



1715 North Westshore Boulevard, Suite 875
Tampa, Florida 33607
tel: 813-281-2900
fax: 813-288-8787
cdmsmith.com

July 15, 2013

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 – Second Quarter 2013
Permit No. 21375-018-SO/01
WACS ID# SWD/09/39859

Dear Mr. Morris:

CDM Smith Inc. (CDM Smith) is providing the Second Quarter 2013 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). In accordance with the requirements of Specific Condition E.9.b.1., this report provides copies of the laboratory reports, field forms, and a CD containing an electronic copy of this report and the electronic data deliverable (EDD) in the "ADaPT" format of the second quarter leachate effluent sample.

County personnel collect leachate flow readings and pH measurements daily as required by Specific Condition Part E.9.b.(2) of the Permit. These readings are reported to the Florida Department of Environmental Protection (FDEP) under separate cover by the County.

Monthly samples of the leachate effluent are collected by County personnel and analyzed by their contract laboratory (S.A.C. Environmental Laboratory Inc.) for Carbonaceous Biochemical Oxygen Demand (CBOD₅), Total Suspended Solids (TSS), and nitrate as required by Specific Condition Part E.9.b.(2) of the Permit. The analytical laboratory reports from the monthly sampling events for April, May, and June of 2013, are in **Attachment 1**.

TestAmerica Laboratories Inc. (TestAmerica), under contract to CDM Smith, collected the second quarter leachate effluent sample on April 19, 2013. Sampling and analyses were conducted in accordance with Chapter 62-160, F.A.C. Standard Operating Procedures (DEP-SOP-001/01).

The second quarter leachate effluent sample collected by TestAmerica was analyzed for the quarterly parameters listed in Specific Condition Part E.9.b.(2) of the permit. A hard copy of the analytical report containing the results from the quarterly sampling event is included in Attachment 1. The results for the parameters listed in Specific Condition Part E.9.b.(2) of the permit for quarterly, semiannual, and annual sampling are summarized in **Table 1, Attachment 2**. A CD containing an electronic copy of the laboratory report and the electronic data deliverable (EDD) in the "ADaPT" format provided by TestAmerica is provided in **Attachment 3**.





John Morris, P.G.
July 15, 2013
Page 2

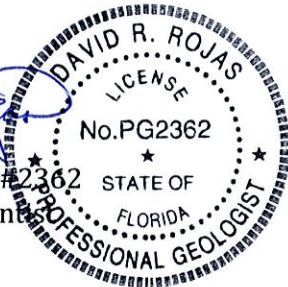
There were no exceedances of the permit criteria established in Specific Condition Part E.9.b.(2) in the sample collected on April 19, 2013. The analytical results from the monthly leachate effluent samples collected in April, May, and June are summarized in **Table 2** (Attachment 2). The concentration of CBOD₅ in the sample collected on April 3, 2013 (20.62 mg/L) exceeded the permit criterion of 20 mg/L established in Specific Condition Part E.9.b.(2). However, only 16.08 mg/L CBOD₅ was detected when the leachate effluent was re-sampled on April 12, 2013.

Results of analyses of samples from MW-6 for arsenic, sodium, chloride, and TDS are summarized in **Table 3**, (Attachment 2). The concentration of TDS detected in the most recent routine sample collected from MW-6 in February 2013 (530 mg/L) exceeded the criterion. In accordance with recent discussions with FDEP, revisions of the treatment criteria for leachate effluent established in the permit are being developed. Upon FDEP approval, Specific Condition E.9. will be modified accordingly.

Please let me know if you have any questions or require additional information.

Sincerely,

David R. Rojas, P.G. #2362
Environmental Scientist
CDM Smith Inc.



Attachments

cc: Solid Waste Administrator, FDEP – Tallahassee
Casey T. Stephens – Citrus County Solid Waste Director
Cathy Winter – Citrus County Contract Services Specialist

Attachment 1

Laboratory Reports:

- **Laboratory Reports for the Monthly Leachate Effluent Samples**
 - April 3, 2013
 - April 12, 2013
 - May 15, 2013
 - June 4, 2013

- **Laboratory Report for the Second Quarter Leachate Effluent Sample Collected in April 2013**

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: E130383
Sample ID: EFFLUENT

Date Collected: 4/3/13 0945
Date Received: 4/3/13 1126

Sample Description:

Location: WWTP

Parameters	Results Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc:				Analytical Method:			
CBOD	20.62 mg/L	J-3		SM5210-B	0.30	4/3/13 1238	
NITRATE	0.23 mg/L			SM4500 NO3-E	0.06	4/3/13 1434	
TSS	7.50 mg/L			SM2540-D	1.00	4/5/13 0929	

Amended report

Sally Ann Camillo
QA Officer



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

Lab ID: E130437

Date Collected: 4/12/13 0915

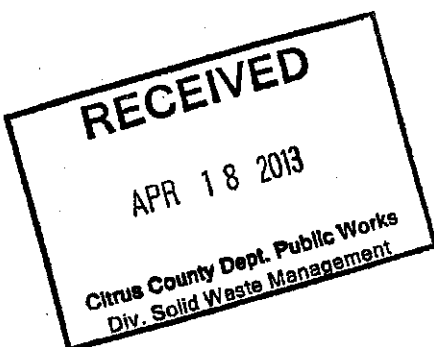
Sample ID: EFFLUENT

Date Received: 4/12/13 0940

Sample Description:

Location: WWTP

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc:					Analytical Method:			
CBOD	16.08	mg/L			SM5210-B	0.30	04/12/13 1104	



Sally Ann Canillo
QA Officer



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: E130556
Sample ID: EFFLUENT

Date Collected: 5/15/13 1045
Date Received: 5/15/13 1138

Sample Description:

Location: WWTP

Parameters	Results Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc:				Analytical Method:			
CBOD	1.12 mg/L			SM5210-B	0.30	5/15/13 1248	
NITRATE	0.12 mg/L			SM4500 NO3-E	0.06	5/15/13 1512	
TSS	1.00 mg/L			SM2540-D	1.00	5/17/13 0845	

Amended report

Sally Ann Casillo
QA Officer



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: E130612
Sample ID: EFFLUENT

Date Collected: 6/4/13 1040
Date Received: 6/4/13 1112

Sample Description:

Location: WWTP

Parameters	Results	Units	Qual	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Analysis Desc:					Analytical Method:			
CBOD	0.95	mg/L			SM5210-B	0.30	6/5/13 1200	
NITRATE	0.22	mg/L			SM4500 NO3-E	0.06	6/5/13 0903	
TSS	1.00	mg/L			SM2540-D	1.00	6/5/13 1010	

Amended report

Sally Ann Casilla
QA Officer



5376 S SUNCOAST BOULEVARD HOMOSASSA FL 34446 352.621.3513 FAX 352.621.3514

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: 660-53929-1

Client Project/Site: Citrus County Landfill Leachate

For:

CDM Smith, Inc.
1715 North Westshore Blvd.
Suite 875
Tampa, Florida 33607

Attn: Mr. Aamod Sonawane



Authorized for release by:

5/6/2013 12:22:52 PM

Terry Hornsby

Project Manager II

terry.hornsby@testamericainc.com

Designee for

Jess Hornsby

Project Manager I

jess.hornsby@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.

Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Surrogate Summary	9
QC Sample Results	10
QC Association Summary	15
Lab Chronicle	17
Method Summary	18
Certification Summary	19
Chain of Custody	21
Receipt Checklists	22



Sample Summary

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-53929-1	Leachate Eff	Water	04/19/13 09:30	04/20/13 09:10
660-53929-2	Trip Blank	Water	04/19/13 00:00	04/20/13 09:10

Definitions/Glossary

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

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.
D1	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis

Metals

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

General Chemistry

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

Glossary

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

Case Narrative

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Job ID: 660-53929-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative 660-53929-1

Receipt

The samples were received on 4/20/2013 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5° C.

GC/MS VOA

No analytical or quality issues were noted.

GC Semi VOA

Method 8011: The following sample was diluted due to sample matrix: Leachate Eff (660-53929-1). As such, surrogate recoveries are not reported, and elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Detection Summary

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Client Sample ID: Leachate Eff

Lab Sample ID: 660-53929-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	13		10	4.0	ug/L	1		6010B	Total
Sodium - DL	780		2.5	1.6	mg/L	5		6010B	Recoverable Total
Chloride	1400		50	10	mg/L	50		300.0	Recoverable Total/NA
Ammonia	0.28		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	2800		50	50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 660-53929-2

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Client Sample Results

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Client Sample ID: Leachate Eff

Lab Sample ID: 660-53929-1

Date Collected: 04/19/13 09:30

Matrix: Water

Date Received: 04/20/13 09:10

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	ug/L			04/22/13 13:24	1
Ethylbenzene	0.44	U	1.0	0.44	ug/L			04/22/13 13:24	1
Toluene	0.51	U	1.0	0.51	ug/L			04/22/13 13:24	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			04/22/13 13:24	1
Xylenes, Total	0.50	U	3.0	0.50	ug/L			04/22/13 13:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130		04/22/13 13:24	1
Dibromofluoromethane	102		70 - 130		04/22/13 13:24	1
Toluene-d8 (Surr)	105		70 - 130		04/22/13 13:24	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.023	U	0.20	0.023	ug/L		04/30/13 15:37	05/01/13 10:27	10
1,2-Dibromo-3-Chloropropane	0.051	U	0.20	0.051	ug/L		04/30/13 15:37	05/01/13 10:27	10
1,2,3-Trichloropropane	0.92	U	2.0	0.92	ug/L		04/30/13 15:37	05/01/13 10:27	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	0	D1	60 - 144	04/30/13 15:37	05/01/13 10:27	10

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13		10	4.0	ug/L		04/26/13 05:56	04/26/13 12:14	1

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	780		2.5	1.6	mg/L		04/26/13 05:56	04/26/13 13:04	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1400		50	10	mg/L			04/30/13 10:29	50
Ammonia	0.28		0.050	0.026	mg/L			04/25/13 13:39	1
Total Dissolved Solids	2800		50	50	mg/L			04/24/13 10:11	1

Client Sample ID: Trip Blank

Lab Sample ID: 660-53929-2

Date Collected: 04/19/13 00:00

Matrix: Water

Date Received: 04/20/13 09:10

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	ug/L			04/22/13 13:42	1
Ethylbenzene	0.44	U	1.0	0.44	ug/L			04/22/13 13:42	1
Toluene	0.51	U	1.0	0.51	ug/L			04/22/13 13:42	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			04/22/13 13:42	1
Xylenes, Total	0.50	U	3.0	0.50	ug/L			04/22/13 13:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		70 - 130		04/22/13 13:42	1
Dibromofluoromethane	106		70 - 130		04/22/13 13:42	1
Toluene-d8 (Surr)	107		70 - 130		04/22/13 13:42	1

TestAmerica Tampa

Client Sample Results

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Client Sample ID: Trip Blank

Lab Sample ID: 660-53929-2

Date Collected: 04/19/13 00:00

Matrix: Water

Date Received: 04/20/13 09:10

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.0022	U	0.020	0.0022	ug/L		04/30/13 15:37	04/30/13 20:09	1
1,2-Dibromo-3-Chloropropane	0.0050	U	0.020	0.0050	ug/L		04/30/13 15:37	04/30/13 20:09	1
1,2,3-Trichloropropane	0.090	U	0.20	0.090	ug/L		04/30/13 15:37	04/30/13 20:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Pentachloroethane	109		60 - 144				04/30/13 15:37	04/30/13 20:09	1
Pentachloroethane	110		60 - 144				04/30/13 15:37	04/30/13 20:09	1

Surrogate Summary

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
660-53901-B-1 DU	Duplicate	97	105	107
660-53901-B-2 MS	Matrix Spike	95	95	104
660-53929-1	Leachate Eff	94	102	105
660-53929-2	Trip Blank	94	106	107
LCS 660-136720/6	Lab Control Sample	95	95	107
MB 660-136720/8	Method Blank	95	111	108
Surrogate Legend				
BFB = 4-Bromofluorobenzene				
DBFM = Dibromofluoromethane				
TOL = Toluene-d8 (Surr)				

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		PCA1 (60-144)	PCA2 (60-144)
660-53929-1	Leachate Eff	0 D1	
660-53929-2	Trip Blank	109	110
LCS 680-274965/11-A	Lab Control Sample	102	97
LCSD 680-274965/12-A	Lab Control Sample Dup	103	95
MB 680-274965/10-A	Method Blank	109	103
Surrogate Legend			
PCA = Pentachloroethane			

QC Sample Results

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

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

Lab Sample ID: MB 660-136720/8

Matrix: Water

Analysis Batch: 136720

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	ug/L			04/22/13 11:15	1
Ethylbenzene	0.44	U	1.0	0.44	ug/L			04/22/13 11:15	1
Toluene	0.51	U	1.0	0.51	ug/L			04/22/13 11:15	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			04/22/13 11:15	1
Xylenes, Total	0.50	U	3.0	0.50	ug/L			04/22/13 11:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		70 - 130		04/22/13 11:15	1
Dibromofluoromethane	111		70 - 130		04/22/13 11:15	1
Toluene-d8 (Surr)	108		70 - 130		04/22/13 11:15	1

Lab Sample ID: LCS 660-136720/6

Matrix: Water

Analysis Batch: 136720

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	17.5		ug/L		88	68 - 134
Ethylbenzene	20.0	20.5		ug/L		103	70 - 130
Toluene	20.0	22.0		ug/L		110	70 - 131
Vinyl chloride	20.0	18.1		ug/L		91	48 - 147
Xylenes, Total	60.0	64.9		ug/L		108	68 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	95		70 - 130
Dibromofluoromethane	95		70 - 130
Toluene-d8 (Surr)	107		70 - 130

Lab Sample ID: 660-53901-B-2 MS

Matrix: Water

Analysis Batch: 136720

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	0.50	U	20.0	17.1		ug/L		85	68 - 134
Ethylbenzene	0.44	U	20.0	16.9		ug/L		85	70 - 130
Toluene	0.51	U	20.0	17.4		ug/L		87	70 - 131
Vinyl chloride	0.50	U	20.0	19.0		ug/L		95	48 - 147
Xylenes, Total	0.50	U	60.0	52.5		ug/L		87	68 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	95		70 - 130
Dibromofluoromethane	95		70 - 130
Toluene-d8 (Surr)	104		70 - 130

TestAmerica Tampa

QC Sample Results

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

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

Lab Sample ID: 660-53901-B-1 DU

Matrix: Water

Analysis Batch: 136720

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Benzene	0.50	U	0.50	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	%Recovery	DU Qualifier	Limits
4-Bromofluorobenzene	97		70 - 130
Dibromofluoromethane	105		70 - 130
Toluene-d8 (Surr)	107		70 - 130

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 680-274965/10-A

Matrix: Water

Analysis Batch: 275144

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 274965

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	0.0022	U	0.020	0.0022	ug/L		04/30/13 15:37	04/30/13 19:34	1
1,2-Dibromo-3-Chloropropane	0.0050	U	0.020	0.0050	ug/L		04/30/13 15:37	04/30/13 19:34	1
1,2,3-Trichloropropane	0.090	U	0.20	0.090	ug/L		04/30/13 15:37	04/30/13 19:34	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	109		60 - 144	04/30/13 15:37	04/30/13 19:34	1
Pentachloroethane	103		60 - 144	04/30/13 15:37	04/30/13 19:34	1

Lab Sample ID: LCS 680-274965/11-A

Matrix: Water

Analysis Batch: 275144

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 274965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	0.100	0.106		ug/L		106	66 - 126
1,2-Dibromo-3-Chloropropane	0.100	0.0968		ug/L		97	70 - 148
1,2,3-Trichloropropane	0.500	0.458		ug/L		92	51 - 146

Surrogate	%Recovery	LCS Qualifier	Limits
Pentachloroethane	102		60 - 144
Pentachloroethane	97		60 - 144

Lab Sample ID: LCSD 680-274965/12-A

Matrix: Water

Analysis Batch: 275144

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 274965

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide	0.100	0.105		ug/L		105	66 - 126	1	30
1,2-Dibromo-3-Chloropropane	0.100	0.0983		ug/L		98	70 - 148	1	30
1,2,3-Trichloropropane	0.500	0.474		ug/L		95	51 - 146	4	30

TestAmerica Tampa

QC Sample Results

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCSD 680-274965/12-A

Matrix: Water

Analysis Batch: 275144

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 274965

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Pentachloroethane	103		60 - 144
Pentachloroethane	95		60 - 144

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 660-136852/1-A

Matrix: Water

Analysis Batch: 136856

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 136852

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		04/26/13 05:56	04/26/13 11:33	1
Sodium	0.31	U	0.50	0.31	mg/L		04/26/13 05:56	04/26/13 11:33	1

Lab Sample ID: LCS 660-136852/2-A

Matrix: Water

Analysis Batch: 136856

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 136852

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	985		ug/L		98	80 - 120
Sodium	10.0	9.63		mg/L		96	80 - 120

Lab Sample ID: 640-43312-E-5-B MS

Matrix: Water

Analysis Batch: 136856

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 136852

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.0	U	1000	977		ug/L		98	80 - 120
Sodium	3.6		10.0	13.2		mg/L		96	80 - 120

Lab Sample ID: 640-43312-E-5-C MSD

Matrix: Water

Analysis Batch: 136856

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 136852

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	4.0	U	1000	969		ug/L		97	80 - 120	1	20
Sodium	3.6		10.0	13.2		mg/L		96	80 - 120	0	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-274935/2

Matrix: Water

Analysis Batch: 274935

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	5.0	1.0	mg/L			04/30/13 07:49	5

TestAmerica Tampa

QC Sample Results

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 680-274935/3

Matrix: Water

Analysis Batch: 274935

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.1		mg/L		100	90 - 110

Lab Sample ID: LCSD 680-274935/4

Matrix: Water

Analysis Batch: 274935

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	50.1		mg/L		100	90 - 110	0	30

Lab Sample ID: 680-89396-G-2 MS

Matrix: Water

Analysis Batch: 274935

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	4.0	U	200	213		mg/L		107	90 - 110

Lab Sample ID: 680-89396-G-2 MSD

Matrix: Water

Analysis Batch: 274935

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	4.0	U	200	199		mg/L		100	90 - 110	7	30

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 680-274454/2

Matrix: Water

Analysis Batch: 274454

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.026	U	0.050	0.026	mg/L			04/25/13 13:30	1

Lab Sample ID: LCS 680-274454/1

Matrix: Water

Analysis Batch: 274454

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.04		mg/L		104	90 - 110

Lab Sample ID: 680-89403-H-5 MS

Matrix: Water

Analysis Batch: 274454

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	0.044	I	1.00	1.07		mg/L		103	90 - 110

TestAmerica Tampa

QC Sample Results

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 680-89403-H-5 MSD

Matrix: Water

Analysis Batch: 274454

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	0.044	I	1.00	1.07		mg/L		103	90 - 110	0	30

Lab Sample ID: 640-43224-E-4 DU

Matrix: Water

Analysis Batch: 274454

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia	0.039	I	0.0321	I	mg/L		20	30

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

Lab Sample ID: MB 660-136779/1

Matrix: Water

Analysis Batch: 136779

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			04/24/13 10:11	1

Lab Sample ID: LCS 660-136779/2

Matrix: Water

Analysis Batch: 136779

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

Lab Sample ID: 660-53916-H-5 DU

Matrix: Water

Analysis Batch: 136779

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	240		252		mg/L		5	20

QC Association Summary

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

GC/MS VOA

Analysis Batch: 136720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-53901-B-1 DU	Duplicate	Total/NA	Water	8260B	
660-53901-B-2 MS	Matrix Spike	Total/NA	Water	8260B	
660-53929-1	Leachate Eff	Total/NA	Water	8260B	
660-53929-2	Trip Blank	Total/NA	Water	8260B	
LCS 660-136720/6	Lab Control Sample	Total/NA	Water	8260B	
MB 660-136720/8	Method Blank	Total/NA	Water	8260B	

GC Semi VOA

Prep Batch: 274965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-53929-1	Leachate Eff	Total/NA	Water	8011	
660-53929-2	Trip Blank	Total/NA	Water	8011	
LCS 680-274965/11-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 680-274965/12-A	Lab Control Sample Dup	Total/NA	Water	8011	
MB 680-274965/10-A	Method Blank	Total/NA	Water	8011	

Analysis Batch: 275144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-53929-2	Trip Blank	Total/NA	Water	8011	274965
LCS 680-274965/11-A	Lab Control Sample	Total/NA	Water	8011	274965
LCSD 680-274965/12-A	Lab Control Sample Dup	Total/NA	Water	8011	274965
MB 680-274965/10-A	Method Blank	Total/NA	Water	8011	274965

Analysis Batch: 275166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-53929-1	Leachate Eff	Total/NA	Water	8011	274965

Metals

Prep Batch: 136852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-43312-E-5-B MS	Matrix Spike	Total Recoverable	Water	3005A	
640-43312-E-5-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
660-53929-1	Leachate Eff	Total Recoverable	Water	3005A	
660-53929-1 - DL	Leachate Eff	Total Recoverable	Water	3005A	
LCS 660-136852/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 660-136852/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 136856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-43312-E-5-B MS	Matrix Spike	Total Recoverable	Water	6010B	136852
640-43312-E-5-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	136852
660-53929-1	Leachate Eff	Total Recoverable	Water	6010B	136852
660-53929-1 - DL	Leachate Eff	Total Recoverable	Water	6010B	136852
LCS 660-136852/2-A	Lab Control Sample	Total Recoverable	Water	6010B	136852
MB 660-136852/1-A	Method Blank	Total Recoverable	Water	6010B	136852

TestAmerica Tampa

QC Association Summary

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

General Chemistry

Analysis Batch: 136779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-53916-H-5 DU	Duplicate	Total/NA	Water	SM 2540C	
660-53929-1	Leachate Eff	Total/NA	Water	SM 2540C	
LCS 660-136779/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-136779/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 274454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-43224-E-4 DU	Duplicate	Total/NA	Water	350.1	
660-53929-1	Leachate Eff	Total/NA	Water	350.1	
680-89403-H-5 MS	Matrix Spike	Total/NA	Water	350.1	
680-89403-H-5 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	
LCS 680-274454/1	Lab Control Sample	Total/NA	Water	350.1	
MB 680-274454/2	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 274935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-53929-1	Leachate Eff	Total/NA	Water	300.0	
680-89396-G-2 MS	Matrix Spike	Total/NA	Water	300.0	
680-89396-G-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 680-274935/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-274935/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-274935/2	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Client Sample ID: Leachate Eff

Date Collected: 04/19/13 09:30

Date Received: 04/20/13 09:10

Lab Sample ID: 660-53929-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	136720	04/22/13 13:24	KW	TAL TAM
Total/NA	Prep	8011			274965	04/30/13 15:37	SSP	TAL SAV
Total/NA	Analysis	8011		10	275166	05/01/13 10:27	SSP	TAL SAV
Total Recoverable	Prep	3005A			136852	04/26/13 05:56	GF	TAL TAM
Total Recoverable	Analysis	6010B		1	136856	04/26/13 12:14	SR	TAL TAM
Total Recoverable	Prep	3005A	DL		136852	04/26/13 05:56	GF	TAL TAM
Total Recoverable	Analysis	6010B	DL	5	136856	04/26/13 13:04	SR	TAL TAM
Total/NA	Analysis	SM 2540C		1	136779	04/24/13 10:11	TO	TAL TAM
Total/NA	Analysis	350.1		1	274454	04/25/13 13:39	JE	TAL SAV
Total/NA	Analysis	300.0		50	274935	04/30/13 10:29	CB	TAL SAV

Client Sample ID: Trip Blank

Date Collected: 04/19/13 00:00

Date Received: 04/20/13 09:10

Lab Sample ID: 660-53929-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	136720	04/22/13 13:42	KW	TAL TAM
Total/NA	Prep	8011			274965	04/30/13 15:37	SSP	TAL SAV
Total/NA	Analysis	8011		1	275144	04/30/13 20:09	SSP	TAL SAV
Total/NA	Prep	8011			274965	04/30/13 15:37	SSP	TAL SAV
Total/NA	Analysis	8011		1	275144	04/30/13 20:09	SSP	TAL SAV

Laboratory References:

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

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

Method Summary

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL TAM
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL SAV
6010B	Metals (ICP)	SW846	TAL TAM
300.0	Anions, Ion Chromatography	MCAWW	TAL SAV
350.1	Nitrogen, Ammonia	MCAWW	TAL SAV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL TAM

Protocol References:

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 SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858
TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Certification Summary

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Laboratory: TestAmerica Tampa

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

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

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	05-31-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-13
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-13
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12 *
Kentucky (UST)	State Program	4	18	03-31-13 *
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	01-01-14
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAP	2	10842	04-01-14
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-14
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-13
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13

* Expired certification is currently pending renewal and is considered valid.

TestAmerica Tampa

Certification Summary

Client: CDM Smith, Inc.
Project/Site: Citrus County Landfill Leachate

TestAmerica Job ID: 660-53929-1

Laboratory: TestAmerica Savannah (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Wyoming	State Program	8	8TMS-Q	06-30-13

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

TestAmerica

$$\begin{aligned} \frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} \frac{d^2}{dt^2} \right) &= \frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} \frac{d^2}{dt^2} \right) \\ &= \frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} \frac{d^2}{dt^2} \right) \end{aligned}$$

5/6/2013

Login Sample Receipt Checklist

Client: CDM Smith, Inc.

Job Number: 660-53929-1

Login Number: 53929

List Source: TestAmerica Tampa

List Number: 1

Creator: Snead, Joshua

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

Login Sample Receipt Checklist

Client: CDM Smith, Inc.

Job Number: 660-53929-1

Login Number: 53929

List Source: TestAmerica Savannah

List Number: 1

List Creation: 04/23/13 07:57 AM

Creator: Conner, Keaton

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



Login Sample Receipt Checklist

Client: CDM Smith, Inc.

Job Number: 660-53929-1

Login Number: 53929

List Number: 2

Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

List Creation: 04/30/13 07:58 AM

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

Attachment 2

Tables:

- **Table 1**
Summary of Leachate Effluent
Quality Analytical Results October
2008 - April 2013
- **Table 2**
Twelve Month Summary of
Leachate Effluent Monthly
Analytical Results
July 2012 - June 2013
- **Table 3**
2010, 2011, 2012, and February
2013 Summary of Monitoring Well
MW-6 for Arsenic, Sodium,
Chloride, and TDS

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

Parameter	Permit Criteria	Units	Leachate Effluent																							
			10/15/2008	1/27/2009	4/20/2009	7/21/2009	9/9/2009 Re-sample	10/14/2009	1/26/2010	5/12/2010	7/27/2010	9/9/2010 Re-sample	10/27/2010	1/19/2011	4/28/2011	5/25/2011 Re-sample	7/20/2011	10/19/2011	1/18/2012	5/1/2012	7/18/2012	10/17/2012	2/20/2013	4/19/2013		
Volatile Organics																										
Acetone	N/A	µg/L	---	---	---	21	---	---	---	---	40	15 l	---	---	---	---	9.9 U J3	---	---	---	9.9 U	---	---	---		
Benzene	1	µg/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	0.50 U	---	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U		
Carbon Tetrachloride	N/A	µg/L	---	---	---	1 U	---	---	---	---	1.2	0.45 l	---	---	---	---	0.42 U	---	---	---	0.42 U	---	---	---		
Chlorobromomethane	N/A	µg/L	---	---	---	0.58 U	0.58 U	---	---	---	5.7	0.58 U	---	---	---	0.58 U	0.58 U	---	---	---	0.58 U	---	---	---		
Chloromethane	N/A	µg/L	---	---	---	1 U	---	---	---	---	2.4 l	1.0 U	---	---	---	1.0 U	---	---	---	---	1.0 U	---	---	---		
Dibromomethane	N/A	µg/L	---	---	---	0.41 U	---	---	---	---	5.8	0.41 U	---	---	---	0.41 U	---	---	---	---	0.41 U	---	---	---		
Ethylbenzene	30	µg/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	---	0.44 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	0.02	µg/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	0.010 U	---	0.010 U	0.010 U	0.010 U	0.010 U	0.0096 U	0.0024 U	0.0022 U	0.023 U		
Toluene	40	µg/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	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U		
Vinyl chloride	1	µg/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	---	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U		
Xylenes, Total	20	µg/L	1 U	2.1 l	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	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U		
Trihalomethanes																										
Bromodichloromethane	See Total THMs	µg/L	---	14	---	410	0.35 U	---	13	---	870	170	0.35 U	0.35 U	---	---	30	---	8.7	---	0.35 U	---	87	---		
Bromoform	See Total THMs	µg/L	---	2.9	---	71	0.58 U	---	7	---	190	36	0.58 U	0.58 U	---	---	8.5	---	0.58 U	---	0.58 U	---	17	---		
Chloroform	See Total THMs	µg/L	---	11	---	370	0.90 U	---	8.3	---	900	110	0.90 U	0.90 U	---	---	25	---	9.9	---	1.6	---	60	---		
Dibromochloromethane	See Total THMs	µg/L	---	6.9	---	280	0.58 U	---	9.7	---	670	110	0.34 U	0.34 U	---	---	19	---	2.4	---	0.34 U	---	55	---		
Total THMs	100	µg/L	---	34.8	---	1131	Not Detected	---	38	---	2630	426	Not Detected	Not Detected	---	---	82.5	---	21	---	1.6	---	220	---		
Metals																										
Antimony	N/A	mg/L	---	---	---	---	---	---	---	---	0.0031 l	---	---	---	---	---	0.0092 U	---	---	---	0.0029 l	---	---	---		
Arsenic	N/A	mg/L	---	---	---	0.0091 l	---	---	---	---	0.025	0.02	0.034	0.012	0.036	---	0.046	0.035	0.031	0.032	0.017	0.019	0.012	0.013		
Barium	2	mg/L	---	---	---	0.058	---	---	---	---	0.081	---	---	---	---	---	0.011	---	---	---	0.064	---	---	---		
Cadmium	0.005	mg/L									0.000095 U						0.000095 U				0.000095 U	---	---	---		
Chromium	0.1	mg/L	---	---	---	0.0058 l	---	---	---	---	0.0066	---	---	---	---	---	0.0063	---	---	---	0.0037 l	---	---	---		
Cobalt	N/A	mg/L	---	---	---	0.011	---	---	---	---	0.019	---	---	---	---	---	0.022	---	---	---	0.0045	---	---	---		
Copper	N/A	mg/L	---	---	---	0.014	---	---	---	---	0.024	---	---	---	---	---	0.0027	---	---	---	0.0056	---	---	---		
Iron	0.3	mg/L	---	---	---	0.068 l	---	---	---	---	0.058 l	---	---	---	---	---	0.076 l	---	---	---	0.26	---	---	---		
Lead	0.015	mg/L	---	---	---	0.002 U	---	---	---	---	0.0031	---	---	---	---	---	0.00020 U	---	---	---	0.00020 U	---	---	---		
Mercury	0.002	mg/L									0.000091 U						0.000091 U				0.000091 U	---	---	---		
Nickel	N/A	mg/L	---	---	---	0.046	---	---	---	---	0.071	---	---	---	---	---	0.077	---	---	---	0.021	---	---	---		
Selenium	0.05	mg/L									0.001 U						0.001 U				0.001 U	---	---	---		
Silver	0.1	mg/L									0.00025 U						0.00025 U				0.00025 U	---	---	---		
Zinc	N/A	mg/L	---	---	---	0.020 l	---	---	---	---	0.031	---	---	---	---	---	0.03	---	---	---	0.015 l	---	---	---		
General Chemistry																										
Ammonia, Total	2.8	mg/L	0.094	1.1	0.19	0.16	---	0.010 U	0.086	0.17	0.09	---	0.013 l	0.01	10	0.7	0.3	0.22	1.4	0.097	0.91	0.12	0.14	0.28		
Chloride	N/A	mg/L	940	1300	1500	710	---	910	1000	1200	1300	---	1000	750	960	---	1200	970	1000	1100	570	570	1300	1400		
Sodium	N/A	mg/L	570	800	820	430	---	570	580	750	830	---	670	400	630	---	800	590	760	610	260	380	850	780		
TDS	N/A	mg/L	2400	2800	3000	1800	---	2000	2200	2900	1500	---	2500	1600	2400	---	2800	1600	2600	2200	1400	1400	2900	2800		
General Field Parameters																										
Conductivity	N/A	µmhos/cm	3929	4907	4820	3462	2786	3772	3475	4752	4617	4167	4358	3176	3780	4701	3963	3675	4526	4181	2281	2702	4247	5068		
Dissolved Oxygen	N/A	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	4.34	7.34	5.52	6.76	2.70		
pH	6.5 - 8.5	S.U.	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	7.44	7.21	8.55	7.73	7.94		
Oxygen Reduction Potential	N/A	mV	---	---	---	---	---	---	228	25.8	350.7	-1.8	164.3	40.2	197.6	216.7	109.4	182.2	217.8	58	-118	-185	109	---		
Temperature, Water	N/A	°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	26.1	27.2	24.3	18.1	25.7		
Turbidity	N/A	NTU	1.07	1.65	5.00	---	6.67	4.73	1.84	7.94	3.40	2.71	4.55	---	10.8	7.04	2.69	5.36	8.33	3.64	6.34	3.02	3.13	13.1		

NOTES:
Permit Criteria - Maximum permitted values in Specific Condition Part E.9.b.(2) of Permit (pH is also assigned a minimum permitted value).
N/A - No maximum permitted value has been assigned for this analyte in the Permit
THMs - Trihalomethanes
--- - Parameter not analyzed
mg/L - milligrams per liter
µg/L - micrograms per liter
NTU - nephelometric turbidity units
Yellow Shaded Value - Indicates the concentration of this parameter exceeds the Permit Criteria.
I - analyte detected below the quantitation limit
U - analyte concentration is below the laboratory method detection limit (MDL) and the MDL is shown.
J3 - estimated value. The value may not be accurate. Spike recovery or RPD is outside of criteria.

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

Parameter	Standard	Permit Criteria	Units	Leachate Effluent - July 2012 to June 2013												
				7/3/2010	8/9/2010	9/6/2012	10/2/2011	11/5/2012	12/4/2012	1/8/2013	2/6/2013	3/12/2013	4/3/2013	4/12/2013	5/15/2013	6/4/2013
CBOD ₅	Permit	20	mg/L	2.33	2.66	1.64	1.13	16.66	1.23	2.25	3.74	23.03 J	20.62 J	16.08	1.12	0.95
TSS	Permit	20	mg/L	15.00	2.50	1.00	2.00	1.50	2.50	3.50	9.50	9.00	7.50	NA	1.00	1.00
Nitrate	Permit	10	mg/L	1.52	1.18	0.19	0.45	0.12	5.30	0.52	0.39	0.11	0.23	NA	0.12	0.22

NOTES:

CBOD₅ - Carbonaceous Biochemical Oxygen Demand

TSS - Total Suspended Solids

Permit Criteria - Maximum permitted values in Specific Condition Part E.9.b.(2) of Permit

mg/L - milligrams per liter

Yellow Shaded Value - Indicates the concentration of this parameter exceeds the standard value

NA - Not Analyzed

U - analyte concentration is below the laboratory method detection limit (MDL) and the MDL is shown

J - estimated value. The value may not be accurate. Spike recovery or RPD is outside of criteria

**Table 3. 2010, 2011, 2012, and February 2013 Summary of Monitoring Well MW-6
for Arsenic, Sodium, Chloride, and TDS
Citrus County Central Landfill**

Parameter	Standard	MCL	Units	MW-6 - January 2010 to February 2013						
				1/26/2010	7/27/2010	1/19/2011	7/20/2011	1/19/2012	7/18/2012	2/20/2013
Arsenic	PDWS	10	mg/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.8 I
Sodium	PDWS	160	mg/L	120	100	100	90	110	120 J	120 J
Chloride	SDWS	250	mg/L	220	220	220	13	250 J	240	240
TDS	SDWS	500	mg/L	400	400	380	370	350	420	530

NOTES:

PDWS - Primary Drinking Water Standard (62-550 F.A.C.)

SDWS - Secondary Drinking Water Standard (62-550 F.A.C.)

mg/L - milligrams per liter

Yellow Shaded Value - Indicates the concentration of this parameter exceeds the standard value.

I - analyte detected below the quantitation limit

U - analyte concentration is below the laboratory method detection limit (MDL) and the MDL is shown.

J - estimated value. The value may not be accurate. Spike recovery or RPD is outside of criteria.

Attachment 3

CD Containing:

- **ZIP file of Second Quarter Leachate Effluent ADaPT Files - April 2013**
- **PDF file of this Report**