OPERATION/CONSTRUCTION MANAGERS
Municipal Services
CIVIL/SANITARY ENGINEERS
Engineering Company, P.A.

May 12, 2011

Jaclynne Drummond, Hydrogeologist Permitting Branch
Solid Waste Section
Division of Waste Management
North Carolina Department of Environmental and Natural Resources
401 Oberlin Road, Suite 150
Raleigh, NC 27605

Re: Corrective Action Evaluation – MW-16 Area of Concern
Alexander County C&D Permit #02-01

Dear Ms. Drummond:

This letter is a brief update to the Corrective Action Evaluation Report (CAER) for Alexander County submitted March 22, 2011. It contains laboratory results for newly installed delineation wells MW-33 and MW-34 and reiterates the next steps for the MW-16 area of concern (AOC).

Alexander County has been operating under a corrective action plan for two years. The MW-16 AOC, located on the eastern side of the landfill, had chlorinated solvents and aromatic hydrocarbons exceeding the 2L Standard within 100-feet of the edge of waste and beyond the property line. Alexander County was able to purchase additional property to extend the compliance boundary to 250-feet from waste. Wells MW-33 and MW-34 were installed slightly inside the 250-feet from waste limit to determine the plume extent. Their proposed locations are shown on **Plate 4** in the CAER.

MW-33 and MW-34 were installed on April 27, 2011. Samples were collected from the newly installed wells on April 28, 2011. Environmental Conservation Laboratories, Inc. (ENCO) of Cary, NC analyzed the samples for App I VOCs. Analysis results indicated no detections above 2L in MW-33 and MW-34. MW-34 samples contained only non-detects. MW-33 samples detected benzene, cis 1-2 dichloroethene, and 1,1 dichloroethane above the laboratory established method detection limits.

The CAER proposed no additional MNA samples for this AOC if well results indicated contamination had not reached 250-feet from the edge of waste. MW-33 and MW-34 will continue to be sampled semi-annually. MW-5 will no longer be sampled as part of traditional semi-annual sampling due to its proximity to the waste boundary. Additional monitoring locations are now present that can provide more relevant information regarding contamination migration and compliance boundary protection. MW-5 will

PO Box 97, Garner, North Carolina 27529 (919) 772-5393
PO Box 828, Morehead City, NC 28557 (252) 726-9481 PO Box 349, Boone, North Carolina 28607 (828) 262-1767

not be abandoned, but remain for supplemental purposes and remediation/water level collection. Additional remediation should not be required at this time because 2L exceedances have not been found past 250 feet from waste.

Laboratory results are included for your reference. Please contact us by phone at (919) 772-5393, with questions or comments.

Sincerely,

MUNICIPAL ENGINEERING SERVICES CO., P.A.

Madeline German, PG

Enclosures
cc: Mr. Josh Mitchell, Alexander County

Environmental Conservation Laboratories, Inc.
102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515
www.encolabs.com

Thursday, May 5, 2011

Municipal Engineering Services (MU001)

Attn: Jonathan Pfohl

P.O. Box 97

Garner, NC 27529

RE: Laboratory Results for
Project Number: [none], Project Name/Desc: Alexander MSWLF
ENCO Workorder: C105177

Dear Jonathan Pfohl,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, April 29, 2011.

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,

Chuck Smith

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 11.

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: MW-33	Lab ID: C105177-01	Sampled: 04/28/11 13:30	Received: 04/29/11 08:00

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	05/12/11	05/03/11 10:30	5/3/2011 15:07

Client ID: MW-34	Lab ID: C105177-02	Sampled: 04/28/11 12:00	Received: 04/29/11 08:00

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	05/12/11	05/03/11 10:30	5/3/2011 15:36

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: MW-33 **Lab ID:** C105177-01

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
1,1-Dichloroethane	2.0	J	1	0.080	1.0	5	ug/L	EPA 8260B	
Benzene	0.72	J	1	0.68	1.0	1	ug/L	EPA 8260B	
cis-1,2-Dichloroethene	2.2	J	1	0.72	1.0	5	ug/L	EPA 8260B	

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ANALYTICAL RESULTS

Description: MW-33 | **Lab Sample ID:** C105177-01 | **Received:** 04/29/11 08:00

Matrix: Water | **Sampled:** 04/28/11 13:30 | **Work Order:** C105177

Project: Alexander MSWLF | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.90	U	ug/L	1	0.90	1.0	5	EPA 8260B	05/03/11 15:07	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.75	U	ug/L	1	0.75	1.0	3	EPA 8260B	05/03/11 15:07	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
1,1-Dichloroethane [75-34-3] ^	**2.0**	J	ug/L	1	0.080	1.0	5	EPA 8260B	05/03/11 15:07	JKG	
1,1-Dichloroethene [75-35-4] ^	0.60	U	ug/L	1	0.60	1.0	5	EPA 8260B	05/03/11 15:07	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	05/03/11 15:07	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.11	U	ug/L	1	0.11	1.0	5	EPA 8260B	05/03/11 15:07	JKG	
1,2-Dichloroethane [107-06-2] ^	0.47	U	ug/L	1	0.47	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
1,2-Dichloropropane [78-87-5] ^	0.59	U	ug/L	1	0.59	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.79	U	ug/L	1	0.79	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	05/03/11 15:07	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	05/03/11 15:07	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	05/03/11 15:07	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	05/03/11 15:07	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	05/03/11 15:07	JKG	
Benzene [71-43-2] ^	**0.72**	J	ug/L	1	0.68	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Bromochloromethane [74-97-5] ^	0.87	U	ug/L	1	0.87	1.0	3	EPA 8260B	05/03/11 15:07	JKG	
Bromodichloromethane [75-27-4] ^	0.75	U	ug/L	1	0.75	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Bromoform [75-25-2] ^	0.68	U	ug/L	1	0.68	1.0	3	EPA 8260B	05/03/11 15:07	JKG	
Bromomethane [74-83-9] ^	0.58	U	ug/L	1	0.58	1.0	10	EPA 8260B	05/03/11 15:07	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	05/03/11 15:07	JKG	
Carbon tetrachloride [56-23-5] ^	0.69	U	ug/L	1	0.69	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Chlorobenzene [108-90-7] ^	0.74	U	ug/L	1	0.74	1.0	3	EPA 8260B	05/03/11 15:07	JKG	
Chloroethane [75-00-3] ^	0.75	U	ug/L	1	0.75	1.0	10	EPA 8260B	05/03/11 15:07	JKG	
Chloroform [67-66-3] ^	0.70	U	ug/L	1	0.70	1.0	5	EPA 8260B	05/03/11 15:07	JKG	
Chloromethane [74-87-3] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	**2.2**	J	ug/L	1	0.72	1.0	5	EPA 8260B	05/03/11 15:07	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.075	U	ug/L	1	0.075	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Dibromochloromethane [124-48-1] ^	0.63	U	ug/L	1	0.63	1.0	3	EPA 8260B	05/03/11 15:07	JKG	
Dibromomethane [74-95-3] ^	0.90	U	ug/L	1	0.90	1.0	10	EPA 8260B	05/03/11 15:07	JKG	
Ethylbenzene [100-41-4] ^	0.62	U	ug/L	1	0.62	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	05/03/11 15:07	JKG	
Methylene chloride [75-09-2] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Styrene [100-42-5] ^	0.053	U	ug/L	1	0.053	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Tetrachloroethene [127-18-4] ^	0.73	U	ug/L	1	0.73	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Toluene [108-88-3] ^	0.85	U	ug/L	1	0.85	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.12	U	ug/L	1	0.12	1.0	5	EPA 8260B	05/03/11 15:07	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.50	U	ug/L	1	0.50	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	05/03/11 15:07	JKG	
Trichloroethene [79-01-6] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	05/03/11 15:07	JKG	

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Description: MW-33
Matrix: Water
Project: Alexander MSWLF

Lab Sample ID: C105177-01
Sampled: 04/28/11 13:30
Sampled By: Jonathan Pfohl

Received: 04/29/11 08:00
Work Order: C105177

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	05/03/11 15:07	JKG	
Vinyl chloride [75-01-4] ^	0.60	U	ug/L	1	0.60	1.0	1	EPA 8260B	05/03/11 15:07	JKG	
Xylenes (Total) [1330-20-7] ^	2.1	U	ug/L	1	2.1	3.0	5	EPA 8260B	05/03/11 15:07	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*88 %*	*51-122*	*1E03016*	*EPA 8260B*	*05/03/11 15:07*	*JKG*	
Dibromofluoromethane	*47*	*1*	*50.0*	*95 %*	*68-117*	*1E03016*	*EPA 8260B*	*05/03/11 15:07*	*JKG*	
Toluene-d8	*48*	*1*	*50.0*	*96 %*	*69-110*	*1E03016*	*EPA 8260B*	*05/03/11 15:07*	*JKG*	

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

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Description: MW-34 | **Lab Sample ID:** C105177-02 | **Received:** 04/29/11 08:00

Matrix: Water | **Sampled:** 04/28/11 12:00 | **Work Order:** C105177

Project: Alexander MSWLF | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.90	U	ug/L	1	0.90	1.0	5	EPA 8260B	05/03/11 15:36	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.75	U	ug/L	1	0.75	1.0	3	EPA 8260B	05/03/11 15:36	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
1,1-Dichloroethane [75-34-3] ^	0.080	U	ug/L	1	0.080	1.0	5	EPA 8260B	05/03/11 15:36	JKG	
1,1-Dichloroethene [75-35-4] ^	0.60	U	ug/L	1	0.60	1.0	5	EPA 8260B	05/03/11 15:36	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	05/03/11 15:36	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.11	U	ug/L	1	0.11	1.0	5	EPA 8260B	05/03/11 15:36	JKG	
1,2-Dichloroethane [107-06-2] ^	0.47	U	ug/L	1	0.47	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
1,2-Dichloropropane [78-87-5] ^	0.59	U	ug/L	1	0.59	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.79	U	ug/L	1	0.79	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	05/03/11 15:36	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	05/03/11 15:36	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	05/03/11 15:36	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	05/03/11 15:36	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	05/03/11 15:36	JKG	
Benzene [71-43-2] ^	0.68	U	ug/L	1	0.68	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Bromochloromethane [74-97-5] ^	0.87	U	ug/L	1	0.87	1.0	3	EPA 8260B	05/03/11 15:36	JKG	
Bromodichloromethane [75-27-4] ^	0.75	U	ug/L	1	0.75	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Bromoform [75-25-2] ^	0.68	U	ug/L	1	0.68	1.0	3	EPA 8260B	05/03/11 15:36	JKG	
Bromomethane [74-83-9] ^	0.58	U	ug/L	1	0.58	1.0	10	EPA 8260B	05/03/11 15:36	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	05/03/11 15:36	JKG	
Carbon tetrachloride [56-23-5] ^	0.69	U	ug/L	1	0.69	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Chlorobenzene [108-90-7] ^	0.74	U	ug/L	1	0.74	1.0	3	EPA 8260B	05/03/11 15:36	JKG	
Chloroethane [75-00-3] ^	0.75	U	ug/L	1	0.75	1.0	10	EPA 8260B	05/03/11 15:36	JKG	
Chloroform [67-66-3] ^	0.70	U	ug/L	1	0.70	1.0	5	EPA 8260B	05/03/11 15:36	JKG	
Chloromethane [74-87-3] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.72	U	ug/L	1	0.72	1.0	5	EPA 8260B	05/03/11 15:36	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.075	U	ug/L	1	0.075	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Dibromochloromethane [124-48-1] ^	0.63	U	ug/L	1	0.63	1.0	3	EPA 8260B	05/03/11 15:36	JKG	
Dibromomethane [74-95-3] ^	0.90	U	ug/L	1	0.90	1.0	10	EPA 8260B	05/03/11 15:36	JKG	
Ethylbenzene [100-41-4] ^	0.62	U	ug/L	1	0.62	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	05/03/11 15:36	JKG	
Methylene chloride [75-09-2] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Styrene [100-42-5] ^	0.053	U	ug/L	1	0.053	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Tetrachloroethene [127-18-4] ^	0.73	U	ug/L	1	0.73	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Toluene [108-88-3] ^	0.85	U	ug/L	1	0.85	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.12	U	ug/L	1	0.12	1.0	5	EPA 8260B	05/03/11 15:36	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.50	U	ug/L	1	0.50	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	05/03/11 15:36	JKG	
Trichloroethene [79-01-6] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Trichlorofluoromethane [75-69-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	05/03/11 15:36	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	05/03/11 15:36	JKG	
Vinyl chloride [75-01-4] ^	0.60	U	ug/L	1	0.60	1.0	1	EPA 8260B	05/03/11 15:36	JKG	

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Description: MW-34 | **Lab Sample ID:** C105177-02 | **Received:** 04/29/11 08:00

Matrix: Water | **Sampled:** 04/28/11 12:00 | **Work Order:** C105177

Project: Alexander MSWLF | **Sampled By:** Jonathan Pfohl

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	2.1	U	ug/L	1	2.1	3.0	5	EPA 8260B	05/03/11 15:36	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*51-122*	*1E03016*	*EPA 8260B*	*05/03/11 15:36*	*JKG*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*68-117*	*1E03016*	*EPA 8260B*	*05/03/11 15:36*	*JKG*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*69-110*	*1E03016*	*EPA 8260B*	*05/03/11 15:36*	*JKG*	

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1E03016 - EPA 5030B_MS

Blank (1E03016-BLK1) Prepared: 05/03/2011 10:25 Analyzed: 05/03/2011 12:11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.90	U	1.0	ug/L							
1,1,1-Trichloroethane	0.65	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.75	U	1.0	ug/L							
1,1,2-Trichloroethane	0.66	U	1.0	ug/L							
1,1-Dichloroethane	0.080	U	1.0	ug/L							
1,1-Dichloroethene	0.60	U	1.0	ug/L							
1,2,3-Trichloropropane	0.72	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	0.11	U	1.0	ug/L							
1,2-Dichloroethane	0.47	U	1.0	ug/L							
1,2-Dichloropropane	0.59	U	1.0	ug/L							
1,4-Dichlorobenzene	0.79	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	0.68	U	1.0	ug/L							
Bromochloromethane	0.87	U	1.0	ug/L							
Bromodichloromethane	0.75	U	1.0	ug/L							
Bromoform	0.68	U	1.0	ug/L							
Bromomethane	0.58	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.69	U	1.0	ug/L							
Chlorobenzene	0.74	U	1.0	ug/L							
Chloroethane	0.75	U	1.0	ug/L							
Chloroform	0.70	U	1.0	ug/L							
Chloromethane	0.55	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.72	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.075	U	1.0	ug/L							
Dibromochloromethane	0.63	U	1.0	ug/L							
Dibromomethane	0.90	U	1.0	ug/L							
Ethylbenzene	0.62	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.14	U	1.0	ug/L							
Styrene	0.053	U	1.0	ug/L							
Tetrachloroethene	0.73	U	1.0	ug/L							
Toluene	0.85	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.12	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.50	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.72	U	1.0	ug/L							
Trichlorofluoromethane	0.66	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.60	U	1.0	ug/L							
Xylenes (Total)	2.1	U	3.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*45*			*ug/L*	*50.0*		*90*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1E03016 - EPA 5030B_MS

Blank (1E03016-BLK1) Continued Prepared: 05/03/2011 10:25 Analyzed: 05/03/2011 12:11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*46*			*ug/L*	*50.0*		*92*	*68-117*			
Surrogate: Toluene-d8	*45*			*ug/L*	*50.0*		*90*	*69-110*			

LCS (1E03016-BS1) Prepared: 05/03/2011 10:25 Analyzed: 05/03/2011 12:40

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		92	75-133			
Benzene	18		1.0	ug/L	20.0		90	81-134			
Chlorobenzene	19		1.0	ug/L	20.0		97	83-117			
Toluene	20		1.0	ug/L	20.0		98	71-118			
Trichloroethene	20		1.0	ug/L	20.0		100	75-115			

Matrix Spike (1E03016-MS1) Prepared: 05/03/2011 10:25 Analyzed: 05/03/2011 13:10

Source: C105275-05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	20		1.0	ug/L	20.0	0.60 U	100	75-133			
Benzene	19		1.0	ug/L	20.0	0.68 U	96	81-134			
Chlorobenzene	19		1.0	ug/L	20.0	0.74 U	96	83-117			
Toluene	19		1.0	ug/L	20.0	0.85 U	97	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.72 U	105	75-115			

Matrix Spike Dup (1E03016-MSD1) Prepared: 05/03/2011 10:25 Analyzed: 05/03/2011 13:39

Source: C105275-05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	20		1.0	ug/L	20.0	0.60 U	100	75-133	0.2	20	
Benzene	19		1.0	ug/L	20.0	0.68 U	96	81-134	0	17	
Chlorobenzene	20		1.0	ug/L	20.0	0.74 U	98	83-117	2	16	
Toluene	19		1.0	ug/L	20.0	0.85 U	93	71-118	4	17	
Trichloroethene	20		1.0	ug/L	20.0	0.72 U	102	75-115	3	18	

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.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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1015 Passport Way
Cary, NC 27513
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Page 1 of 1

Client Name: Municipal Engineering Services (MESCO)	Project Number:
Address: PO Box 97	Project Name/Desc: Alexander Co. MSWLF
City/ST/Zip: Garner NC 27529	PO # / Billing Info:
Tel: (919) 772-5393 Fax: (919) 772-1176	Reporting Contact: J. Pfahl
Sampler(s) Name, Affiliation (Print): Jonathan Pfahl	Billing Contact:
Sampler(s) Signature: JPfahl	Facility # (if required):

Requested Analyses: VOCs - App I

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C105177

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	VOCs - App I	Sample Comments
	MW-33	4/28/11	1:30	Grab	WT	3	✓	
	MW-34	4/28/11	12:00	Grab	WT	3	✓	

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
		JPfahl	4/28/11 8:00	[signature]	4-29-11 8:00
Comments		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt: 2.5°C		Condition Upon Receipt: ___ Acceptable ___ Unacceptable	

Matrix : GW-Groundwater SO-Soil 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

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