DURHAM
1869
CITY OF MEDICINE

CITY OF DURHAM
DEPARTMENT OF WATER MANAGEMENT
101 CITY HALL PLAZA • DURHAM, NC 27701
919-560-4381 • FAX 919-560-4479
www.durhamnc.gov

Administration
919-560-4381
Customer Billing Services
919-560-4412
Laboratory Services
919-560-4386
Plant Maintenance
919-560-4388
Regulatory Compliance
919-560-4381
Utility Engineering
919-560-4381
Wastewater Treatment
North - 919- 560-4384
South - 919-560-4386
Water Supply & Treatment
Williams - 919-560-4348
Brown - 919-560-4362
Water & Sewer Maintenance
919-560-4344

Date: October 3, 2012

Ervin Lane
Compliance Hydrogeologist
NC Department of Environment and Natural Resources
Division of Waste Management - Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

Re: LF Condensate Spill at the City of Durham Closed MSW Sanitary Landfill

Dear Sir,

The attached report summarizes soil sampling performed after a spill of landfill gas condensate from the City of Durham's gas collection system. The spill occurred beyond the landfill compliance boundary, triggering this sampling. Refer to my letter, dated April 13, 2012 for details related to the spill.

The attached figure shows the location of the final installation of the new force main and the highlights the existing line draining to the adjacent Water Reclamation Facility. The new line has been in service for 60 days with no incidents and all flow is reaching the Water Reclamation Facility.

Golder Associates performed all the sampling requested by the Division of Waste Management. Please refer to the attached report for their professional opinion as to the resolution of the issue. Because Golder found that all samples were below the Protection of Groundwater Soil Remediation Goals (PSRGs) or at background levels the City requests that the Division of Waste Management issue a notice of No Further Action.

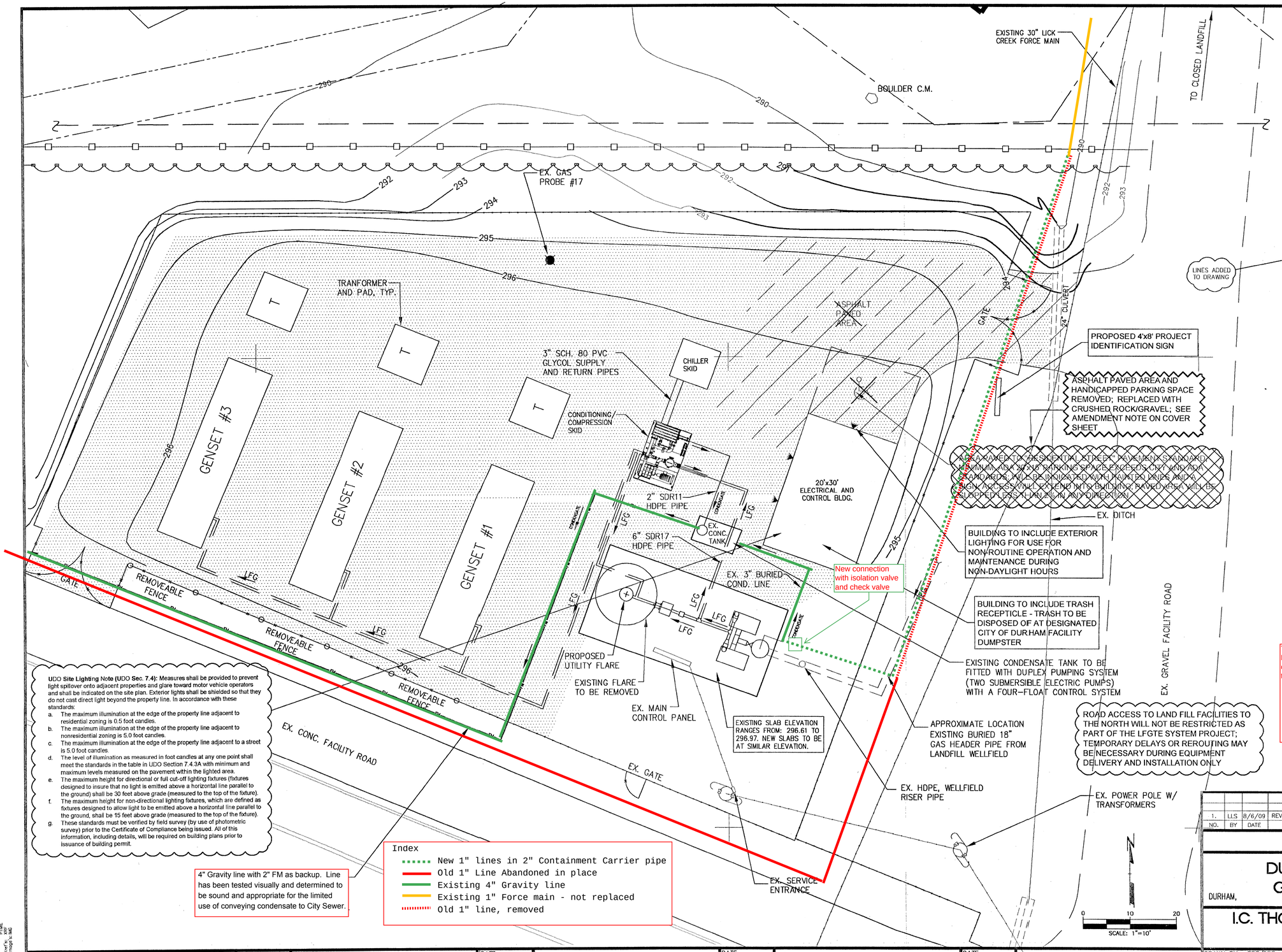
Thank you for your work and continued assistance in maintaining our compliance with our closure activities.

Sincerely,

Simon Lobdell, PE
City of Durham, Department of Water Management.

cc: Reginald Hicks, Compliance Manager, Department of Water Management
Jerry Morrone, PE - CE V, Utility Engineering, Department of Water Management
Robert Gasper, PE - CE IV, Department of Water Management
Don F. Greeley, PE, PLS, Director, Department of Water Management,

Figures



UDO **Site Lighting Note (UDO Sec. 7.4):** Measures shall be provided to prevent light spillover onto adjacent properties and glare toward motor vehicle operators and shall be indicated on the site plan. Exterior lights shall be shielded so that they do not cast direct light beyond the property line. In accordance with these standards:

a. The maximum illumination at the edge of the property line adjacent to residential zoning is 0.5 foot candles.
b. The maximum illumination at the edge of the property line adjacent to nonresidential zoning is 5.0 foot candles.
c. The maximum illumination at the edge of the property line adjacent to a street is 5.0 foot candles.
d. The level of illumination as measured in foot candles at any one point shall meet the standards in the table in UDO Section 7.4.3A with minimum and maximum levels measured on the pavement within the lighted area.
e. The maximum height for directional or full cut-off lighting fixtures (fixtures designed to insure that no light is emitted above a horizontal line parallel to the ground) shall be 30 feet above grade (measured to the top of the fixture).
f. The maximum height for non-directional lighting fixtures, which are defined as fixtures designed to allow light to be emitted above a horizontal line parallel to the ground, shall be 15 feet above grade (measured to the top of the fixture).
g. These standards must be verified by field survey (by use of photometric survey) prior to the Certificate of Compliance being issued. All of this information, including details, will be required on building plans prior to issuance of building permit.

4" Gravity line with 2" FM as backup. Line has been tested visually and determined to be sound and appropriate for the limited use of conveying condensate to City Sewer.

Index
- New 1" lines in 2" Containment Carrier pipe
- Old 1" Line Abandoned in place
- Existing 4" Gravity line
- Existing 1" Force main - not replaced
- Old 1" line, removed

LEGEND

- EXISTING LIGHT POLE OR UTILITY POLE
- EXISTING FENCE LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING DITCH
- EXISTING SANITARY SEWER LINE
- EXISTING SANITARY FORCEMAIN
- PROPOSED GRAVEL AREAS
- 295 PROPOSED GROUND CONTOUR
- PROPOSED FORCEMAIN PIPES
- PROPOSED TRAVEL WAY
- PROPERTY LINE
- WETLAND DELINEATION
- 25' BUFFER TO WETLAND DELINEATION LINE
- 100' STREAM BUFFER LINE
- 10' SETBACK TO 100' STREAM BUFFER
- PROPOSED TREE PROTECTION FENCE
- PROPOSED SILT FENCE

NOTES

1. EX. = EXISTING
2. LFG = LANDFILL GAS
3. BASE MAP TOPOGRAPHIC AND EXISTING CONDITIONS SURVEY BY MUNICIPAL ENGINEERING SERVICES COMPANY, GARNER, NORTH CAROLINA, SEPTEMBER 23, 2008.
4. CITY OF DURHAM PROVIDED LOCATIONS OF EXISTING BURIED SANITARY SEWER AND SANITARY FORCEMAIN.
5. LOCATION OF UNDERGROUND ELECTRICAL LINES IS APPROXIMATE AND OTHER LINES MAY EXIST. THEREFORE, LOCATING OF ACTUAL LINES IS NECESSARY PRIOR TO WORK.
6. REFERENCES: PARCEL ID. NO. (PIN) 0842-01-18-1935; TAX MAP NO. 0842.

PROJECT LOCATION IDENTIFICATION

PIN: 0842-01-18-1935
TAX MAP NO. 0842
1900 E. CLUB BLVD.
DURHAM, NC 27704

OWNER: CITY OF DURHAM
WATER DEPARTMENT
MS. NANCY NEWELL
919-560-4381

PROJECT DEVELOPER:
MP DURHAM LLC
MR. LEON LEBLANC
207-604-6964

CERTIFICATION

THIS DRAWING WAS PREPARED BY RMT NORTH CAROLINA, INC.
THE PROFESSIONAL ENGINEER SEALING THIS DRAWING IS:
R. KENT NILSSON, P.E.
RMT NORTH CAROLINA, INC.
30 PATEWOOD DRIVE
SUITE 100
GREENVILLE, SC 29615-3535
(864)281-0030 PHONE
(864)281-0288 FAX
KENT.NILSSON@RMTINC.COM

This drawing is not sealed by a Professional Engineer. This is a conceptual sketch of the repairs made in the field.

ISSUED FOR CONSTRUCTION

NO.	BY	DATE	REVISION	APP'D.
1.	LLS	8/6/09	REVISIONS TO PAVED PARKING	DRF

PIPING SYSTEM PLAN

DURHAM LANDFILL GAS GENERATING FACILITY

DURHAM, NORTH CAROLINA

I.C. THOMASSON ASSOCIATES INC.
CONSULTING ENGINEERS
NASHVILLE, TENNESSEE

DATE:	E	DATE:	D	DATE:	C	DATE:	B	DATE: LJS	A DUKE_COMMENTS	DRAWN BY: EPF/DRF	ICT JOB No. 208184.90	SHEET No.
BY:		BY:		BY:		BY:				RMT FILE NO. 80290105.DWG	DATE: JUNE 8, 2009	3 OF 5

SLDT DATA
Drawing Name: PIPING
Date/Time: 8/6/09
Scale: SCL
Sheet Size: PTLWT
Plot Date: PTLWT
Plot Time: PTLWT
Attached Xref's: NRF
Attached Image's: NRF

SHT 5 OF 9

Appendix 1 - Golder Report

July 30, 2012 0739-6604212.600

Mr. Simon Lobdell, P.E.
City of Durham
Water Management Department
1600 Mist Lake Drive
Durham, North Carolina 27704

RE: LANDFILL GAS CONDENSATE SOIL SAMPLING SUMMARY
CITY OF DURHAM LANDFILL, PERMIT NO. 32-01
DURHAM, NORTH CAROLINA

Dear Simon:

As requested, Golder Associates NC, Inc. is submitting this summary of soil sampling results for the above referenced facility. Samples were collected at the request of the North Carolina Department of Environment and Natural Resources (DENR) following a landfill gas condensate release on March 2, 2012, at the closed City of Durham Landfill.

A Golder field representative collected four soil samples in and around the release area on April 20, 2012. The locations of the soil samples are shown on the attached drawing. Soil Sample 1 (S-1) was collected upgradient of the release area and outside the drainage swale to obtain background concentrations of inorganic compounds. Soil Sample 2 (S-2) was collected from the site of the release. Soil Samples 3 and 4 (S-3 and S-4) were collected downgradient of the release.

The soil samples were collected using a decontaminated hand-auger. Each sample was collected at an interval between 1 and 2 feet below ground surface. The samples were shipped to Environmental Conservation Laboratories (ENCO) of Cary, North Carolina. Sample S-1 was analyzed for NC Appendix I inorganic compounds and samples S-2, S-3, and S-4 were analyzed for NC Appendix I volatile organic compounds (VOCs) and inorganic compounds per instructions from Ervin Lane of the DENR. The analytical results for the soil samples are summarized on Table 1 and laboratory certificates-of-analysis are included as attachments to this report.

Upon review of the March 20, 2012, soil sampling analytical results, four NC Appendix I VOCs (acetone, 2-butanone, toluene, and total xylenes) were detected in sample S-2 at concentrations below their respective DENR, Inactive Hazardous Sites Branch, Protection of Groundwater Soil Remediation Goals (PSRG[2]). Tetrachloroethene was detected in downgradient samples S-3 and S-4 at concentrations below the PSRG[2].

Three NC Appendix I inorganic compounds were detected in soil samples that exceeded their respective PSRG[2]. Antimony was detected in background sample S-1 and samples S-2 and S-4 and cobalt and vanadium were detected in background sample S-1 and samples S-2, S-3, and S-4 above their respective PSRG[2]. Because concentrations of antimony, cobalt, and vanadium are similar in the background sample S-1 and the samples in the release area, the concentrations are interpreted to be representative of background conditions.

A copy of these results should be forwarded to NC DENR. If you have any questions, please contact the undersigned at 336-852-4903.

Golder Associates NC, Inc.
5B Oak Branch Drive
Greensboro, NC. 27407 USA
Tel: (336) 852-4903 Fax: (336) 852-4904 www.golder.com

Golder Associates: Operations in Africa, Asia, Australasia, Europe, North America and South America

Sincerely,
GOLDER ASSOCIATES NC, INC.

David "Dusty" Y. Reedy II, P.G.
Senior Project Hydrogeologist

Rachel P. Kirkman, P.G.
Associate and Senior Geologist

Attachments: Table 1: Summary of Soil Sampling Results
Drawing 1: Soil Sample Location Map
Laboratory Certificates-of-Analysis

C: Chris Marriott, Waste Disposal Manager, City of Durham, 1833 Camden Avenue, Durham, NC 32253. 919-560-4186. Chris.Marriott@durhamnc.gov

g:\projects\city of durham\2012 soil sampling\2012.07.27.final_revised_durham-soil_sampling_summary.docx

TABLE 1

Summary of Soil Sampling Results
City of Durham Landfill, Permit No. 32-01
Durham, North Carolina

PARAMETER	Date	Units	PSRG[2]	Background S-1	S-2	S-3	S-4	Blanks	
Antimony	04/20/12	mg/kg dry	0.9	1.70	2.39	ND	1.88	0.136	J
Arsenic	04/20/12	mg/kg dry	5.8	3.95	4.86	4.00	2.83	0.243	J
Barium	04/20/12	mg/kg dry	580	106	73.7	53.4	78.6	ND	
Beryllium	04/20/12	mg/kg dry	63	0.628	0.272	0.473	0.535	ND	
Cadmium	04/20/12	mg/kg dry	3.0	ND	0.229	ND	ND	ND	
Chromium	04/20/12	mg/kg dry	NA	17.3	18.4	8.00	12.1	ND	
Cobalt	04/20/12	mg/kg dry	0.9	11.5	11.8	6.23	11.7	ND	
Copper	04/20/12	mg/kg dry	700	10.0	46.0	7.57	14.3	ND	
Lead	04/20/12	mg/kg dry	270	14.4	42.1	23.1	15.5	ND	
Nickel	04/20/12	mg/kg dry	1300*	10.3	30.5	7.23	13.3	ND	
Vanadium	04/20/12	mg/kg dry	6.0	32.5	32.9	14.8	20.8	ND	
Zinc	04/20/12	mg/kg dry	1200	29.7	150	23.6	36.6	ND	
Acetone	04/20/12	mg/kg dry	240	--	2.1	ND	ND	ND	
2-Butanone	04/20/12	mg/kg dry	16	--	1.8	ND	ND	ND	
Tetrachloroethene	04/20/12	mg/kg dry	0.0050	--	ND	0.002	0.002	ND	
Toluene	04/20/12	mg/kg dry	5.5	--	0.061	ND	ND	ND	
Total Xylenes	04/20/12	mg/kg dry	5.8	--	0.062	ND	ND	ND	

Notes:

PSRG[2] = Protection of Groundwater Soil Remediation Goals (North Carolina Department of Environment and Natural Resources, Inactive Hazardous Sites Branch, Preliminary Soil Remediation Goals (PSRG) Table, February 2012)
mg/kg = milligrams per kilogram
ND - not detected above MDL
J = estimated concentration below the MQL
Blanks = trip and method blanks
NA = not available
Shaded concentrations exceed the PSRG[2].
Soil sample S-1 was collected outside the spill area as a background sample and was analyzed form NC Appendix I metals only.
PSRG[2] for total chromium is not available. PSRG[2] for chromium (III) is 360,000 mg/kg. PSRG[2] for chromium (VI) is 3.8 mg/kg.
* = PSRG[2] for nickel is for the soluble salts form

LEGEND

▬ ▬ ▬	LIMITS OF WASTE
○ S-1	SOIL SAMPLE LOCATIONS
⬡ MW-4R	MONITORING WELL LOCATION
▬ ▬ ▬	APPROXIMATE LIMITS OF DRAINAGE SWALE

50 0 50
SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
△	–	–	–	–		

PROJECT
CITY OF DURHAM
CLOSED LANDFILL

TITLE
SOIL SAMPLE LOCATION MAP

Golder Associates
GREENSBORO NC

PROJECT No.	073–9604212		FILE No. SOIL SAMPLE LOCATION MAP	
DESIGN	DYR	4/23/12	SCALE AS SHOWN	REV. –
CADD	LKB	4/23/12	DWG 1	
CHECK				
REVIEW				

X:\Projects\City Of Durham\073-96042\SOIL SAMPLE LOCATION MAP.dwg 7/30/2012 11:50 AM

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

Friday, May 4, 2012

Golder Associates, Inc. (GO007)

Attn: Dusty Reedy

5B Oak Branch Drive

Greensboro, NC 27407

RE: Laboratory Results for
Project Number: 073-9604212.600, Project Name/Desc: City of Durham
ENCO Workorder(s): C204495

Dear Dusty Reedy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, April 20, 2012.

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

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

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

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

Sincerely,

Stephanie Franz

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 27.

PROJECT NARRATIVE

Date: 04 May 2012
Client: Golder Associates, Inc. (GO007)
Project: City of Durham
Lab ID: C204495

Overview

Environmental Conservation Laboratories, Inc. (ENCO) analyzed all submitted samples in accordance with the methods referenced in the laboratory report. Any particular difficulties encountered during sample handling by ENCO are discussed in the QC Remarks section below.

Quality Control Samples

Antimony and Arsenic were detected in the 6010C Method Blank at low-level concentrations (less than half of the MRL). Detections of these analytes should be considered to have a possible high bias if the concentration in the associated sample is not greater than ten times that of the detection in the Method Blank. The spike recoveries of Antimony, Beryllium, Cadmium, Chromium, Copper, Nickel, Thallium, and Vanadium were outside of control limits for the MS, MSD, and/or Post Spike samples. The batch was approved based on acceptable LSC recovery of these analytes.

Quality Control Remarks

The samples associated with this work order were analyzed at a dilution for the Appendix I Metals due to matrix interference, resulting in elevated reporting limits.

Other Comments

All samples received under this work order arrived in acceptable conditions. The samples were not checked for residual chlorine, as it is not required.

The analytical data presented in this report are consistent with the methods as referenced in the analytical report. Any exceptions or deviations are noted in the QC remarks section of this narrative or in the Flags/Notes and Definitions section of the report.

Released By:
Environmental Conservation Laboratories, Inc.

Stephanie Franz
Project Manager

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: Soil Sample 1 | **Lab ID: C204495-01RE1** | **Sampled: 04/20/12 10:42** | **Received: 04/20/12 12:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	10/17/12	04/23/12	11:31	4/25/2012 17:05

Client ID: Soil Sample 2 | **Lab ID: C204495-02RE1** | **Sampled: 04/20/12 11:40** | **Received: 04/20/12 12:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	10/17/12	04/23/12	11:31	4/25/2012 17:07
EPA 8260B	05/04/12	04/26/12	13:16	5/3/2012 14:15

Client ID: Soil Sample 3 | **Lab ID: C204495-03** | **Sampled: 04/20/12 11:20** | **Received: 04/20/12 12:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 8260B	05/04/12	04/25/12	11:15	4/26/2012 02:47

Client ID: Soil Sample 3 | **Lab ID: C204495-03RE1** | **Sampled: 04/20/12 11:20** | **Received: 04/20/12 12:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	10/17/12	04/23/12	11:31	4/25/2012 17:09

Client ID: Soil Sample 4 | **Lab ID: C204495-04** | **Sampled: 04/20/12 11:00** | **Received: 04/20/12 12:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 8260B	05/04/12	04/25/12	11:15	4/26/2012 03:16

Client ID: Soil Sample 4 | **Lab ID: C204495-04RE1** | **Sampled: 04/20/12 11:00** | **Received: 04/20/12 12:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	10/17/12	04/23/12	11:31	4/25/2012 17:11

Client ID: 3201-Trip Blank | **Lab ID: C204495-05** | **Sampled: 04/20/12 11:00** | **Received: 04/20/12 12:50**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 8260B	05/04/12	05/02/12	10:57	5/3/2012 09:09

www.encolabs.com

SAMPLE DETECTION SUMMARY

Client ID: Soil Sample 1 **Lab ID: C204495-01RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Antimony - Total	1.70	JBD	1.26	11.4	mg/kg dry	EPA 6010C	J-01, R-05
Arsenic - Total	3.95	JBD	1.14	5.71	mg/kg dry	EPA 6010C	J-01, R-05
Barium - Total	106	D	1.14	5.71	mg/kg dry	EPA 6010C	R-05
Beryllium - Total	0.628	D	0.137	0.571	mg/kg dry	EPA 6010C	R-05
Chromium - Total	17.3	D	1.14	5.71	mg/kg dry	EPA 6010C	R-05
Cobalt - Total	11.5	D	1.14	5.71	mg/kg dry	EPA 6010C	R-05
Copper - Total	10.0	D	2.17	5.71	mg/kg dry	EPA 6010C	R-05
Lead - Total	14.4	D	1.37	5.71	mg/kg dry	EPA 6010C	R-05
Nickel - Total	10.3	JD	4.11	28.5	mg/kg dry	EPA 6010C	R-05
Vanadium - Total	32.5	D	1.14	5.71	mg/kg dry	EPA 6010C	R-05
Zinc - Total	29.7	D	12.6	28.5	mg/kg dry	EPA 6010C	R-05

Client ID: Soil Sample 2 **Lab ID: C204495-02RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
2-Butanone	1.8	D	0.082	0.53	mg/kg dry	EPA 8260B	
Acetone	2.1	D	0.15	0.53	mg/kg dry	EPA 8260B	
Antimony - Total	2.39	JBD	1.40	12.7	mg/kg dry	EPA 6010C	J-01, R-05
Arsenic - Total	4.86	JBD	1.27	6.37	mg/kg dry	EPA 6010C	J-01, R-05
Barium - Total	73.7	D	1.27	6.37	mg/kg dry	EPA 6010C	R-05
Beryllium - Total	0.272	JD	0.153	0.637	mg/kg dry	EPA 6010C	R-05
Cadmium - Total	0.229	JD	0.122	0.637	mg/kg dry	EPA 6010C	R-05
Chromium - Total	18.4	D	1.27	6.37	mg/kg dry	EPA 6010C	R-05
Cobalt - Total	11.8	D	1.27	6.37	mg/kg dry	EPA 6010C	R-05
Copper - Total	46.0	D	2.42	6.37	mg/kg dry	EPA 6010C	R-05
Lead - Total	42.1	D	1.53	6.37	mg/kg dry	EPA 6010C	R-05
Nickel - Total	30.5	JD	4.59	31.9	mg/kg dry	EPA 6010C	R-05
Toluene	0.061	JD	0.025	0.11	mg/kg dry	EPA 8260B	
Vanadium - Total	32.9	D	1.27	6.37	mg/kg dry	EPA 6010C	R-05
Xylenes (Total)	0.062	JD	0.059	0.32	mg/kg dry	EPA 8260B	
Zinc - Total	150	D	14.0	31.9	mg/kg dry	EPA 6010C	R-05

Client ID: Soil Sample 3 **Lab ID: C204495-03**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Tetrachloroethene	0.002		0.0003	0.001	mg/kg dry	EPA 8260B	

Client ID: Soil Sample 3 **Lab ID: C204495-03RE1**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	4.00	JBD	1.21	6.06	mg/kg dry	EPA 6010C	J-01, R-05
Barium - Total	53.4	D	1.21	6.06	mg/kg dry	EPA 6010C	R-05
Beryllium - Total	0.473	JD	0.145	0.606	mg/kg dry	EPA 6010C	R-05
Chromium - Total	8.00	D	1.21	6.06	mg/kg dry	EPA 6010C	R-05
Cobalt - Total	6.23	D	1.21	6.06	mg/kg dry	EPA 6010C	R-05
Copper - Total	7.57	D	2.30	6.06	mg/kg dry	EPA 6010C	R-05
Lead - Total	23.1	D	1.45	6.06	mg/kg dry	EPA 6010C	R-05
Nickel - Total	7.23	JD	4.36	30.3	mg/kg dry	EPA 6010C	R-05
Vanadium - Total	14.8	D	1.21	6.06	mg/kg dry	EPA 6010C	R-05
Zinc - Total	23.6	JD	13.3	30.3	mg/kg dry	EPA 6010C	R-05

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Client ID: Soil Sample 4			Lab ID: C204495-04				
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**	**Notes**
Tetrachloroethene	0.002		0.0003	0.001	mg/kg dry	EPA 8260B	

Client ID: Soil Sample 4			Lab ID: C204495-04RE1				
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**	**Notes**
Antimony - Total	1.88	JBD	1.29	11.8	mg/kg dry	EPA 6010C	J-01, R-05
Arsenic - Total	2.83	JBD	1.18	5.88	mg/kg dry	EPA 6010C	J-01, R-05
Barium - Total	78.6	D	1.18	5.88	mg/kg dry	EPA 6010C	R-05
Beryllium - Total	0.535	JD	0.141	0.588	mg/kg dry	EPA 6010C	R-05
Chromium - Total	12.1	D	1.18	5.88	mg/kg dry	EPA 6010C	R-05
Cobalt - Total	11.7	D	1.18	5.88	mg/kg dry	EPA 6010C	R-05
Copper - Total	14.3	D	2.23	5.88	mg/kg dry	EPA 6010C	R-05
Lead - Total	15.5	D	1.41	5.88	mg/kg dry	EPA 6010C	R-05
Nickel - Total	13.3	JD	4.23	29.4	mg/kg dry	EPA 6010C	R-05
Vanadium - Total	20.8	D	1.18	5.88	mg/kg dry	EPA 6010C	R-05
Zinc - Total	36.6	D	12.9	29.4	mg/kg dry	EPA 6010C	R-05

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ANALYTICAL RESULTS

Description: Soil Sample 1
Matrix: Soil
Project: City of Durham

Lab Sample ID: C204495-01
Sampled: 04/20/12 10:42
Sampled By: Brent Freyer

Received: 04/20/12 12:50
Work Order: C204495
% Solids: 87.6

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**1.70**	JBD	mg/kg dry	10	1.26	11.4	2D23017	EPA 6010C	04/25/12 17:05	JDH	J-01, R-05
Arsenic [7440-38-2] ^	**3.95**	JBD	mg/kg dry	10	1.14	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	J-01, R-05
Barium [7440-39-3] ^	**106**	D	mg/kg dry	10	1.14	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Beryllium [7440-41-7] ^	**0.628**	D	mg/kg dry	10	0.137	0.571	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Cadmium [7440-43-9] ^	0.110	UD	mg/kg dry	10	0.110	0.571	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Chromium [7440-47-3] ^	**17.3**	D	mg/kg dry	10	1.14	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Cobalt [7440-48-4] ^	**11.5**	D	mg/kg dry	10	1.14	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Copper [7440-50-8] ^	**10.0**	D	mg/kg dry	10	2.17	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Lead [7439-92-1] ^	**14.4**	D	mg/kg dry	10	1.37	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Nickel [7440-02-0] ^	**10.3**	JD	mg/kg dry	10	4.11	28.5	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Selenium [7782-49-2] ^	1.14	UD	mg/kg dry	10	1.14	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Silver [7440-22-4] ^	1.14	UD	mg/kg dry	10	1.14	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Thallium [7440-28-0] ^	1.14	UD	mg/kg dry	10	1.14	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Vanadium [7440-62-2] ^	**32.5**	D	mg/kg dry	10	1.14	5.71	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05
Zinc [7440-66-6] ^	**29.7**	D	mg/kg dry	10	12.6	28.5	2D23017	EPA 6010C	04/25/12 17:05	JDH	R-05

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

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Description:	Soil Sample 2	**Lab Sample ID:**	C204495-02	**Received:**	04/20/12 12:50
Matrix:	Soil	**Sampled:**	04/20/12 11:40	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	Brent Freyer	**% Solids:**	78.5

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.017	UD	mg/kg dry	82.5	0.017	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.026	UD	mg/kg dry	82.5	0.026	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.021	UD	mg/kg dry	82.5	0.021	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.026	UD	mg/kg dry	82.5	0.026	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,1-Dichloroethane [75-34-3] ^	0.026	UD	mg/kg dry	82.5	0.026	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,1-Dichloroethene [75-35-4] ^	0.032	UD	mg/kg dry	82.5	0.032	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.067	UD	mg/kg dry	82.5	0.067	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.083	UD	mg/kg dry	82.5	0.083	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,2-Dibromoethane [106-93-4] ^	0.048	UD	mg/kg dry	82.5	0.048	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.028	UD	mg/kg dry	82.5	0.028	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,2-Dichloroethane [107-06-2] ^	0.043	UD	mg/kg dry	82.5	0.043	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,2-Dichloropropane [78-87-5] ^	0.027	UD	mg/kg dry	82.5	0.027	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.021	UD	mg/kg dry	82.5	0.021	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
2-Butanone [78-93-3] ^	**1.8**	D	mg/kg dry	82.5	0.082	0.53	2D26032	EPA 8260B	05/03/12 14:15	JKG	
2-Hexanone [591-78-6] ^	0.079	UD	mg/kg dry	82.5	0.079	0.53	2D26032	EPA 8260B	05/03/12 14:15	JKG	
4-Methyl-2-pentanone [108-10-1] ^	0.060	UD	mg/kg dry	82.5	0.060	0.53	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Acetone [67-64-1] ^	**2.1**	D	mg/kg dry	82.5	0.15	0.53	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Acrylonitrile [107-13-1] ^	0.17	UD	mg/kg dry	82.5	0.17	1.1	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Benzene [71-43-2] ^	0.018	UD	mg/kg dry	82.5	0.018	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Bromochloromethane [74-97-5] ^	0.043	UD	mg/kg dry	82.5	0.043	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Bromodichloromethane [75-27-4] ^	0.025	UD	mg/kg dry	82.5	0.025	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Bromoform [75-25-2] ^	0.047	UD	mg/kg dry	82.5	0.047	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Bromomethane [74-83-9] ^	0.034	UD	mg/kg dry	82.5	0.034	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Carbon disulfide [75-15-0] ^	0.041	UD	mg/kg dry	82.5	0.041	0.53	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Carbon tetrachloride [56-23-5] ^	0.023	UD	mg/kg dry	82.5	0.023	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Chlorobenzene [108-90-7] ^	0.018	UD	mg/kg dry	82.5	0.018	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Chloroethane [75-00-3] ^	0.026	UD	mg/kg dry	82.5	0.026	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Chloroform [67-66-3] ^	0.019	UD	mg/kg dry	82.5	0.019	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Chloromethane [74-87-3] ^	0.022	UD	mg/kg dry	82.5	0.022	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.024	UD	mg/kg dry	82.5	0.024	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.018	UD	mg/kg dry	82.5	0.018	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Dibromochloromethane [124-48-1] ^	0.037	UD	mg/kg dry	82.5	0.037	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Dibromomethane [74-95-3] ^	0.035	UD	mg/kg dry	82.5	0.035	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Ethylbenzene [100-41-4] ^	0.021	UD	mg/kg dry	82.5	0.021	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Iodomethane [74-88-4] ^	0.046	UD	mg/kg dry	82.5	0.046	0.53	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Methylene chloride [75-09-2] ^	0.077	UD	mg/kg dry	82.5	0.077	0.21	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Styrene [100-42-5] ^	0.10	UD	mg/kg dry	82.5	0.10	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Tetrachloroethene [127-18-4] ^	0.029	UD	mg/kg dry	82.5	0.029	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Toluene [108-88-3] ^	**0.061**	JD	mg/kg dry	82.5	0.025	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.039	UD	mg/kg dry	82.5	0.039	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.041	UD	mg/kg dry	82.5	0.041	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.041	UD	mg/kg dry	82.5	0.041	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Trichloroethene [79-01-6] ^	0.034	UD	mg/kg dry	82.5	0.034	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Trichlorofluoromethane [75-69-4] ^	0.027	UD	mg/kg dry	82.5	0.027	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Vinyl acetate [108-05-4] ^	0.049	UD	mg/kg dry	82.5	0.049	0.53	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Vinyl chloride [75-01-4] ^	0.025	UD	mg/kg dry	82.5	0.025	0.11	2D26032	EPA 8260B	05/03/12 14:15	JKG	
Xylenes (Total) [1330-20-7] ^	**0.062**	JD	mg/kg dry	82.5	0.059	0.32	2D26032	EPA 8260B	05/03/12 14:15	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*61-118*	*2D26032*	*EPA 8260B*	*05/03/12 14:15*	*JKG*	
Dibromofluoromethane	*49*	*1*	*50.0*	*98 %*	*66-114*	*2D26032*	*EPA 8260B*	*05/03/12 14:15*	*JKG*	

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Description:	Soil Sample 2	**Lab Sample ID:**	C204495-02	**Received:**	04/20/12 12:50
Matrix:	Soil	**Sampled:**	04/20/12 11:40	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	Brent Freyer	**% Solids:**	78.5

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*63-118*		*2D26032*	*EPA 8260B*	*05/03/12 14:15*	*JKG*	

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Description:	Soil Sample 2	**Lab Sample ID:**	C204495-02	**Received:**	04/20/12 12:50
Matrix:	Soil	**Sampled:**	04/20/12 11:40	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	Brent Freyer	**% Solids:**	78.5

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**2.39**	JBD	mg/kg dry	10	1.40	12.7	2D23017	EPA 6010C	04/25/12 17:07	JDH	J-01, R-05
Arsenic [7440-38-2] ^	**4.86**	JBD	mg/kg dry	10	1.27	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	J-01, R-05
Barium [7440-39-3] ^	**73.7**	D	mg/kg dry	10	1.27	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Beryllium [7440-41-7] ^	**0.272**	JD	mg/kg dry	10	0.153	0.637	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Cadmium [7440-43-9] ^	**0.229**	JD	mg/kg dry	10	0.122	0.637	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Chromium [7440-47-3] ^	**18.4**	D	mg/kg dry	10	1.27	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Cobalt [7440-48-4] ^	**11.8**	D	mg/kg dry	10	1.27	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Copper [7440-50-8] ^	**46.0**	D	mg/kg dry	10	2.42	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Lead [7439-92-1] ^	**42.1**	D	mg/kg dry	10	1.53	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Nickel [7440-02-0] ^	**30.5**	JD	mg/kg dry	10	4.59	31.9	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Selenium [7782-49-2] ^	1.27	UD	mg/kg dry	10	1.27	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Silver [7440-22-4] ^	1.27	UD	mg/kg dry	10	1.27	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Thallium [7440-28-0] ^	1.27	UD	mg/kg dry	10	1.27	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Vanadium [7440-62-2] ^	**32.9**	D	mg/kg dry	10	1.27	6.37	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05
Zinc [7440-66-6] ^	**150**	D	mg/kg dry	10	14.0	31.9	2D23017	EPA 6010C	04/25/12 17:07	JDH	R-05

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Description:	Soil Sample 3	**Lab Sample ID:**	C204495-03	**Received:**	04/20/12 12:50
Matrix:	Soil	**Sampled:**	04/20/12 11:20	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	Brent Freyer	**% Solids:**	82.5

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,1-Dichloroethane [75-34-3] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,1-Dichloroethene [75-35-4] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.0008	U	mg/kg dry	1	0.0008	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.001	U	mg/kg dry	1	0.001	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,2-Dibromoethane [106-93-4] ^	0.0006	U	mg/kg dry	1	0.0006	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,2-Dichloroethane [107-06-2] ^	0.0005	U	mg/kg dry	1	0.0005	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,2-Dichloropropane [78-87-5] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
2-Butanone [78-93-3] ^	0.0009	U	mg/kg dry	1	0.0009	0.006	2D25018	EPA 8260B	04/26/12 02:47	JKG	
2-Hexanone [591-78-6] ^	0.0009	U	mg/kg dry	1	0.0009	0.006	2D25018	EPA 8260B	04/26/12 02:47	JKG	
4-Methyl-2-pentanone [108-10-1] ^	0.0007	U	mg/kg dry	1	0.0007	0.006	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Acetone [67-64-1] ^	0.002	U	mg/kg dry	1	0.002	0.006	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Acrylonitrile [107-13-1] ^	0.002	U	mg/kg dry	1	0.002	0.012	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Benzene [71-43-2] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Bromochloromethane [74-97-5] ^	0.0005	U	mg/kg dry	1	0.0005	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Bromodichloromethane [75-27-4] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Bromoform [75-25-2] ^	0.0005	U	mg/kg dry	1	0.0005	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Bromomethane [74-83-9] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Carbon disulfide [75-15-0] ^	0.0005	U	mg/kg dry	1	0.0005	0.006	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Carbon tetrachloride [56-23-5] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Chlorobenzene [108-90-7] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Chloroethane [75-00-3] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Chloroform [67-66-3] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Chloromethane [74-87-3] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Dibromochloromethane [124-48-1] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Dibromomethane [74-95-3] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Ethylbenzene [100-41-4] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Iodomethane [74-88-4] ^	0.0005	U	mg/kg dry	1	0.0005	0.006	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Methylene chloride [75-09-2] ^	0.0009	U	mg/kg dry	1	0.0009	0.002	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Styrene [100-42-5] ^	0.001	U	mg/kg dry	1	0.001	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Tetrachloroethene [127-18-4] ^	**0.002**		mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Toluene [108-88-3] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.0005	U	mg/kg dry	1	0.0005	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.0005	U	mg/kg dry	1	0.0005	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Trichloroethene [79-01-6] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Trichlorofluoromethane [75-69-4] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Vinyl acetate [108-05-4] ^	0.0006	U	mg/kg dry	1	0.0006	0.006	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Vinyl chloride [75-01-4] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 02:47	JKG	
Xylenes (Total) [1330-20-7] ^	0.0007	U	mg/kg dry	1	0.0007	0.004	2D25018	EPA 8260B	04/26/12 02:47	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*48*	*1*	*50.0*	*97 %*	*61-118*	*2D25018*	*EPA 8260B*	*04/26/12 02:47*	*JKG*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*66-114*	*2D25018*	*EPA 8260B*	*04/26/12 02:47*	*JKG*	

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Description:	Soil Sample 3	**Lab Sample ID:**	C204495-03	**Received:**	04/20/12 12:50
Matrix:	Soil	**Sampled:**	04/20/12 11:20	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	Brent Freyer	**% Solids:**	82.5

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
Toluene-d8	*48*	*1*	*50.0*	*95 %*	*63-118*	*2D25018*	*EPA 8260B*	*04/26/12 02:47*	*JKG*	

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Description:	Soil Sample 3	**Lab Sample ID:**	C204495-03	**Received:**	04/20/12 12:50
Matrix:	Soil	**Sampled:**	04/20/12 11:20	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	Brent Freyer	**% Solids:**	82.5

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	1.33	UD	mg/kg dry	10	1.33	12.1	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Arsenic [7440-38-2] ^	**4.00**	JBD	mg/kg dry	10	1.21	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	J-01, R-05
Barium [7440-39-3] ^	**53.4**	D	mg/kg dry	10	1.21	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Beryllium [7440-41-7] ^	**0.473**	JD	mg/kg dry	10	0.145	0.606	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Cadmium [7440-43-9] ^	0.116	UD	mg/kg dry	10	0.116	0.606	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Chromium [7440-47-3] ^	**8.00**	D	mg/kg dry	10	1.21	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Cobalt [7440-48-4] ^	**6.23**	D	mg/kg dry	10	1.21	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Copper [7440-50-8] ^	**7.57**	D	mg/kg dry	10	2.30	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Lead [7439-92-1] ^	**23.1**	D	mg/kg dry	10	1.45	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Nickel [7440-02-0] ^	**7.23**	JD	mg/kg dry	10	4.36	30.3	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Selenium [7782-49-2] ^	1.21	UD	mg/kg dry	10	1.21	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Silver [7440-22-4] ^	1.21	UD	mg/kg dry	10	1.21	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Thallium [7440-28-0] ^	1.21	UD	mg/kg dry	10	1.21	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Vanadium [7440-62-2] ^	**14.8**	D	mg/kg dry	10	1.21	6.06	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05
Zinc [7440-66-6] ^	**23.6**	JD	mg/kg dry	10	13.3	30.3	2D23017	EPA 6010C	04/25/12 17:09	JDH	R-05

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

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Description:	Soil Sample 4	**Lab Sample ID:**	C204495-04	**Received:**	04/20/12 12:50
Matrix:	Soil	**Sampled:**	04/20/12 11:00	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	Brent Freyer	**% Solids:**	85.0

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,1-Dichloroethane [75-34-3] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,1-Dichloroethene [75-35-4] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.0006	U	mg/kg dry	1	0.0006	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.0008	U	mg/kg dry	1	0.0008	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,2-Dibromoethane [106-93-4] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,2-Dichloroethane [107-06-2] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,2-Dichloropropane [78-87-5] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
2-Butanone [78-93-3] ^	0.0008	U	mg/kg dry	1	0.0008	0.005	2D25018	EPA 8260B	04/26/12 03:16	JKG	
2-Hexanone [591-78-6] ^	0.0007	U	mg/kg dry	1	0.0007	0.005	2D25018	EPA 8260B	04/26/12 03:16	JKG	
4-Methyl-2-pentanone [108-10-1] ^	0.0006	U	mg/kg dry	1	0.0006	0.005	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Acetone [67-64-1] ^	0.001	U	mg/kg dry	1	0.001	0.005	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Acrylonitrile [107-13-1] ^	0.002	U	mg/kg dry	1	0.002	0.010	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Benzene [71-43-2] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Bromochloromethane [74-97-5] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Bromodichloromethane [75-27-4] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Bromoform [75-25-2] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Bromomethane [74-83-9] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Carbon disulfide [75-15-0] ^	0.0004	U	mg/kg dry	1	0.0004	0.005	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Carbon tetrachloride [56-23-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Chlorobenzene [108-90-7] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Chloroethane [75-00-3] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Chloroform [67-66-3] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Chloromethane [74-87-3] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Dibromochloromethane [124-48-1] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Dibromomethane [74-95-3] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Ethylbenzene [100-41-4] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Iodomethane [74-88-4] ^	0.0004	U	mg/kg dry	1	0.0004	0.005	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Methylene chloride [75-09-2] ^	0.0007	U	mg/kg dry	1	0.0007	0.002	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Styrene [100-42-5] ^	0.0009	U	mg/kg dry	1	0.0009	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Tetrachloroethene [127-18-4] ^	**0.002**		mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Toluene [108-88-3] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.0004	U	mg/kg dry	1	0.0004	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Trichloroethene [79-01-6] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Trichlorofluoromethane [75-69-4] ^	0.0003	U	mg/kg dry	1	0.0003	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Vinyl acetate [108-05-4] ^	0.0005	U	mg/kg dry	1	0.0005	0.005	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Vinyl chloride [75-01-4] ^	0.0002	U	mg/kg dry	1	0.0002	0.001	2D25018	EPA 8260B	04/26/12 03:16	JKG	
Xylenes (Total) [1330-20-7] ^	0.0005	U	mg/kg dry	1	0.0005	0.003	2D25018	EPA 8260B	04/26/12 03:16	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*93 %*	*61-118*	*2D25018*	*EPA 8260B*	*04/26/12 03:16*	*JKG*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*66-114*	*2D25018*	*EPA 8260B*	*04/26/12 03:16*	*JKG*	

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Description:	Soil Sample 4	**Lab Sample ID:**	C204495-04	**Received:**	04/20/12 12:50
Matrix:	Soil	**Sampled:**	04/20/12 11:00	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	Brent Freyer	**% Solids:**	85.0

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*46*	*1*	*50.0*	*93 %*	*63-118*		*2D25018*	*EPA 8260B*	*04/26/12 03:16*	*JKG*	

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Description:	Soil Sample 4	**Lab Sample ID:**	C204495-04	**Received:**	04/20/12 12:50
Matrix:	Soil	**Sampled:**	04/20/12 11:00	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	Brent Freyer	**% Solids:**	85.0

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**1.88**	JBD	mg/kg dry	10	1.29	11.8	2D23017	EPA 6010C	04/25/12 17:11	JDH	J-01, R-05
Arsenic [7440-38-2] ^	**2.83**	JBD	mg/kg dry	10	1.18	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	J-01, R-05
Barium [7440-39-3] ^	**78.6**	D	mg/kg dry	10	1.18	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Beryllium [7440-41-7] ^	**0.535**	JD	mg/kg dry	10	0.141	0.588	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Cadmium [7440-43-9] ^	0.113	UD	mg/kg dry	10	0.113	0.588	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Chromium [7440-47-3] ^	**12.1**	D	mg/kg dry	10	1.18	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Cobalt [7440-48-4] ^	**11.7**	D	mg/kg dry	10	1.18	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Copper [7440-50-8] ^	**14.3**	D	mg/kg dry	10	2.23	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Lead [7439-92-1] ^	**15.5**	D	mg/kg dry	10	1.41	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Nickel [7440-02-0] ^	**13.3**	JD	mg/kg dry	10	4.23	29.4	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Selenium [7782-49-2] ^	1.18	UD	mg/kg dry	10	1.18	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Silver [7440-22-4] ^	1.18	UD	mg/kg dry	10	1.18	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Thallium [7440-28-0] ^	1.18	UD	mg/kg dry	10	1.18	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Vanadium [7440-62-2] ^	**20.8**	D	mg/kg dry	10	1.18	5.88	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05
Zinc [7440-66-6] ^	**36.6**	D	mg/kg dry	10	12.9	29.4	2D23017	EPA 6010C	04/25/12 17:11	JDH	R-05

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Description: 3201-Trip Blank | **Lab Sample ID:** C204495-05 | **Received:** 04/20/12 12:50

Matrix: Water | **Sampled:** 04/20/12 11:00 | **Work Order:** C204495

Project: City of Durham | **Sampled By:** ENCO

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	2E02017	EPA 8260B	05/03/12 09:09	JKG	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*47*	*1*	*50.0*	*94 %*	*51-122*	*2E02017*	*EPA 8260B*	*05/03/12 09:09*	*JKG*	
Dibromofluoromethane	*50*	*1*	*50.0*	*100 %*	*68-117*	*2E02017*	*EPA 8260B*	*05/03/12 09:09*	*JKG*	

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Description:	3201-Trip Blank	**Lab Sample ID:**	C204495-05	**Received:**	04/20/12 12:50
Matrix:	Water	**Sampled:**	04/20/12 11:00	**Work Order:**	C204495
Project:	City of Durham	**Sampled By:**	ENCO		

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	Batch	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
Toluene-d8	*49*	*1*	*50.0*	*97 %*	*67-127*	*2E02017*	*EPA 8260B*	*05/03/12 09:09*	*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 2D25018 - EPA 5035_MS

Blank (2D25018-BLK1) Prepared: 04/25/2012 11:15 Analyzed: 04/25/2012 23:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.0002	U	0.001	mg/kg wet							
1,1,1-Trichloroethane	0.0002	U	0.001	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.0002	U	0.001	mg/kg wet							
1,1,2-Trichloroethane	0.0002	U	0.001	mg/kg wet							
1,1-Dichloroethane	0.0002	U	0.001	mg/kg wet							
1,1-Dichloroethene	0.0003	U	0.001	mg/kg wet							
1,2,3-Trichloropropane	0.0006	U	0.001	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.0008	U	0.001	mg/kg wet							
1,2-Dibromoethane	0.0005	U	0.001	mg/kg wet							
1,2-Dichlorobenzene	0.0003	U	0.001	mg/kg wet							
1,2-Dichloroethane	0.0004	U	0.001	mg/kg wet							
1,2-Dichloropropane	0.0003	U	0.001	mg/kg wet							
1,4-Dichlorobenzene	0.0002	U	0.001	mg/kg wet							
2-Butanone	0.0008	U	0.005	mg/kg wet							
2-Hexanone	0.0008	U	0.005	mg/kg wet							
4-Methyl-2-pentanone	0.0006	U	0.005	mg/kg wet							
Acetone	0.001	U	0.005	mg/kg wet							
Acrylonitrile	0.002	U	0.010	mg/kg wet							
Benzene	0.0002	U	0.001	mg/kg wet							
Bromochloromethane	0.0004	U	0.001	mg/kg wet							
Bromodichloromethane	0.0002	U	0.001	mg/kg wet							
Bromoform	0.0004	U	0.001	mg/kg wet							
Bromomethane	0.0003	U	0.001	mg/kg wet							
Carbon disulfide	0.0004	U	0.005	mg/kg wet							
Carbon tetrachloride	0.0002	U	0.001	mg/kg wet							
Chlorobenzene	0.0002	U	0.001	mg/kg wet							
Chloroethane	0.0002	U	0.001	mg/kg wet							
Chloroform	0.0002	U	0.001	mg/kg wet							
Chloromethane	0.0002	U	0.001	mg/kg wet							
cis-1,2-Dichloroethene	0.0002	U	0.001	mg/kg wet							
cis-1,3-Dichloropropene	0.0002	U	0.001	mg/kg wet							
Dibromochloromethane	0.0004	U	0.001	mg/kg wet							
Dibromomethane	0.0003	U	0.001	mg/kg wet							
Ethylbenzene	0.0002	U	0.001	mg/kg wet							
Iodomethane	0.0004	U	0.005	mg/kg wet							
Methylene chloride	0.0007	U	0.002	mg/kg wet							
Styrene	0.001	U	0.001	mg/kg wet							
Tetrachloroethene	0.0003	U	0.001	mg/kg wet							
Toluene	0.0002	U	0.001	mg/kg wet							
trans-1,2-Dichloroethene	0.0004	U	0.001	mg/kg wet							
trans-1,3-Dichloropropene	0.0004	U	0.001	mg/kg wet							
trans-1,4-Dichloro-2-butene	0.0004	U	0.001	mg/kg wet							
Trichloroethene	0.0003	U	0.001	mg/kg wet							
Trichlorofluoromethane	0.0003	U	0.001	mg/kg wet							
Vinyl acetate	0.0005	U	0.005	mg/kg wet							
Vinyl chloride	0.0002	U	0.001	mg/kg wet							
Xylenes (Total)	0.0006	U	0.003	mg/kg wet							
Surrogate: 4-Bromofluorobenzene	*46*			*ug/L*	*50.0*		*92*	*61-118*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 2D25018 - EPA 5035_MS

Blank (2D25018-BLK1) Continued Prepared: 04/25/2012 11:15 Analyzed: 04/25/2012 23:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*49*			*ug/L*	*50.0*		*97*	*66-114*			
Surrogate: Toluene-d8	*47*			*ug/L*	*50.0*		*95*	*63-118*			

LCS (2D25018-BS1) Prepared: 04/25/2012 11:15 Analyzed: 04/26/2012 00:22

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		90	64-133			
Benzene	20		1.0	ug/L	20.0		100	79-129			
Chlorobenzene	21		1.0	ug/L	20.0		103	79-121			
Toluene	18		1.0	ug/L	20.0		91	77-120			
Trichloroethene	22		1.0	ug/L	20.0		111	78-118			
Surrogate: 4-Bromofluorobenzene	*45*			*ug/L*	*50.0*		*90*	*61-118*			
Surrogate: Dibromofluoromethane	*45*			*ug/L*	*50.0*		*89*	*66-114*			
Surrogate: Toluene-d8	*49*			*ug/L*	*50.0*		*99*	*63-118*			

Matrix Spike (2D25018-MS1) Prepared: 04/25/2012 11:15 Analyzed: 04/26/2012 00:51

Source: C204638-15

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.30 U	97	64-133			
Benzene	21		1.0	ug/L	20.0	0.17 U	104	79-129			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	106	79-121			
Toluene	20		1.0	ug/L	20.0	0.24 U	100	77-120			
Trichloroethene	23		1.0	ug/L	20.0	0.32 U	116	78-118			
Surrogate: 4-Bromofluorobenzene	*45*			*ug/L*	*50.0*		*91*	*61-118*			
Surrogate: Dibromofluoromethane	*45*			*ug/L*	*50.0*		*89*	*66-114*			
Surrogate: Toluene-d8	*48*			*ug/L*	*50.0*		*97*	*63-118*			

Matrix Spike Dup (2D25018-MSD1) Prepared: 04/25/2012 11:15 Analyzed: 04/26/2012 01:20

Source: C204638-15

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.30 U	94	64-133	3	23	
Benzene	20		1.0	ug/L	20.0	0.17 U	102	79-129	2	23	
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	107	79-121	0.6	25	
Toluene	20		1.0	ug/L	20.0	0.24 U	100	77-120	0.8	23	
Trichloroethene	22		1.0	ug/L	20.0	0.32 U	110	78-118	5	24	
Surrogate: 4-Bromofluorobenzene	*48*			*ug/L*	*50.0*		*95*	*61-118*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*66-114*			
Surrogate: Toluene-d8	*48*			*ug/L*	*50.0*		*97*	*63-118*			

Batch 2D26032 - EPA 5035_MS

Blank (2D26032-BLK1) Prepared: 04/26/2012 13:16 Analyzed: 05/03/2012 10:48

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

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 2D26032 - EPA 5035_MS

Blank (2D26032-BLK1) Continued Prepared: 04/26/2012 13:16 Analyzed: 05/03/2012 10:48

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.0002	U	0.001	mg/kg wet							
1,1,1-Trichloroethane	0.0002	U	0.001	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.0002	U	0.001	mg/kg wet							
1,1,2-Trichloroethane	0.0002	U	0.001	mg/kg wet							
1,1-Dichloroethane	0.0002	U	0.001	mg/kg wet							
1,1-Dichloroethene	0.0003	U	0.001	mg/kg wet							
1,2,3-Trichloropropane	0.0006	U	0.001	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.0008	U	0.001	mg/kg wet							
1,2-Dibromoethane	0.0005	U	0.001	mg/kg wet							
1,2-Dichlorobenzene	0.0003	U	0.001	mg/kg wet							
1,2-Dichloroethane	0.0004	U	0.001	mg/kg wet							
1,2-Dichloropropane	0.0003	U	0.001	mg/kg wet							
1,4-Dichlorobenzene	0.0002	U	0.001	mg/kg wet							
2-Butanone	0.0008	U	0.005	mg/kg wet							
2-Hexanone	0.0008	U	0.005	mg/kg wet							
4-Methyl-2-pentanone	0.0006	U	0.005	mg/kg wet							
Acetone	0.001	U	0.005	mg/kg wet							
Acrylonitrile	0.002	U	0.010	mg/kg wet							
Benzene	0.0002	U	0.001	mg/kg wet							
Bromochloromethane	0.0004	U	0.001	mg/kg wet							
Bromodichloromethane	0.0002	U	0.001	mg/kg wet							
Bromoform	0.0004	U	0.001	mg/kg wet							
Bromomethane	0.0003	U	0.001	mg/kg wet							
Carbon disulfide	0.0004	U	0.005	mg/kg wet							
Carbon tetrachloride	0.0002	U	0.001	mg/kg wet							
Chlorobenzene	0.0002	U	0.001	mg/kg wet							
Chloroethane	0.0002	U	0.001	mg/kg wet							
Chloroform	0.0002	U	0.001	mg/kg wet							
Chloromethane	0.0002	U	0.001	mg/kg wet							
cis-1,2-Dichloroethene	0.0002	U	0.001	mg/kg wet							
cis-1,3-Dichloropropene	0.0002	U	0.001	mg/kg wet							
Dibromochloromethane	0.0004	U	0.001	mg/kg wet							
Dibromomethane	0.0003	U	0.001	mg/kg wet							
Ethylbenzene	0.0002	U	0.001	mg/kg wet							
Iodomethane	0.0004	U	0.005	mg/kg wet							
Methylene chloride	0.0007	U	0.002	mg/kg wet							
Styrene	0.001	U	0.001	mg/kg wet							
Tetrachloroethene	0.0003	U	0.001	mg/kg wet							
Toluene	0.0002	U	0.001	mg/kg wet							
trans-1,2-Dichloroethene	0.0004	U	0.001	mg/kg wet							
trans-1,3-Dichloropropene	0.0004	U	0.001	mg/kg wet							
trans-1,4-Dichloro-2-butene	0.0004	U	0.001	mg/kg wet							
Trichloroethene	0.0003	U	0.001	mg/kg wet							
Trichlorofluoromethane	0.0003	U	0.001	mg/kg wet							
Vinyl acetate	0.0005	U	0.005	mg/kg wet							
Vinyl chloride	0.0002	U	0.001	mg/kg wet							
Xylenes (Total)	0.0006	U	0.003	mg/kg wet							
Surrogate: 4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*103*	*61-118*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 2D26032 - EPA 5035_MS

Blank (2D26032-BLK1) Continued Prepared: 04/26/2012 13:16 Analyzed: 05/03/2012 10:48

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*49*			*ug/L*	*50.0*		*98*	*66-114*			
Surrogate: Toluene-d8	*48*			*ug/L*	*50.0*		*97*	*63-118*			

LCS (2D26032-BS1) Prepared: 04/26/2012 13:16 Analyzed: 05/03/2012 11:18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	16		1.0	ug/L	20.0		81	64-133			
Benzene	17		1.0	ug/L	20.0		83	79-129			
Chlorobenzene	19		1.0	ug/L	20.0		93	79-121			
Toluene	17		1.0	ug/L	20.0		83	77-120			
Trichloroethene	18		1.0	ug/L	20.0		91	78-118			
Surrogate: 4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*112*	*61-118*			
Surrogate: Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*66-114*			
Surrogate: Toluene-d8	*50*			*ug/L*	*50.0*		*99*	*63-118*			

Matrix Spike (2D26032-MS1) Prepared: 04/26/2012 13:16 Analyzed: 05/03/2012 12:47

Source: C204966-11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	17		1.0	ug/L	20.0	0.30 U	85	64-133			
Benzene	18		1.0	ug/L	20.0	0.17 U	88	79-129			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	100	79-121			
Toluene	17		1.0	ug/L	20.0	0.24 U	87	77-120			
Trichloroethene	20		1.0	ug/L	20.0	0.32 U	100	78-118			
Surrogate: 4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*108*	*61-118*			
Surrogate: Dibromofluoromethane	*50*			*ug/L*	*50.0*		*100*	*66-114*			
Surrogate: Toluene-d8	*50*			*ug/L*	*50.0*		*100*	*63-118*			

Matrix Spike Dup (2D26032-MSD1) Prepared: 04/26/2012 13:16 Analyzed: 05/03/2012 13:16

Source: C204966-11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	17		1.0	ug/L	20.0	0.30 U	83	64-133	2	23	
Benzene	16		1.0	ug/L	20.0	0.17 U	82	79-129	7	23	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	96	79-121	4	25	
Toluene	17		1.0	ug/L	20.0	0.24 U	83	77-120	6	23	
Trichloroethene	19		1.0	ug/L	20.0	0.32 U	94	78-118	7	24	
Surrogate: 4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*111*	*61-118*			
Surrogate: Dibromofluoromethane	*48*			*ug/L*	*50.0*		*96*	*66-114*			
Surrogate: Toluene-d8	*50*			*ug/L*	*50.0*		*99*	*63-118*			

Batch 2E02017 - EPA 5030B_MS

Blank (2E02017-BLK1) Prepared: 05/02/2012 10:57 Analyzed: 05/03/2012 01:45

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

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 2E02017 - EPA 5030B_MS

Blank (2E02017-BLK1) Continued Prepared: 05/02/2012 10:57 Analyzed: 05/03/2012 01:45

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.2	U	5.0	ug/L							
Acrylonitrile	3.5	U	10	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Iodomethane	1.7	U	5.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.70	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl acetate	0.95	U	5.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*46*			*ug/L*	*50.0*		*91*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 2E02017 - EPA 5030B_MS

Blank (2E02017-BLK1) Continued Prepared: 05/02/2012 10:57 Analyzed: 05/03/2012 01:45

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*49*			*ug/L*	*50.0*		*97*	*68-117*			
Surrogate: Toluene-d8	*47*			*ug/L*	*50.0*		*94*	*67-127*			

LCS (2E02017-BS1) Prepared: 05/02/2012 10:57 Analyzed: 05/03/2012 02:15

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	21		1.0	ug/L	20.0		107	75-133			
Benzene	20		1.0	ug/L	20.0		101	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		100	83-117			
Toluene	20		1.0	ug/L	20.0		98	71-118			
Trichloroethene	19		1.0	ug/L	20.0		97	82-118			

Matrix Spike (2E02017-MS1) Prepared: 05/02/2012 10:57 Analyzed: 05/03/2012 02:44

Source: C204966-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	23		1.0	ug/L	20.0	0.21 U	116	75-133			
Benzene	22		1.0	ug/L	20.0	0.15 U	108	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	104	83-117			
Toluene	21		1.0	ug/L	20.0	0.14 U	105	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	100	82-118			

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 2D23017 - EPA 3050B

Blank (2D23017-BLK1) Prepared: 04/23/2012 11:31 Analyzed: 04/25/2012 16:18

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	**0.136**	**J**	1.00	mg/kg wet							
Arsenic	**0.243**	**J**	0.500	mg/kg wet							
Barium	0.100	U	0.500	mg/kg wet							
Beryllium	0.0120	U	0.0500	mg/kg wet							
Cadmium	0.00960	U	0.0500	mg/kg wet							
Chromium	0.100	U	0.500	mg/kg wet							
Cobalt	0.100	U	0.500	mg/kg wet							
Copper	0.190	U	0.500	mg/kg wet							
Lead	0.120	U	0.500	mg/kg wet							
Nickel	0.360	U	2.50	mg/kg wet							
Selenium	0.100	U	0.500	mg/kg wet							
Silver	0.100	U	0.500	mg/kg wet							
Thallium	0.100	U	0.500	mg/kg wet							
Vanadium	0.100	U	0.500	mg/kg wet							
Zinc	1.10	U	2.50	mg/kg wet							

LCS (2D23017-BS1) Prepared: 04/23/2012 11:31 Analyzed: 04/25/2012 16:20

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

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 2D23017 - EPA 3050B

LCS (2D23017-BS1) Continued Prepared: 04/23/2012 11:31 Analyzed: 04/25/2012 16:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	9.40	B	1.00	mg/kg wet	10.0		94	80-120			
Arsenic	9.47	B	0.500	mg/kg wet	10.0		95	80-120			
Barium	9.89		0.500	mg/kg wet	10.0		99	80-120			
Beryllium	0.932		0.0500	mg/kg wet	1.00		93	80-120			
Cadmium	0.984		0.0500	mg/kg wet	1.00		98	80-120			
Chromium	9.44		0.500	mg/kg wet	10.0		94	80-120			
Cobalt	9.77		0.500	mg/kg wet	10.0		98	80-120			
Copper	9.37		0.500	mg/kg wet	10.0		94	80-120			
Lead	9.70		0.500	mg/kg wet	10.0		97	80-120			
Nickel	9.74		2.50	mg/kg wet	10.0		97	80-120			
Selenium	9.05		0.500	mg/kg wet	10.0		91	80-120			
Silver	9.45		0.500	mg/kg wet	10.0		95	80-120			
Thallium	9.17		0.500	mg/kg wet	10.0		92	80-120			
Vanadium	9.56		0.500	mg/kg wet	10.0		96	80-120			
Zinc	9.92		2.50	mg/kg wet	10.0		99	80-120			

Matrix Spike (2D23017-MS1) Prepared: 04/23/2012 11:31 Analyzed: 04/25/2012 16:25

Source: C204475-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	16.6	B	1.22	mg/kg dry	12.1	9.21	61	75-125			QM-07
Arsenic	9.56	B	0.612	mg/kg dry	12.1	0.122 U	79	75-125			
Barium	106		0.612	mg/kg dry	12.1	91.6	116	75-125			
Beryllium	0.736		0.0612	mg/kg dry	1.21	0.0147 U	61	75-125			QM-07
Cadmium	0.501		0.0612	mg/kg dry	1.21	0.0118 U	41	75-125			QM-07
Chromium	75.2		0.612	mg/kg dry	12.1	66.4	73	75-125			QM-07
Cobalt	33.5		0.612	mg/kg dry	12.1	22.4	92	75-125			
Copper	101		0.612	mg/kg dry	12.1	75.9	204	75-125			QM-07
Lead	12.6		0.612	mg/kg dry	12.1	1.79	90	75-125			
Nickel	142		3.06	mg/kg dry	12.1	134	71	75-125			QM-07
Selenium	11.9		0.612	mg/kg dry	12.1	0.860	91	75-125			
Silver	11.5		0.612	mg/kg dry	12.1	0.162	94	75-125			
Thallium	0.122	U	0.612	mg/kg dry	12.1	0.122 U		75-125			QM-07
Vanadium	55.8		0.612	mg/kg dry	12.1	45.0	90	75-125			
Zinc	36.4		3.06	mg/kg dry	12.1	25.2	93	75-125			

Matrix Spike Dup (2D23017-MSD1) Prepared: 04/23/2012 11:31 Analyzed: 04/25/2012 16:27

Source: C204475-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	17.6	B	1.22	mg/kg dry	12.1	9.21	69	75-125	6	20	QM-07
Arsenic	9.79	B	0.612	mg/kg dry	12.1	0.122 U	81	75-125	2	20	
Barium	103		0.612	mg/kg dry	12.1	91.6	95	75-125	2	20	
Beryllium	0.730		0.0612	mg/kg dry	1.21	0.0147 U	60	75-125	0.9	20	QM-07
Cadmium	0.435		0.0612	mg/kg dry	1.21	0.0118 U	36	75-125	14	20	QM-07
Chromium	85.8		0.612	mg/kg dry	12.1	66.4	160	75-125	13	20	QM-07
Cobalt	34.8		0.612	mg/kg dry	12.1	22.4	103	75-125	4	20	
Copper	93.0		0.612	mg/kg dry	12.1	75.9	142	75-125	8	20	QM-07

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 2D23017 - EPA 3050B

Matrix Spike Dup (2D23017-MSD1) Continued Prepared: 04/23/2012 11:31 Analyzed: 04/25/2012 16:27

Source: C204475-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Lead	13.1		0.612	mg/kg dry	12.1	1.79	93	75-125	3	20	
Nickel	165		3.06	mg/kg dry	12.1	134	260	75-125	15	20	QM-07
Selenium	12.3		0.612	mg/kg dry	12.1	0.860	94	75-125	3	20	
Silver	11.9		0.612	mg/kg dry	12.1	0.162	97	75-125	3	20	
Thallium	0.122	U	0.612	mg/kg dry	12.1	0.122 U		75-125		20	QM-07
Vanadium	62.9		0.612	mg/kg dry	12.1	45.0	148	75-125	12	20	QM-07
Zinc	39.8		3.06	mg/kg dry	12.1	25.2	120	75-125	9	20	

Post Spike (2D23017-PS1) Prepared: 04/23/2012 11:31 Analyzed: 04/25/2012 16:29

Source: C204475-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.337	B	0.0200	mg/L	0.200	0.150	93	80-120			
Arsenic	0.179	B	0.0100	mg/L	0.200	-0.0159	97	80-120			
Barium	1.66		0.0100	mg/L	0.200	1.50	80	80-120			
Beryllium	0.0145		0.00100	mg/L	0.0200	-0.00455	95	80-120			
Cadmium	0.00940		0.00100	mg/L	0.0200	-0.00944	94	80-120			
Chromium	1.25		0.0100	mg/L	0.200	1.08	83	80-120			
Cobalt	0.555		0.0100	mg/L	0.200	0.365	95	80-120			
Copper	1.41		0.0100	mg/L	0.200	1.24	85	80-120			
Lead	0.217		0.0100	mg/L	0.200	0.0292	94	80-120			
Nickel	2.32		0.0500	mg/L	0.200	2.18	71	80-120			QM-08
Selenium	0.208		0.0100	mg/L	0.200	0.0141	97	80-120			
Silver	0.208		0.0100	mg/L	0.200	0.00265	103	80-120			
Thallium	-0.0599	U	0.0100	mg/L	0.200	-0.251	125	80-120			QM-08
Vanadium	0.914		0.0100	mg/L	0.200	0.734	90	80-120			
Zinc	0.591		0.0500	mg/L	0.200	0.412	90	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.
J-01	Result is estimated due to positive results in the associated method blank.
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).
R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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Cary, NC 27511
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Page 1 of 1

Client Name: Golder Associates, Inc. (GO007)	Project Number: 073-9604212.600
Address: 5B Oak Branch Drive	Project Name/Desc: City of Durham
City/ST/Zip: Greensboro, NC 27407	PO # / Billing Info:
Tel: (336) 852-4903 / Fax: (336) 852-4904	Reporting Contact: Dusty Reedy
Sampler(s) Name, Affiliation (Print): Brent Freyer, Golder	Billing Contact: Accounts Payable
Sampler(s) Signature: Brent Freyer	Site Location / Time Zone: Durham, NC / EST

Requested Analyses: % Solids, Ag, As, Ba, Be, Cd, Co, Cr, Cu, Ni, Pb, Sb, Se, Se, Tl, V, Zn — 8260B Appendix 1

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due __/__/__

Lab Workorder: C204495

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	% Solids, Ag, As, Ba, Be, Cd, Co, Cr, Cu, Ni, Pb, Sb, Se, Se, Tl, V, Zn	8260B Appendix 1									Sample Comments
	Soil Sample 1	4/20/12	1042	G	SO	4	X	~~X~~	metals only for soil sample 1								background
	Soil Sample 2	4/20/12	1140	G	SO	4	X	X									point of origin
	Soil Sample 3	4/20/12	1120	G	SO	4	X	X									midpoint
	Soil Sample 4	4/20/12	1100	G	SO	4	X	X									bottom of spill
	3201-Trip Blank				WA	2		X									

<-- Total # of Containers

Sample Kit Prepared By: Briana Greaney	Date/Time: 4/10/12	Relinquished By: Brent Freyer	Date/Time: 4/20/12	Received By: James Hays	Date/Time: 4/20/12 12:50
Comments/Special Reporting Requirements: ① Please provide "Level 2" data report ② Unit rates per "Basic Ordering Agreement for Lab Services" dated April 9, 2004 and the 2011 Unit Price Sheet ③ Estimated Fee: $720		Relinquished By:	Date/Time:	Received By:	Date/Time:
		Relinquished By:	Date/Time:	Received By:	Date/Time:
		Cooler #'s & Temps on Receipt: C-25 2.6°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: 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

Brent Freyer Brent Freyer accepted by: [signature]