ENCO Laboratories

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Friday, February 20, 2015
City of Durham (CI020)
Attn: Simon Lobdell
1600 Mist Lake
Durham, NC 27701

RE: Laboratory Results for
Project Number: [none], Project Name/Desc: Closed Landfill
ENCO Workorder(s): C501773

Dear Simon Lobdell,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Wednesday, February 11, 2015.

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 Cary. 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,

Stephanie Franz

Project Manager

Enclosure(s)

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: Rill Sample #1 **Lab ID: C501773-01** **Sampled: 02/11/15 10:55** **Received: 02/11/15 11:57**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 300.0	03/11/15	02/18/15 09:55	02/19/15 03:39
EPA 351.2	03/11/15	02/12/15 10:33	02/13/15 09:47
EPA 353.2	02/13/15 10:55	02/11/15 14:36	02/11/15 16:23
EPA 353.2	03/11/15	02/12/15 07:20	02/12/15 12:00
EPA 353.2	11/06/17	02/13/15 09:06	02/13/15 09:39
EPA 365.4	03/11/15	02/12/15 10:33	02/13/15 11:14
EPA 6010C	08/10/15	02/12/15 19:32	02/16/15 14:42
EPA 6020A	08/10/15	02/12/15 14:41	02/16/15 12:06
EPA 8260B	02/25/15	02/11/15 11:55	02/11/15 15:47

Client ID: Trip Blank **Lab ID: C501773-02** **Sampled: 02/11/15 10:55** **Received: 02/11/15 11:57**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	02/25/15	02/11/15 11:55	02/11/15 15:18

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SAMPLE DETECTION SUMMARY

Client ID: Rill Sample #1 **Lab ID:** C501773-01

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Barium - Total	289		1.00	10.0	ug/L	EPA 6010C	
Chromium - Total	3.82	J	1.40	10.0	ug/L	EPA 6010C	
Cobalt - Total	2.29	J	1.10	10.0	ug/L	EPA 6010C	
Copper - Total	5.81	J	1.60	10.0	ug/L	EPA 6010C	
Nickel - Total	6.41	J	1.80	10.0	ug/L	EPA 6010C	
Nitrate as N	0.20		0.025	0.10	mg/L	EPA 353.2	
Nitrate/Nitrite as N	1.2		0.041	0.10	mg/L	EPA 353.2	
Nitrite as N	1.0		0.017	0.10	mg/L	EPA 353.2	
Phosphorus	0.085	J	0.025	0.10	mg/L	EPA 365.4	
Sulfate as SO4	4.5	J	2.9	5.0	mg/L	EPA 300.0	
Total Kjeldahl Nitrogen	1.2		0.26	0.48	mg/L	EPA 351.2	
Vanadium - Total	3.72	J	1.40	10.0	ug/L	EPA 6010C	
Zinc - Total	13.1		3.80	10.0	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: Rill Sample #1 | **Lab Sample ID:** C501773-01 | **Received:** 02/11/15 11:57
Matrix: Surface Water | **Sampled:** 02/11/15 10:55 | **Work Order:** C501773
Project: Closed Landfill | **Sampled By:** Simon Lobdell

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Acrylonitrile [107-13-1]^	3.5	U	ug/L	1	3.5	10	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Iodomethane [74-88-4]^	1.7	U	ug/L	1	1.7	5.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
m,p-Xylenes [108-38-3/106-42-3]^	0.17	U	ug/L	1	0.17	2.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
o-Xylene [95-47-6]^	0.065	U	ug/L	1	0.065	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6]^	0.70	U	ug/L	1	0.70	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Vinyl acetate [108-05-4]^	0.95	U	ug/L	1	0.95	5.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	

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ANALYTICAL RESULTS

Description: Rill Sample #1	**Lab Sample ID:** C501773-01	**Received:** 02/11/15 11:57
Matrix: Surface Water	**Sampled:** 02/11/15 10:55	**Work Order:** C501773
Project: Closed Landfill	**Sampled By:** Simon Lobdell	

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	5B11026	EPA 8260B	02/11/15 15:47	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*101 %*	*53-136*	*5B11026*	*EPA 8260B*	*02/11/15 15:47*	*MSZ*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*67-129*	*5B11026*	*EPA 8260B*	*02/11/15 15:47*	*MSZ*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*59-134*	*5B11026*	*EPA 8260B*	*02/11/15 15:47*	*MSZ*	

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0]^	0.220	U	ug/L	1	0.220	2.00	5B12035	EPA 6020A	02/16/15 12:06	VLO	
Arsenic [7440-38-2]^	5.40	U	ug/L	1	5.40	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Barium [7440-39-3]^	**289**		ug/L	1	1.00	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Beryllium [7440-41-7]^	0.100	U	ug/L	1	0.100	1.00	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Cadmium [7440-43-9]^	0.360	U	ug/L	1	0.360	1.00	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Chromium [7440-47-3]^	**3.82**	J	ug/L	1	1.40	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Cobalt [7440-48-4]^	**2.29**	J	ug/L	1	1.10	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Copper [7440-50-8]^	**5.81**	J	ug/L	1	1.60	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Lead [7439-92-1]^	2.10	U	ug/L	1	2.10	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Nickel [7440-02-0]^	**6.41**	J	ug/L	1	1.80	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Selenium [7782-49-2]^	0.910	U	ug/L	1	0.910	3.00	5B12035	EPA 6020A	02/16/15 12:06	VLO	
Silver [7440-22-4]^	1.90	U	ug/L	1	1.90	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Thallium [7440-28-0]^	0.110	U	ug/L	1	0.110	1.00	5B12035	EPA 6020A	02/16/15 12:06	VLO	
Vanadium [7440-62-2]^	**3.72**	J	ug/L	1	1.40	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	
Zinc [7440-66-6]^	**13.1**		ug/L	1	3.80	10.0	5B12036	EPA 6010C	02/16/15 14:42	JDH	

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Nitrate as N [14797-55-8]^	**0.20**		mg/L	1	0.025	0.10	5B13008	EPA 353.2	02/13/15 09:39	SHA	
Nitrate/Nitrite as N^	**1.2**		mg/L	1	0.041	0.10	5B12002	EPA 353.2	02/12/15 12:00	SHA	
Nitrite as N [14797-65-0]^	**1.0**		mg/L	1	0.017	0.10	5B11032	EPA 353.2	02/11/15 16:23	SHA	
Phosphorus [7723-14-0]^	**0.085**	J	mg/L	1	0.025	0.10	5B12009	EPA 365.4	02/13/15 11:14	SHA	
Sulfate as SO4 [14808-79-8]^	**4.5**	J	mg/L	1	2.9	5.0	5B18011	EPA 300.0	02/19/15 03:39	AJB	
Total Kjeldahl Nitrogen^	**1.2**		mg/L	1	0.26	0.48	5B12008	EPA 351.2	02/13/15 09:47	SHA	

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ANALYTICAL RESULTS

Description: Trip Blank | **Lab Sample ID:** C501773-02 | **Received:** 02/11/15 11:57

Matrix: Water | **Sampled:** 02/11/15 10:55 | **Work Order:** C501773

Project: Closed Landfill | **Sampled By:** ENCO

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Acetone [67-64-1]^	1.2	U	ug/L	1	1.2	5.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Acrylonitrile [107-13-1]^	3.5	U	ug/L	1	3.5	10	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Iodomethane [74-88-4]^	1.7	U	ug/L	1	1.7	5.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
m,p-Xylenes [108-38-3/106-42-3]^	0.17	U	ug/L	1	0.17	2.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
o-Xylene [95-47-6]^	0.065	U	ug/L	1	0.065	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6]^	0.70	U	ug/L	1	0.70	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Vinyl acetate [108-05-4]^	0.95	U	ug/L	1	0.95	5.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	

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ANALYTICAL RESULTS

Description: Trip Blank
Matrix: Water
Project: Closed Landfill

Lab Sample ID: C501773-02
Sampled: 02/11/15 10:55
Sampled By: ENCO

Received: 02/11/15 11:57
Work Order: C501773

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	5B11026	EPA 8260B	02/11/15 15:18	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*100 %*	*53-136*	*5B11026*	*EPA 8260B*	*02/11/15 15:18*	*MSZ*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*67-129*	*5B11026*	*EPA 8260B*	*02/11/15 15:18*	*MSZ*	
Toluene-d8	*55*	*1*	*50.0*	*111 %*	*59-134*	*5B11026*	*EPA 8260B*	*02/11/15 15:18*	*MSZ*	

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QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 5B11026 - EPA 5030B_MS

Blank (5B11026-BLK1) Prepared: 02/11/2015 11:55 Analyzed: 02/11/2015 12:47

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
m,p-Xylenes	0.17	U	2.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
o-Xylene	0.065	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							

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QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 5B11026 - EPA 5030B_MS - Continued

Blank (5B11026-BLK1) Continued Prepared: 02/11/2015 11:55 Analyzed: 02/11/2015 12:47

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*101*	*53-136*			
Dibromofluoromethane	*55*			*ug/L*	*50.0*		*110*	*67-129*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*59-134*			

LCS (5B11026-BS1) Prepared: 02/11/2015 11:55 Analyzed: 02/11/2015 13:17

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	21		1.0	ug/L	20.0		104	75-133			
Benzene	19		1.0	ug/L	20.0		94	81-134			
Chlorobenzene	21		1.0	ug/L	20.0		106	83-117			
Toluene	19		1.0	ug/L	20.0		94	71-118			
Trichloroethene	18		1.0	ug/L	20.0		88	74-119			
4-Bromofluorobenzene	*55*			*ug/L*	*50.0*		*111*	*53-136*			
Dibromofluoromethane	*56*			*ug/L*	*50.0*		*111*	*67-129*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*59-134*			

Matrix Spike (5B11026-MS1) Prepared: 02/11/2015 11:55 Analyzed: 02/11/2015 13:47

Source: C501737-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.21 U	94	75-133			
Benzene	18		1.0	ug/L	20.0	0.15 U	91	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	99	83-117			
Toluene	17		1.0	ug/L	20.0	0.14 U	87	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	97	74-119			
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*108*	*53-136*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*67-129*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*59-134*			

Matrix Spike Dup (5B11026-MSD1) Prepared: 02/11/2015 11:55 Analyzed: 02/11/2015 14:17

Source: C501737-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.21 U	94	75-133	0.3	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	88	81-134	3	17	
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	99	83-117	0.05	16	
Toluene	17		1.0	ug/L	20.0	0.14 U	87	71-118	0.7	17	
Trichloroethene	17		1.0	ug/L	20.0	0.15 U	87	74-119	10	22	
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*106*	*53-136*			
Dibromofluoromethane	*54*			*ug/L*	*50.0*		*109*	*67-129*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*59-134*			

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

Batch 5B12035 - EPA 3005A

Blank (5B12035-BLK1) Prepared: 02/12/2015 14:41 Analyzed: 02/16/2015 10:24

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							

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QUALITY CONTROL DATA

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

Batch 5B12035 - EPA 3005A - Continued

Blank (5B12035-BLK1) Continued Prepared: 02/12/2015 14:41 Analyzed: 02/16/2015 10:24

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Selenium	0.910	U	3.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (5B12035-BS1) Prepared: 02/12/2015 14:41 Analyzed: 02/16/2015 10:27

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	195		2.00	ug/L	200		97	80-120			
Selenium	206		3.00	ug/L	200		103	80-120			
Thallium	201		1.00	ug/L	200		100	80-120			

Matrix Spike (5B12035-MS1) Prepared: 02/12/2015 14:41 Analyzed: 02/16/2015 10:35

Source: C500823-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	202		2.00	ug/L	200	0.753	101	75-125			
Selenium	212		3.00	ug/L	200	0.910 U	106	75-125			
Thallium	193		1.00	ug/L	200	0.110 U	97	75-125			

Matrix Spike Dup (5B12035-MSD1) Prepared: 02/12/2015 14:41 Analyzed: 02/16/2015 10:38

Source: C500823-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	200		2.00	ug/L	200	0.753	100	75-125	1	20	
Selenium	212		3.00	ug/L	200	0.910 U	106	75-125	0.09	20	
Thallium	195		1.00	ug/L	200	0.110 U	98	75-125	1	20	

Post Spike (5B12035-PS1) Prepared: 02/12/2015 14:41 Analyzed: 02/16/2015 10:42

Source: C500823-02

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	201		2.00	ug/L	200	0.753	100	80-120			
Selenium	209		3.00	ug/L	200	0.0887	105	80-120			
Thallium	191		1.00	ug/L	200	0.0660	96	80-120			

Batch 5B12036 - EPA 3005A

Blank (5B12036-BLK1) Prepared: 02/12/2015 19:32 Analyzed: 02/16/2015 13:19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	5.40	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.40	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	2.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

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QUALITY CONTROL DATA

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

Batch 5B12036 - EPA 3005A - Continued

LCS (5B12036-BS1) Prepared: 02/12/2015 19:32 Analyzed: 02/16/2015 13:24

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	204		10.0	ug/L	200		102	80-120			
Barium	213		10.0	ug/L	200		106	80-120			
Beryllium	19.9		1.00	ug/L	20.0		100	80-120			
Cadmium	21.3		1.00	ug/L	20.0		107	80-120			
Chromium	199		10.0	ug/L	200		99	80-120			
Cobalt	210		10.0	ug/L	200		105	80-120			
Copper	192		10.0	ug/L	200		96	80-120			
Lead	209		10.0	ug/L	200		104	80-120			
Nickel	211		10.0	ug/L	200		105	80-120			
Silver	195		10.0	ug/L	200		97	80-120			
Vanadium	192		10.0	ug/L	200		96	80-120			
Zinc	216		10.0	ug/L	200		108	80-120			

Matrix Spike (5B12036-MS1) Prepared: 02/12/2015 19:32 Analyzed: 02/16/2015 13:40

Source: C500930-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	199		10.0	ug/L	200	5.40 U	99	75-125			
Barium	1260		10.0	ug/L	200	1020	119	75-125			
Beryllium	21.2		1.00	ug/L	20.0	0.100 U	106	75-125			
Cadmium	19.8		1.00	ug/L	20.0	0.360 U	99	75-125			
Chromium	217		10.0	ug/L	200	11.6	102	75-125			
Cobalt	239		10.0	ug/L	200	30.6	104	75-125			
Copper	209		10.0	ug/L	200	1.60 U	104	75-125			
Lead	210		10.0	ug/L	200	2.10 U	105	75-125			
Nickel	239		10.0	ug/L	200	31.3	104	75-125			
Silver	212		10.0	ug/L	200	1.90 U	106	75-125			
Vanadium	201		10.0	ug/L	200	1.40 U	100	75-125			
Zinc	239		10.0	ug/L	200	19.0	110	75-125			

Matrix Spike Dup (5B12036-MSD1) Prepared: 02/12/2015 19:32 Analyzed: 02/16/2015 13:50

Source: C500930-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	189		10.0	ug/L	200	5.40 U	94	75-125	5	20	
Barium	1190		10.0	ug/L	200	1020	82	75-125	6	20	
Beryllium	19.9		1.00	ug/L	20.0	0.100 U	100	75-125	6	20	
Cadmium	18.8		1.00	ug/L	20.0	0.360 U	94	75-125	6	20	
Chromium	206		10.0	ug/L	200	11.6	97	75-125	5	20	
Cobalt	226		10.0	ug/L	200	30.6	98	75-125	6	20	
Copper	198		10.0	ug/L	200	1.60 U	99	75-125	5	20	
Lead	198		10.0	ug/L	200	2.10 U	99	75-125	6	20	
Nickel	227		10.0	ug/L	200	31.3	98	75-125	5	20	
Silver	200		10.0	ug/L	200	1.90 U	100	75-125	6	20	
Vanadium	191		10.0	ug/L	200	1.40 U	96	75-125	5	20	
Zinc	221		10.0	ug/L	200	19.0	101	75-125	8	20	

Post Spike (5B12036-PS1) Prepared: 02/12/2015 19:32 Analyzed: 02/16/2015 13:53

Source: C500930-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

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QUALITY CONTROL DATA

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

Batch 5B12036 - EPA 3005A - Continued

Post Spike (5B12036-PS1) Continued Prepared: 02/12/2015 19:32 Analyzed: 02/16/2015 13:53

Source: C500930-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.177		0.0100	mg/L	0.200	-0.0155	88	80-120			
Barium	1.21		0.0100	mg/L	0.200	1.02	93	80-120			
Beryllium	0.0194		0.00100	mg/L	0.0200	-8.28E-5	97	80-120			
Cadmium	0.0178		0.00100	mg/L	0.0200	-0.00103	89	80-120			
Chromium	0.200		0.0100	mg/L	0.200	0.0116	94	80-120			
Cobalt	0.215		0.0100	mg/L	0.200	0.0306	92	80-120			
Copper	0.191		0.0100	mg/L	0.200	-0.00271	95	80-120			
Lead	0.187		0.0100	mg/L	0.200	0.00203	92	80-120			
Nickel	0.215		0.0100	mg/L	0.200	0.0313	92	80-120			
Silver	0.194		0.0100	mg/L	0.200	-0.000155	97	80-120			
Vanadium	0.184		0.0100	mg/L	0.200	-0.00212	92	80-120			
Zinc	0.212		0.0100	mg/L	0.200	0.0190	96	80-120			

Classical Chemistry Parameters - Quality Control

Batch 5B11032 - NO PREP

Blank (5B11032-BLK1) Prepared: 02/11/2015 14:36 Analyzed: 02/11/2015 16:05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.017	U	0.10	mg/L							

LCS (5B11032-BS1) Prepared: 02/11/2015 14:36 Analyzed: 02/11/2015 15:47

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1.0		0.10	mg/L	1.00		102	90-110			

Matrix Spike (5B11032-MS1) Prepared: 02/11/2015 14:36 Analyzed: 02/11/2015 23:22

Source: C500825-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.97		0.10	mg/L	1.00	0.017 U	97	90-110			

Matrix Spike Dup (5B11032-MSD1) Prepared: 02/11/2015 14:36 Analyzed: 02/11/2015 23:23

Source: C500825-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.99		0.10	mg/L	1.00	0.017 U	99	90-110	2	10	

Batch 5B12002 - NO PREP

Blank (5B12002-BLK1) Prepared: 02/12/2015 07:20 Analyzed: 02/12/2015 11:04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	0.041	U	0.10	mg/L							

LCS (5B12002-BS1) Prepared: 02/12/2015 07:20 Analyzed: 02/12/2015 11:01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.3		0.10	mg/L	1.25		107	90-110			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Classical Chemistry Parameters - Quality Control

Batch 5B12002 - NO PREP - Continued

Matrix Spike (5B12002-MS1) Prepared: 02/12/2015 07:20 Analyzed: 02/12/2015 11:08

Source: C415158-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.1		0.10	mg/L	0.513	0.53	112	90-110			QM-05

Matrix Spike Dup (5B12002-MSD1) Prepared: 02/12/2015 07:20 Analyzed: 02/12/2015 11:10

Source: C415158-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.1		0.10	mg/L	0.513	0.53	114	90-110	0.6	10	QM-05

Batch 5B12008 - Same

Blank (5B12008-BLK1) Prepared: 02/12/2015 10:33 Analyzed: 02/13/2015 09:13

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	0.26	U	0.48	mg/L							

LCS (5B12008-BS1) Prepared: 02/12/2015 10:33 Analyzed: 02/13/2015 09:16

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	12		0.48	mg/L	12.0		97	90-110			

Matrix Spike (5B12008-MS1) Prepared: 02/12/2015 10:33 Analyzed: 02/13/2015 09:20

Source: C416551-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	29	D	2.4	mg/L	4.79	23	126	90-110			QM-16

Matrix Spike Dup (5B12008-MSD1) Prepared: 02/12/2015 10:33 Analyzed: 02/13/2015 09:22

Source: C416551-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	28	D	2.4	mg/L	4.79	23	111	90-110	3	10	QM-16

Batch 5B12009 - Same

Blank (5B12009-BLK1) Prepared: 02/12/2015 10:33 Analyzed: 02/13/2015 10:50

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	0.025	U	0.10	mg/L							

LCS (5B12009-BS1) Prepared: 02/12/2015 10:33 Analyzed: 02/13/2015 10:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	1.5		0.10	mg/L	1.60		97	80-120			

Matrix Spike (5B12009-MS1) Prepared: 02/12/2015 10:33 Analyzed: 02/13/2015 10:55

Source: C416551-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	12	D	1.5	mg/L	0.640	12	87	80-120			

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QUALITY CONTROL DATA

Classical Chemistry Parameters - Quality Control

Batch 5B12009 - Same - Continued

Matrix Spike Dup (5B12009-MSD1) Prepared: 02/12/2015 10:33 Analyzed: 02/13/2015 10:57

Source: C416551-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	12	D	1.5	mg/L	0.640	12	83	80-120	0.2	25	

Batch 5B18011 - NO PREP

Blank (5B18011-BLK1) Prepared: 02/18/2015 09:55 Analyzed: 02/18/2015 18:26

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	2.9	U	5.0	mg/L							

LCS (5B18011-BS1) Prepared: 02/18/2015 09:55 Analyzed: 02/18/2015 17:36

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	48		5.0	mg/L	50.0		95	90-110			

Matrix Spike (5B18011-MS1) Prepared: 02/18/2015 09:55 Analyzed: 02/19/2015 09:41

Source: C501868-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	35		5.0	mg/L	20.0	17	92	90-110			

Matrix Spike Dup (5B18011-MSD1) Prepared: 02/18/2015 09:55 Analyzed: 02/19/2015 09:57

Source: C501868-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	36		5.0	mg/L	20.0	17	95	90-110	2	10	

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FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence (85% or greater confidence) to make a "tentative identification".
P	Greater than 25% concentration difference was observed between the primary and secondary GC column. The lower concentration is reported.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-16	Matrix spike recovery could not be calculated due to high concentrations of analyte in source sample.

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ENCO
ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN OF CUSTODY RECORD
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Page ____ of ____

Client Name: City of Durham (CI020)	Project Number: [none]
Address: 1600 Mist Lake	Project Name/Desc: Closed Landfill
City/ST/Zip: Durham, NC 27701	PO # / Billing Info:
Tel: (919) 560-4381 Fax:	Reporting Contact: Simon Lobdell
Sampler(s) Name, Affiliation (Print): Simon Lobdell	Billing Contact: Accounts Payable
Sampler(s) Signature: [signature]	Site Location / Time Zone: Landfill EST

Requested Analyses

Requested Turnaround Times

Note : Rush requests subject acceptance by the facility

___ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C501773

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	Nitrate Calc 353.2	Nitrite as N 353.2	NOX 353.2,P,TKN 351.2	Sulfate 300					Sample Comments
	Rill Sample #1	2/11/15	10:55	grab	SW	6	X	X	X	X	X	X					unfiltered
	Trip Blank				SW	2	X										

Preservation (See Codes) (Combine as necessary)

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By: [signature]	Date/Time: 2/11/15 11:57	Received By: [signature]	Date/Time: 2/11/15 1157
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt: 1.1 c		Condition Upon Receipt: ✓ Acceptable ___ Unacceptable	

Matrix : **GW**-Groundwater **SO**-Soil **DW**-Drinking Water **SE**-Sediment **SW**-Surface Water **WW**-Wastewater **A**-Air **O**-Other (detail in comments)

Preservation: **I**-Ice **H**-HCl **N**-HNO3 **S**-H2SO4 **NO**-NaOH **O**-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist