	104	90 - 110	

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 660-101965**

Method: 350.1
Preparation: N/A

MS Lab Sample ID: 660-37902-P-1 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/28/2010 1359
Date Prepared: N/A

Analysis Batch: 660-101965
Prep Batch: N/A

Instrument ID: LACHAT
Lab File ID: 10.28.10.NH3.B.txt
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 660-37902-P-1 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/28/2010 1401
Date Prepared: N/A

Analysis Batch: 660-101965
Prep Batch: N/A

Instrument ID: LACHAT
Lab File ID: 10.28.10.NH3.B.txt
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia as N	94	96	90 - 110	2	30		

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Method Blank - Batch: 640-74591

**Method: 5310 C
Preparation: N/A**

Lab Sample ID: MB 640-74591/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/01/2010 0242
Date Prepared: N/A

Analysis Batch: 640-74591
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Result	Qual	MDL	PQL
Total Organic Carbon	0.35	U	0.35	1.0

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 640-74591**

**Method: 5310 C
Preparation: N/A**

LCS Lab Sample ID: LCS 640-74591/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/01/2010 0259
Date Prepared: N/A

Analysis Batch: 640-74591
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

LCSD Lab Sample ID: LCSD 640-74591/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/01/2010 0315
Date Prepared: N/A

Analysis Batch: 640-74591
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Organic Carbon	103	106	80 - 120	2	25		

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 640-74591**

**Method: 5310 C
Preparation: N/A**

MS Lab Sample ID: 660-37964-A-3 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/01/2010 1618
Date Prepared: N/A

Analysis Batch: 640-74591
Prep Batch: N/A

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

MSD Lab Sample ID: 660-37964-A-3 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/01/2010 1635
Date Prepared: N/A

Analysis Batch: 640-74591
Prep Batch: N/A

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Total Organic Carbon	104	203	80 - 120	37	25		J3

Duplicate - Batch: 640-74591

**Method: 5310 C
Preparation: N/A**

Lab Sample ID: 660-37970-G-1 DU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/01/2010 1511
Date Prepared: N/A

Analysis Batch: 640-74591
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Organic Carbon	6.5	7.21	11	25	

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Method Blank - Batch: 640-74610

Lab Sample ID: MB 640-74610/1
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 11/01/2010 1848
 Date Prepared: N/A

Analysis Batch: 640-74610
 Prep Batch: N/A
 Units: mg/L

**Method: 5310 C
 Preparation: N/A**

Instrument ID: No Equipment Assigned
 Lab File ID: N/A
 Initial Weight/Volume: 40 mL
 Final Weight/Volume: 40 mL

Analyte	Result	Qual	MDL	PQL
Total Organic Carbon	0.35	U	0.35	1.0

**Lab Control Sample/
 Lab Control Sample Duplicate Recovery Report - Batch: 640-74610**

LCS Lab Sample ID: LCS 640-74610/2
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 11/01/2010 1905
 Date Prepared: N/A

Analysis Batch: 640-74610
 Prep Batch: N/A
 Units: mg/L

**Method: 5310 C
 Preparation: N/A**

Instrument ID: No Equipment Assigned
 Lab File ID: N/A
 Initial Weight/Volume: 40 mL
 Final Weight/Volume: 40 mL

LCSD Lab Sample ID: LCSD 640-74610/3
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 11/01/2010 1921
 Date Prepared: N/A

Analysis Batch: 640-74610
 Prep Batch: N/A
 Units: mg/L

Instrument ID: No Equipment Assigned
 Lab File ID: N/A
 Initial Weight/Volume: 40 mL
 Final Weight/Volume: 40 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Organic Carbon	107	106	80 - 120	1	25		

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 640-74610

Method: 5310 C
Preparation: N/A

MS Lab Sample ID: 660-37891-B-2 MS
Client Matrix: Water
Dilution: 4.0
Date Analyzed: 11/01/2010 2316
Date Prepared: N/A

Analysis Batch: 640-74610
Prep Batch: N/A

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

MSD Lab Sample ID: 660-37891-B-2 MSD
Client Matrix: Water
Dilution: 4.0
Date Analyzed: 11/01/2010 2333
Date Prepared: N/A

Analysis Batch: 640-74610
Prep Batch: N/A

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Total Organic Carbon	118	117	80 - 120	0	25		

Duplicate - Batch: 640-74610

Method: 5310 C
Preparation: N/A

Lab Sample ID: 660-37863-F-1 DU
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 11/01/2010 2045
Date Prepared: N/A

Analysis Batch: 640-74610
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 40 mL
Final Weight/Volume: 40 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Organic Carbon	26	25.4	0.8	25	

Quality Control Results

Client: SCS Engineers

Job Number: 660-37947-1

Method Blank - Batch: 660-101956

Method: SM 2540C
Preparation: N/A

Lab Sample ID: MB 660-101956/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/28/2010 1229
Date Prepared: N/A

Analysis Batch: 660-101956
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	PQL	PQL
Total Dissolved Solids	5.0	U	5.0	5.0

Lab Control Sample - Batch: 660-101956

Method: SM 2540C
Preparation: N/A

Lab Sample ID: LCS 660-101956/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/28/2010 1230
Date Prepared: N/A

Analysis Batch: 660-101956
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 10 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Dissolved Solids	10000	9880	99	80 - 120	

Duplicate - Batch: 660-101956

Method: SM 2540C
Preparation: N/A

Lab Sample ID: 660-37947-4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/28/2010 1239
Date Prepared: N/A

Analysis Batch: 660-101956
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 15 mL
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids	2500	2470	0.3	20	

Form FD 9000-7: Field Parameter Data Sheet for Surface Water

Meter #s: Rental from Cyclope

PAGE: 1 of 1

11/05/2010

Time Out: 6:30
Time In: 4:20

CLIENT NAME: SCS

SURVEY/PROJECT: EFF/Nostril Station / Supply well crew

SAMPLERS: Joe H. Henry

SAMPLE ID	TIME	TOTAL DEPTH (feet)	SECCHI DEPTH (feet)	SAMPLE DEPTH (feet)	WATER TEMP (Celsius)	DO (mg/L)	FIELD Ox-Red (mV)	Cond (µs/cm)	SALINITY (ppt)	PH (su)	TURBIDITY (NTU)	Comments
EFF	6:35	4.0	n/a	Surface	26.2	1.36	164.3	435.8	n/a	8.12	4.55	No Shad
Plant Supply well 845	Spot	n/a	Spot	25.7	1.60	32.7	461	n/a	6.27	0.35	Plant water	Yellowish color
Plant Supply well 900 (IND)	Spot	n/a	Spot	31.4	0.24	-66.1	4620	n/a	6.50	144	4.0	No Shad
Lacoste Storage Tank 925	17	n/a	Surface	25.1	1.98	55.7	5991	n/a	7.98	36.8	4.0	Yellowish
												No Shad

Instrument Calibrations: YSI 3500 Calibrated to pH 7.00, slope to pH 4.00, pH 6.00

KCL Conductivity Standards: 0.001M = (147µS/cm) 0.01M = (143µS/cm) YSI 85 D.O. Meter Calibrated to mg/L @ °C
Cooler Temp: °C

Signature: [Signature] Relinquished by: [Signature] Date: 10/27/10 Time: 12:02

Date Completed: 10/27/10 Received by: [Signature]

FIELD CONDITIONS FOR STATION# _____ AT TIME _____

WIND DIRECTION: N E @ 5 TIDAL STAGE: N/A

WIND SPEED (MPH/KNOTS): 0 WAVE CONDITIONS: N/A

PREVIOUS RAINFALL: _____

CLOUD COVER (%): _____

Note: This Sheet is used for recording Sample Data - Calibration information must also be documented

Login Sample Receipt Check List

Client: SCS Engineers

Job Number: 660-37947-1

Login Number: 37947
Creator: McNulty, Carol
List Number: 1

List Source: TestAmerica Tampa

Question	T / F / NA	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	14.1 degrees C CU-07 recd direct from field
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 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.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Login Sample Receipt Check List

Client: SCS Engineers

Job Number: 660-37947-1

Login Number: 37947
Creator: Snead, Joshua
List Number: 1

List Source: TestAmerica Tallahassee
List Creation: 10/29/10 08:41 AM

Question	T / F / NA	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	4.7
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	

ATTACHMENT 2

MONTHLY LEACAHATE QUALITY
ANALYTICAL RESULTS FOR
OCTOBER, NOVEMBER, AND DECEMBER 2010

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

SOLID WASTE MANAGEMENT
 PO BOX 340
 LECANTO FL 34460

Invoice Number 11290

Client	CITRUS COUNTY UTILITIES ¹	Sample Number	E101762	
Project	LANDFILL LEACHATE PLANT	Date/Time Sampled	10/5/10	0850 HRS
Sample Description	WWTP/EFF	Date/Time Received	10/5/10	1143 HRS

Method	Analytes	Units	Results	MDL	Analyst	Analysis Date/Time
SM5210-B	CBOD	mg/L	2.35	0.30 mg/L	SJL	10/6/10 1018 HRS
SM2540-D	TSS	mg/L	1.50	1.00 mg/L	SJL	10/6/10 0920 HRS
SM4500-NO3-E	NITRATE	mg/L	1.87	0.06 mg/L	SJL	10/6/10 1120 HRS

Sally Ann Canillo
 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

1 OF 1

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

SOLID WASTE MANAGEMENT
 PO BOX 340
 LECANTO FL 34460

Invoice Number 11340

Client	CITRUS COUNTY UTILITIES	Sample Number	E101951
Project	LANDFILL LEACHATE PLANT	Date/Time Sampled	11/2/10 1120 HRS
Sample Description	WWTP/EFF	Date/Time Received	11/2/10 1236 HRS

Method	Analytes	Units	Results	MDL	Analyst	Analysis Date/Time
SM5210-B	CBOD	mg/L	2.07	0.30 mg/L	SJL	11/3/10 1020 HRS
SM2540-D	TSS	mg/L	<1	1.00 mg/L	SJL	11/3/10 0944 HRS
SM4500-NO3-E	NITRATE	mg/L	1.55	0.06 mg/L	SJL	11/2/10 1400 HRS

Sally Ann Carrillo
 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 11385

Client	CITRUS COUNTY UTILITIES	Sample Number	E102168
Project	LANDFILL LEACHATE PLANT	Date/Time Sampled	12/8/10 1110 HRS
Sample Description	WWTP/EFF	Date/Time Received	12/8/10 1250 HRS

Method	Analytes	Units	Results	MDL	Analyst	Analysis Date/Time
SM5210-B	CBOD	mg/L	1.72	0.30 mg/L	SJL	12/8/10 1400 HRS
SM2540-D	TSS	mg/L	2.00	1.00 mg/L	SJL	12/10/10 0911 HRS
SM4500-NO3-E	NITRATE	mg/L	5.95	0.06 mg/L	SJL	12/9/10 1000 HRS

Sally Ann Casella
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

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	
Volatile Organics								Resample					Resample		
Acetone	GCTL	6300	ug/L	---	---	---	21	---	---	---	---	---	40	15 I	---
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
Carbon Tetrachloride	PDWS	3	ug/L	---	---	---	1 U	---	---	---	---	---	1.2	0.45 I	---
Chlorobromomethane	GCTL	91	ug/L	---	---	---	0.58 U	0.58 U	---	---	---	---	5.7	0.58 U	---
Chloromethane	GCTL	2.7	ug/L	---	---	---	1 U	---	---	---	---	---	2.41	1.0 U	---
Dibromomethane	GCTL	70	ug/L	---	---	---	0.41 U	---	---	---	---	---	5.8	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	0.44 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
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
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
Xylenes, Total	SDWS	20	ug/L	1 U	2.11	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
Trihalomethanes															
Bromodichloromethane	See Total THMs		ug/L	---	14	---	410	0.35 U	---	13	---	---	870	170	0.35 U
Bromoform	See Total THMs		ug/L	---	2.9	---	71	0.58 U	---	7	---	---	190	36	0.58 U
Chloroform	See Total THMs		ug/L	---	11	---	370	0.90 U	---	8.3	---	---	900	110	0.90 U
Dibromochloromethane	See Total THMs		ug/L	---	6.9	---	280	0.58 U	---	9.7	---	---	670	110	0.34 U
Total THMs	Permit	100	ug/L	---	34.8	---	1131	Not Detected	---	38	---	---	2630	426	Not Detected
Metals															
Antimony	PDWS	0.006	mg/L	---	---	---	---	---	---	---	---	---	0.0031 I	---	---
Arsenic	PDWS	0.01	mg/L	---	---	---	0.0091 I	---	---	---	---	---	0.025	0.02	0.034
Barium	PDWS	2	mg/L	---	---	---	0.058	---	---	---	---	---	0.081	---	---
Cobalt	GCTL	0.14	mg/L	---	---	---	0.011	---	---	---	---	---	0.019	---	---
Chromium	PDWS	0.1	mg/L	---	---	---	0.0058 I	---	---	---	---	---	0.0066	---	---
Copper	SDWS	1	mg/L	---	---	---	0.014	---	---	---	---	---	0.024	---	---
Lead	PDWS	0.015	mg/L	---	---	---	0.002 U	---	---	---	---	---	0.0031	---	---
Nickel	PDWS	0.1	mg/L	---	---	---	0.046	---	---	---	---	---	0.071	---	---
Iron	SDWS	0.3	mg/L	---	---	---	0.068 I	---	---	---	---	---	0.058 I	---	---
Zinc	SDWS	5	mg/L	---	---	---	0.020 I	---	---	---	---	---	0.031	---	---
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
Chloride	SDWS	250	mg/L	940	1300	1500	710	---	910	1000	1200	1300	---	---	1000
Cyanide	PDWS	0.2	mg/L	---	---	---	0.014	---	---	---	---	---	---	---	---
Sodium	PDWS	160	mg/L	570	800	820	430	---	570	580	750	830	---	---	670
TDS	SDWS	500	mg/L	2400	2800	3000	1800	---	2000	2200	2900	1500	---	---	2500
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	
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	
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	
Oxygen Reduction Potential	NS	NS	mV	---	---	---	---	---	---	228	25.8	350.7	-1.8	164.3	
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	
Turbidity	NS	NS	NTU	1.07	1.65	5	---	6.67	4.73	1.84	7.94	3.4	2.71	4.55	

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).

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

Parameter	Standard	MCL	Units	1/6/2010	2/3/2010	3/2/2010	4/6/2010	5/12/2010	6/2/2010	7/14/2010	8/4/2010	9/15/2010	10/5/2010	11/2/2010	12/8/2010
				CBOD	Permit	20	mg/L	1.5	1.77	1.64	1.83	1.62	3.44	1.85	1.92
TSS	Permit	20	mg/L	1.0 U	6.5	1.0 U	1.0 U	11	2.5	1.0 U	2.5	1.5	1.5	1.0 U	2
Nitrate	Permit	10	mg/L	1.25	6.12	1.06	0.17	2.38	0.6	4.2	1.65	6.02	1.87	1.55	5.95

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. Summary of Leachate Influent Quality Analytical Results
Citrus County Central Landfill**

Parameter	Units	Water Supply	Phase 2 Influent	Master Lift Influent
Trihalomethanes				
Bromodichloromethane	ug/L	0.35 U	0.35 U	0.35 U
Bromoform	ug/L	0.58 U	0.58 U	0.58 U
Chloroform	ug/L	0.90 U	0.90 U	0.90 U
Dibromochloromethane	ug/L	0.34 U	0.34 U	0.34 U
Total THMs	ug/L	Not Detected	Not Detected	Not Detected
Metals				
Arsenic	mg/L	4.0 U	50	48
General Chemistry				
Total Organic Carbon	mg/L	0.35 I	120	180
General Field Parameters				
Conductivity	umhos/cm	461	4620	5991
Dissolved Oxygen	mg/L	1.6	0.74	1.98
pH	pH Units	6.27	6.8	7.98
Oxygen Reduction Potential	mV	32.7	-66.1	55.7
Temperature, Water	deg C	25.7	31.4	25.1
Turbidity	NTU	0.35	144	36.8

Notes

1. NS = No numeric standard has been set for this analyte.
2. MCL = 40 Code of Federal Regulations (CFR) Part 261.24.
3. --- = Parameter not analyzed.
4. ug/l: micrograms per liter.
5. Yellow Shaded values indicate parameter concentrations exceeded 40 CFR Part 261.24.
6. **I** = Analyte detected below quantitation limits.
7. **U** = Analyte concentration was below the laboratory detection limit (value shown).

ATTACHMENT 4

COMPACT DISK CONTAINING
REPORT IN PDF FORMAT AND
ADaPT FILE