



# ENCO Laboratories

*Accurate.*

*Timely.*

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*Innovative.*

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Thursday, March 28, 2013

Angelo's Recycled Materials (AN010)

Attn: John Arnold

4111 Enterprise Road

Dade City, FL 33525

**RE: Laboratory Results for**

**Project Number: 87895, Project Name/Desc: ENTERPRISE LF & RECYC (FKA SID LARKIN & SON, INC.)**

**ENCO Workorder(s): A301741**

Dear John Arnold,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, March 21, 2013.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Orlando. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Ronald Wambles For Marcia Colon

Project Manager

Enclosure(s)

# SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: EP-1      Lab ID: A301741-01      Sampled: 03/21/13 11:29      Received: 03/21/13 13:50

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 300.0	03/23/13	11:29	03/21/13	16:54	3/21/2013 23:31
EPA 300.0	04/18/13		03/21/13	16:54	3/21/2013 23:31
EPA 350.1	04/18/13		03/27/13	09:31	3/27/2013 11:35
EPA 6020A	09/17/13		03/22/13	09:26	3/26/2013 14:24
EPA 7470A	04/18/13		03/26/13	11:53	3/27/2013 09:42
EPA 8011	04/04/13	04/09/13	03/26/13	13:48	3/26/2013 18:56
EPA 8260B	04/04/13		03/22/13	11:57	3/22/2013 22:51
SM 2540C-1997	03/28/13		03/21/13	16:12	3/24/2013 09:46

# SAMPLE DETECTION SUMMARY

Client ID: EP-1

Lab ID: A301741-01

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Chloride	0.70	I	0.29	5.0	mg/L	EPA 300.0	
Copper - Total	7.15	I	2.20	10.0	ug/L	EPA 6020A	
Nitrate as N	0.27	I	0.052	1.0	mg/L	EPA 300.0	J
Sodium - Total	0.550	I	0.320	1.00	mg/L	EPA 6020A	
Total Dissolved Solids	30		10	10	mg/L	SM 2540C-1997	

# ANALYTICAL RESULTS

**Description:** EP-1

**Lab Sample ID:** A301741-01

**Received:** 03/21/13 13:50

**Matrix:** Ground Water

**Sampled:** 03/21/13 11:29

**Work Order:** A301741

**Project:** ENTERPRISE LF & RECYC (FKA SID LARKIN & SON, INC.)

**Sampled By:** Chris Monaco

## Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.61	U	ug/L	1	0.61	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,1,1-Trichloroethane [71-55-6]^	0.80	U	ug/L	1	0.80	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,1,2,2-Tetrachloroethane [79-34-5]^	0.54	U	ug/L	1	0.54	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,1,2-Trichloroethane [79-00-5]^	0.76	U	ug/L	1	0.76	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,1-Dichloroethane [75-34-3]^	0.62	U	ug/L	1	0.62	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,1-Dichloroethene [75-35-4]^	0.94	U	ug/L	1	0.94	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,2,3-Trichloropropane [96-18-4]^	0.64	U	ug/L	1	0.64	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,2-Dichlorobenzene [95-50-1]^	0.73	U	ug/L	1	0.73	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,2-Dichloroethane [107-06-2]^	0.63	U	ug/L	1	0.63	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,2-Dichloropropane [78-87-5]^	0.80	U	ug/L	1	0.80	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
1,4-Dichlorobenzene [106-46-7]^	0.76	U	ug/L	1	0.76	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
2-Butanone [78-93-3]^	4.5	U	ug/L	1	4.5	5.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
2-Hexanone [591-78-6]^	1.4	U	ug/L	1	1.4	5.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
4-Methyl-2-pentanone [108-10-1]^	0.79	U	ug/L	1	0.79	5.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Acetone [67-64-1]^	1.8	U	ug/L	1	1.8	5.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Acrylonitrile [107-13-1]^	3.2	U	ug/L	1	3.2	10	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Benzene [71-43-2]^	0.71	U	ug/L	1	0.71	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Bromochloromethane [74-97-5]^	0.94	U	ug/L	1	0.94	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Bromodichloromethane [75-27-4]^	0.52	U	ug/L	1	0.52	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Bromoform [75-25-2]^	0.75	U	ug/L	1	0.75	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Bromomethane [74-83-9]^	0.95	U	ug/L	1	0.95	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Carbon disulfide [75-15-0]^	2.6	U	ug/L	1	2.6	5.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Carbon tetrachloride [56-23-5]^	0.94	U	ug/L	1	0.94	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Chlorobenzene [108-90-7]^	0.72	U	ug/L	1	0.72	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Chloroethane [75-00-3]^	0.98	U	ug/L	1	0.98	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Chloroform [67-66-3]^	0.80	U	ug/L	1	0.80	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Chloromethane [74-87-3]^	0.82	U	ug/L	1	0.82	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
cis-1,2-Dichloroethene [156-59-2]^	0.53	U	ug/L	1	0.53	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
cis-1,3-Dichloropropene [10061-01-5]^	0.59	U	ug/L	1	0.59	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Dibromochloromethane [124-48-1]^	0.44	U	ug/L	1	0.44	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Dibromomethane [74-95-3]^	0.84	U	ug/L	1	0.84	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Ethylbenzene [100-41-4]^	0.69	U	ug/L	1	0.69	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Iodomethane [74-88-4]^	0.72	U	ug/L	1	0.72	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
m,p-Xylenes [108-38-3/106-42-3]^	1.3	U	ug/L	1	1.3	2.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Methylene chloride [75-09-2]^	0.71	U	ug/L	1	0.71	2.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
o-Xylene [95-47-6]^	0.53	U	ug/L	1	0.53	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Styrene [100-42-5]^	0.61	U	ug/L	1	0.61	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Tetrachloroethene [127-18-4]^	0.76	U	ug/L	1	0.76	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Toluene [108-88-3]^	0.72	U	ug/L	1	0.72	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
trans-1,2-Dichloroethene [156-60-5]^	0.73	U	ug/L	1	0.73	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
trans-1,3-Dichloropropene [10061-02-6]^	0.73	U	ug/L	1	0.73	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
trans-1,4-Dichloro-2-butene [110-57-6]^	0.79	U	ug/L	1	0.79	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Trichloroethene [79-01-6]^	0.89	U	ug/L	1	0.89	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Trichlorofluoromethane [75-69-4]^	0.94	U	ug/L	1	0.94	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Vinyl acetate [108-05-4]^	0.60	U	ug/L	1	0.60	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Vinyl chloride [75-01-4]^	0.71	U	ug/L	1	0.71	1.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U
Xylenes (Total) [1330-20-7]^	1.3	U	ug/L	1	1.3	2.0	3C22026	EPA 8260B	03/22/13 22:51	KWB	U

# ANALYTICAL RESULTS

Description: EP-1

Lab Sample ID: A301741-01

Received: 03/21/13 13:50

Matrix: Ground Water

Sampled: 03/21/13 11:29

Work Order: A301741

Project: ENTERPRISE LF & RECYC (FKA SID  
LARKIN & SON, INC.)

Sampled By: Chris Monaco

## Volatile Organic Compounds by GCMS

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Surrogates	Results	DF	Spike Lvl	% Rec	% Rec Limits		Batch	Method	Analyzed	By	Notes
4-Bromofluorobenzene	47	1	50.0	94 %	41-142		3C22026	EPA 8260B	03/22/13 22:51	KWB	
Dibromofluoromethane	52	1	50.0	104 %	53-146		3C22026	EPA 8260B	03/22/13 22:51	KWB	
Toluene-d8	52	1	50.0	103 %	41-146		3C22026	EPA 8260B	03/22/13 22:51	KWB	

## Semivolatile Organic Compounds by GC

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,2-Dibromo-3-chloropropane [96-12-8]^	0.004	U	ug/L	1	0.004	0.020	3C26019	EPA 8011	03/26/13 18:56	RGG	U
1,2-Dibromoethane [106-93-4]^	0.003	U	ug/L	1	0.003	0.020	3C26019	EPA 8011	03/26/13 18:56	RGG	U
<u>Surrogates</u>	<u>Results</u>	<u>DF</u>	<u>Spike Lvl</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>Batch</u>	<u>Method</u>	<u>Analyzed</u>	<u>By</u>	<u>Notes</u>	
1,1,1,2-Tetrachloroethane	0.24	1	0.250	96 %	70-130	3C26019	EPA 8011	03/26/13 18:56	RGG		

## Metals by EPA 6000/7000 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Mercury [7439-97-6]^	0.0230	U	ug/L	1	0.0230	0.200	3C21035	EPA 7470A	03/27/13 09:42	JMA	

## Metals (total recoverable) by EPA 6000/7000 Series Methods

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	1.10	U	ug/L	1	1.10	20.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Arsenic [7440-38-2]^	6.10	U	ug/L	1	6.10	10.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Barium [7440-39-3]^	20.0	U	ug/L	1	20.0	100	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Beryllium [7440-41-7]^	0.940	U	ug/L	1	0.940	1.00	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Cadmium [7440-43-9]^	1.10	U	ug/L	1	1.10	3.00	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Chromium [7440-47-3]^	4.50	U	ug/L	1	4.50	10.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Cobalt [7440-48-4]^	2.10	U	ug/L	1	2.10	10.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Copper [7440-50-8]^	7.15	I	ug/L	1	2.20	10.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Iron [7439-89-6]^	38.0	U	ug/L	1	38.0	50.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Lead [7439-92-1]^	1.60	U	ug/L	1	1.60	5.00	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Nickel [7440-02-0]^	3.20	U	ug/L	1	3.20	10.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Selenium [7782-49-2]^	6.50	U	ug/L	1	6.50	10.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Silver [7440-22-4]^	0.290	U	ug/L	1	0.290	1.00	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Sodium [7440-23-5]^	0.550	I	mg/L	1	0.320	1.00	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Thallium [7440-28-0]^	0.580	U	ug/L	1	0.580	1.00	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Vanadium [7440-62-2]^	2.00	U	ug/L	1	2.00	10.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	
Zinc [7440-66-6]^	16.0	U	ug/L	1	16.0	50.0	3C21034	EPA 6020A	03/26/13 14:24	JMA	

# ANALYTICAL RESULTS

**Description:** EP-1

**Lab Sample ID:** A301741-01

**Received:** 03/21/13 13:50

**Matrix:** Ground Water

**Sampled:** 03/21/13 11:29

**Work Order:** A301741

**Project:** ENTERPRISE LF & RECYC (FKA SID  
LARKIN & SON, INC.)

**Sampled By:** Chris Monaco

## Classical Chemistry Parameters

^ - ENCO Orlando certified analyte [NELAC E83182]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Ammonia as N [7664-41-7]^	0.0073	U	mg/L	1	0.0073	0.020	3C27011	EPA 350.1	03/27/13 11:35	KGonz	U
Chloride [16887-00-6]^	0.70	I	mg/L	1	0.29	5.0	3C21002	EPA 300.0	03/21/13 23:31	RSA	
Nitrate as N [14797-55-8]^	0.27	I	mg/L	1	0.052	1.0	3C21002	EPA 300.0	03/21/13 23:31	RSA	J
Total Dissolved Solids [ECL-0156]^	30		mg/L	1	10	10	3C21029	SM 2540C-1997	03/24/13 09:46	AH	

# QUALITY CONTROL DATA

## Volatile Organic Compounds by GCMS - Quality Control

Batch 3C22026 - EPA 5030B\_MS

Blank (3C22026-BLK1)

Prepared: 03/22/2013 11:57 Analyzed: 03/22/2013 13:23

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.61	U	1.0	ug/L							U
1,1,1-Trichloroethane	0.80	U	1.0	ug/L							U
1,1,2,2-Tetrachloroethane	0.54	U	1.0	ug/L							U
1,1,2-Trichloroethane	0.76	U	1.0	ug/L							U
1,1-Dichloroethane	0.62	U	1.0	ug/L							U
1,1-Dichloroethene	0.94	U	1.0	ug/L							U
1,2,3-Trichloropropane	0.64	U	1.0	ug/L							U
1,2-Dichlorobenzene	0.73	U	1.0	ug/L							U
1,2-Dichloroethane	0.63	U	1.0	ug/L							U
1,2-Dichloropropane	0.80	U	1.0	ug/L							U
1,4-Dichlorobenzene	0.76	U	1.0	ug/L							U
2-Butanone	4.5	U	5.0	ug/L							U
2-Hexanone	1.4	U	5.0	ug/L							U
4-Methyl-2-pentanone	0.79	U	5.0	ug/L							U
Acetone	1.8	U	5.0	ug/L							U
Acrylonitrile	3.2	U	10	ug/L							U
Benzene	0.71	U	1.0	ug/L							U
Bromochloromethane	0.94	U	1.0	ug/L							U
Bromodichloromethane	0.52	U	1.0	ug/L							U
Bromoform	0.75	U	1.0	ug/L							U
Bromomethane	0.95	U	1.0	ug/L							U
Carbon disulfide	2.6	U	5.0	ug/L							U
Carbon tetrachloride	0.94	U	1.0	ug/L							U
Chlorobenzene	0.72	U	1.0	ug/L							U
Chloroethane	0.98	U	1.0	ug/L							U
Chloroform	0.80	U	1.0	ug/L							U
Chloromethane	0.82	U	1.0	ug/L							U
cis-1,2-Dichloroethene	0.53	U	1.0	ug/L							U
cis-1,3-Dichloropropene	0.59	U	1.0	ug/L							U
Dibromochloromethane	0.44	U	1.0	ug/L							U
Dibromomethane	0.84	U	1.0	ug/L							U
Ethylbenzene	0.69	U	1.0	ug/L							U
Iodomethane	0.72	U	1.0	ug/L							U
m,p-Xylenes	1.3	U	2.0	ug/L							U
Methylene chloride	0.71	U	2.0	ug/L							U
o-Xylene	0.53	U	1.0	ug/L							U
Styrene	0.61	U	1.0	ug/L							U
Tetrachloroethene	0.76	U	1.0	ug/L							U
Toluene	0.72	U	1.0	ug/L							U
trans-1,2-Dichloroethene	0.73	U	1.0	ug/L							U
trans-1,3-Dichloropropene	0.73	U	1.0	ug/L							U
trans-1,4-Dichloro-2-butene	0.79	U	1.0	ug/L							U
Trichloroethene	0.89	U	1.0	ug/L							U
Trichlorofluoromethane	0.94	U	1.0	ug/L							U
Vinyl acetate	0.60	U	1.0	ug/L							U
Vinyl chloride	0.71	U	1.0	ug/L							U
Xylenes (Total)	1.3	U	2.0	ug/L							U
4-Bromofluorobenzene	48			ug/L	50.0		95	41-142			
Dibromofluoromethane	49			ug/L	50.0		98	53-146			

# QUALITY CONTROL DATA

## Volatile Organic Compounds by GCMS - Quality Control

Batch 3C22026 - EPA 5030B\_MS - Continued

Blank (3C22026-BLK1) Continued

Prepared: 03/22/2013 11:57 Analyzed: 03/22/2013 13:23

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene-d8	50			ug/L	50.0		101	41-146			

LCS (3C22026-BS1)

Prepared: 03/22/2013 11:57 Analyzed: 03/22/2013 12:53

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	23		1.0	ug/L	20.0		114	65-144			
Benzene	22		1.0	ug/L	20.0		109	73-138			
Chlorobenzene	19		1.0	ug/L	20.0		93	77-127			
Toluene	20		1.0	ug/L	20.0		102	71-123			
Trichloroethene	19		1.0	ug/L	20.0		96	83-133			
4-Bromofluorobenzene	47			ug/L	50.0		94	41-142			
Dibromofluoromethane	49			ug/L	50.0		98	53-146			
Toluene-d8	51			ug/L	50.0		102	41-146			

Matrix Spike (3C22026-MS1)

Prepared: 03/22/2013 11:57 Analyzed: 03/22/2013 13:53

Source: A301496-05

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	1300	L	1.0	ug/L	40.0	1300	6	65-144			E, QM-02, D
Benzene	47		1.0	ug/L	40.0	0.71 U	117	73-138			D
Chlorobenzene	37		1.0	ug/L	40.0	0.72 U	92	77-127			D
Toluene	43		1.0	ug/L	40.0	0.72 U	107	71-123			D
Trichloroethene	71		1.0	ug/L	40.0	31	98	83-133			D
4-Bromofluorobenzene	47			ug/L	50.0		95	41-142			
Dibromofluoromethane	51			ug/L	50.0		102	53-146			
Toluene-d8	52			ug/L	50.0		103	41-146			

Matrix Spike Dup (3C22026-MSD1)

Prepared: 03/22/2013 11:57 Analyzed: 03/22/2013 14:23

Source: A301496-05

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	1300	L	1.0	ug/L	40.0	1300	NR	65-144	0.4	16	E, QM-02, D
Benzene	45		1.0	ug/L	40.0	0.71 U	112	73-138	4	14	D
Chlorobenzene	37		1.0	ug/L	40.0	0.72 U	92	77-127	0.5	13	D
Toluene	41		1.0	ug/L	40.0	0.72 U	103	71-123	4	16	D
Trichloroethene	69		1.0	ug/L	40.0	31	94	83-133	2	20	D
4-Bromofluorobenzene	47			ug/L	50.0		94	41-142			
Dibromofluoromethane	51			ug/L	50.0		101	53-146			
Toluene-d8	51			ug/L	50.0		102	41-146			

## Semivolatile Organic Compounds by GC - Quality Control

Batch 3C26019 - EPA 504/8011

Blank (3C26019-BLK1)

Prepared: 03/26/2013 13:48 Analyzed: 03/26/2013 14:59

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dibromo-3-chloropropane	0.004	U	0.020	ug/L							U
1,2-Dibromoethane	0.003	U	0.020	ug/L							U



# QUALITY CONTROL DATA

## Semivolatile Organic Compounds by GC - Quality Control

### Batch 3C26019 - EPA 504/8011 - Continued

#### Blank (3C26019-BLK1) Continued

Prepared: 03/26/2013 13:48 Analyzed: 03/26/2013 14:59

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.25			ug/L	0.250		99	70-130			

#### LCS (3C26019-BS1)

Prepared: 03/26/2013 13:48 Analyzed: 03/26/2013 15:16

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dibromo-3-chloropropane	0.24		0.020	ug/L	0.250		95	61-139			
1,2-Dibromoethane	0.23		0.020	ug/L	0.250		93	65-133			
1,1,1,2-Tetrachloroethane	0.24			ug/L	0.250		98	70-130			

#### Matrix Spike (3C26019-MS1)

Prepared: 03/26/2013 13:48 Analyzed: 03/26/2013 15:33

Source: A301573-02

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dibromo-3-chloropropane	0.33		0.020	ug/L	0.250	0.004 U	131	61-139			
1,2-Dibromoethane	0.26		0.020	ug/L	0.250	0.003 U	103	65-133			
1,1,1,2-Tetrachloroethane	0.28			ug/L	0.250		112	70-130			

#### Matrix Spike Dup (3C26019-MSD1)

Prepared: 03/26/2013 13:48 Analyzed: 03/26/2013 15:50

Source: A301573-02

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dibromo-3-chloropropane	0.26		0.020	ug/L	0.250	0.004 U	104	61-139	23	12	QM-11
1,2-Dibromoethane	0.25		0.020	ug/L	0.250	0.003 U	99	65-133	5	17	
1,1,1,2-Tetrachloroethane	0.26			ug/L	0.250		103	70-130			

## Metals by EPA 6000/7000 Series Methods - Quality Control

### Batch 3C21035 - EPA 7470A

#### Blank (3C21035-BLK1)

Prepared: 03/26/2013 11:53 Analyzed: 03/27/2013 09:02

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.0230	U	0.200	ug/L							

#### Blank (3C21035-BLK2)

Prepared: 03/26/2013 11:53 Analyzed: 03/27/2013 09:05

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.230	U	2.00	ug/L							

#### LCS (3C21035-BS1)

Prepared: 03/26/2013 11:53 Analyzed: 03/27/2013 09:08

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.40		0.200	ug/L	5.00		108	80-120			

#### Matrix Spike (3C21035-MS1)

Prepared: 03/26/2013 11:53 Analyzed: 03/27/2013 09:14

Source: A301740-02

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.69		0.200	ug/L	5.00	0.0230 U	114	75-125			QM-11

# QUALITY CONTROL DATA

## Metals by EPA 6000/7000 Series Methods - Quality Control

### Batch 3C21035 - EPA 7470A - Continued

#### Matrix Spike Dup (3C21035-MSD1)

Prepared: 03/26/2013 11:53 Analyzed: 03/27/2013 09:17

Source: A301740-02

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.31		0.200	ug/L	5.00	0.0230 U	86	75-125	28	20	QM-11

#### Post Spike (3C21035-PS1)

Prepared: 03/27/2013 06:00 Analyzed: 03/27/2013 09:21

Source: A301740-02

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.17		0.200	ug/L	5.61	-0.0161	93	80-120			

## Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

### Batch 3C21034 - EPA 3005A

#### Blank (3C21034-BLK1)

Prepared: 03/22/2013 09:26 Analyzed: 03/26/2013 11:46

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	1.10	U	20.0	ug/L							
Arsenic	6.10	U	10.0	ug/L							
Barium	20.0	U	100	ug/L							
Beryllium	0.940	U	1.00	ug/L							
Cadmium	1.10	U	3.00	ug/L							
Chromium	4.50	U	10.0	ug/L							
Cobalt	2.10	U	10.0	ug/L							
Copper	2.20	U	10.0	ug/L							
Iron	38.0	U	50.0	ug/L							
Lead	1.60	U	5.00	ug/L							
Nickel	3.20	U	10.0	ug/L							
Selenium	6.50	U	10.0	ug/L							
Silver	0.290	U	1.00	ug/L							
Sodium	0.320	U	1.00	mg/L							
Thallium	0.580	U	1.00	ug/L							
Vanadium	2.00	U	10.0	ug/L							
Zinc	16.0	U	50.0	ug/L							

#### LCS (3C21034-BS1)

Prepared: 03/22/2013 09:26 Analyzed: 03/26/2013 11:57

Analyte	Result	Flag	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	50.1		20.0	ug/L	50.0		100	80-120			
Arsenic	476		10.0	ug/L	500		95	80-120			
Barium	491		100	ug/L	500		98	80-120			
Beryllium	47.8		1.00	ug/L	50.0		96	80-120			
Cadmium	47.1		3.00	ug/L	50.0		94	80-120			
Chromium	496		10.0	ug/L	500		99	80-120			
Cobalt	489		10.0	ug/L	500		98	80-120			
Copper	528		10.0	ug/L	500		106	80-120			
Iron	1010		50.0	ug/L	1000		101	80-120			
Lead	486		5.00	ug/L	500		97	80-120			
Nickel	502		10.0	ug/L	500		100	80-120			
Selenium	450		10.0	ug/L	500		90	80-120			
Silver	49.7		1.00	ug/L	50.0		99	80-120			
Sodium	24.9		1.00	mg/L	25.0		100	80-120			

# QUALITY CONTROL DATA

## Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

Batch 3C21034 - EPA 3005A - Continued

LCS (3C21034-BS1) Continued

Prepared: 03/22/2013 09:26 Analyzed: 03/26/2013 11:57

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Thallium	49.6		1.00	ug/L	50.0		99	80-120			
Vanadium	488		10.0	ug/L	500		98	80-120			
Zinc	492		50.0	ug/L	500		98	80-120			

Matrix Spike (3C21034-MS1)

Prepared: 03/22/2013 09:26 Analyzed: 03/26/2013 12:40

Source: A301740-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	50.3		20.0	ug/L	50.0	1.10 U	101	75-125			
Arsenic	497		10.0	ug/L	500	6.10 U	99	75-125			
Barium	511		100	ug/L	500	20.0 U	102	75-125			
Beryllium	50.2		1.00	ug/L	50.0	0.940 U	100	75-125			
Cadmium	48.4		3.00	ug/L	50.0	1.10 U	97	75-125			
Chromium	514		10.0	ug/L	500	5.93	102	75-125			
Cobalt	515		10.0	ug/L	500	2.10 U	103	75-125			
Copper	512		10.0	ug/L	500	2.20 U	102	75-125			
Iron	1290		50.0	ug/L	1000	181	111	75-125			
Lead	491		5.00	ug/L	500	1.60 U	98	75-125			
Nickel	507		10.0	ug/L	500	3.20 U	101	75-125			
Selenium	476		10.0	ug/L	500	6.50 U	95	75-125			
Silver	49.5		1.00	ug/L	50.0	0.290 U	99	75-125			
Sodium	31.9		1.00	mg/L	25.0	5.69	105	75-125			
Thallium	50.8		1.00	ug/L	50.0	0.580 U	102	75-125			
Vanadium	505		10.0	ug/L	500	2.00 U	101	75-125			
Zinc	496		50.0	ug/L	500	16.0 U	99	75-125			

Matrix Spike Dup (3C21034-MSD1)

Prepared: 03/22/2013 09:26 Analyzed: 03/26/2013 12:44

Source: A301740-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	50.4		20.0	ug/L	50.0	1.10 U	101	75-125	0.2	20	
Arsenic	505		10.0	ug/L	500	6.10 U	101	75-125	2	20	
Barium	504		100	ug/L	500	20.0 U	101	75-125	1	20	
Beryllium	49.3		1.00	ug/L	50.0	0.940 U	99	75-125	2	20	
Cadmium	49.1		3.00	ug/L	50.0	1.10 U	98	75-125	1	20	
Chromium	508		10.0	ug/L	500	5.93	101	75-125	1	20	
Cobalt	498		10.0	ug/L	500	2.10 U	100	75-125	4	20	
Copper	506		10.0	ug/L	500	2.20 U	101	75-125	1	20	
Iron	1310		50.0	ug/L	1000	181	113	75-125	2	20	
Lead	495		5.00	ug/L	500	1.60 U	99	75-125	0.8	20	
Nickel	506		10.0	ug/L	500	3.20 U	101	75-125	0.09	20	
Selenium	477		10.0	ug/L	500	6.50 U	95	75-125	0.09	20	
Silver	49.6		1.00	ug/L	50.0	0.290 U	99	75-125	0.3	20	
Sodium	31.0		1.00	mg/L	25.0	5.69	101	75-125	3	20	
Thallium	50.6		1.00	ug/L	50.0	0.580 U	101	75-125	0.5	20	
Vanadium	495		10.0	ug/L	500	2.00 U	99	75-125	2	20	
Zinc	499		50.0	ug/L	500	16.0 U	100	75-125	0.6	20	

# QUALITY CONTROL DATA

## Metals (total recoverable) by EPA 6000/7000 Series Methods - Quality Control

### Batch 3C21034 - EPA 3005A - Continued

#### Post Spike (3C21034-PS1)

Prepared: 03/26/2013 09:00 Analyzed: 03/26/2013 12:47

Source: A301740-01

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	4.86		2.00	ug/L	4.90	0.00480	99	80-120			
Arsenic	47.6		1.00	ug/L	49.0	-0.143	97	80-120			
Barium	48.5		10.0	ug/L	49.0	-0.617	100	80-120			
Beryllium	4.84		0.100	ug/L	4.90	-0.0193	99	80-120			
Cadmium	4.60		0.300	ug/L	4.90	0.00941	94	80-120			
Chromium	49.2		1.00	ug/L	49.0	0.581	99	80-120			
Cobalt	47.8		1.00	ug/L	49.0	0.00971	98	80-120			
Copper	47.6		1.00	ug/L	49.0	0.0656	97	80-120			
Iron	122		5.00	ug/L	98.0	17.7	106	80-120			
Lead	47.6		0.500	ug/L	49.0	0.0581	97	80-120			
Nickel	48.4		1.00	ug/L	49.0	0.0973	98	80-120			
Selenium	45.8		1.00	ug/L	49.0	-0.0467	93	80-120			
Silver	4.86		0.100	ug/L	4.90	-0.0147	100	80-120			
Sodium	3070		100	ug/L	2450	558	102	80-120			
Thallium	4.92		0.100	ug/L	4.90	-0.00402	101	80-120			
Vanadium	48.5		1.00	ug/L	49.0	0.0927	99	80-120			
Zinc	47.2		5.00	ug/L	49.0	0.501	95	80-120			

## Classical Chemistry Parameters - Quality Control

### Batch 3C21002 - NO PREP

#### Blank (3C21002-BLK1)

Prepared: 03/21/2013 16:54 Analyzed: 03/21/2013 21:12

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	0.29	U	5.0	mg/L							
Nitrate as N	0.052	U	1.0	mg/L							U

#### LCS (3C21002-BS1)

Prepared: 03/21/2013 16:54 Analyzed: 03/21/2013 21:27

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	51		5.0	mg/L	50.0		103	90-110			
Nitrate as N	11		1.0	mg/L	10.0		108	90-110			

#### Matrix Spike (3C21002-MS1)

Prepared: 03/21/2013 16:54 Analyzed: 03/21/2013 21:43

Source: A301740-04

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	54		5.0	mg/L	50.0	2.7	103	90-110			
Nitrate as N	12		1.0	mg/L	10.0	1.0	107	90-110			

#### Matrix Spike Dup (3C21002-MSD1)

Prepared: 03/21/2013 16:54 Analyzed: 03/21/2013 21:58

Source: A301740-04

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chloride	57		5.0	mg/L	50.0	2.7	108	90-110	5	10	
Nitrate as N	12		1.0	mg/L	10.0	1.0	106	90-110	0.6	10	

### Batch 3C21029 - NO PREP

# QUALITY CONTROL DATA

## Classical Chemistry Parameters - Quality Control

### Batch 3C21029 - NO PREP - Continued

Blank (3C21029-BLK1)

Prepared: 03/21/2013 16:12 Analyzed: 03/24/2013 09:46

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	10	U	10	mg/L							

LCS (3C21029-BS1)

Prepared: 03/21/2013 16:12 Analyzed: 03/24/2013 09:46

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	980		10	mg/L	1000		98	90-110			

Duplicate (3C21029-DUP1)

Prepared: 03/21/2013 16:12 Analyzed: 03/24/2013 09:46

Source: A300883-03

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	470		10	mg/L		460			0.4	10	

### Batch 3C27011 - NO PREP

Blank (3C27011-BLK1)

Prepared: 03/27/2013 09:31 Analyzed: 03/27/2013 11:09

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Ammonia as N	0.0073	U	0.020	mg/L							U

LCS (3C27011-BS1)

Prepared: 03/27/2013 09:31 Analyzed: 03/27/2013 11:16

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Ammonia as N	0.98		0.020	mg/L	1.00		98	90-110			

Matrix Spike (3C27011-MS1)

Prepared: 03/27/2013 09:31 Analyzed: 03/27/2013 11:21

Source: A301318-01

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Ammonia as N	1.0		0.020	mg/L	1.00	0.074	92	90-110			

Matrix Spike Dup (3C27011-MSD1)

Prepared: 03/27/2013 09:31 Analyzed: 03/27/2013 11:22

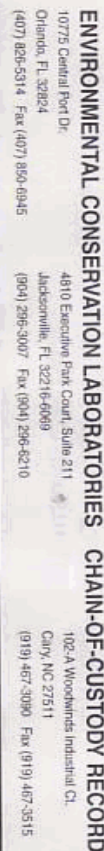
Source: A301318-01

Analyte	Result	Flaq	POL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Ammonia as N	0.96		0.020	mg/L	1.00	0.074	89	90-110	3	10	QM-07

**FLAGS/NOTES AND DEFINITIONS**

<b>PQL</b>	PQL: Practical Quantitation Limit.
<b>B</b>	Results are based upon membrane filter colony counts that are outside the method indicated ideal range.
<b>I</b>	The reported value is between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
<b>J</b>	Estimated value.
<b>K</b>	Off-scale low; Actual value is known to be less than the value given.
<b>L</b>	Off-scale high; Actual value is known to be greater than value given.
<b>M</b>	Presence of analyte is verified but not quantified; the actual value is less than the MRL but greater than the MDL.
<b>N</b>	Presumptive evidence of presence of material.
<b>O</b>	Sampled, but analysis lost or not performed.
<b>Q</b>	Sample exceeded the accepted holding time.
<b>T</b>	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
<b>U</b>	Indicates that the compound was analyzed for but not detected.
<b>V</b>	Indicates that the analyte was detected in both the sample and the associated method blank.
<b>Y</b>	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
<b>Z</b>	Too many colonies were present (TNTC); the numeric value represents the filtration volume.
<b>?</b>	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
<b>*</b>	Not reported due to interference.
<b>E</b>	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
<b>QM-02</b>	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
<b>QM-07</b>	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
<b>QM-11</b>	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.





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