North Wake C&D Landfill Facility Permit No. 92-09 Semi-Annual Sampling Report

(October 2011 Sampling Event)

Wake County

Report

December 2011

WAKE COUNTY
NORTH CAROLINA

CDM

DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Consultant - Camp Dresser & McKee

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Mathew F. Colone Phone: 919-787-5620

E-mail: colonemf@cdm.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Wake County North Wake C&D Landfill	9004 Deponie Drive Raleigh, NC 27615	92-09	.0500	October 19-20, 2011

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☐ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

☒ No. No groundwater or surface water standards were exceeded.
☐ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Mathew F. Colone — Consultant — (919) 787-5620

Facility Representative Name (Print) — Title — (Area Code) Telephone Number

Signature — 12/13/2011 Date — Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1851 GEOLOGIST MATHEW F. COLONE

12/13/2011

5400 Glenwood Ave, Suite 300, Raleigh, NC 27612

Facility Representative Address

F-0412

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009

5400 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612
tel: 919 787-5620
fax: 919 781-5730

December 13, 2011

Ms. Jaclynne Drummond
Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Subject: October 2011 Semi-Annual Monitoring Sampling Report
North Wake C&D Landfill
Facility Permit No. 92-09

Dear Ms. Drummond:

Camp Dresser & McKee, on behalf of Wake County, is submitting an electronic copy of the October 2011 semi-annual sampling event report. This letter report presents the results of the most recent semi-annual sampling event at the North Wake C&D Landfill and constitutes the second semi-annual sampling for 2011. The approved groundwater monitoring network consists of the background well (MW-1) and 3 downgradient compliance wells (CD-1, CD-2, and CD–3). Sampling results from the October 2011 event are discussed below.

Field Activities

Groundwater samples from the North Wake C&D Landfill were collected on October 19, 2011 by use of disposable, laboratory decontaminated, bailers. Groundwater elevations were measured at each well prior to sampling and are presented in **Table 1**. These groundwater elevations were used to construct a potentiometric surface map for this sampling event. The potentiometric contours and sampling locations are shown on **Figure 1**.

After depth to groundwater was determined, three well volumes of water were removed from each well prior to sampling to provide fresh formation water within the well water column. Each well volume was measured in the field for pH, conductivity, temperature, turbidity, dissolved oxygen, and oxidation-reduction potential. Turbidity was elevated in each well after purging and was allowed to stabilize prior to sample collection. The water quality parameters at the time of sampling and groundwater elevations are presented in **Table 1**.

Sampling Results

Environmental Conservation Laboratories, Inc. in Cary, North Carolina analyzed the groundwater samples for North Carolina Appendix I volatile organic compounds (VOC's) and metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). In accordance with Solid Waste Section guidelines the analytical results were reported to the laboratory specific method detection limit (MDL) and are quantifiable at or below Solid Waste Section Limits (SWSLs). All monitoring wells for the C&D Landfill had detections of analytes above the MDL but below SWSLs. These detections were qualified as estimated or "J" flags.

No Appendix I VOCs or metals were detected above North Carolina 2L Standards. Selenium was detected as an estimated concentration for the first time in samples collected from MW-1. Acetone, which is a common laboratory contaminant, was detected for the first time in samples collected from CD-2 as an estimated concentration. No VOCs were detected in the equipment and trip blanks. A complete summary of all detected constituents, including detections above the MDL, is presented in **Table 2**. A copy of the analytical results from the October 2011 semi-annual sampling event is provided in **Appendix A**.

If you have any questions or require further explanation, do not hesitate to call me at (919) 787-5620.

Very truly yours,

Mathew F. Colone, P.G.
Camp Dresser & McKee

cc: Elliott Cornell, WCSWM
Lee Squires, WCSWM

Table 1
Water Quality Parameters
October 2011 Semi-Annual Sampling Event
North Wake C&D Landfill

	Water Quality Parameters						Groundwater Elevations		
Monitoring Well I.D.	pH	Conductivity (μS/cm)	Temperature (deg. C)	Turbidity (NTUs)	DO (mg/L)	ORP	TOC Elevation (feet AMSL)	Depth to Groundwater (feet)	Groundwater Elevation (feet AMSL)
MW-1	4.91	76	16.0	506	6.82	12.3	333.80	47.18	286.62
CD-1	5.53	97	16.6	682	5.02	5.1	296.26	15.73	280.53
CD-2	5.45	118	16.7	246	5.21	6.0	282.64	11.43	271.21
CD-3	4.87	68	17.6	520	4.53	10.0	301.49	22.11	279.38

NOTES:
1. AMSL - Above Mean Sea Level
2. TOC - Top of Casing
3. μS/cm - Microsiemens per centimeter
4. mg/L - Milligrams per liter
5. ORP - Oxidation Reduction Potential
6. NTU - Nephelometric Turbidity Units
7. Monitoring wells with high turbidity were allowed to settle prior to sampling; turbidity shown in table was recorded at the time of sampling.

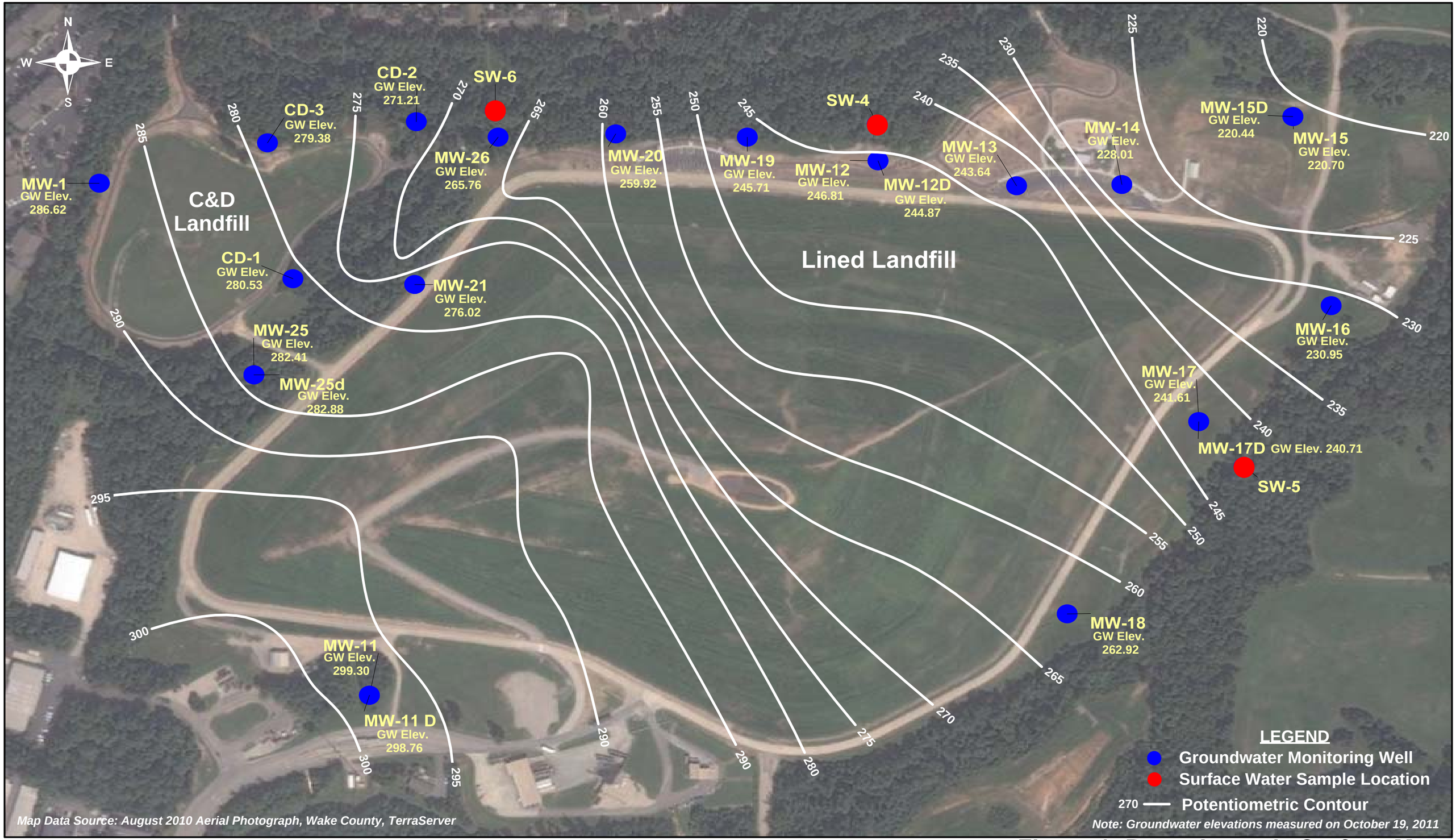
Table 2
Detected Groundwater Constituents - Metals and Volatile Organic Compounds
October 2011 Semi-Annual Sampling Event
North Wake C&D Landfill

		Metals								Volatile Organic Compounds		
Monitor Well	Sample Date	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Acetone	Chloroform	Toluene
NC 2L Standard		0.01	0.7	0.002	0.01	0.015	0.001	0.02	0.02	6,000	70	600
Solid Waste Section Limit		0.01	0.1	0.001	0.01	0.01	0.0002	0.01	0.01	100	5	1
MW-1	5-Jun-01											
MW-1	29-Nov-01											
MW-1	5-Apr-02											
MW-1	7-Nov-02											
MW-1	16-Apr-03											
MW-1	30-Oct-03											
MW-1	7-Apr-04											
MW-1	19-Nov-04											
MW-1	22-Apr-05					**0.016**						
MW-1	10-Nov-05					**0.015**						
MW-1	13-Apr-06											
MW-1	8-Nov-06											
MW-1	18-Apr-07											
MW-1	7-Nov-07		0.151		**0.011**	**0.028**						
MW-1	13-May-08	0.00187JB	0.0452JB		0.00263J							
MW-1	3-Nov-08		0.0329J						0.00123JB			
MW-1	18-Mar-09		0.0308J						0.00127JB			
MW-1	19-Oct-09		0.0418J		0.00265J				0.00091JB			
MW-1	7-May-10		0.0439J		0.00132J	0.00236J						
MW-1	28-Oct-10		0.0378J									
MW-1	14-Mar-11		0.0421J									
MW-1	20-Oct-11		0.0444J					0.00619J				
CD-1	5-Jun-01		0.102									
CD-1	29-Nov-01		0.371									
CD-1	5-Apr-02											
CD-1	7-Nov-02											
CD-1	16-Apr-03											
CD-1	30-Oct-03											
CD-1	7-Apr-04											
CD-1	19-Nov-04			0.001								
CD-1	22-Apr-05		**0.735**		**0.011**	**0.015**						
CD-1	10-Nov-05											
CD-1	13-Apr-06											
CD-1	8-Nov-06					0.011						
CD-1	18-Apr-07		0.501		0.015	0.011						
CD-1	7-Nov-07		0.501		0.013	0.011						
CD-1	13-May-08	0.00417JB	0.257B		0.0138	**0.015**						
CD-1	3-Nov-08		0.131		0.00739J	0.00691J						
CD-1	18-Mar-08		0.135		0.00632J				0.00148JB			
CD-1	19-Oct-09		0.258		**0.0148**	0.00871J			0.00612J		0.11J	
CD-1	7-May-10		0.195		0.0095J	0.00272J						
CD-1	28-Oct-10		0.136		0.00717J							
CD-1	14-Mar-11	0.00312J	0.174		0.00978J	0.00434J						
CD-1	20-Oct-11		0.0629J		0.00306J							

Table 2
Detected Groundwater Constituents - Metals and Volatile Organic Compounds
October 2011 Semi-Annual Sampling Event
North Wake C&D Landfill

		Metals								Volatile Organic Compounds		
Monitor Well	Sample Date	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Acetone	Chloroform	Toluene
NC 2L Standard		0.01	0.7	0.002	0.01	0.015	0.001	0.02	0.02	6,000	70	600
Solid Waste Section Limit		0.01	0.1	0.001	0.01	0.01	0.0002	0.01	0.01	100	5	1
CD-2	5-Jun-01											
CD-2	29-Nov-01		0.357									
CD-2	5-Apr-02											
CD-2	7-Nov-02											
CD-2	16-Apr-03											
CD-2	30-Oct-03											
CD-2	7-Apr-04											
CD-2	19-Nov-04				**0.015**	0.011						
CD-2	22-Apr-05					**0.018**						
CD-2	10-Nov-05											
CD-2	13-Apr-06											
CD-2	8-Nov-06					**0.016**						
CD-2	18-Apr-07		0.192									
CD-2	7-Nov-07		0.224			0.012						
CD-2	13-May-08		0.0451JB		0.0049J	0.00552J			0.00112J			
CD-2	3-Nov-08		0.0357J		0.00401J				0.00126JB			
CD-2	18-Mar-09		0.0418J		0.00116J				0.00124JB		0.00572	
CD-2	19-Oct-09		0.0637J		0.00716J				0.00333J		0.38J	
CD-2	7-May-10		0.137		0.00743J	0.00197J						
CD-2	28-Oct-10		0.0824J		0.00381J						0.98J	0.5J
CD-2	14-Mar-11		0.0569J		0.00174J			0.00274J			0.97J	
CD-2	20-Oct-11		0.0532J		0.00378J					5.9J	1.8J	
CD-3	5-Jun-01											
CD-3	29-Nov-01											
CD-3	5-Apr-02											
CD-3	7-Nov-02											
CD-3	16-Apr-03											
CD-3	30-Oct-03											
CD-3	7-Apr-04											
CD-3	19-Nov-04											
CD-3	22-Apr-05											
CD-3	10-Nov-05											
CD-3	13-Apr-06											
CD-3	8-Nov-06											
CD-3	18-Apr-07		0.109									
CD-3	7-Nov-07		0.269			**0.015**						
CD-3	13-May-08		0.0312JB		0.00197J							
CD-3	3-Nov-08		0.0265J		0.00124J	0.0041J			0.00119JB			
CD-3	18-Mar-09		0.0423J						0.00109JB			
CD-3	19-Oct-09		0.0461J					0.00351J			0.15J	
CD-3	7-May-10		0.122		0.00161J	0.00517J				11J		0.63J
CD-3	28-Oct-10		0.872J									
CD-3	14-Mar-11		0.0507J									
CD-3	20-Oct-11		0.0453J									

Notes:
Metal detections are in milligrams per liter (parts per million)
Volatile Organic Compound detections are in micrograms per liter (parts per billion)
- Concentration exceeds N.C. 2L Groundwater Standards
- Indicates result below detection limits
J - Indicates the analytical result is an estimated concentration between the Method Detection Limit (MDL) and the Solid Waste Section Reporting Limit (SWSL)
B - Indicates the analyte was detected in the associated method blank



CDM

Scale in Feet

118 0 236

Figure 1: Potentiometric Surface Map

October 2011 Semi-Annual Sampling Event
North Wake Lined and C&D Landfills
Raleigh, North Carolina

Appendix A

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

Monday, October 31, 2011

CDM (CD004)

Attn: Aaron Weispfenning

5400 GLENWOOD AVE SUITE 300

RALEIGH, NC 27612-

RE: Laboratory Results for
Project Number: [none], Project Name/Desc: N Wake C&D Landfill
ENCO Workorder: C112856

Dear Aaron Weispfenning,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, October 20, 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 31.

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 9209-MW1 **Lab ID: C112856-01** **Sampled: 10/20/11 13:10** **Received: 10/20/11 14:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/17/12	10/24/11 13:17	10/27/2011 13:43
EPA 7470A	11/17/11	10/21/11 09:36	10/21/2011 15:24
EPA 8260B	11/03/11	10/27/11 08:31	10/28/2011 02:20

Client ID: 9209-CD1 **Lab ID: C112856-02** **Sampled: 10/20/11 13:40** **Received: 10/20/11 14:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/17/12	10/24/11 13:17	10/27/2011 13:45
EPA 7470A	11/17/11	10/21/11 09:36	10/21/2011 15:27
EPA 8260B	11/03/11	10/27/11 08:31	10/28/2011 02:50

Client ID: 9209-CD2 **Lab ID: C112856-03** **Sampled: 10/20/11 13:30** **Received: 10/20/11 14:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/17/12	10/24/11 13:17	10/27/2011 14:04
EPA 7470A	11/17/11	10/21/11 09:36	10/21/2011 15:30
EPA 8260B	11/03/11	10/27/11 08:31	10/28/2011 03:20

Client ID: 9209-CD3 **Lab ID: C112856-04** **Sampled: 10/20/11 13:20** **Received: 10/20/11 14:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/17/12	10/24/11 13:17	10/27/2011 14:06
EPA 7470A	11/17/11	10/21/11 09:36	10/21/2011 15:33
EPA 8260B	11/03/11	10/27/11 08:31	10/28/2011 03:49

Client ID: 9209-EQBlank **Lab ID: C112856-05** **Sampled: 10/20/11 12:55** **Received: 10/20/11 14:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	04/17/12	10/24/11 13:17	10/27/2011 14:07
EPA 7470A	11/17/11	10/21/11 09:36	10/21/2011 15:37
EPA 8260B	11/03/11	10/27/11 08:31	10/28/2011 04:19

Client ID: 9209-TripBlank **Lab ID: C112856-06** **Sampled: 10/20/11 12:55** **Received: 10/20/11 14:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	11/03/11	10/27/11 08:31	10/28/2011 04:49

www.encolabs.com

NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 9209-MW1 **Lab ID: C112856-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	44.4	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Selenium - Total	6.19	J	1	2.70	10.0	10	ug/L	EPA 6010C	

Client ID: 9209-CD1 **Lab ID: C112856-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	62.9	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	3.06	J	1	1.00	10.0	10	ug/L	EPA 6010C	

Client ID: 9209-CD2 **Lab ID: C112856-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Acetone	5.9	J	1	1.2	5.0	100	ug/L	EPA 8260B	
Barium - Total	53.2	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chloroform	1.8	J	1	0.70	1.0	5	ug/L	EPA 8260B	
Chromium - Total	3.78	J	1	1.00	10.0	10	ug/L	EPA 6010C	

Client ID: 9209-CD3 **Lab ID: C112856-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	45.3	J	1	1.00	10.0	100	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 9209-MW1 **Lab Sample ID:** C112856-01 **Received:** 10/20/11 14:15

Matrix: Ground Water **Sampled:** 10/20/11 13:10 **Work Order:** C112856

Project: N Wake C&D Landfill **Sampled By:** Aaron Weispfenning

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	10/28/11 02:20	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.75	U	ug/L	1	0.75	1.0	3	EPA 8260B	10/28/11 02:20	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
1,1-Dichloroethane [75-34-3] ^	0.080	U	ug/L	1	0.080	1.0	5	EPA 8260B	10/28/11 02:20	jkg	
1,1-Dichloroethene [75-35-4] ^	0.60	U	ug/L	1	0.60	1.0	5	EPA 8260B	10/28/11 02:20	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/28/11 02:20	jkg	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.11	U	ug/L	1	0.11	1.0	5	EPA 8260B	10/28/11 02:20	jkg	
1,2-Dichloroethane [107-06-2] ^	0.47	U	ug/L	1	0.47	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
1,2-Dichloropropane [78-87-5] ^	0.59	U	ug/L	1	0.59	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.79	U	ug/L	1	0.79	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/28/11 02:20	jkg	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/28/11 02:20	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/28/11 02:20	jkg	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/28/11 02:20	jkg	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/28/11 02:20	jkg	
Benzene [71-43-2] ^	0.68	U	ug/L	1	0.68	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Bromochloromethane [74-97-5] ^	0.87	U	ug/L	1	0.87	1.0	3	EPA 8260B	10/28/11 02:20	jkg	
Bromodichloromethane [75-27-4] ^	0.75	U	ug/L	1	0.75	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Bromoform [75-25-2] ^	0.68	U	ug/L	1	0.68	1.0	3	EPA 8260B	10/28/11 02:20	jkg	
Bromomethane [74-83-9] ^	0.58	U	ug/L	1	0.58	1.0	10	EPA 8260B	10/28/11 02:20	jkg	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/28/11 02:20	jkg	
Carbon tetrachloride [56-23-5] ^	0.69	U	ug/L	1	0.69	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Chlorobenzene [108-90-7] ^	0.74	U	ug/L	1	0.74	1.0	3	EPA 8260B	10/28/11 02:20	jkg	
Chloroethane [75-00-3] ^	0.75	U	ug/L	1	0.75	1.0	10	EPA 8260B	10/28/11 02:20	jkg	
Chloroform [67-66-3] ^	0.70	U	ug/L	1	0.70	1.0	5	EPA 8260B	10/28/11 02:20	jkg	
Chloromethane [74-87-3] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.72	U	ug/L	1	0.72	1.0	5	EPA 8260B	10/28/11 02:20	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.075	U	ug/L	1	0.075	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Dibromochloromethane [124-48-1] ^	0.63	U	ug/L	1	0.63	1.0	3	EPA 8260B	10/28/11 02:20	jkg	
Dibromomethane [74-95-3] ^	0.90	U	ug/L	1	0.90	1.0	10	EPA 8260B	10/28/11 02:20	jkg	
Ethylbenzene [100-41-4] ^	0.62	U	ug/L	1	0.62	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/28/11 02:20	jkg	
Methylene chloride [75-09-2] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Styrene [100-42-5] ^	0.053	U	ug/L	1	0.053	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Tetrachloroethene [127-18-4] ^	0.73	U	ug/L	1	0.73	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/28/11 02:20	jkg	
Toluene [108-88-3] ^	0.85	U	ug/L	1	0.85	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.12	U	ug/L	1	0.12	1.0	5	EPA 8260B	10/28/11 02:20	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.50	U	ug/L	1	0.50	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/28/11 02:20	jkg	

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Description: 9209-MW1 | **Lab Sample ID:** C112856-01 | **Received:** 10/20/11 14:15

Matrix: Ground Water | **Sampled:** 10/20/11 13:10 | **Work Order:** C112856

Project: N Wake C&D Landfill | **Sampled By:** Aaron Weispfenning

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
Trichloroethene [79-01-6] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Trichlorofluoromethane [75-69-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/28/11 02:20	jkg	
Vinyl chloride [75-01-4] ^	0.60	U	ug/L	1	0.60	1.0	1	EPA 8260B	10/28/11 02:20	jkg	
Xylenes (Total) [1330-20-7] ^	2.1	U	ug/L	1	2.1	3.0	5	EPA 8260B	10/28/11 02:20	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*113 %*	*51-122*	*1J27006*	*EPA 8260B*	*10/28/11 02:20*	*jkg*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*68-117*	*1J27006*	*EPA 8260B*	*10/28/11 02:20*	*jkg*	
Toluene-d8	*58*	*1*	*50.0*	*115 %*	*67-127*	*1J27006*	*EPA 8260B*	*10/28/11 02:20*	*jkg*	

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Description: 9209-MW1
Matrix: Ground Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-01
Sampled: 10/20/11 13:10
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	10/21/11 15:24	NLH	

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Description: 9209-MW1 | **Lab Sample ID:** C112856-01 | **Received:** 10/20/11 14:15

Matrix: Ground Water | **Sampled:** 10/20/11 13:10 | **Work Order:** C112856

Project: N Wake C&D Landfill | **Sampled By:** Aaron Weispfenning

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	10/27/11 13:43	JDH	
Barium [7440-39-3] ^	**44.4**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/27/11 13:43	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/27/11 13:43	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	10/27/11 13:43	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 13:43	JDH	
Selenium [7782-49-2] ^	**6.19**	J	ug/L	1	2.70	10.0	10	EPA 6010C	10/27/11 13:43	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 13:43	JDH	

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

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Description: 9209-CD1 | **Lab Sample ID:** C112856-02 | **Received:** 10/20/11 14:15

Matrix: Ground Water | **Sampled:** 10/20/11 13:40 | **Work Order:** C112856

Project: N Wake C&D Landfill | **Sampled By:** Aaron Weispfenning

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	10/28/11 02:50	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.75	U	ug/L	1	0.75	1.0	3	EPA 8260B	10/28/11 02:50	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
1,1-Dichloroethane [75-34-3] ^	0.080	U	ug/L	1	0.080	1.0	5	EPA 8260B	10/28/11 02:50	jkg	
1,1-Dichloroethene [75-35-4] ^	0.60	U	ug/L	1	0.60	1.0	5	EPA 8260B	10/28/11 02:50	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/28/11 02:50	jkg	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.11	U	ug/L	1	0.11	1.0	5	EPA 8260B	10/28/11 02:50	jkg	
1,2-Dichloroethane [107-06-2] ^	0.47	U	ug/L	1	0.47	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
1,2-Dichloropropane [78-87-5] ^	0.59	U	ug/L	1	0.59	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.79	U	ug/L	1	0.79	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/28/11 02:50	jkg	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/28/11 02:50	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/28/11 02:50	jkg	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/28/11 02:50	jkg	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/28/11 02:50	jkg	
Benzene [71-43-2] ^	0.68	U	ug/L	1	0.68	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Bromochloromethane [74-97-5] ^	0.87	U	ug/L	1	0.87	1.0	3	EPA 8260B	10/28/11 02:50	jkg	
Bromodichloromethane [75-27-4] ^	0.75	U	ug/L	1	0.75	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Bromoform [75-25-2] ^	0.68	U	ug/L	1	0.68	1.0	3	EPA 8260B	10/28/11 02:50	jkg	
Bromomethane [74-83-9] ^	0.58	U	ug/L	1	0.58	1.0	10	EPA 8260B	10/28/11 02:50	jkg	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/28/11 02:50	jkg	
Carbon tetrachloride [56-23-5] ^	0.69	U	ug/L	1	0.69	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Chlorobenzene [108-90-7] ^	0.74	U	ug/L	1	0.74	1.0	3	EPA 8260B	10/28/11 02:50	jkg	
Chloroethane [75-00-3] ^	0.75	U	ug/L	1	0.75	1.0	10	EPA 8260B	10/28/11 02:50	jkg	
Chloroform [67-66-3] ^	0.70	U	ug/L	1	0.70	1.0	5	EPA 8260B	10/28/11 02:50	jkg	
Chloromethane [74-87-3] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.72	U	ug/L	1	0.72	1.0	5	EPA 8260B	10/28/11 02:50	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.075	U	ug/L	1	0.075	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Dibromochloromethane [124-48-1] ^	0.63	U	ug/L	1	0.63	1.0	3	EPA 8260B	10/28/11 02:50	jkg	
Dibromomethane [74-95-3] ^	0.90	U	ug/L	1	0.90	1.0	10	EPA 8260B	10/28/11 02:50	jkg	
Ethylbenzene [100-41-4] ^	0.62	U	ug/L	1	0.62	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/28/11 02:50	jkg	
Methylene chloride [75-09-2] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Styrene [100-42-5] ^	0.053	U	ug/L	1	0.053	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Tetrachloroethene [127-18-4] ^	0.73	U	ug/L	1	0.73	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/28/11 02:50	jkg	
Toluene [108-88-3] ^	0.85	U	ug/L	1	0.85	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.12	U	ug/L	1	0.12	1.0	5	EPA 8260B	10/28/11 02:50	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.50	U	ug/L	1	0.50	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/28/11 02:50	jkg	
Trichloroethene [79-01-6] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Trichlorofluoromethane [75-69-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/28/11 02:50	jkg	

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Description: 9209-CD1
Matrix: Ground Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-02
Sampled: 10/20/11 13:40
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

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
Vinyl chloride [75-01-4] ^	0.60	U	ug/L	1	0.60	1.0	1	EPA 8260B	10/28/11 02:50	jkg	
Xylenes (Total) [1330-20-7] ^	2.1	U	ug/L	1	2.1	3.0	5	EPA 8260B	10/28/11 02:50	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*57*	*1*	*50.0*	*114 %*	*51-122*	*1J27006*	*EPA 8260B*	*10/28/11 02:50*	*jkg*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*68-117*	*1J27006*	*EPA 8260B*	*10/28/11 02:50*	*jkg*	
Toluene-d8	*58*	*1*	*50.0*	*115 %*	*67-127*	*1J27006*	*EPA 8260B*	*10/28/11 02:50*	*jkg*	

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Description: 9209-CD1
Matrix: Ground Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-02
Sampled: 10/20/11 13:40
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	10/21/11 15:27	NLH	

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Description: 9209-CD1 | **Lab Sample ID:** C112856-02 | **Received:** 10/20/11 14:15

Matrix: Ground Water | **Sampled:** 10/20/11 13:40 | **Work Order:** C112856

Project: N Wake C&D Landfill | **Sampled By:** Aaron Weispfenning

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	10/27/11 13:45	JDH	
Barium [7440-39-3] ^	**62.9**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/27/11 13:45	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/27/11 13:45	JDH	
Chromium [7440-47-3] ^	**3.06**	J	ug/L	1	1.00	10.0	10	EPA 6010C	10/27/11 13:45	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 13:45	JDH	
Selenium [7782-49-2] ^	2.70	U	ug/L	1	2.70	10.0	10	EPA 6010C	10/27/11 13:45	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 13:45	JDH	

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

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Description: 9209-CD2 | **Lab Sample ID:** C112856-03 | **Received:** 10/20/11 14:15

Matrix: Ground Water | **Sampled:** 10/20/11 13:30 | **Work Order:** C112856

Project: N Wake C&D Landfill | **Sampled By:** Aaron Weispfenning

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	10/28/11 03:20	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.75	U	ug/L	1	0.75	1.0	3	EPA 8260B	10/28/11 03:20	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
1,1-Dichloroethane [75-34-3] ^	0.080	U	ug/L	1	0.080	1.0	5	EPA 8260B	10/28/11 03:20	jkg	
1,1-Dichloroethene [75-35-4] ^	0.60	U	ug/L	1	0.60	1.0	5	EPA 8260B	10/28/11 03:20	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/28/11 03:20	jkg	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.11	U	ug/L	1	0.11	1.0	5	EPA 8260B	10/28/11 03:20	jkg	
1,2-Dichloroethane [107-06-2] ^	0.47	U	ug/L	1	0.47	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
1,2-Dichloropropane [78-87-5] ^	0.59	U	ug/L	1	0.59	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.79	U	ug/L	1	0.79	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/28/11 03:20	jkg	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/28/11 03:20	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/28/11 03:20	jkg	
Acetone [67-64-1] ^	**5.9**	J	ug/L	1	1.2	5.0	100	EPA 8260B	10/28/11 03:20	jkg	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/28/11 03:20	jkg	
Benzene [71-43-2] ^	0.68	U	ug/L	1	0.68	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Bromochloromethane [74-97-5] ^	0.87	U	ug/L	1	0.87	1.0	3	EPA 8260B	10/28/11 03:20	jkg	
Bromodichloromethane [75-27-4] ^	0.75	U	ug/L	1	0.75	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Bromoform [75-25-2] ^	0.68	U	ug/L	1	0.68	1.0	3	EPA 8260B	10/28/11 03:20	jkg	
Bromomethane [74-83-9] ^	0.58	U	ug/L	1	0.58	1.0	10	EPA 8260B	10/28/11 03:20	jkg	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/28/11 03:20	jkg	
Carbon tetrachloride [56-23-5] ^	0.69	U	ug/L	1	0.69	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Chlorobenzene [108-90-7] ^	0.74	U	ug/L	1	0.74	1.0	3	EPA 8260B	10/28/11 03:20	jkg	
Chloroethane [75-00-3] ^	0.75	U	ug/L	1	0.75	1.0	10	EPA 8260B	10/28/11 03:20	jkg	
Chloroform [67-66-3] ^	**1.8**	J	ug/L	1	0.70	1.0	5	EPA 8260B	10/28/11 03:20	jkg	
Chloromethane [74-87-3] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.72	U	ug/L	1	0.72	1.0	5	EPA 8260B	10/28/11 03:20	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.075	U	ug/L	1	0.075	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Dibromochloromethane [124-48-1] ^	0.63	U	ug/L	1	0.63	1.0	3	EPA 8260B	10/28/11 03:20	jkg	
Dibromomethane [74-95-3] ^	0.90	U	ug/L	1	0.90	1.0	10	EPA 8260B	10/28/11 03:20	jkg	
Ethylbenzene [100-41-4] ^	0.62	U	ug/L	1	0.62	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/28/11 03:20	jkg	
Methylene chloride [75-09-2] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Styrene [100-42-5] ^	0.053	U	ug/L	1	0.053	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Tetrachloroethene [127-18-4] ^	0.73	U	ug/L	1	0.73	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/28/11 03:20	jkg	
Toluene [108-88-3] ^	0.85	U	ug/L	1	0.85	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.12	U	ug/L	1	0.12	1.0	5	EPA 8260B	10/28/11 03:20	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.50	U	ug/L	1	0.50	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/28/11 03:20	jkg	
Trichloroethene [79-01-6] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Trichlorofluoromethane [75-69-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/28/11 03:20	jkg	

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Description: 9209-CD2
Matrix: Ground Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-03
Sampled: 10/20/11 13:30
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

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
Vinyl chloride [75-01-4] ^	0.60	U	ug/L	1	0.60	1.0	1	EPA 8260B	10/28/11 03:20	jkg	
Xylenes (Total) [1330-20-7] ^	2.1	U	ug/L	1	2.1	3.0	5	EPA 8260B	10/28/11 03:20	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*113 %*	*51-122*	*1J27006*	*EPA 8260B*	*10/28/11 03:20*	*jkg*	
Dibromofluoromethane	*54*	*1*	*50.0*	*109 %*	*68-117*	*1J27006*	*EPA 8260B*	*10/28/11 03:20*	*jkg*	
Toluene-d8	*57*	*1*	*50.0*	*114 %*	*67-127*	*1J27006*	*EPA 8260B*	*10/28/11 03:20*	*jkg*	

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Description: 9209-CD2
Matrix: Ground Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-03
Sampled: 10/20/11 13:30
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	10/21/11 15:30	NLH	

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Description: 9209-CD2 | **Lab Sample ID:** C112856-03 | **Received:** 10/20/11 14:15

Matrix: Ground Water | **Sampled:** 10/20/11 13:30 | **Work Order:** C112856

Project: N Wake C&D Landfill | **Sampled By:** Aaron Weispfenning

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	10/27/11 14:04	JDH	
Barium [7440-39-3] ^	**53.2**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/27/11 14:04	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/27/11 14:04	JDH	
Chromium [7440-47-3] ^	**3.78**	J	ug/L	1	1.00	10.0	10	EPA 6010C	10/27/11 14:04	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 14:04	JDH	
Selenium [7782-49-2] ^	2.70	U	ug/L	1	2.70	10.0	10	EPA 6010C	10/27/11 14:04	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 14:04	JDH	

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

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Description: 9209-CD3 | **Lab Sample ID:** C112856-04 | **Received:** 10/20/11 14:15

Matrix: Ground Water | **Sampled:** 10/20/11 13:20 | **Work Order:** C112856

Project: N Wake C&D Landfill | **Sampled By:** Aaron Weispfenning

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	10/28/11 03:49	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.75	U	ug/L	1	0.75	1.0	3	EPA 8260B	10/28/11 03:49	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
1,1-Dichloroethane [75-34-3] ^	0.080	U	ug/L	1	0.080	1.0	5	EPA 8260B	10/28/11 03:49	jkg	
1,1-Dichloroethene [75-35-4] ^	0.60	U	ug/L	1	0.60	1.0	5	EPA 8260B	10/28/11 03:49	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/28/11 03:49	jkg	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.11	U	ug/L	1	0.11	1.0	5	EPA 8260B	10/28/11 03:49	jkg	
1,2-Dichloroethane [107-06-2] ^	0.47	U	ug/L	1	0.47	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
1,2-Dichloropropane [78-87-5] ^	0.59	U	ug/L	1	0.59	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.79	U	ug/L	1	0.79	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/28/11 03:49	jkg	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/28/11 03:49	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/28/11 03:49	jkg	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/28/11 03:49	jkg	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/28/11 03:49	jkg	
Benzene [71-43-2] ^	0.68	U	ug/L	1	0.68	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Bromochloromethane [74-97-5] ^	0.87	U	ug/L	1	0.87	1.0	3	EPA 8260B	10/28/11 03:49	jkg	
Bromodichloromethane [75-27-4] ^	0.75	U	ug/L	1	0.75	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Bromoform [75-25-2] ^	0.68	U	ug/L	1	0.68	1.0	3	EPA 8260B	10/28/11 03:49	jkg	
Bromomethane [74-83-9] ^	0.58	U	ug/L	1	0.58	1.0	10	EPA 8260B	10/28/11 03:49	jkg	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/28/11 03:49	jkg	
Carbon tetrachloride [56-23-5] ^	0.69	U	ug/L	1	0.69	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Chlorobenzene [108-90-7] ^	0.74	U	ug/L	1	0.74	1.0	3	EPA 8260B	10/28/11 03:49	jkg	
Chloroethane [75-00-3] ^	0.75	U	ug/L	1	0.75	1.0	10	EPA 8260B	10/28/11 03:49	jkg	
Chloroform [67-66-3] ^	0.70	U	ug/L	1	0.70	1.0	5	EPA 8260B	10/28/11 03:49	jkg	
Chloromethane [74-87-3] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.72	U	ug/L	1	0.72	1.0	5	EPA 8260B	10/28/11 03:49	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.075	U	ug/L	1	0.075	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Dibromochloromethane [124-48-1] ^	0.63	U	ug/L	1	0.63	1.0	3	EPA 8260B	10/28/11 03:49	jkg	
Dibromomethane [74-95-3] ^	0.90	U	ug/L	1	0.90	1.0	10	EPA 8260B	10/28/11 03:49	jkg	
Ethylbenzene [100-41-4] ^	0.62	U	ug/L	1	0.62	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/28/11 03:49	jkg	
Methylene chloride [75-09-2] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Styrene [100-42-5] ^	0.053	U	ug/L	1	0.053	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Tetrachloroethene [127-18-4] ^	0.73	U	ug/L	1	0.73	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/28/11 03:49	jkg	
Toluene [108-88-3] ^	0.85	U	ug/L	1	0.85	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.12	U	ug/L	1	0.12	1.0	5	EPA 8260B	10/28/11 03:49	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.50	U	ug/L	1	0.50	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/28/11 03:49	jkg	
Trichloroethene [79-01-6] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Trichlorofluoromethane [75-69-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/28/11 03:49	jkg	

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Description: 9209-CD3
Matrix: Ground Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-04
Sampled: 10/20/11 13:20
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

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
Vinyl chloride [75-01-4] ^	0.60	U	ug/L	1	0.60	1.0	1	EPA 8260B	10/28/11 03:49	jkg	
Xylenes (Total) [1330-20-7] ^	2.1	U	ug/L	1	2.1	3.0	5	EPA 8260B	10/28/11 03:49	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*112 %*	*51-122*	*1J27006*	*EPA 8260B*	*10/28/11 03:49*	*jkg*	
Dibromofluoromethane	*54*	*1*	*50.0*	*109 %*	*68-117*	*1J27006*	*EPA 8260B*	*10/28/11 03:49*	*jkg*	
Toluene-d8	*57*	*1*	*50.0*	*115 %*	*67-127*	*1J27006*	*EPA 8260B*	*10/28/11 03:49*	*jkg*	

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Description: 9209-CD3
Matrix: Ground Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-04
Sampled: 10/20/11 13:20
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	10/21/11 15:33	NLH	

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Description: 9209-CD3 | **Lab Sample ID:** C112856-04 | **Received:** 10/20/11 14:15

Matrix: Ground Water | **Sampled:** 10/20/11 13:20 | **Work Order:** C112856

Project: N Wake C&D Landfill | **Sampled By:** Aaron Weispfenning

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	10/27/11 14:06	JDH	
Barium [7440-39-3] ^	**45.3**	J	ug/L	1	1.00	10.0	100	EPA 6010C	10/27/11 14:06	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/27/11 14:06	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	10/27/11 14:06	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 14:06	JDH	
Selenium [7782-49-2] ^	2.70	U	ug/L	1	2.70	10.0	10	EPA 6010C	10/27/11 14:06	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 14:06	JDH	

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

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Description: 9209-EQBlank
Matrix: Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-05
Sampled: 10/20/11 12:55
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

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	10/28/11 04:19	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.75	U	ug/L	1	0.75	1.0	3	EPA 8260B	10/28/11 04:19	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
1,1-Dichloroethane [75-34-3] ^	0.080	U	ug/L	1	0.080	1.0	5	EPA 8260B	10/28/11 04:19	jkg	
1,1-Dichloroethene [75-35-4] ^	0.60	U	ug/L	1	0.60	1.0	5	EPA 8260B	10/28/11 04:19	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/28/11 04:19	jkg	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.11	U	ug/L	1	0.11	1.0	5	EPA 8260B	10/28/11 04:19	jkg	
1,2-Dichloroethane [107-06-2] ^	0.47	U	ug/L	1	0.47	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
1,2-Dichloropropane [78-87-5] ^	0.59	U	ug/L	1	0.59	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.79	U	ug/L	1	0.79	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/28/11 04:19	jkg	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/28/11 04:19	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/28/11 04:19	jkg	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/28/11 04:19	jkg	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/28/11 04:19	jkg	
Benzene [71-43-2] ^	0.68	U	ug/L	1	0.68	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Bromochloromethane [74-97-5] ^	0.87	U	ug/L	1	0.87	1.0	3	EPA 8260B	10/28/11 04:19	jkg	
Bromodichloromethane [75-27-4] ^	0.75	U	ug/L	1	0.75	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Bromoform [75-25-2] ^	0.68	U	ug/L	1	0.68	1.0	3	EPA 8260B	10/28/11 04:19	jkg	
Bromomethane [74-83-9] ^	0.58	U	ug/L	1	0.58	1.0	10	EPA 8260B	10/28/11 04:19	jkg	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/28/11 04:19	jkg	
Carbon tetrachloride [56-23-5] ^	0.69	U	ug/L	1	0.69	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Chlorobenzene [108-90-7] ^	0.74	U	ug/L	1	0.74	1.0	3	EPA 8260B	10/28/11 04:19	jkg	
Chloroethane [75-00-3] ^	0.75	U	ug/L	1	0.75	1.0	10	EPA 8260B	10/28/11 04:19	jkg	
Chloroform [67-66-3] ^	0.70	U	ug/L	1	0.70	1.0	5	EPA 8260B	10/28/11 04:19	jkg	
Chloromethane [74-87-3] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.72	U	ug/L	1	0.72	1.0	5	EPA 8260B	10/28/11 04:19	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.075	U	ug/L	1	0.075	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Dibromochloromethane [124-48-1] ^	0.63	U	ug/L	1	0.63	1.0	3	EPA 8260B	10/28/11 04:19	jkg	
Dibromomethane [74-95-3] ^	0.90	U	ug/L	1	0.90	1.0	10	EPA 8260B	10/28/11 04:19	jkg	
Ethylbenzene [100-41-4] ^	0.62	U	ug/L	1	0.62	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/28/11 04:19	jkg	
Methylene chloride [75-09-2] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Styrene [100-42-5] ^	0.053	U	ug/L	1	0.053	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Tetrachloroethene [127-18-4] ^	0.73	U	ug/L	1	0.73	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/28/11 04:19	jkg	
Toluene [108-88-3] ^	0.85	U	ug/L	1	0.85	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.12	U	ug/L	1	0.12	1.0	5	EPA 8260B	10/28/11 04:19	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.50	U	ug/L	1	0.50	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/28/11 04:19	jkg	
Trichloroethene [79-01-6] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Trichlorofluoromethane [75-69-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/28/11 04:19	jkg	

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Description: 9209-EQBlank
Matrix: Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-05
Sampled: 10/20/11 12:55
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

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
Vinyl chloride [75-01-4] ^	0.60	U	ug/L	1	0.60	1.0	1	EPA 8260B	10/28/11 04:19	jkg	
Xylenes (Total) [1330-20-7] ^	2.1	U	ug/L	1	2.1	3.0	5	EPA 8260B	10/28/11 04:19	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*57*	*1*	*50.0*	*113 %*	*51-122*	*1J27006*	*EPA 8260B*	*10/28/11 04:19*	*jkg*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*68-117*	*1J27006*	*EPA 8260B*	*10/28/11 04:19*	*jkg*	
Toluene-d8	*57*	*1*	*50.0*	*114 %*	*67-127*	*1J27006*	*EPA 8260B*	*10/28/11 04:19*	*jkg*	

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Description: 9209-EQBlank
Matrix: Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-05
Sampled: 10/20/11 12:55
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	10/21/11 15:37	NLH	

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Description: 9209-EQBlank
Matrix: Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-05
Sampled: 10/20/11 12:55
Sampled By: Aaron Weispfenning

Received: 10/20/11 14:15
Work Order: C112856

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	10/27/11 14:07	JDH	
Barium [7440-39-3] ^	1.00	U	ug/L	1	1.00	10.0	100	EPA 6010C	10/27/11 14:07	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	10/27/11 14:07	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	10/27/11 14:07	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 14:07	JDH	
Selenium [7782-49-2] ^	2.70	U	ug/L	1	2.70	10.0	10	EPA 6010C	10/27/11 14:07	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	10/27/11 14:07	JDH	

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

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Description: 9209-TripBlank
Matrix: Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-06
Sampled: 10/20/11 12:55
Sampled By: ENCO

Received: 10/20/11 14:15
Work Order: C112856

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	10/28/11 04:49	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.75	U	ug/L	1	0.75	1.0	3	EPA 8260B	10/28/11 04:49	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
1,1-Dichloroethane [75-34-3] ^	0.080	U	ug/L	1	0.080	1.0	5	EPA 8260B	10/28/11 04:49	jkg	
1,1-Dichloroethene [75-35-4] ^	0.60	U	ug/L	1	0.60	1.0	5	EPA 8260B	10/28/11 04:49	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	10/28/11 04:49	jkg	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.11	U	ug/L	1	0.11	1.0	5	EPA 8260B	10/28/11 04:49	jkg	
1,2-Dichloroethane [107-06-2] ^	0.47	U	ug/L	1	0.47	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
1,2-Dichloropropane [78-87-5] ^	0.59	U	ug/L	1	0.59	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.79	U	ug/L	1	0.79	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	10/28/11 04:49	jkg	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	10/28/11 04:49	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	10/28/11 04:49	jkg	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	10/28/11 04:49	jkg	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	10/28/11 04:49	jkg	
Benzene [71-43-2] ^	0.68	U	ug/L	1	0.68	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Bromochloromethane [74-97-5] ^	0.87	U	ug/L	1	0.87	1.0	3	EPA 8260B	10/28/11 04:49	jkg	
Bromodichloromethane [75-27-4] ^	0.75	U	ug/L	1	0.75	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Bromoform [75-25-2] ^	0.68	U	ug/L	1	0.68	1.0	3	EPA 8260B	10/28/11 04:49	jkg	
Bromomethane [74-83-9] ^	0.58	U	ug/L	1	0.58	1.0	10	EPA 8260B	10/28/11 04:49	jkg	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	10/28/11 04:49	jkg	
Carbon tetrachloride [56-23-5] ^	0.69	U	ug/L	1	0.69	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Chlorobenzene [108-90-7] ^	0.74	U	ug/L	1	0.74	1.0	3	EPA 8260B	10/28/11 04:49	jkg	
Chloroethane [75-00-3] ^	0.75	U	ug/L	1	0.75	1.0	10	EPA 8260B	10/28/11 04:49	jkg	
Chloroform [67-66-3] ^	0.70	U	ug/L	1	0.70	1.0	5	EPA 8260B	10/28/11 04:49	jkg	
Chloromethane [74-87-3] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.72	U	ug/L	1	0.72	1.0	5	EPA 8260B	10/28/11 04:49	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.075	U	ug/L	1	0.075	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Dibromochloromethane [124-48-1] ^	0.63	U	ug/L	1	0.63	1.0	3	EPA 8260B	10/28/11 04:49	jkg	
Dibromomethane [74-95-3] ^	0.90	U	ug/L	1	0.90	1.0	10	EPA 8260B	10/28/11 04:49	jkg	
Ethylbenzene [100-41-4] ^	0.62	U	ug/L	1	0.62	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	10/28/11 04:49	jkg	
Methylene chloride [75-09-2] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Styrene [100-42-5] ^	0.053	U	ug/L	1	0.053	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Tetrachloroethene [127-18-4] ^	0.73	U	ug/L	1	0.73	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Tetrahydrofuran [109-99-9] ^	0.80	U	ug/L	1	0.80	1.0	NE	EPA 8260B	10/28/11 04:49	jkg	
Toluene [108-88-3] ^	0.85	U	ug/L	1	0.85	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.12	U	ug/L	1	0.12	1.0	5	EPA 8260B	10/28/11 04:49	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.50	U	ug/L	1	0.50	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	10/28/11 04:49	jkg	
Trichloroethene [79-01-6] ^	0.72	U	ug/L	1	0.72	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Trichlorofluoromethane [75-69-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	10/28/11 04:49	jkg	

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Description: 9209-TripBlank
Matrix: Water
Project: N Wake C&D Landfill

Lab Sample ID: C112856-06
Sampled: 10/20/11 12:55
Sampled By: ENCO

Received: 10/20/11 14:15
Work Order: C112856

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
Vinyl chloride [75-01-4] ^	0.60	U	ug/L	1	0.60	1.0	1	EPA 8260B	10/28/11 04:49	jkg	
Xylenes (Total) [1330-20-7] ^	2.1	U	ug/L	1	2.1	3.0	5	EPA 8260B	10/28/11 04:49	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*111 %*	*51-122*	*1J27006*	*EPA 8260B*	*10/28/11 04:49*	*jkg*	
Dibromofluoromethane	*54*	*1*	*50.0*	*109 %*	*68-117*	*1J27006*	*EPA 8260B*	*10/28/11 04:49*	*jkg*	
Toluene-d8	*57*	*1*	*50.0*	*114 %*	*67-127*	*1J27006*	*EPA 8260B*	*10/28/11 04:49*	*jkg*	

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

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J27006 - EPA 5030B_MS

Blank (1J27006-BLK1) Prepared: 10/27/2011 08:31 Analyzed: 10/27/2011 19:26

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							
Tetrahydrofuran	0.80	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							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1J27006 - EPA 5030B_MS

Blank (1J27006-BLK1) Continued Prepared: 10/27/2011 08:31 Analyzed: 10/27/2011 19:26

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*57*			*ug/L*	*50.0*		*114*	*51-122*			
Surrogate: Dibromofluoromethane	*55*			*ug/L*	*50.0*		*110*	*68-117*			
Surrogate: Toluene-d8	*58*			*ug/L*	*50.0*		*117*	*67-127*			

LCS (1J27006-BS1) Prepared: 10/27/2011 08:31 Analyzed: 10/27/2011 19:55

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		98	75-133			
Benzene	19		1.0	ug/L	20.0		95	81-134			
Chlorobenzene	19		1.0	ug/L	20.0		93	83-117			
Toluene	18		1.0	ug/L	20.0		91	71-118			
Trichloroethene	19		1.0	ug/L	20.0		93	75-115			
Surrogate: 4-Bromofluorobenzene	*58*			*ug/L*	*50.0*		*116*	*51-122*			
Surrogate: Dibromofluoromethane	*55*			*ug/L*	*50.0*		*110*	*68-117*			
Surrogate: Toluene-d8	*58*			*ug/L*	*50.0*		*115*	*67-127*			

Matrix Spike (1J27006-MS1) Prepared: 10/27/2011 08:31 Analyzed: 10/27/2011 20:25

Source: C113273-05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	22		1.0	ug/L	20.0	0.60 U	111	75-133			
Benzene	21		1.0	ug/L	20.0	0.68 U	105	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.74 U	104	83-117			
Toluene	20		1.0	ug/L	20.0	0.85 U	102	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.72 U	106	75-115			
Surrogate: 4-Bromofluorobenzene	*58*			*ug/L*	*50.0*		*117*	*51-122*			
Surrogate: Dibromofluoromethane	*54*			*ug/L*	*50.0*		*108*	*68-117*			
Surrogate: Toluene-d8	*57*			*ug/L*	*50.0*		*114*	*67-127*			

Matrix Spike Dup (1J27006-MSD1) Prepared: 10/27/2011 08:31 Analyzed: 10/27/2011 20:55

Source: C113273-05

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	10	20	
Benzene	19		1.0	ug/L	20.0	0.68 U	97	81-134	8	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.74 U	95	83-117	9	16	
Toluene	19		1.0	ug/L	20.0	0.85 U	95	71-118	7	17	
Trichloroethene	20		1.0	ug/L	20.0	0.72 U	100	75-115	6	18	
Surrogate: 4-Bromofluorobenzene	*57*			*ug/L*	*50.0*		*114*	*51-122*			
Surrogate: Dibromofluoromethane	*55*			*ug/L*	*50.0*		*110*	*68-117*			
Surrogate: Toluene-d8	*57*			*ug/L*	*50.0*		*115*	*67-127*			

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 1J21009 - EPA 245.1

Blank (1J21009-BLK1) Prepared: 10/21/2011 09:36 Analyzed: 10/21/2011 14:21

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 1J21009 - EPA 245.1

Blank (1J21009-BLK1) Continued Prepared: 10/21/2011 09:36 Analyzed: 10/21/2011 14:21

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.170	U	0.200	ug/L							

LCS (1J21009-BS1) Prepared: 10/21/2011 09:36 Analyzed: 10/21/2011 14:24

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.80		0.200	ug/L	5.00		96	85-115			

Matrix Spike (1J21009-MS1) Prepared: 10/21/2011 09:36 Analyzed: 10/21/2011 14:29

Source: C112369-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	10.0	E	0.200	ug/L	5.00	6.18	77	85-115			QM-16

Matrix Spike Dup (1J21009-MSD1) Prepared: 10/21/2011 09:36 Analyzed: 10/21/2011 14:32

Source: C112369-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	9.82		0.200	ug/L	5.00	6.18	73	85-115	2	15	QM-07

Post Spike (1J21009-PS1) Prepared: 10/21/2011 09:36 Analyzed: 10/21/2011 14:35

Source: C112369-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	9.06		0.200	ug/L	5.00	6.18	58	75-125			QM-08

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

Batch 1J24031 - EPA 3005A

Blank (1J24031-BLK1) Prepared: 10/24/2011 13:17 Analyzed: 10/27/2011 13:00

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.00	U	10.0	ug/L							
Lead	1.90	U	10.0	ug/L							
Selenium	2.70	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							

LCS (1J24031-BS1) Prepared: 10/24/2011 13:17 Analyzed: 10/27/2011 13:03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	213		10.0	ug/L	200		107	80-120			
Barium	207		10.0	ug/L	200		103	80-120			
Cadmium	20.8		1.00	ug/L	20.0		104	80-120			
Chromium	199		10.0	ug/L	200		100	80-120			

QUALITY CONTROL

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

Batch 1J24031 - EPA 3005A

LCS (1J24031-BS1) Continued Prepared: 10/24/2011 13:17 Analyzed: 10/27/2011 13:03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Lead	211		10.0	ug/L	200		106	80-120			
Selenium	212		10.0	ug/L	200		106	80-120			
Silver	202		10.0	ug/L	200		101	80-120			

Matrix Spike (1J24031-MS1) Prepared: 10/24/2011 13:17 Analyzed: 10/27/2011 13:13

Source: C112676-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	217		10.0	ug/L	200	2.97	107	75-125			
Barium	224		10.0	ug/L	200	18.3	103	75-125			
Cadmium	20.7		1.00	ug/L	20.0	0.360 U	103	75-125			
Chromium	201		10.0	ug/L	200	1.00 U	100	75-125			
Lead	213		10.0	ug/L	200	1.90 U	106	75-125			
Selenium	213		10.0	ug/L	200	4.51	104	75-125			
Silver	201		10.0	ug/L	200	1.90 U	100	75-125			

Matrix Spike Dup (1J24031-MSD1) Prepared: 10/24/2011 13:17 Analyzed: 10/27/2011 13:15

Source: C112676-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	214		10.0	ug/L	200	2.97	105	75-125	2	20	
Barium	223		10.0	ug/L	200	18.3	102	75-125	0.7	20	
Cadmium	20.6		1.00	ug/L	20.0	0.360 U	103	75-125	0.3	20	
Chromium	199		10.0	ug/L	200	1.00 U	99	75-125	1	20	
Lead	210		10.0	ug/L	200	1.90 U	105	75-125	1	20	
Selenium	215		10.0	ug/L	200	4.51	105	75-125	1	20	
Silver	199		10.0	ug/L	200	1.90 U	100	75-125	0.8	20	

Post Spike (1J24031-PS1) Prepared: 10/24/2011 13:17 Analyzed: 10/27/2011 13:17

Source: C112676-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.214		0.0100	mg/L	0.200	0.00297	106	80-120			
Barium	0.225		0.0100	mg/L	0.200	0.0183	103	80-120			
Cadmium	0.0209		0.00100	mg/L	0.0200	-2.30E-5	105	80-120			
Chromium	0.201		0.0100	mg/L	0.200	0.000725	100	80-120			
Lead	0.212		0.0100	mg/L	0.200	-0.000267	106	80-120			
Selenium	0.212		0.0100	mg/L	0.200	0.00451	104	80-120			
Silver	0.202		0.0100	mg/L	0.200	-0.000323	101	80-120			

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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-08	Post-digestion spike did not meet method requirements due to confirmed matrix effects (dilution test).
QM-16	Matrix spike recovery could not be calculated due to high concentrations of analyte in source sample.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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Cary, NC 27511
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Page 1 of 1

Client Name: CDM (CD004)	Project Number: [none]
Address: 5400 GLENWOOD AVE SUITE 300	Project Name/Desc: N Wake C&D Landfill
City/ST/Zip: RALEIGH, NC 27612-	PO # / Billing Info
Tel: 325-3500 Fax: () -	Reporting Contact: Aaron Weispfenning
Sampler(s) Name, Affiliation (Print): Aaron Weispfenning CDM	Billing Contact: Anarosa Jones
Sampler(s) Signature: [signature]	Site Location / Time Zone

Requested Analyses: 8260B Appendix 1, 8260B Extended; Ag,As,Ba,Cd,Cr,Pb,Se; Hg

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

X Standard

___ Expedited

Due ___/___/___

Lab Workorder: C112856

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1, 8260B Extended	Ag,As,Ba,Cd,Cr,Pb,Se	Hg								Sample Comments
	9209-MW1	10/20/11	1310	G	GW	4	X	X	X								-report results according
	9209-CD1	10/20/11	1340	G	GW	4	X	X	X								to SWS guidelines
	9209-CD2	10/20/11	1330	G	GW	4	X	X	X								-report "J" values
	9209-CD3	10/20/11	1320	G	GW	4	X	X	X								-provide edd
	9209-EQBlank	10/20/11	1055	G	WA	4	X	X	X								
	9209-TripBlank	—	—	—	WA	2	X										

<-- Total # of Containers

Sample Kit Prepared By: [signature]	Date/Time: 10/17/11	Relinquished By: [signature]	Date/Time: 10/20/11 1415	Received By: [signature]	Date/Time: 10/20/11 1415
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: C-17 1.8°C		Condition Upon Receipt: X 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

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