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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):

Golder Associates NC, Inc. on behalf of the City of Durham

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

Name: David Y. Reedy II Phone: 336-852-4903

E-mail: dreedy@golder.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Closed City of Durham Landfill	2115 East Club Boulevard Durham NC 27704	32-01	.1600	November 24-25, 2014

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.

David Y. Reedy II, P.G. | Senior Hydrogeologist | 336-852-4903

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

Signature | 2-5-15 Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1963 GEOLOGIST DAVID YATES REEDY, II 2-5-15

Golder Associates NC, Inc., 5B Oak Branch Drive, Greensboro, NC 27407

Facility Representative Address

C-2862

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

Revised 6/2009

SECOND SEMI-ANNUAL 2014 SAMPLING EVENT

Closed City of Durham Landfill
Permit No. 32-01

Durham County, North Carolina

Submitted To:

City of Durham
Department of Water Management
1600 Mist Lake Drive
Durham, North Carolina 27704

Submitted By: Golder Associates NC, Inc.
5B Oak Branch Drive
Greensboro, NC 27407 USA

February 2015 **0739-604214.100**

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February 5, 2015 0739-604214.100

Mr. Ervin Lane, Hydrogeologist
NC DENR Division of Waste Management
Solid Waste Section
217 West Jones Street
Raleigh, North Carolina 27603

RE: WATER QUALITY MONITORING REPORT, SECOND SEMI-ANNUAL 2014 SAMPLING EVENT
CLOSED CITY OF DURHAM LANDFILL, PERMIT NO. 32-01
DURHAM COUNTY, NORTH CAROLINA

Dear Ervin:

Golder Associates NC, Inc. (Golder) is submitting the enclosed *Water Quality Monitoring Report,* which documents the results of the November 24-25, 2014, compliance monitoring event at the City of Durham's closed Municipal Solid Waste Landfill.

During the November 2014 event, barium was detected in the sample from MW-5 and cobalt was detected in the sample from NES-3 at concentrations that exceeded their respective Solid Waste Section Reporting Limits (SWSLs) and applicable groundwater protection standards. The concentrations of barium and cobalt were statistically evaluated and are not considered to represent statistically significant increases over background concentrations; no additional action is warranted at this time.

Cobalt was also detected at estimated concentrations below the SWSL, but above the Solid Waste Section Groundwater Protection Standard (GPS) in the samples from upgradient well MW-9R and downgradient well MW-3R. Vanadium was detected at estimated concentrations below the SWSL, but above GPS in the samples from upgradient well MW-9R and downgradient well NES-3. The concentrations of cobalt and vanadium are similar to historical results and are considered to be naturally occurring. No additional action is warranted for these estimated concentrations.

One organic constituent (vinyl chloride) was detected at a concentration below the SWSL, but above the NC 2L Standard in the sample from MW-2 during the November 2014 sampling event. There were no other NC Appendix I organic constituents reported above applicable groundwater protection standards in samples from downgradient monitoring wells during the event. No NC Appendix I constituents were reported at concentrations above applicable surface water standards in samples collected from the surface water monitoring locations during the November 2014 event.

On August 22, 2014, the City submitted a Nature and Extent Study (NES) to the North Carolina Department of Environment and Natural Resources (NC DENR) in response to the concentrations of detected NC Appendix I organic constituents above their respective groundwater protection standards in monitoring well MW-10. Based on the findings of the NES, the City requested that MW-10 be replaced by NES-3. On October 17, 2014, NC DENR issued a letter approving the request to modify the monitoring network and allow the facility to return to detection monitoring if no NC Appendix I organic constituents are reported above the NC 2L Standards during the second semi-annual water quality monitoring event of 2014. Based on the results summarized in the attached report, the facility will return to a detection monitoring program for the next compliance monitoring event, which is tentatively scheduled for May 2015.

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Sincerely,
GOLDER ASSOCIATES NC, INC.

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

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Associate and Senior Consultant

C: Simon Lobdell, Civil Engineer III, City of Durham, 1600 Mist Lake Drive Durham, NC 27704. 919-560-4381. Simon.Lobdell@durhamnc.gov

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1.0 INTRODUCTION

This report summarizes the monitoring results from the November 24 and 25, 2014, groundwater and surface water sampling and analysis event at the closed City of Durham Landfill in Durham County, North Carolina in accordance with Title 15A of the North Carolina Administrative Code (NCAC) Subchapter 13B.1632. The City of Durham Landfill is a closed Municipal Solid Waste Landfill (MSWL) and is maintained by the City of Durham (the City) under Permit No. 32-01 issued by the North Carolina Department of Environment and Natural Resources (DENR).

1.1 Site Description and Background

The subject property is a closed, unlined municipal solid waste landfill that ceased waste acceptance in 1997. The location of the facility is shown on the inlay on Drawing 1. As presented, the closed City of Durham Landfill is located northeast of downtown Durham, off East Club Boulevard and southwest of Falls Lake.

Topographic elevations at the facility range from approximately 280 to 400 feet above mean sea level. In general, surface drainage from the facility and surrounding areas is routed by drainage channels and storm water control structures toward Ellerbee Creek to the west of the facility. Locally, surface water flows radially away from the closed and capped landfill toward unnamed streams to the northeast, south and west. These streams are tributaries of Ellerbe Creek, which flows into Falls Lake, located northeast of the landfill.

1.2 Compliance Monitoring History

Groundwater quality at the landfill has been monitored since 1989, beginning with annual monitoring, and is currently monitored semi-annually in accordance with the approved Water Quality Monitoring Plan (WQMP) prepared by Malcolm Pirnie, Inc. in April 1994.

Assessment Monitoring was conducted at the landfill from November 1996 through June 1999 due to the detection of benzene in monitoring well MW-3. Following the June 1999 monitoring event, DENR granted approval for the City to return to Detection Monitoring. Detection Monitoring was conducted at the site from October 1999 through December 2004. However, based on additional detections of volatile organic compounds (VOCs), the landfill returned to Assessment Monitoring during the June 2005 monitoring event (Weston Solutions, 2006).

In May 2008, monitoring well PZ-6 was replaced by monitoring well MW-9R as the upgradient/background monitoring well due to the poor water quality and elevated metals concentrations detected in PZ-6. Also in May 2008, monitoring well MW-3 was replaced by MW-3R as a downgradient compliance monitoring well and MW-6R was replaced by MW-10 as a downgradient monitoring well.

Both MW-3 and MW-6R were determined to be located within or in close proximity to the landfill waste boundary.

On May 12, 2011, S&ME submitted a request to the NC DENR to reduce the number of upgradient monitoring wells from the semi-annual sampling schedule. On May 17, 2011, NC DENR granted approval to remove monitoring wells MW-7R and MW-8 from the compliance well sampling list.

On August 22, 2014, the City submitted a Nature and Extent Study (NES) to the NC DENR in response to the concentrations of detected NC Appendix I constituents above their respective groundwater protection standards in monitoring wells MW-5 and MW-10. Based on the findings of the NES, the City requested that MW-10 be replaced by NES-3. On October 17, 2014, NC DENR issued a letter approving the request to modify the monitoring network and allow the facility to return to detection monitoring if no NC Appendix I VOCs were reported above the NC 2L Standard during the second semi-annual water quality monitoring event of 2014.

The current approved facility monitoring network consists of one upgradient/background monitoring well (MW-9R) and five downgradient compliance monitoring wells (MW-2, MW-3R, MW-4R, MW-5, and NES-3) which monitor the uppermost aquifer. Groundwater samples are typically analyzed for the NC Appendix II list during the spring events and for the NC Appendix I plus detected NC Appendix II constituents during the fall events. The facility's monitoring network also includes one upstream surface water monitoring point (S-4) and three downstream surface water monitoring points (S-1, S-2, and S-3), which are sampled in conjunction with the groundwater monitoring wells. Surface water samples are analyzed semi-annually for NC Appendix I constituents.

1.3 Hydrogeologic Setting

Geologically, the facility is located within the Piedmont Physiographic Province of North Carolina and within the Durham Basin (NCGS, 1985). The Durham Basin is comprised of Triassic sedimentary rocks including sandstones, mudstones, conglomerates and unconsolidated sediments occurring from the erosion of adjoining Paleozoic metamorphic rocks of the Raleigh Belt (Weston Solutions, 2006).

The uppermost aquifer beneath the facility is comprised of saprolite and weathered rock, which transitions into bedrock. Bedrock consists of arkosic sandstones, siltstones, and mudstones, which comprise the Pekin Formation. Site monitoring wells are screened in silty sands, silty to sandy clays, and sandstones of the Chatham Group of the Triassic Formations (Malcolm Pirnie, 1994 and 1996).

The depth to groundwater typically ranges from approximately 4 feet below grade along the western and southern perimeter of the facility to nearly 50 feet below grade in the central and eastern portion of the facility. Historical groundwater elevation data are presented on Table 1.

As presented on Table 1, the hydraulic head level in the uppermost aquifer beneath the facility is fairly consistent, with temporal variation from the long-term average limited to approximately 8 feet (plus or minus) in the upgradient well, with generally lower variations in the downgradient wells. As expected, the range in fluctuation appears to be greater in the area near the upgradient wells, as these wells are more centrally located to the regional groundwater recharge area. The range in fluctuation in the downgradient compliance wells, which are generally located nearer groundwater discharge areas, is less likely due to the stabilizing effect of hydraulic discharge boundaries.

Static water level measurements obtained on November 24 and 25, 2014, were used to prepare the groundwater contours presented on Drawing 1. Groundwater flow across the majority of the site is to the northwest, west and southwest, which is consistent with previous groundwater contour flow interpretations.

Based on the November 2014 groundwater contour map, the hydraulic gradient in the uppermost aquifer underlying the site was measured along the conceptual flow paths shown on Drawing 1. As shown on Table 2, the average hydraulic gradient for the groundwater flow was calculated to be approximately 0.024 feet/foot. An estimated effective porosity of 0.2 was used for the uppermost aquifer (Heath, 2001).

Using the above values, the estimated rate of groundwater flow for the uppermost aquifer beneath the facility was calculated using the following modified Darcy equation:

$$V_{gw} = Ki/n_e$$

where V_{gw} = average linear velocity (feet/year), K = hydraulic conductivity (feet/year), i = horizontal hydraulic gradient, and n_e = effective porosity.

As shown on Table 2, the average estimated linear groundwater flow velocity under the waste management unit is approximately 109 feet/year to the northwest, west, and southwest, which is generally consistent with previous estimates. The range of groundwater flow is expected to vary depending on the hydrogeologic unit in which it occurs. However, the linear velocity equation above makes the simplified assumptions of a homogeneous and isotropic aquifer. Therefore, this equation represents a likely average value for the uppermost aquifer and does not account for heterogeneous and/or anisotropic conditions that may be present in the uppermost aquifer at the facility.

2.0 FIELD PROGRAM, MONITORING RESULTS, AND DISCUSSION

Field activities conducted as part of the November 24 and 25, 2014, sampling event are discussed in the following sections.

2.1 Visual Inspection Program

In order to detect a potential release at the earliest possible time, a visual inspection program is used at the closed City of Durham Landfill. This program includes physical indicators such as potential water table mounding beneath the waste management unit, physical examination of any stresses in biological communities, visible signs of leachate migration (i.e., leachate seeps), unexplained changes in soil characteristics, and any other change to the environment due to the waste management unit. During the November 2014 compliance monitoring event, no physical indicators were observed in the vicinity of the waste management areas.

2.2 Well Network and Groundwater Elevation Measurements

The network of groundwater monitoring wells at the closed City of Durham Landfill consists of upgradient monitoring well MW-9R and five downgradient monitoring wells MW-2, MW-3R, MW-4R, MW-5, and NES-3. Monitoring well construction information is summarized in Table 3 and the well locations are shown on Drawing 1. The network of monitoring wells was constructed to target the preferential flow path for groundwater underlying waste disposal areas.

Depth-to-water measurements were recorded to the nearest 0.01 foot prior to initiating groundwater purging and sampling activities. Additional depth-to-water measurements were collected from MW-3, MW-6R, MW-7R, MW-8, MW-10, PZ-2R, PZ-3, and PZ-4R to assist in constructing the groundwater contour map for the facility. A summary of measured groundwater elevations for this event are presented in Table 1.

2.3 November 2014 Water Quality Monitoring Event

Personnel from Golder visited the facility on November 24-25, 2014, to purge and sample monitoring wells MW-2, MW-3R, MW-4R, MW-5, MW-9R, and NES-3. In addition to the groundwater samples, surface water samples were collected from upstream monitoring point S-4 and downstream monitoring locations S-1, S-2, and S-3.

Monitoring wells, with the exception of NES-3, were purged and sampled using dedicated bladder pumps and low-flow micropurge techniques. Well NES-3 was purged and sampled using a portable bladder pump and low-flow micropurge techniques. The surface water samples were collected directly from the stream flow, by lowering the sample containers into the stream flow with the opening facing into the current flow, taking care to prevent the over flow of the sample containers and to minimize sample-induced turbidity. Measurements of temperature, pH, specific conductivity, dissolved oxygen, oxidation-reduction potential, and turbidity were recorded during the purge and at the time of sampling.

Prior to sampling, the laboratory-supplied sample containers were prepared. Each sample container was labeled with the sample identification number, sampling personnel, date and time of sample collection, project name and number, and requested chemical analyses.

The required groundwater samples were collected directly from the pump tubing in the labeled, laboratory-supplied, pre-preserved sample containers after purging. After collection, the samples were placed in a cooler on ice, under chain-of-custody control. Copies of the sampling logs are presented in Appendix A. Included in each log is a description of the sampling equipment, sampling method, field observations, and water quality measurements.

2.4 Laboratory Analysis Program

The November 2014 groundwater and surface water samples were received by Environmental Conservation Laboratories, Inc. (ENCO) of Cary, North Carolina on November 26, 2014, under chain-of-custody control for analysis of NC Appendix I constituents for groundwater samples and NC Appendix I constituents for surface water samples.

2.5 November 2014 Sampling Results

Analytical results for the November 2014 groundwater are summarized in Table 4 with available historical data and groundwater field parameters are summarized in Table 5. Analytical results for surface water are summarized in Table 6 with available historical data and surface water field parameters are summarized in Table 7. The laboratory certificates-of-analysis, chain-of-custody forms and laboratory data reviews for the sampling event are included in Appendix B.

As presented in Table 4 and the laboratory certificates-of-analysis, three NC Appendix I inorganic constituents were detected in samples from one or more downgradient monitoring wells at concentrations above their respective Solid Waste Section Reporting Limits (SWSLs) during the November 2014 sampling event. Barium was detected in the samples from MW-2, MW-3R, MW-4R, MW-5, and NES-3 at concentrations greater than the SWSL during the event. Barium has consistently been detected in samples from upgradient monitoring wells and each downgradient well and appears to indicate that barium is naturally occurring. Cobalt was detected in the sample from downgradient monitoring well NES-3 and zinc was detected in the sample from downgradient well MW-2 at concentrations above their respective SWSLs during the November 2014 event. Cobalt and zinc have also been detected in samples from upgradient wells and downgradient wells during previous events and are considered naturally occurring. No NC Appendix I VOCs were detected at concentrations above their respective SWSLs in samples from downgradient wells during the November 2014 sampling event.

As presented in Table 6, one NC Appendix I inorganic constituent was detected in surface water samples at concentrations above its SWSL. Zinc was detected at concentrations greater than the SWSL in the

samples from upstream surface water monitoring point S-4 and downstream surface water monitoring points S-1 and S-3. Zinc has been historically detected in samples from both upstream and downstream surface water monitoring points and the concentrations are consistent with historical detections. There were no NC Appendix I organic constituents reported above the SWSLs in samples from surface water monitoring locations during the November 2014 sampling event.

3.0 LABORATORY AND FIELD QA/QC

A field blank was collected by Golder personnel as part of the November 2014 groundwater sampling event. In addition to the field blank, a laboratory-prepared trip blank accompanied the volatile sample containers to and from the laboratory. ENCO analyzed the field blank for the same constituents as the groundwater samples, and the trip blank for NC Appendix I VOCs. A review of the laboratory data was performed by Golder personnel. No NC Appendix I constituents were detected in the field, trip, or method blanks during the November 2014 event and no data qualification was necessary.

4.0 DATA EVALUATION

The results of the data evaluations are presented in the following sections.

4.1 North Carolina Groundwater and Surface Water Quality Standard Comparisons

As presented on Table 4, two NC Appendix I inorganic constituents were detected in samples from downgradient wells that exceeded their applicable groundwater protection standards during the November 2014 event. Barium was detected in the sample from MW-5 at a concentration that exceeded its SWSL and NC 2L Standard and cobalt was detected in the sample from NES-3 at a concentration that exceeded its SWSL and Solid Waste Section Groundwater Protection Standards (GPSs). Cobalt was also detected in the samples from upgradient well MW-9R and downgradient well MW-3R at estimated concentrations below the SWSL, but above the GPS. Vanadium was detected in samples from upgradient well MW-9R and downgradient well NES-3 at estimated concentrations below the SWSL, but above the GPS. These constituents have historically been detected at comparable concentrations in upgradient and downgradient monitoring wells at the site and are considered naturally occurring.

No NC Appendix I VOCs were detected at concentrations that exceeded both the SWSL and NC 2L Standard during the November 2014 event. Vinyl chloride was detected in the sample from MW-2 at an estimated concentration below the SWSL, but above the NC 2L Standard. As presented on Table 6, no NC Appendix I inorganic or organic constituents were detected above applicable surface water standards during the November 2014 event.

4.2 Statistical Evaluations

Barium was detected in the sample from MW-5 at a concentration which exceeded the SWSL and NC 2L Standard and cobalt was detected in the sample from NWS-3 at a concentration which exceeded the SWSL and GPS during the November 2014 event. The barium and cobalt detections were statistically evaluated to determine if the reported concentrations exceeded the facility background concentrations. The statistical worksheets are presented in Appendix C. As presented, the reported concentrations of barium in the sample from MW-5 and cobalt in the sample from NES-3 are below the background concentrations and no further action is recommended.

5.0 CONCLUSIONS

During the November 2014 event, barium was detected in the sample from MW-5 and cobalt was detected in the sample from NES-3 at concentrations that exceeded their respective SWSLs and applicable groundwater standards. The concentrations of barium and cobalt were statistically evaluated and not determined to be statistically significant over background concentrations and no further action is recommended. No VOCs were detected in downgradient wells at concentrations that exceeded the SWSL and NC 2L Standard during the November 2014 event. Based on the results summarized herein and the October 17, 2014, NC DENR letter, the facility will return to a detection monitoring program for the next compliance monitoring event which is tentatively scheduled for May 2015.

6.0 REFERENCES

Golder Associates NC, Inc., September 2007. Groundwater Monitoring Report, First Semiannual 2007 Sampling Event, City of Durham Closed Municipal Solid Waste Landfill, Permit No. 32-01, Durham County, North Carolina.

Heath, Ralph C., 1993, *Basic Ground-Water Hydrology*, USGS Water Supply Paper 2220.

Malcolm Pirnie, Inc., April 1994. City of Durham Sanitary Landfill Water Quality Monitoring Plan.

Malcolm Pirnie, Inc., December 1996. City of Durham Municipal Solid Waste Landfill November 1996 Assessment Monitoring.

NCGS (North Carolina Geologic Survey), 1985. Geologic Map of North Carolina. Scale 1:500,000.

S&ME, October 2011. May 2011 Semi-Annual Groundwater and Surface Water Monitoring Report, City of Durham, Closed Municipal Solid Waste Landfill (DWM Permit No. 32-01).

Weston Solutions, Inc., February 2006. December 2005 Semiannual Event - Closed Durham City Landfill.

TABLES

TABLE 1

Summary of Historical Groundwater Elevation Data in Monitoring Wells
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Well ID	MW-2		MW-3R		MW-4R		MW-5		MW-6R		MW-7R		MW-8		MW-9R		MW-10		NES-3		PZ-2R		PZ-3		PZ-4R	
TOC Elevation (ft AMSL)	285.65		285.19		294.48		300.26		290.51		317.12		311.96		360.58		282.81		283.56		346.90		349.33		338.82	
Date	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW	GW Elev	DTW
05/26/98	280.20	6.30	NI	--	NI	NI	290.20	9.60	NI	NI	NI	NI	304.40	8.70	NI	NI	NI	NI	NI	NI	NI	NI	318.80	31.20	NI	NI
12/01/98	280.06	6.44	NI	--	NI	NI	298.43	1.37	NI	NI	NI	NI	304.40	8.70	NI	NI	NI	NI	NI	NI	NI	NI	321.29	28.71	NI	NI
06/07/99	275.71	10.79	NI	--	NI	NI	285.79	14.01	NI	NI	NI	NI	300.87	12.23	NI	NI	NI	NI	NI	NI	NI	NI	319.05	30.95	NI	NI
07/08/99	NM	NM	NI	--	289.09	6.51	NM	NM	NI	NI	NI	NI	NM	NM	NI	NI	NI	NI	NI	NI	NI	NI	NM	NM	NI	NI
12/13/99	279.09	7.41	NI	--	289.49	6.11	288.28	11.52	NI	NI	NI	NI	302.19	10.91	NI	NI	NI	NI	NI	NI	NI	NI	319.83	30.17	NI	NI
06/06/00	277.15	9.35	NI	--	289.37	6.23	287.10	12.70	NI	NI	NI	NI	301.98	11.12	NI	NI	NI	NI	NI	NI	NI	NI	319.45	30.55	NI	NI
12/11/00	277.10	9.40	NI	--	289.15	6.45	288.05	11.75	NI	NI	NI	NI	302.01	11.09	NI	NI	NI	NI	NI	NI	NI	NI	320.27	29.73	NI	NI
06/04/01	278.37	8.13	NI	--	289.67	5.93	286.67	13.13	NI	NI	NI	NI	301.42	11.68	NI	NI	NI	NI	NI	NI	NI	NI	318.52	31.48	NI	NI
12/04/01	275.19	11.31	NI	--	289.15	6.45	288.25	11.55	NI	NI	NI	NI	299.32	13.78	NI	NI	NI	NI	NI	NI	NI	NI	319.11	30.89	NI	NI
06/10/02	275.59	10.91	NI	--	288.52	7.08	288.38	11.42	NI	NI	NI	NI	302.55	10.55	NI	NI	NI	NI	NI	NI	NI	NI	317.57	32.43	NI	NI
12/16/02	280.13	6.37	NI	--	290.51	5.09	292.22	7.58	NI	NI	NI	NI	305.28	7.82	NI	NI	NI	NI	NI	NI	NI	NI	318.72	31.28	NI	NI
06/09/03	278.90	7.60	NI	--	290.04	5.56	288.21	11.59	NI	NI	NI	NI	301.45	11.65	NI	NI	NI	NI	NI	NI	NI	NI	317.81	32.19	NI	NI
12/08/03	278.49	8.01	NI	--	289.82	5.78	288.06	11.74	NI	NI	NI	NI	310.00	3.10	NI	NI	NI	NI	NI	NI	NI	NI	319.84	30.16	NI	NI
06/28/04	276.34	10.16	NM	--	290.00	5.60	287.15	12.65	275.79	15.60	297.73	20.48	300.87	12.23	349.02	12.45	NI	NI	NI	NI	318.70	27.86	319.37	30.63	313.74	25.68
12/20/04	275.48	11.02	NM	--	289.78	5.82	288.18	11.62	276.89	14.50	299.55	18.66	301.72	11.38	334.52	26.95	NI	NI	NI	NI	318.98	27.58	321.02	28.98	319.78	19.64
06/06/05	280.35	6.15	NM	--	289.87	5.73	287.31	12.49	275.79	15.60	297.82	20.39	300.74	12.36	349.62	11.85	NI	NI	NI	NI	320.93	25.63	321.07	28.93	320.42	19.00
12/05/05	274.26	12.24	NM	--	289.94	5.66	287.72	12.08	275.59	15.80	299.17	19.04	300.09	13.01	346.25	15.22	NI	NI	NI	NI	319.65	26.91	320.75	29.25	317.42	22.00
06/05/06	277.45	9.05	NM	--	291.10	4.50	287.45	12.35	275.81	15.58	298.91	19.30	300.51	12.59	347.47	14.00	NI	NI	NI	NI	319.74	26.82	318.85	31.15	317.89	21.53
12/04/06	279.40	7.10	NM	--	290.02	5.58	288.80	11.00	277.18	14.21	300.86	17.35	301.80	11.30	349.22	12.25	NI	NI	NI	NI	319.56	27.00	319.30	30.70	317.42	22.00
05/30/07	279.38	7.12	NM	--	291.00	4.60	289.89	9.91	278.59	12.80	300.48	17.73	303.60	9.50	348.47	13.00	NI	NI	NI	NI	320.18	26.38	318.56	31.44	319.08	20.34
11/19/07	273.92	--	NM	--	292.72	--	287.60	--	276.62	--	298.07	--	302.37	--	343.35	--	NI	NI	NI	NI	319.20	--	318.91	--	316.28	--
05/19/08	282.10	--	281.76	3.43	293.41	--	291.72	--	280.04	--	302.98	--	304.87	--	349.36	--	NI	NI	NI	NI	319.85	--	317.82	--	317.18	--
11/19/08	280.36	--	281.55	3.64	293.30	--	291.25	--	279.42	--	302.46	--	304.58	--	346.98	--	277.32	--	NI	NI	319.64	--	318.31	--	317.07	--
06/30/09	279.07	--	280.11	5.08	292.11	--	290.00	--	278.45	--	300.40	--	303.39	--	347.71	--	276.86	--	NI	NI	321.11	--	317.77	--	318.08	--
11/30/09	279.48	--	281.70	--	292.34	--	290.15	--	278.89	--	301.66	--	303.85	--	346.84	--	276.07	--	NI	NI	319.33	--	317.49	--	315.67	--
05/20/10	281.47	--	281.76	--	292.51	--	290.12	--	279.20	--	301.44	--	304.11	--	351.95	--	276.16	--	NI	NI	321.12	--	317.76	--	317.98	--
11/19/10	276.43	--	281.08	--	292.00	--	289.31	--	277.35	--	300.31	--	305.37	--	344.38	--	275.74	--	274.74	--	320.28	--	317.80	--	316.40	--
05/19/11	281.17	--	281.92	--	292.18	--	290.16	--	278.81	--	301.45	--	303.26	--	347.10	--	276.00	--	276.56	--	320.70	--	316.38	--	316.07	--
11/28/11	276.20	9.45	281.31	3.88	292.00	2.48	289.35	9.21	277.62	12.89	300.52	16.60	302.05	9.91	342.60	17.98	275.57	7.24	275.82	7.74	320.87	26.03	317.36	31.97	315.10	23.72
05/22/12	279.43	6.22	280.67	4.52	291.77	2.71	289.61	8.95	278.00	12.51	299.94	17.18	302.02	9.94	344.45	16.13	275.95	6.86	275.59	7.97	320.92	25.98	316.14	33.19	315.09	23.73
11/26/12	277.80	7.85	281.35	3.84	291.59	2.89	289.67	8.89	277.39	13.12	299.51	17.61	301.99	9.97	341.99	18.59	275.47	7.34	274.88	8.68	320.39	26.51	317.04	32.29	314.83	23.99
05/21/13	282.29	3.36	281.72	3.47	292.39	2.09	290.76	7.8	278.63	11.88	301.86	15.26	304.19	7.77	348.06	12.52	276.92	5.89	277.15	6.41	320.78	26.12	315.93	33.40	315.56	23.26
11/06/13	278.10	7.55	281.27	3.92	291.88	2.60	NM	NM	277.42	13.09	299.66	17.46	301.68	10.28	343.84	16.74	275.58	7.23	NM	NM	321.14	25.76	317.23	32.10	315.61	23.21
05/21/14	281.43	4.22	281.39	3.8	292.17	2.31	290.30	9.96	279.37	11.14	301.42	15.70	303.60	8.36	350.99	9.59	275.92	6.89	271.36	12.2	321.28	25.62	316.61	32.72	317.28	21.54
11/24/14	278.97	6.68	281.58	3.61	292.25	2.23	290.21	10.05	277.82	12.69	300.64	16.48	302.44	9.52	344.70	15.88	NM	NM	275.09	8.47	321.76	25.14	318.36	30.97	316.57	22.25
MEAN	278.44	8.30	281.35	3.97	290.97	4.83	289.28	10.60	277.76	13.97	300.31	18.09	302.79	10.48	217.56	15.64	176.69	6.91	275.15	7.70	320.28	26.55	318.53	30.99	316.84	22.34
MAXIMUM	282.29	12.24	281.92	5.08	293.41	7.08	298.43	14.01	280.04	15.80	302.98	20.48	310.00	13.78	351.95	26.95	277.32	7.34	277.15	8.68	321.76	27.86	322.40	33.40	320.42	25.68
MINIMUM	273.92	3.36	280.11	3.43	288.52	2.09	285.79	1.37	275.59	11.88	297.73	15.26	299.32	3.10	334.52	11.85	275.47	5.89	271.36	6.41	318.70	25.63	315.93	28.71	313.74	19.00

Notes:
ft AMSL = feet above mean sea level
NA = not applicable
NM = not measured
TOC = top of well casing
NI = not installed
TOC elevations were surveyed by SEPI Engineering in September 2009.
MW-5 was damaged prior to the November 2013 event and a water level was not able to measured during the event.
MW-5 was resurveyed by Dewberry Engineers Inc. on May 27, 2014, after being repaired on March 5, 2014.

TABLE 2

Summary of Estimated Horizontal Flow Velocities
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

November 2014							
Gradient Calculation Segment	**Flow Direction**	**Gradient Segment Length (feet)**	**Gradient Segment Elevations (feet)**	**Horizontal Gradient (i, feet)**	**Effective Porosity (n_e)**	**Hydraulic Conductivity (K, cm/sec)**	**Velocity (V_{gw}, feet/year)**
i_1	NW	1360	320 / 280	0.0294	0.2	8.87E-04	134.94
i_2	W	1882	320 / 280	0.0213	0.2	8.87E-04	97.51
i_3	SW	1466	320 / 290	0.0205	0.2	8.87E-04	93.90

Notes:

Horizontal velocities based on the modified Darcy equation $V_{gw} = Ki/n_e$.

Values for K and n_e based on estimates from Malcolm Pirnie, Inc.'s *City of Durham Municipal Solid Waste Landfill December 1998 Groundwater Monitoring Letter Report dated January 29, 1999 and Weston Solutions, Inc.'s December 2005 Semiannual Event--Closed Durham City Landfill*

TABLE 3

Summary of Well Construction Information
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Well Identification	Northing	Easting	Date of Construction	Ground Surface Elevation (ft AMSL)	TOC Elevation (ft AMSL)	Well Depth (feet)	Well Diameter (inches)	Screened Interval (ft AMSL)	Geology of Screened Interval	Well Type
MW-2	831828.02	2042303.29	04/19/85	283.69	285.65	19.62	2	264.07 - 274.07	--	Compliance Well
MW-3R	830508.02	2041431.79	--	282.18	285.19	17.65	2	264.53 - 274.53	--	Compliance Well
MW-4R	829624.77	2042330.46	06/30/99	291.91	294.48	17.39	2	274.52 - 284.52	Partially Weathered Rock	Compliance Well
MW-5	832230.50	2043386.22	08/17/94	296.67	300.26	21.77	2	275.39 - 285.39	Partially Weathered Rock	Compliance Well
MW-6R	830895.64	2041339.55	06/10/04	287.62	290.51	26.72	2	260.90 - 270.90	Regolith	Water Level Only
MW-7R	831775.12	2043783.06	06/10/04	314.60	317.12	44.01	2	270.59 - 295.59	Partially Weathered Rock/bedrock	Water Level Only
MW-8	829821.92	2043599.54	09/18/94	308.24	311.96	16.52	2	291.72 - 299.22	Regolith	Water Level Only
MW-9R	830702.99	2043834.41	06/10/04	358.03	360.58	22.55	2	335.48 - 345.48	Regolith	Compliance Well
MW-10	830933.88	2041289.17	08/20/08	280.75	282.81	16.61	2	264.14 - 274.14	Regolith	Water Level Only
NES-3	830895.64	2041197.18	07/31/09	280.69	283.56	12.35	2	268.34 - 273.34	Regolith	Compliance Well
P-2R	831136.44	2043506.78	06/10/04	343.12	345.90	34.59	2	308.53 - 318.53	Regolith/Partially Weathered Rock	Water Level Only
PZ-3	830581.61	2043460.99	12/18/93	345.71	349.33	42.40	2	303.31 - 318.31	Partially Weathered Rock	Water Level Only
PZ-4R	830318.99	2043456.93	06/08/04	335.85	338.82	38.38	2	297.47 - 312.47	Partially Weathered Rock	Water Level Only
PZ-6	831072.37	2043873.16	02/21/94	346.79	349.21	61.50	2	285.29 - 305.29	Partially Weathered Rock	Water Level Only

Notes:
ft AMSL = feet above mean sea level
TOC = top of well casing elevation
TOC and Ground Surface Elevation surveyed for all wells by SEPI Engineering in September 2009.
Screened Interval is approximate, based on field measurements by S&ME in May 2008.
MW-5 was resurveyed by Dewberry Engineers Inc. on May 27, 2014, after being repaired on March 5, 2014.
-- = not available

TABLE 4

Summary of Detected Constituents in Groundwater
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient					Downgradient						Blanks
					PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3	
Antimony	ug/L	09/19/94	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
SWS GPS = 1 ug/L	ug/L	12/02/94	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
EPA MCL = 6 ug/L	ug/L	02/07/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/13/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/01/95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	06/10/96	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/12/96	--	5	ND	ND	--	ND	--	**6**	--	--	ND	--	--	--
	ug/L	03/18/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	07/08/99	--	5	--	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	12/15/99	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/27/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/04/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/03/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/29/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/20/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/05	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/05	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	05/30/07	0.58	6	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.22	6	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.22	6	--	--	ND	ND	ND	ND	0.26	ND	ND	--	--	ND
	ug/L	11/19/08	0.29	6	--	--	0.53 B	0.54 B	0.51 B	0.59 B	0.68 B	0.65 B	0.53 B	0.59 B	-- J	0.53 J
	ug/L	06/30/09	0.68	6	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/30/09	0.073	6	--	--	ND	0.365 J	ND	ND	0.196 J	ND	ND	ND	--	ND
	ug/L	05/20/10	0.22	6	--	--	ND	**1.42 J**	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/19/10	0.22	6	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	0.22	6	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	0.220	6	--	--	--	--	ND	0.269 J	0.277 J	0.635 J	ND	ND	--	ND
	ug/L	05/23/12	--	6	--	--	--	--	ND	0.542 J	**1.37 J**	0.224 J	ND	ND	--	ND
	ug/L	11/26/12	0.220	6	--	--	--	--	ND	ND	0.508 J	ND	ND	ND	--	ND
	ug/L	05/21/13	0.220	6	--	--	--	--	ND	0.289 J	0.310 J	ND	ND	ND	--	ND
	ug/L	11/06/13	0.220	6	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	0.220	6	--	--	--	--	ND	ND	0.233 B	ND	ND	ND	ND	0.475 J
	ug/L	11/24/14	0.220	6	--	--	--	--	ND	0.357 J	0.324 J	0.224 J	0.357 J	--	ND	ND
Arsenic	ug/L	09/19/94	--	5	**11**	ND	--	ND	--	ND	--	--	ND	--	--	--
NC 2L = 10 ug/L	ug/L	12/02/94	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
EPA MCL = 10 ug/L	ug/L	02/07/95	--	5	9.1	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/13/95	--	5	ND	ND	--	ND	--	ND	--	--	8.2	--	--	--
	ug/L	11/01/95	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/10/96	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/12/96	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/18/97	--	5	5	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	5	5	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	5	6	ND	--	--	--	ND	--	--	ND	--	--	--
	ug/L	07/08/99	--	5	--	--	--	ND	--	--	--	5	--	--	--	--
	ug/L	12/15/99	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	5	6	ND	--	ND	--	ND	--	ND	7	--	--	--
	ug/L	12/27/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/04/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/03/01	--	5	ND	ND	--	ND	--	ND	--	ND	6	--	--	--
	ug/L	06/10/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	6	--	--	--
	ug/L	06/29/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/20/04	--	5	ND	--	ND	ND	--	ND	--	ND	7	--	--	--
	ug/L	06/05/05	--	5	ND	--	6	ND	--	ND	--	ND	6	--	--	--
	ug/L	12/05/05	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	7	--	--	--
	ug/L	12/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	6	--	--	--
	ug/L	05/30/07	2	10	ND	--	2.0 B	3.1 B	--	ND	--	ND	3.4 B	--	--	3.8 J
	ug/L	11/19/07	0.15	10	2.3	--	4.8	1.2	--	0.46	--	0.69	4.4	--	--	0.89
	ug/L	05/19/08	0.15	10	--	--	0.72	ND	ND	ND	2.7	ND	1.9	--	--	ND
	ug/L	11/19/08	0.22	10	--	--	1.7 J	1.3 J	0.26 J	0.59 J	5.9 J	1.2 J	4.4 J	3.7 J	--	ND
	ug/L	06/30/09	2.8	10	--	--	4.4 B	ND	ND	ND	6.2 B	8.2 B	4.9 B	ND	--	4.3 J
	ug/L	11/30/09	2.8	10	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/20/10	2.8	10	--	--	ND	ND	ND	ND	ND	ND	5.98 B	ND	--	3.22 J
	ug/L	11/19/10	2.8	10	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	2.8	10	--	--	--	--	ND	ND	ND	ND	ND	5.23 J	--	ND
	ug/L	11/28/11	2.80	10	--	--	--	--	4.99 B	ND	2.99 B	ND	3.24 B	ND	--	4.35 J
	ug/L	05/23/12	--	10	--	--	--	--	ND	ND	ND	ND	7.51 J	ND	--	ND
	ug/L	11/26/12	2.80	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	5.40	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	5.40	10	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	5.40	10	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	11/24/14	5.40	10	--	--	--	--	ND	7.34 J	ND	6.64 J	ND	--	5.80 J	ND
Barium	ug/L	09/19/94	--	--	**1834**	113	--	**2115**	--	199	--	--	**9400**	--	--	--
NC 2L= 700 ug/L	ug/L	12/02/94	--	--	**760**	**1775**	--	119	--	32	--	--	**2300**	--	--	--
EPA MCL = 2000 ug/L	ug/L	02/07/95	--	--	**2648**	**1484**	--	111	--	48	--	--	**2436**	--	--	--
	ug/L	03/13/95	--	--	524	**716**	--	118	--	37	--	--	**1630**	--	--	--
	ug/L	11/01/95	--	--	**970**	**770**	--	120	--	25	--	--	**3360**	--	--	--
	ug/L	06/10/96	--	--	**891**	459	--	123	--	50	--	--	**992**	--	--	--
	ug/L	11/12/96	--	--	**1555**	512	--	84	--	47	--	--	**976**	--	--	--
	ug/L	03/18/97	--	--	**850**	509	--	138	--	70	--	--	**1154**	--	--	--
	ug/L	10/02/97	--	--	**840**	558	--	312	--	48	--	--	**1250**	--	--	--
	ug/L	05/26/98	--	--	**779**	482	--	103	--	48	--	--	**1637**	--	--	--
	ug/L	12/01/98	--	--	**2390**	655	--	118	--	45	--	--	**867**	--	--	--
	ug/L	06/07/99	--	--	**1850**	**2780**	--	373	--	106	--	--	**996**	--	--	--
	ug/L	07/08/99	--	--	--	--	--	--	--	--	--	**1217**	--	--	--	--
	ug/L	12/15/99	--	--	**944**	366	--	116	--	84	--	315	**942**	--	--	--
	ug/L	06/06/00	--	--	**2488**	**1018**	--	114	--	46	--	377	**3979**	--	--	--
	ug/L	12/27/00	--	--	**1826**	518	--	104	--	144	--	**1120**	**5757**	--	--	--
	ug/L	06/04/01	--	--	**2804**	**862**	--	475	--	128	--	**964**	**3649**	--	--	--
	ug/L	12/03/01	--	--	**965**	**750**	--	**778**	--	153	--	**1053**	**1441**	--	--	--
	ug/L	06/10/02	--	--	**849**	554	--	**843**	--	53	--	**943**	**1167**	--	--	--
	ug/L	12/16/02	--	--	620	429	--	209	--	59	--	544	**909**	--	--	--
	ug/L	06/09/03	--	--	432	450	--	120	--	67	--	437	**941**	--	--	--
	ug/L	12/08/03	--	--	**2881**	648	--	141	--	85	--	544	**3692**	--	--	--
	ug/L	06/29/04	--	--	**5664**	--	**763**	139	--	97	--	551	**1899**	--	--	--
	ug/L	12/20/04	--	--	578	--	639	111	--	90	--	543	**4192**	--	--	--
	ug/L	06/05/05	--	--	**952**	--	**817**	93	--	64	--	607	**1845**	--	--	--
	ug/L	12/05/05	--	--	435	--	**703**	92	--	126	--	585	**1758**	--	--	--
	ug/L	06/05/06	--	--	575	--	**880**	90	--	97	--	**796**	**3778**	--	--	--
	ug/L	12/05/06	--	--	635	--	**924**	71	--	63	--	**890**	**3134**	--	--	--
	ug/L	05/30/07	0.2	100	619	--	622	69.0 J	--	67.2 J	--	472	**1240**	--	--	ND
	ug/L	11/19/07	1	100	**1300**	--	**820**	300	--	120	--	510	**1400**	--	--	ND
	ug/L	05/19/08	1	100	--	--	600	33	55 J	66	530	580	**1300**	--	--	ND
	ug/L	11/19/08	1.1	100	--	--	580	64 J	38 J	82 J	380	510	**1400**	250	--	ND
	ug/L	06/30/09	4.2	100	--	--	618	106	51.2 J	80.8 J	440	552	**1590**	341	--	ND
	ug/L	11/30/09	1	100	--	--	580	39.4 J	45.8 J	58 J	80.8 J	513	**1450**	168	--	ND
	ug/L	05/20/10	1	100	--	--	578	41.5 J	45.1 J	64.7 J	166	564	**1460**	122	--	ND
	ug/L	11/19/10	1	100	--	--	572	56.1 J	53.3 J	114	102	485	**1500**	238	--	ND
	ug/L	05/19/11	1	100	--	--	--	--	53.1 J	83 J	116	562	**1860**	248	--	1.14 J
	ug/L	11/28/11	1.00	100	--	--	--	--	80.4 J	195	130	540	**1870**	268	--	ND
	ug/L	05/23/12	--	100	--	--	--	--	50.6 J	82.2 J	212	577	**1920**	664	--	ND
	ug/L	11/26/12	1.00	100	--	--	--	--	78.1 J	207	164	553	**1710**	**738**	--	1.14 J
	ug/L	05/21/13	1.00	100	--	--	--	--	49.4 J	84.5 J	228	572	**1960**	221	--	ND
	ug/L	11/06/13	1.00	100	--	--	--	--	42.9 J	187	247	481	--	**754**	--	ND
	ug/L	05/21/14	1.00	100	--	--	--	--	44.4 J	73.6 J	265	560	**1880**	336	101	ND
	ug/L	11/24/14	1.00	100	--	--	--	--	44.3 J	224	175	543	**1910**	--	148	ND

TABLE 4

Summary of Detected Constituents in Groundwater
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient					Downgradient						Blanks
					PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3	
Beryllium	ug/L	09/19/94	--	1	**8.1**	ND	--	**7.3**	--	1.5	--	--	**9.8**	--	--	--
SWS GPS = 4 ug/L	ug/L	12/02/94	--	1	3.1	3.9	--	ND	--	ND	--	--	**5**	--	--	--
EPA MCL = 4 ug/L	ug/L	02/07/95	--	1	**8.6**	1.9	--	ND	--	ND	--	--	**4.7**	--	--	--
	ug/L	03/13/95	--	1	1.5	ND	--	ND	--	ND	--	--	**5.2**	--	--	--
	ug/L	11/01/95	--	1	**18**	ND	--	ND	--	ND	--	--	**8**	--	--	--
	ug/L	06/10/96	--	1	3	ND	--	ND	--	1.5	--	--	ND	--	--	--
	ug/L	11/12/96	--	1	**5**	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/18/97	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	1	1.5	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	1	1	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	1	2	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	1	**5**	4	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	07/08/99	--	1	--	--	--	--	--	--	--	2	--	--	--	--
	ug/L	12/15/99	--	1	2	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	1	**7**	2	--	ND	--	ND	--	ND	**5**	--	--	--
	ug/L	12/27/00	--	1	2	ND	--	ND	--	ND	--	ND	**8**	--	--	--
	ug/L	06/04/01	--	1	4	ND	--	ND	--	ND	--	ND	2	--	--	--
	ug/L	12/03/01	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	1	2	ND	--	ND	--	ND	--	ND	2	--	--	--
	ug/L	06/29/04	--	1	2	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/20/04	--	1	ND	--	ND	ND	--	ND	--	ND	2	--	--	--
	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	2	--	--	--
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	1	--	--	--
	ug/L	05/30/07	0.7	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.24	1	3.1	--	0.79	0.93	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.24	1	--	--	ND	ND	0.38 J	ND	0.25	ND	ND	--	--	ND
	ug/L	11/19/08	0.28	1	--	--	0.3 J	0.37 J	0.73 J	0.73 J	ND	ND	0.34 J	ND	--	ND
	ug/L	06/30/09	0.08	1	--	--	ND	ND	0.47 J	0.11 J	ND	0.13 J	ND	0.46 J	--	ND
	ug/L	11/30/09	0.1	1	--	--	ND	ND	0.534 B	0.182 B	ND	ND	ND	0.131 B	--	0.121 J
	ug/L	05/20/10	0.1	1	--	--	ND	ND	0.521 J	0.21 J	ND	ND	ND	ND	--	ND
	ug/L	11/19/10	0.1	1	--	--	ND	ND	0.608 J	0.191 J	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	0.1	1	--	--	--	--	0.549 J	0.242 J	ND	ND	ND	0.14 J	--	ND
	ug/L	11/28/11	0.100	1	--	--	--	--	0.770 J	0.204 J	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	1	--	--	--	--	0.456 J	0.214 J	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.100	1	--	--	--	--	0.837 J	0.230 J	ND	ND	ND	0.181 J	--	ND
	ug/L	05/21/13	0.100	1	--	--	--	--	0.444 J	0.255 J	ND	ND	ND	0.246 J	--	ND
	ug/L	11/06/13	0.100	1	--	--	--	--	0.464 J	0.229 J	ND	ND	--	ND	--	ND
	ug/L	05/21/14	0.100	1	--	--	--	--	0.494 J	0.173 J	ND	ND	ND	0.199 J	ND	ND
	ug/L	11/24/14	0.100	1	--	--	--	--	0.384 J	0.136 J	ND	ND	ND	--	ND	ND
Cadmium	ug/L	09/19/94	--	1	ND	ND	--	ND	--	ND	--	--	1.6	--	--	--
NC 2L =2 ug/L	ug/L	12/02/94	--	1	ND	ND	--	ND	--	1	--	--	ND	--	--	--
EPA MCL = 5 ug/L	ug/L	02/07/95	--	1	**2.2**	**32**	--	ND	--	ND	--	--	1.6	--	--	--
	ug/L	03/13/95	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/01/95	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/10/96	--	1	ND	ND	--	ND	--	1.8	--	--	ND	--	--	--
	ug/L	11/12/96	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/18/97	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	1	ND	ND	--	ND	--	ND	--	--	**3**	--	--	--
	ug/L	07/08/99	--	1	--	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	12/15/99	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	1	ND	ND	--	ND	--	ND	--	ND	1	--	--	--
	ug/L	12/27/00	--	1	ND	ND	--	ND	--	ND	--	ND	1	--	--	--
	ug/L	06/04/01	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/03/01	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	1	ND	ND	--	ND	--	**7**	--	ND	**2**	--	--	--
	ug/L	12/16/02	--	1	ND	ND	--	ND	--	1	--	ND	ND	--	--	--
	ug/L	06/09/03	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/29/04	--	1	1	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/20/04	--	1	1	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	05/30/07	0.5	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.24	1	0.93	--	0.34	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.24	1	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.15	1	--	--	0.29 B	0.31 B	0.29 B	0.49 B	0.34 B	0.4 B	0.28 B	0.32 B	--	0.28 J
	ug/L	06/30/09	0.09	1	--	--	ND	ND	ND	ND	0.12 B	ND	0.13 B	0.26 B	--	0.22 J
	ug/L	11/30/09	0.36	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/20/10	0.36	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/19/10	0.36	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	0.36	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	0.360	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.360	1	--	--	--	--	0.506 J	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	0.360	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	0.360	1	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	0.360	1	--	--	--	--	0.614 J	ND	ND	ND	0.905 J	0.361 J	ND	ND
	ug/L	11/24/14	0.360	1	--	--	--	--	ND	0.490 J	ND	ND	ND	--	ND	ND
Chromium	ug/L	09/19/94	--	5	**207**	**12**	--	**139**	--	**25**	--	--	**699**	--	--	--
NC 2L = 10 ug/L	ug/L	12/02/94	--	5	**71**	**95**	--	9.7	--	ND	--	--	**142**	--	--	--
EPA MCL = 100 ug/L	ug/L	02/07/95	--	5	**271**	**45**	--	8.3	--	ND	--	--	**128**	--	--	--
	ug/L	03/13/95	--	5	5.8	**14**	--	**13**	--	ND	--	--	**36**	--	--	--
	ug/L	11/01/95	--	5	**40**	7	--	6	--	ND	--	--	**129**	--	--	--
	ug/L	06/10/96	--	5	**65**	ND	--	ND	--	ND	--	--	**12**	--	--	--
	ug/L	11/12/96	--	5	**133**	**10**	--	9	--	ND	--	--	**19**	--	--	--
	ug/L	03/18/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	5	**65**	7	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	5	**37**	5	--	ND	--	ND	--	--	6	--	--	--
	ug/L	12/01/98	--	5	**176**	9	--	**11**	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	5	**46**	**35**	--	ND	--	ND	--	--	7	--	--	--
	ug/L	07/08/99	--	5	--	--	--	--	--	--	--	**108**	--	--	--	--
	ug/L	12/15/99	--	5	**121**	5	--	5	--	5	--	5	5	--	--	--
	ug/L	06/06/00	--	5	**297**	**33**	--	5	--	5	--	5	7	--	--	--
	ug/L	12/27/00	--	5	**102**	ND	--	ND	--	7	--	ND	**150**	--	--	--
	ug/L	06/04/01	--	5	**41**	**25**	--	**13**	--	ND	--	ND	ND	--	--	--
	ug/L	12/03/01	--	5	**54**	**16**	--	ND	--	ND	--	ND	**24**	--	--	--
	ug/L	06/10/02	--	5	**21**	ND	--	6	--	ND	--	ND	7	--	--	--
	ug/L	12/16/02	--	5	**32**	5	--	**17**	--	ND	--	**30**	ND	--	--	--
	ug/L	06/09/03	--	5	**88**	7	--	10	--	5	--	9	ND	--	--	--
	ug/L	12/08/03	--	5	**89**	**19**	--	10	--	ND	--	**17**	**40**	--	--	--
	ug/L	06/29/04	--	5	**104**	--	**13**	**12**	--	**13**	--	ND	**16**	--	--	--
	ug/L	12/20/04	--	5	**11**	--	7	ND	--	6	--	ND	**67**	--	--	--
	ug/L	06/05/05	--	5	**32**	--	**18**	ND	--	ND	--	ND	**14**	--	--	--
	ug/L	12/05/05	--	5	ND	--	7	ND	--	5	--	5	**22**	--	--	--
	ug/L	06/05/06	--	5	**69**	--	9	ND	--	6	--	ND	**41**	--	--	--
	ug/L	12/05/06	--	5	9	--	ND	ND	--	ND	--	ND	5	--	--	--
	ug/L	05/30/07	2	10	7.0 J	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	2.3	10	**90**	--	**18**	**20**	--	4.7	--	2.3	8.8	--	--	ND
	ug/L	05/19/08	2.3	10	--	--	ND	ND	ND	ND	2.4 J	ND	ND	--	--	ND
	ug/L	11/19/08	2	10	--	--	ND	2.3 J	ND	ND	3.0 J	2.5 J	ND	6.3 J	--	ND
	ug/L	06/30/09	0.7	10	--	--	1.2 J	0.7 J	0.7 J	1.4 J	1.2 J	0.7 J	1.3 J	6.1 J	--	ND
	ug/L	11/30/09	1	10	--	--	2.12 J	ND	1.21 J	ND	1.45 J	ND	ND	1.02 J	--	ND
	ug/L	05/20/10	1	10	--	--	ND	1.72 J	ND	ND	1.64 J	ND	ND	2.07 J	--	ND
	ug/L	11/19/10	1	10	--	--	3.28 J	ND	5.65 J	2.27 J	1.47 J	ND	ND	2.62 J	--	ND
	ug/L	05/19/11	1	10	--	--	--	--	1.3 J	8.21 J	4.85 J	1.37 J	1.29 J	4.17 J	--	ND
	ug/L	11/28/11	1.00	10	--	--	--	--	7.67 J	4.88 J	3.02 J	ND	1.27 J	ND	--	ND
	ug/L	05/23/12	--	10	--	--	--	--	2.09 J	5.55 J	4.28 J	1.51 J	1.86 J	2.76 J	--	ND
	ug/L	11/26/12	1.00	10	--	--	--	--	8.65 J	2.56 J	2.03 J	ND	ND	1.45 J	--	ND
	ug/L	05/21/13	1.40	10	--	--	--	--	2.35 J	6.43 J	ND	ND	ND	4.36 J	--	ND
	ug/L	11/06/13	1.40	10	--	--	--	--	ND	2.42 J	4.05 J	1.72 J	--	ND	--	ND
	ug/L	05/21/14	1.40	10	--	--	--	--	2.03 J	1.49 J	4.33 J	ND	ND	3.44 J	1.88 J	ND
	ug/L	11/24/14	1.40	10	--	--	--	--	2.36 J	ND	2.35 J	ND	ND	--	4.70 J	ND

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City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient					Downgradient						Blanks
					PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3	
Cobalt	ug/L	09/19/94	--	--	--	ND	--	32	--	ND	--	--	89	--	--	--
SWS GPS = 1 ug/L	ug/L	12/02/94	--	--	ND	11	--	ND	--	ND	--	--	39	--	--	--
No EPA MCL	ug/L	02/07/95	--	--	30	14	--	ND	--	ND	--	--	23	--	--	--
	ug/L	03/13/95	--	--	--	12	--	ND	--	ND	--	--	18	--	--	--
	ug/L	11/01/95	--	10	12	ND	--	ND	--	ND	--	--	47	--	--	--
	ug/L	06/10/96	--	10	ND	ND	--	12	--	ND	--	--	ND	--	--	--
	ug/L	11/12/96	--	10	34	ND	--	13	--	ND	--	--	ND	--	--	--
	ug/L	03/18/97	--	10	16	ND	--	16	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	10	20.6	ND	--	21.5	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	10	45	ND	--	15	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	25	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	10	34	55	--	14	--	ND	--	--	ND	--	--	--
	ug/L	07/08/99	--	10	--	--	--	--	--	--	--	29	--	--	--	--
	ug/L	12/15/99	--	10	16	ND	--	14	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	10	32	ND	--	14	--	ND	--	ND	76	--	--	--
	ug/L	12/27/00	--	10	ND	ND	--	19	--	ND	--	ND	150	--	--	--
	ug/L	06/04/01	--	10	50	ND	--	13	--	ND	--	ND	60	--	--	--
	ug/L	12/03/01	--	10	33	26	--	17	--	ND	--	ND	11	--	--	--
	ug/L	06/10/02	--	10	16	12	--	20	--	ND	--	ND	14	--	--	--
	ug/L	12/16/02	--	10	14	ND	--	25	--	ND	--	11	ND	--	--	--
	ug/L	06/09/03	--	10	ND	ND	--	16	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	10	87	ND	--	16	--	ND	--	ND	65	--	--	--
	ug/L	06/29/04	--	10	91	--	ND	26	--	ND	--	ND	ND	--	--	--
	ug/L	12/20/04	--	5	7.4	--	ND	20	--	ND	--	ND	47	--	--	--
	ug/L	06/05/05	--	--	--	--	--	--	--	ND	--	--	--	--	--	--
	ug/L	12/05/05	--	--	--	--	--	--	--	ND	--	--	--	--	--	--
	ug/L	06/05/06	--	--	--	--	--	--	--	ND	--	--	--	--	--	--
	ug/L	12/05/06	--	--	--	--	--	--	--	ND	--	--	--	--	--	--
	ug/L	05/30/07	2	10	3.2 J	--	ND	11.2	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	1.1	10	16	--	7 J	21	--	2.3 J	--	2 J	2.5 J	--	--	ND
	ug/L	05/19/08	1.1	10	--	--	ND	2.6 J	5.1 J	ND	7.3	ND	ND	--	--	ND
	ug/L	11/19/08	1.1	10	--	--	ND	7.8 J	5.0 J	ND	4.7 J	ND	ND	16	--	ND
	ug/L	06/30/09	0.6	10	--	--	ND	5.7 J	5.9 J	0.7 J	6.7 J	0.8 J	ND	21.7	--	ND
	ug/L	11/30/09	1.1	10	--	--	ND	4.28 J	5.43 J	ND	1.95 J	ND	ND	8.89 J	--	ND
	ug/L	05/20/10	1.1	10	--	--	ND	6.01 J	5.75 J	ND	4.42 J	ND	ND	3.89 J	--	ND
	ug/L	11/19/10	1.1	10	--	--	ND	4.41 J	6.12 J	ND	2.5 J	ND	ND	8.05 J	--	ND
	ug/L	05/19/11	1.1	10	--	--	--	--	6.93 J	ND	1.7 J	ND	ND	5.31 J	--	ND
	ug/L	11/28/11	1.10	10	--	--	--	--	7.63 J	ND	2.74 J	ND	ND	5.64 J	--	ND
	ug/L	05/23/12	--	10	--	--	--	--	5.64 J	1.18 J	4.70 J	1.24 J	ND	4.63 J	--	ND
	ug/L	11/26/12	1.10	10	--	--	--	--	6.61 J	ND	2.88 J	ND	ND	6.42 J	--	ND
	ug/L	05/21/13	1.10	10	--	--	--	--	5.19 J	ND	3.16 J	ND	ND	ND	--	ND
	ug/L	11/06/13	1.10	10	--	--	--	--	5.27 B	1.30 B	5.05 B	ND	--	8.49 J	--	1.11 J
	ug/L	05/21/14	1.10	10	--	--	--	--	6.10 J	ND	6.05 J	ND	ND	2.36 J	5.57 J	ND
	ug/L	11/24/14	1.10	10	--	--	--	--	6.25 J	ND	1.89 J	ND	ND	--	10.5	ND
Copper	ug/L	09/19/94	--	5	109	ND	--	73	--	7	--	--	598	--	--	--
NC 2L = 1000 ug/L	ug/L	12/02/94	--	5	44	43	--	7.3	--	ND	--	--	113	--	--	--
EPA MCL = 1300 ug/L[E]	ug/L	02/07/95	--	5	150	50	--	5.2	--	ND	--	--	75	--	--	--
	ug/L	03/13/95	--	5	17	11	--	6.8	--	ND	--	--	58	--	--	--
	ug/L	11/01/95	--	5	20	7	--	ND	--	ND	--	--	145	--	--	--
	ug/L	06/10/96	--	5	62	ND	--	ND	--	ND	--	--	8.7	--	--	--
	ug/L	11/12/96	--	5	73	ND	--	ND	--	ND	--	--	10	--	--	--
	ug/L	03/18/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	5	27	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	5	30	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	5	60	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	5	69	43	--	ND	--	ND	--	--	10	--	--	--
	ug/L	07/08/99	--	5	--	--	--	--	--	--	--	89	--	--	--	--
	ug/L	12/15/99	--	5	30	5	--	5	--	5	--	5	6	--	--	--
	ug/L	06/06/00	--	5	101	17	--	5	--	5	--	5	--	--	--	--
	ug/L	12/27/00	--	5	48	ND	--	ND	--	5	--	5	34	--	--	--
	ug/L	06/04/01	--	5	95	ND	--	ND	--	ND	--	ND	28	--	--	--
	ug/L	12/03/01	--	5	28	14	--	ND	--	ND	--	ND	15	--	--	--
	ug/L	06/10/02	--	5	30	5	--	7	--	ND	--	ND	20	--	--	--
	ug/L	12/16/02	--	5	16	10	--	23	--	ND	--	20	16	--	--	--
	ug/L	06/09/03	--	5	52	5	--	8	--	ND	--	ND	14	--	--	--
	ug/L	12/08/03	--	5	92	6	--	7	--	ND	--	6	26	--	--	--
	ug/L	06/29/04	--	5	211	--	12	5	--	5	--	ND	--	--	--	--
	ug/L	12/20/04	--	5	7	--	ND	6	--	ND	--	ND	--	--	--	--
	ug/L	06/05/05	--	2	28	--	11	ND	--	ND	--	ND	--	--	--	--
	ug/L	12/05/05	--	2	ND	--	ND	ND	--	4	--	4	--	--	--	--
	ug/L	06/05/06	--	2	6	--	7	4	--	3	--	3	--	--	--	--
	ug/L	12/05/06	--	2	4	--	ND	ND	--	ND	--	ND	--	--	--	--
	ug/L	05/30/07	0.6	10	7.2 J	--	0.6 B	ND	--	1.1 B	--	1.7 B	ND	--	--	0.7 J
	ug/L	11/19/07	0.45	10	50	--	7.2	17	--	2.1 B	--	1.1 B	4 B	--	--	1.1
	ug/L	05/19/08	0.45	10	--	--	1.3 B	1.8 B	2.4 B	1.8 B	7.3 B	4.6 B	1.7 B	--	--	5.7
	ug/L	11/19/08	0.48	10	--	--	1.2 B	2.6 B	1.2 B	1.4 B	3.4 B	1.5 B	1.3 B	3.7 B	--	1.1 J
	ug/L	06/30/09	0.81	10	--	--	ND	ND	1.14 B	ND	ND	ND	ND	1.33 B	--	2.36 J
	ug/L	11/30/09	1.6	10	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/20/10	1.6	10	--	--	ND	ND	ND	ND	ND	ND	ND	11.5	--	ND
	ug/L	11/19/10	1.6	10	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	1.6	10	--	--	--	--	1.99 J	2.62 J	2.50 J	ND	ND	6.08 J	--	ND
	ug/L	11/28/11	1.60	10	--	--	--	--	5.69 J	2.95 J	ND	ND	ND	1.79 J	--	ND
	ug/L	05/23/12	--	10	--	--	--	--	1.76 J	2.12 J	ND	3.91 J	ND	ND	--	ND
	ug/L	11/26/12	1.60	10	--	--	--	--	3.48 J	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	1.60	10	--	--	--	--	ND	2.35 J	ND	ND	ND	12.0	--	ND
	ug/L	11/06/13	1.60	10	--	--	--	--	ND	4.59 J	ND	ND	--	ND	--	ND
	ug/L	05/21/14	1.60	10	--	--	--	--	ND	2.03 J	1.64 J	ND	ND	6.82 J	1.63 J	ND
	ug/L	11/24/14	1.60	10	--	--	--	--	ND	1.68 J	ND	ND	ND	--	ND	ND
Lead	ug/L	09/19/94	--	5	40	8.8	--	47	--	ND	--	--	199	--	--	--
NC 2L = 15 ug/L	ug/L	12/02/94	--	5	30	53	--	10	--	14	--	--	77	--	--	--
EPA MCL = 15 ug/L	ug/L	02/07/95	--	5	76	34	--	12	--	7.8	--	--	63	--	--	--
	ug/L	03/13/95	--	5	11	14	--	63	--	ND	--	--	35	--	--	--
	ug/L	11/01/95	--	5	14	9	--	ND	--	ND	--	--	60	--	--	--
	ug/L	06/10/96	--	5	25	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/12/96	--	5	30	10	--	ND	--	ND	--	--	8	--	--	--
	ug/L	03/18/97	--	5	ND	10	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	5	16	22	--	7	--	ND	--	--	14	--	--	--
	ug/L	05/26/98	--	5	11	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	5	36	8	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	5	19	54	--	ND	--	ND	--	--	8	--	--	--
	ug/L	07/08/99	--	5	--	--	--	--	--	--	--	29	--	--	--	--
	ug/L	12/15/99	--	5	14	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	5	37	28	--	ND	--	ND	--	ND	16	--	--	--
	ug/L	12/27/00	--	5	20	ND	--	ND	--	10	--	ND	82	--	--	--
	ug/L	06/04/01	--	5	35	ND	--	ND	--	8	--	ND	68	--	--	--
	ug/L	12/03/01	--	5	23	30	--	ND	--	ND	--	ND	23	--	--	--
	ug/L	06/10/02	--	5	6	ND	--	ND	--	ND	--	ND	7	--	--	--
	ug/L	12/16/02	--	5	ND	5	--	12	--	5	--	8	ND	--	--	--
	ug/L	06/09/03	--	5	ND	8	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	5	35	8	--	ND	--	ND	--	ND	47	--	--	--
	ug/L	06/29/04	--	5	83	--	6	ND	--	ND	--	28	11	--	--	--
	ug/L	12/20/04	--	5	ND	--	ND	ND	--	ND	--	ND	75	--	--	--
	ug/L	06/05/05	--	5	13	--	7	ND	--	ND	--	ND	39	--	--	--
	ug/L	12/05/05	--	5	ND	--	ND	ND	--	ND	--	ND	13	--	--	--
	ug/L	06/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	38	--	--	--
	ug/L	12/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	12	--	--	--
	ug/L	05/30/07	2	10	3.5 B	--	ND	ND	--	ND	--	ND	ND	--	--	3.1 J
	ug/L	11/19/07	2.4	10	25	--	13 B	17 B	--	11 B	--	3.8 B	5.1 B	--	--	3.5
	ug/L	05/19/08	2.4	5	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.13	10	--	--	4.7 B	1.2 B	3.2 B	0.5 B	1.3 B	0.19 B	0.29 B	3.8 B	--	3.1 J
	ug/L	06/30/09	1.6	10	--	--	ND	2.3 B	ND	ND	ND	3.6 B	2.1 B	8.8 B	--	ND
	ug/L	11/30/09	1.9	10	--	--	ND	ND	ND	ND	ND	ND	ND	2.22 B	--	3.09 J
	ug/L	05/20/10	1.9	10	--	--	ND	2.51 J	ND	ND	ND	ND	ND	2.04 J	--	ND
	ug/L	11/19/10	1.9	10	--	--	2.62 J	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	1.9	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	1.90	10	--	--	--	--	2.81 J	ND	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	10	--	--	--	--	2.21 J	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	1.90	10	--	--	--	--	2.39 J	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	2.10	10	--	--	--	--	ND	ND	2.90 J	ND	ND	2.82 J	--	ND
	ug/L	11/06/13	2.10	10	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	2.10	10	--	--	--	--	ND	ND	5.52 J	ND	2.78 J	3.76 J	ND	ND
	ug/L	11/24/14	2.10	10	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND

TABLE 4

Summary of Detected Constituents in Groundwater
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient					Downgradient						Blanks
					PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3	
Mercury	ug/L	12/01/98	--	0.2	0.2	ND	--	ND	--	ND	--	--	ND	--	--	--
NC 2L= 1 ug/L	ug/L	06/07/99	--	0.2	0.2	ND	--	ND	--	ND	--	--	ND	--	--	--
'EPA MCL = 2 ug/L	ug/L	07/08/99	--	0.2	--	--	--	---	--	--	--	ND	--	--	--	--
	ug/L	12/15/99	--	5	**14**	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	5	**37**	**28**	--	ND	--	ND	--	ND	**16**	--	--	--
	ug/L	12/22/00	--	5	**20**	ND	--	ND	--	**10**	--	ND	**82**	--	--	--
	ug/L	06/04/01	--	5	**35**	ND	--	ND	--	**8**	--	ND	**68**	--	--	--
	ug/L	12/03/01	--	5	**23**	**30**	--	ND	--	ND	--	ND	**23**	--	--	--
	ug/L	06/10/02	--	5	**6**	ND	--	ND	--	ND	--	ND	**7**	--	--	--
	ug/L	12/16/02	--	5	ND	**5**	--	**12**	--	**5**	--	**8**	ND	--	--	--
	ug/L	06/09/03	--	5	ND	**8**	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	5	**35**	**8.0**	--	ND	--	ND	--	ND	**47.0**	--	--	--
	ug/L	06/28/04	--	5	**83**	--	**6**	ND	--	ND	--	**28**	**11**	--	--	--
	ug/L	12/20/04	--	5	ND	--	ND	ND	--	ND	--	ND	**75**	--	--	--
	ug/L	06/05/05	--	5	**13**	--	**7**	ND	--	ND	--	ND	**39**	--	--	--
	ug/L	12/07/05	--	5	ND	--	ND	ND	--	ND	--	ND	**13**	--	--	--
	ug/L	06/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	**38**	--	--	--
	ug/L	12/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	**12**	--	--	--
	ug/L	05/30/07	0.11	0.2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.044	0.2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.044	0.2	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.044	0.2	--	--	--	--	ND	--	--	--	--	--	--	--
	ug/L	06/30/09	0.044	0.2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/30/09	0.044	0.2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/20/10	0.044	0.2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/19/10	0.044	0.2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/19/11	0.044	0.2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/28/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/23/12	--	0.2	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/21/13	0.170	0.2	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/21/14	0.17	0.2	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/24/14	0.17	0.2	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	ug/L	09/19/94	--	10	17	13	--	77	--	15	--	--	**468**	--	--	--
NC 2L = 100 ug/L	ug/L	12/02/94	--	10	56	55	--	14	--	ND	--	--	96	--	--	--
No EPA MCL	ug/L	02/07/95	--	10	**211**	31	--	ND	--	ND	--	--	64	--	--	--
	ug/L	03/13/95	--	10	30	25	--	11	--	ND	--	--	61	--	--	--
	ug/L	11/01/95	--	10	32	16	--	ND	--	ND	--	--	68	--	--	--
	ug/L	06/10/96	--	10	49	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/12/96	--	10	**103**	ND	--	ND	--	ND	--	--	12	--	--	--
	ug/L	03/18/97	--	10	50	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	10	52	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	10	43	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	10	**124**	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	10	**126**	34	--	ND	--	ND	--	--	16	--	--	--
	ug/L	07/08/99	--	10	--	--	--	--	--	--	--	37	--	--	--	--
	ug/L	12/15/99	--	10	**227**	ND	--	ND	--	10	--	ND	ND	--	--	--
	ug/L	06/06/00	--	10	**343**	25	--	ND	--	ND	--	ND	13	--	--	--
	ug/L	12/27/00	--	10	**144**	ND	--	ND	--	ND	--	ND	**132**	--	--	--
	ug/L	06/04/01	--	10	88	ND	--	ND	--	ND	--	11	20	--	--	--
	ug/L	12/03/01	--	10	54	16	--	ND	--	ND	--	ND	19	--	--	--
	ug/L	06/10/02	--	10	21	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	10	33	ND	--	14	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	10	26	ND	--	11	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	10	99	ND	--	ND	--	ND	--	ND	29	--	--	--
	ug/L	06/29/04	--	10	**130**	--	10	ND	--	12	--	ND	14	--	--	--
	ug/L	12/20/04	--	10	10	--	10	ND	--	ND	--	ND	46	--	--	--
	ug/L	06/05/05	--	10	35	--	11	ND	--	ND	--	ND	13	--	--	--
	ug/L	12/05/05	--	10	ND	--	ND	ND	--	10	--	ND	15	--	--	--
	ug/L	06/05/06	--	10	61	--	ND	ND	--	ND	--	ND	33	--	--	--
	ug/L	12/05/06	--	10	32	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	05/30/07	2	50	27.4 J	--	ND	2.9 J	--	ND	--	2.9 J	4.0 J	--	--	ND
	ug/L	11/19/07	9.8	50	**140**	--	19	37	--	9.9	--	ND	11	--	--	ND
	ug/L	05/19/08	9.8	50	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	9.8	50	--	--	ND	ND	ND	ND	11.0	ND	ND	10.0 J	--	ND
	ug/L	06/30/09	0.6	50	--	--	2.1 B	7.6 B	3.6 B	3.4 B	8.7 B	5.0 B	5.7 B	13.1 B	--	0.6 J
	ug/L	11/30/09	1.8	50	--	--	ND	ND	2.17 B	ND	5.81 B	2.29 B	2.81 B	4.28 B	--	4.59 J
	ug/L	05/20/10	1.8	50	--	--	ND	ND	2.61 J	ND	6.78 J	2.56 J	3.20 J	1.98 J	--	ND
	ug/L	11/19/10	1.8	50	--	--	ND	ND	4.33 J	3.13 J	5.34 J	2.37 J	1.89 J	6.23 J	--	ND
	ug/L	05/19/11	1.8	50	--	--	--	--	3.03 J	2.99 J	6.92 J	3.94 J	3.31 J	6.16 J	--	ND
	ug/L	11/28/11	1.80	50	--	--	--	--	5.78 J	8.84 J	7.08 J	2.95 J	2.84 J	5.47 J	--	ND
	ug/L	05/23/12	--	50	--	--	--	--	2.77 J	3.36 J	5.84 J	4.50 J	2.13 J	5.26 J	--	ND
	ug/L	11/26/12	1.80	50	--	--	--	--	6.52 J	6.93 J	6.03 J	3.37 J	2.54 J	3.98 J	--	ND
	ug/L	05/21/13	1.80	50	--	--	--	--	2.68 J	6.92 J	4.02 J	3.75 J	3.51 J	5.52 J	--	ND
	ug/L	11/06/13	1.80	50	--	--	--	--	ND	7.54 J	8.35 J	ND	--	6.08 J	--	ND
	ug/L	05/21/14	1.80	50	--	--	--	--	ND	ND	7.44 J	ND	3.53 J	3.93 J	3.88 J	ND
	ug/L	11/24/14	1.80	50	--	--	--	--	ND	6.85 J	4.83 J	ND	3.84 J	--	6.19 J	ND
Selenium	ug/L	09/19/94	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
NC 2L = 20 ug/L	ug/L	12/02/94	--	5	ND	ND	--	ND	--	7.6	--	--	ND	--	--	--
EPA MCL = 50 ug/L	ug/L	02/07/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/13/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/01/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/10/96	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/12/96	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/18/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	07/08/99	--	5	--	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	12/15/99	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/27/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/04/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/03/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/29/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/20/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/05	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/05	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/06	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	05/30/07	2	10	ND	--	ND	3.2 B	--	ND	--	ND	ND	--	--	5.7 J
	ug/L	11/19/07	0.43	10	1.4 B	--	1 B	2.5 B	--	0.51 B	--	1.5 B	1.5 B	--	--	0.52
	ug/L	05/19/08	0.43	10	--	--	ND	ND	ND	ND	0.85	0.47	ND	--	--	ND
	ug/L	11/19/08	0.32	10	--	--	ND	0.67 B	0.55 B	ND	1.5 B	0.42 B	0.64 B	1.5 B	--	0.36 J
	ug/L	06/30/09	3.4	10	--	--	2.1 B	7.6 B	3.6 B	3.4 B	8.7 B	5.0 B	5.7 B	13.1 B	--	0.6 J
	ug/L	11/30/09	2.7	10	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/20/10	0.83	10	--	--	ND	ND	ND	ND	2.79 J	1.22 J	1.42 J	ND	--	ND
	ug/L	11/19/10	0.83	10	--	--	ND	0.863 J	ND	ND	2.41 J	0.928 J	1.12 J	2.11 J	--	ND
	ug/L	05/19/11	0.83	10	--	--	--	--	ND	ND	2.87 J	1.76 J	2.14 J	3.01 J	--	ND
	ug/L	11/28/11	2.70	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	4.50	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	5.00	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	5.00	10	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	5.00	10	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	11/24/14	5.00	10	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND

TABLE 4

Summary of Detected Constituents in Groundwater
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient					Downgradient						Blanks
					PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3	
Silver	ug/L	09/19/94	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
NC 2L = 20 ug/L	ug/L	12/02/94	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
EPA MCL = 100 ug/L	ug/L	02/07/95	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/13/95	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/01/95	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/10/96	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/12/96	--	1	5	ND	--	ND	--	2	--	--	ND	--	--	--
	ug/L	03/18/97	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	1	ND	ND	--	1	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	1	1	2	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	07/08/99	--	1	--	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	12/15/99	--	1	ND	ND	--	ND	--	10	--	ND	ND	--	--	--
	ug/L	06/06/00	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/27/00	--	1	ND	ND	--	ND	--	ND	--	ND	2	--	--	--
	ug/L	06/04/01	--	1	ND	ND	--	ND	--	3	--	ND	2	--	--	--
	ug/L	12/03/01	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	1	ND	ND	--	ND	--	ND	--	1	ND	--	--	--
	ug/L	12/16/02	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	1	ND	ND	--	ND	--	ND	--	ND	3	--	--	--
	ug/L	06/29/04	--	1	8	ND	ND	ND	--	1	--	ND	ND	--	--	--
	ug/L	12/20/04	--	1	ND	--	ND	ND	--	1	--	ND	ND	--	--	--
	ug/L	06/05/05	--	1	ND	--	2	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	1	--	--	--
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	2	--	--	--
	ug/L	05/30/07	2	10	ND	--	ND	ND	--	ND	--	2.0 J	ND	--	--	ND
	ug/L	11/19/07	2.5	10	--	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	2.5	10	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	3.2	10	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	06/30/09	3.2	10	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/30/09	1.9	10	--	--	ND	ND	ND	ND	ND	ND	2.57 J	ND	--	ND
	ug/L	05/20/10	1.9	10	--	--	ND	ND	ND	ND	2.11 J	ND	ND	ND	--	ND
	ug/L	11/19/10	1.9	10	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	1.9	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	1.90	10	--	--	--	--	ND	2.01 J	ND	ND	ND	7.19 J	--	ND
	ug/L	05/23/12	--	10	--	--	--	--	7.43 J	5.61 J	2.88 J	2.73 J	ND	5.95 J	--	ND
	ug/L	11/26/12	1.90	10	--	--	--	--	2.14 J	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	1.90	10	--	--	--	--	3.33 J	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	1.90	10	--	--	--	--	ND	ND	3.14 J	ND	--	3.64 J	--	ND
	ug/L	05/21/14	1.90	10	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	11/24/14	1.90	10	--	--	--	--	ND	ND	ND	2.32	ND	--	ND	ND
Thallium	ug/L	09/19/94	--	5	ND	ND	--	ND	--	ND	--	--	**6.1**	--	--	--
SWS GPS = 0.28 ug/L	ug/L	12/02/94	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
EPA MCL = 2 ug/L	ug/L	02/07/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/13/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/01/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/10/96	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/12/96	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/18/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	07/08/99	--	1	--	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	12/15/99	--	1	ND	ND	--	--	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	1	ND	ND	--	--	--	ND	--	ND	ND	--	--	--
	ug/L	12/27/00	--	1	ND	ND	--	--	--	ND	--	ND	**1**	--	--	--
	ug/L	06/04/01	--	1	ND	ND	--	--	--	ND	--	ND	**1**	--	--	--
	ug/L	12/03/01	--	1	ND	ND	--	--	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	1	ND	ND	--	--	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	1	ND	ND	--	--	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	1	ND	ND	--	--	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	1	ND	ND	--	--	--	ND	--	ND	ND	--	--	--
	ug/L	06/29/04	--	1	**2**	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/20/04	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	05/30/07	0.044	5.5	0.108 J	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.09	5.5	--	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.09	5.5	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.22	5.5	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	06/30/09	0.036	5.5	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/30/09	0.11	5.5	--	--	ND	0.75 J	ND	ND	ND	**3.14 J**	ND	ND	--	ND
	ug/L	05/20/10	0.11	5.5	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/19/10	0.11	5.5	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	0.11	5.5	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	0.110	5.5	--	--	--	--	ND	0.142 J	ND	**0.281 J**	ND	ND	--	ND
	ug/L	05/23/12	--	5.5	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.110	5.5	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	0.110	5.5	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	0.110	5.5	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	0.110	5.5	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	11/24/14	0.110	5.5	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND
Tin	ug/L	12/01/98	--	50	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
GPS = 2000 ug/L	ug/L	06/07/99	--	50	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
No EPA MCL	ug/L	07/08/99	--	50	--	---	--	---	--	--	--	ND	--	--	--	--
	ug/L	12/15/99	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/22/00	--	1	ND	ND	--	ND	--	ND	--	ND	1	--	--	--
	ug/L	06/04/01	--	1	ND	ND	--	ND	--	ND	--	ND	1	--	--	--
	ug/L	12/03/01	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/29/04	--	1	2	---	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/20/04	--	1	ND	---	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/05	--	1	ND	---	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/05	--	1	ND	---	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/06	--	1	ND	---	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/06	--	1	ND	---	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	05/30/07	2	100	ND	--	ND	ND	--	ND	--	ND	ND	--	--	3.6 J
	ug/L	11/19/07	7.6	100	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/19/08	7.6	100	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	06/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/20/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/19/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/19/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/28/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/23/12	--	100	--	--	--	--	ND	ND	33.8 J	3.67 J	5.63 J	ND	--	ND
	ug/L	11/26/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/26/12	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	05/21/13	2.10	100	--	--	--	--	ND	ND	7.20 J	3.68 J	3.49 J	3.35 J	--	--
	ug/L	11/06/13	2.10	100	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/21/14	2.10	100	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/24/14	2.10	100	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 4

Summary of Detected Constituents in Groundwater
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient							Downgradient												Blanks	
					PZ-6		MW-7		MW-7R		MW-8		MW-9R	MW-2		MW-3R		MW-4R		MW-5		MW-10		NES-3			
Vanadium	ug/L	09/19/94	--	5	203		16		--		122		--	23		--		--		411		--		--		--	
SWS GPS = 0.3 ug/L	ug/L	12/02/94	--	5	51		68		--		7.9		--	ND		--		--		124		--		--		--	
No EPA MCL	ug/L	02/07/95	--	5	206		37		--		6		--	ND		--		--		99		--		--		--	
	ug/L	03/13/95	--	5	16		9.7		--		9.4		--	ND		--		--		85		--		--		--	
	ug/L	11/01/95	--	5	37		5		--		7		--	ND		--		--		16		--		--		--	
	ug/L	06/10/96	--	5	50		ND		--		ND		--	ND		--		--		14		--		--		--	
	ug/L	11/12/96	--	5	141		11		--		12		--	ND		--		--		25		--		--		--	
	ug/L	03/18/97	--	5	141		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	10/02/97	--	5	65		8.5		--		5.8		--	ND		--		--		ND		--		--		--	
	ug/L	05/26/98	--	5	20		5		--		5		--	ND		--		--		ND		--		--		--	
	ug/L	12/01/98	--	5	110		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	06/07/99	--	5	45		45		--		ND		--	ND		--		--		11		--		--		--	
	ug/L	07/08/99	--	5	--		--		--		--		--	--		--		16		--		--		--		--	
	ug/L	12/15/99	--	5	38		ND		--		6		--	ND		--		ND		6		--		--		--	
	ug/L	06/06/00	--	5	109		36		--		6		--	ND		--		ND		23		--		--		--	
	ug/L	12/27/00	--	5	26		ND		--		ND		--	ND		--		ND		44		--		--		--	
	ug/L	06/04/01	--	5	22		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	12/03/01	--	5	25		16		--		ND		--	ND		--		ND		26		--		--		--	
	ug/L	06/10/02	--	5	12		ND		--		9		--	ND		--		ND		8		--		--		--	
	ug/L	12/16/02	--	5	7		ND		--		17		--	ND		--		ND		ND		--		--		--	
	ug/L	06/09/03	--	5	5		6		--		9		--	ND		--		ND		ND		--		--		--	
	ug/L	12/08/03	--	5	46		ND		--		5		--	ND		--		ND		43		--		--		--	
	ug/L	06/29/04	--	5	59		--		12		ND		--	ND		--		ND		17		--		--		--	
	ug/L	12/20/04	--	5	8		--		5		5		--	ND		--		ND		69		--		--		--	
	ug/L	06/05/05	--	5	27		--		17		ND		--	ND		--		ND		17		--		--		--	
	ug/L	12/05/05	--	5	ND		--		ND		ND		--	ND		--		ND		16		--		--		--	
	ug/L	06/05/06	--	5	ND		--		7		ND		--	ND		--		ND		42		--		--		--	
	ug/L	12/05/06	--	5	ND		--		ND		ND		--	ND		--		ND		7		--		--		--	
	ug/L	05/30/07	1	25	5.4	J	--		ND		ND		--	ND		--		ND		ND		--		--		ND	
	ug/L	11/19/07	2.9	25	20		--		13		17		--	3.1	J	--		ND		3.8		--		--		ND	
	ug/L	05/19/08	2.9	25	--		--		ND		ND		4.0	ND		9.0		ND		ND		--		--		ND	
	ug/L	11/19/08	1.9	25	--		--		ND		ND		ND	ND		2.3	J	ND		ND		3.6	J	--		ND	
	ug/L	06/30/09	0.7	25	--		--		ND		ND		ND	ND		1.1	J	ND		ND		6.9	J	--		ND	
	ug/L	11/30/09	1.4	25	--		--		ND		ND		1.58	J	ND	2.48	J	ND		ND		2.29	J	--		ND	
	ug/L	05/20/10	1.4	25	--		--		ND		2.60	J	ND	ND		3.25	J	ND		ND		4.70	J	--		ND	
	ug/L	11/19/10	1.4	25	--		--		2.03	J	ND		3.74	J	ND	1.47	J	ND		ND		ND		--		ND	
	ug/L	05/19/11	1.4	25	--		--		--		--		ND		3.86	J	1.47	J	ND		ND	3.89	J	--		ND	
	ug/L	11/28/11	1.40	25	--		--		--		--		9.59	J	ND	1.77	J	ND		ND		ND		--		ND	
	ug/L	05/23/12	--	25	--		--		--		--		1.74	J	2.24	J	2.60	J	ND		ND	ND		--		ND	
	ug/L	11/26/12	1.40	25	--		--		--		--		12.8	J	ND	ND		ND		ND		ND		--		ND	
	ug/L	05/21/13	1.40	25	--		--		--		--		ND		1.71	J	2.69	J	ND		ND	5.77	J	--		ND	
	ug/L	11/06/13	1.40	25	--		--		--		--		ND		ND	2.48	J	ND		--		ND		--		ND	
	ug/L	05/21/14	1.40	25	--		--		--		--		2.09	J	ND	2.91	J	ND		ND		5.07	J	1.97	J	ND	
	ug/L	11/24/14	1.40	25	--		--		--		--		1.91	J	ND	ND		ND		ND		--		4.24	J	ND	
Zinc	ug/L	09/19/94	--	10	303		ND		--		207		--	34		--		--		1030		--				--	
NC 2L = 1000 ug/L	ug/L	12/02/94	--	10	106		140		--		ND		--	ND		--		--		202		--		--		--	
EPA MCL = 5000 ug/L`	ug/L	02/07/95	--	10	477		74		--		70		--	ND		--		--		183		--		--		--	
	ug/L	03/13/95	--	10	291		114		--		59		--	ND		--		--		185		--		--		--	
	ug/L	11/01/95	--	10	65		15		--		ND		--	ND		--		--		225		--		--		--	
	ug/L	06/10/96	--	10	125		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	11/12/96	--	10	134		16		--		11		--	ND		--		--		26		--		--		--	
	ug/L	03/18/97	--	10	ND		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	10/02/97	--	10	96		19		--		ND		--	23		--		--		ND		--		--		--	
	ug/L	05/26/98	--	10	20		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	12/01/98	--	10	121		ND		--		ND		--	11		--		--		ND		--		--		--	
	ug/L	06/07/99	--	10	77		156		--		92		--	31		--		--		31		--		--		--	
	ug/L	07/08/99	--	10	--		--		--		--		--	--		--		64		--		--		--		--	
	ug/L	12/15/99	--	10	100		26		--		33		--	38		--		56		50		--		--		--	
	ug/L	06/06/00	--	10	267		67		--		ND		--	17		--		ND		28		--		--		--	
	ug/L	12/27/00	--	10	100		46		--		ND		--	28		--		257		414		--		--		--	
	ug/L	06/04/01	--	10	80		191		--		121		--	24		--		162		269		--		--		--	
	ug/L	12/03/01	--	10	73		37		--		249		--	59		--		214		55		--		--		--	
	ug/L	06/10/02	--	10	41		68		--		168		--	52		--		141		20		--		--		--	
	ug/L	12/16/02	--	10	27		28		--		37		--	12		--		26		14		--		--		--	
	ug/L	06/09/03	--	10	12		19		--		27		--	19		--		10		ND		--		--		--	
	ug/L	12/08/03	--	10	261		11		--		11		--	18		--		13		216		--		--		--	
	ug/L	06/29/04	--	10	369		--		59		ND		--	18		--		ND		35		--		--		--	
	ug/L	12/20/04	--	10	17		--		15		13		--	52		--		ND		134		--		--		--	
	ug/L	06/05/05	--	10	56		--		55		20		--	44		--		ND		103		--		--		--	
	ug/L	12/05/05	--	10	ND		--		ND		ND		--	74		--		ND		35		--		--		--	
	ug/L	06/05/06	--	10	14		--		18		ND		--	31		--		ND		98		--		--		--	
	ug/L	12/05/06	--	10	ND		--		ND		ND		--	14		--		ND		26		--		--		--	
	ug/L	05/30/07	1	10	18.4		--		12.3		4.4	B	--	10.4	B	--		1.1	B	3.3	B	--		--		2.4	J
	ug/L	11/19/07	3	10	160		--		66		52		--	21		--		20		58		--		--		90	
	ug/L	05/19/08	3	10	--		--		34		4.6		12	8.7		45		30		54		--		--		ND	
	ug/L	11/19/08	3.3	10	--		--		26		9.8	J	7.7	J	14	23		22		58		26		--		ND	
	ug/L	06/30/09	3.4	10	--		--		4.7	B	ND		5.8	B	7.9	B	3.5	B	ND		ND	22.4	B	--		15.2	
	ug/L	11/30/09	3.8	10	--		--		ND		11.7		5.99	J	6.40	J	3.93	J	ND		ND	19.9		--		ND	
	ug/L	05/20/10	3.8	10	--		--		ND		4.15	J	5.76	J	4.95	J	ND		ND		ND	90.3		--		ND	
	ug/L	11/19/10	3.8	10	--		--		ND		ND		ND		ND		ND		ND		ND	11.5		--		ND	
	ug/L	05/19/11	3.8	10	--		--		--		--		6.26	B	7.80	B	ND		ND		ND	9.03	B	--		4.26	J
	ug/L	11/28/11	3.80	10	--		--		--		--		21.7		18.6		ND		ND		ND	26.6		--		ND	
	ug/L	05/23/12	--	10	--		--		--		--		6.59	J	8.53	J	ND		5.43	J	ND	39.0		--		ND	
	ug/L	11/26/12	3.80	10	--		--		--		--		11.6		12.4		ND		ND		ND	4.12	J	--		ND	
	ug/L	05/21/13	3.80	10	--		--		--		--		ND		5.22	J	ND		ND		ND	41.4		--		ND	
	ug/L	11/06/13	3.80	10	--		--		--		--		3.81	J	14.2		ND		ND		--	4.68	J	--		ND	
	ug/L	05/21/14	3.80	10	--		--		--		--		7.41	J	6.21	J	4.08	J	ND		ND	12.0		6.20	J	ND	
	ug/L	11/24/14	3.80	10	--		--		--		--		6.14	J	15.5		ND		ND		ND	--		6.58	J	ND	
Acetone	ug/L	09/19/94	--	--	--		--		--		--		--	--		--		--		--		--		--		--	
NC 2L = 6000 ug/L	ug/L	12/02/94	--	--	--		--		--		--		--	--		--		--		--		--		--		--	
No EPA MCL	ug/L	02/07/95	--	--	ND		ND		--		49.8		--	ND		--		--		ND		--		--		--	
	ug/L	03/13/95	--	--	ND		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	11/01/95	--	--	ND		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	06/10/96	--	25	ND		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	11/12/96	--	25	ND		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	03/18/97	--	25	ND		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	10/02/97	--	25	ND		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	05/26/98	--	20	ND		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	12/01/98	--	20	ND		ND		--		235		--	ND		--		--		ND		--		--		--	
	ug/L	02/26/99	--	20	--		--		--		ND		--	--		--		--		--		--		--		--	
	ug/L	06/07/99	--	20	ND		ND		--		ND		--	ND		--		--		ND		--		--		--	
	ug/L	07/08/99	--	20	--		--		--		--		--	--		--		ND		--		--		--		--	
	ug/L	12/15/99	--	50	ND		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	06/06/00	--	50	ND		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	12/27/00	--	20	ND		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	06/04/01	--	20	ND		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	12/03/01	--	20	ND		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	06/10/02	--	20	ND		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	12/16/02	--	20	ND		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	06/09/03	--	20	ND		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	12/08/03	--	20	ND		ND		--		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	06/29/04	--	20	ND		--		ND		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	12/20/04	--	10	ND		--		ND		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	06/05/05	--	10	ND		--		ND		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	12/05/05	2.5	10	ND		--		ND		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	06/05/06	--	10	ND		--		ND		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	12/05/06	--	10	ND		--		ND		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	05/30/07	0.9	100	ND		--		ND		1.7	B	--	ND		--		ND		ND		--		--		--	
	ug/L	11/19/07	8.9	100	ND		--		ND		ND		--	ND		--		ND		ND		--		--		--	
	ug/L	05/19/08	8.9	100	--		--		ND		ND		ND	ND		ND		ND		ND		--		--		--	
	ug/L	11/19/08	8.9	100	--		--		ND		ND		ND	ND		ND		ND		ND		--		--		--	
	ug/L	06/30/09	1.5	100	--		--		ND		ND		ND	ND		ND		ND		ND		ND		--		ND	
	ug/L	11/30/09	1.5	100	--		--		ND		ND		ND	ND		ND		ND		ND		ND		--		ND	
	ug/L	05/20/10	1.5	100	--		--		ND		ND		ND	ND		ND		ND		ND		ND		--		ND	
	ug/L	11/19/10	3	100	--		--		ND		ND		ND	ND		ND		ND		ND		ND		--		ND	
	ug/L	05/19/11	1.2	100	--		--		--		--		ND	ND		ND		ND		ND		ND		--		ND	
	ug/L	11/28/11	1.2	100	--		--		--		--		ND	ND		ND		ND		ND		ND		--		ND	
	ug/L	05/23/12	--	100	--		--		--		--		ND	ND		ND		ND		ND		ND		--		ND	
	ug/L	11/26/12	1.2	100	--		--		--		--		ND	ND		ND		ND		ND		ND		--		ND	
	ug/L	05/21/13	1.2	100	--		--		--		--		ND	ND		ND		ND		ND		ND		--		ND	
	ug/L	11/06/13	1.2	100	--		--		--		--		ND	ND		ND		ND		--		ND		--		ND	
	ug/L	05/21/14	1.2	100	--		--		--		--		ND	ND		ND		ND		5.6	J	ND		ND		ND	
	ug/L	11/24/14	1.2	100	--		--		--		--		ND	ND		ND		ND		ND		--		ND		ND	

TABLE 4

Summary of Detected Constituents in Groundwater
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient					Downgradient						Blanks
					PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3	
Benzene	ug/L	09/19/94	--	--	--	ND	--	ND	--	--	--	--	--	--	--	--
NC 2L= 1 ug/L	ug/L	12/02/94	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
EPA MCL = 5 ug/L	ug/L	02/07/95	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/13/95	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/01/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/10/96	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	09/03/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	10/02/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/12/96	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/18/97	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	05/26/98	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	ND
	ug/L	12/01/98	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	ND
	ug/L	06/07/99	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	07/08/99	--	5	--	--	--	--	--	--	--	ND	--	--	--	ND
	ug/L	12/15/99	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/06/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/27/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/04/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/03/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/10/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/16/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/09/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/08/03	--	3	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/29/04	--	3	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/20/04	--	0.5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/05	--	0.5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/05	0.14	0.5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/06	--	0.5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/06	--	0.5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/30/07	0.12	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.29	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.29	1	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.29	1	--	--	ND	ND	ND	ND	ND	ND	ND	**4.0**	--	ND
	ug/L	06/30/09	0.2	1	--	--	ND	ND	ND	ND	ND	ND	ND	**4.6**	--	ND
	ug/L	11/30/09	0.2	1	--	--	ND	ND	ND	ND	ND	ND	ND	**1.8**	--	ND
	ug/L	05/20/10	0.050	1	--	--	ND	ND	ND	ND	ND	ND	ND	0.89 J	--	ND
	ug/L	11/19/10	0.200	1	--	--	ND	ND	ND	ND	ND	ND	ND	**2.3**	--	ND
	ug/L	05/19/11	0.680	1	--	--	--	--	ND	ND	ND	ND	ND	**1.7**	--	ND
	ug/L	11/28/11	0.68	1	--	--	--	--	ND	ND	ND	ND	ND	**1.6**	--	ND
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	**1.7 J**	--	ND
	ug/L	11/26/12	0.15	1	--	--	--	--	ND	ND	ND	ND	ND	**3.0**	--	ND
	ug/L	05/21/13	0.15	1	--	--	--	--	ND	ND	ND	ND	ND	0.42 J	--	ND
	ug/L	11/06/13	0.15	1	--	--	--	--	ND	ND	ND	ND	--	**2.4**	--	ND
	ug/L	05/21/14	0.15	1	--	--	--	--	ND	ND	ND	ND	ND	0.86 J	ND	ND
	ug/L	11/24/14	0.15	1	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND
Chlorobenzene	ug/L	09/19/94	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
NC 2L= 50 ug/L	ug/L	12/02/94	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
EPA MCL = 100 ug/L	ug/L	02/07/95	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/13/95	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/01/95	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/10/96	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	09/03/96	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/96	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/12/96	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/18/97	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/99	--	--	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	07/08/99	--	--	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/15/99	--	--	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	--	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/27/00	--	--	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/04/01	--	--	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/03/01	--	--	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	--	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	--	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	--	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/29/04	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/20/04	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/05	0.24	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/30/07	0.16	3	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.26	3	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.26	3	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.26	3	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	06/30/09	0.27	3	--	--	ND	ND	ND	ND	0.41 J	ND	ND	ND	--	ND
	ug/L	11/30/09	0.27	3	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/20/10	0.069	3	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/19/10	0.54	3	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	0.74	3	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	0.74	3	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	3	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.17	3	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	0.17	3	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	0.17	3	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	0.17	3	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	11/24/14	0.17	3	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND
1,4-Dichlorobenzene	ug/L	12/08/03	--	1	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
NC 2L=6 ug/L	ug/L	06/28/04	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
EPA MCL = 75 ug/L	ug/L	12/20/04	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/05	0.32	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/30/07	0.15	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.3	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.3	1	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.3	1	--	--	ND	ND	ND	ND	ND	ND	ND	1.3 J	--	ND
	ug/L	06/30/09	0.38	1	--	--	ND	ND	ND	ND	ND	ND	ND	2.2 J	--	ND
	ug/L	11/30/09	0.38	1	--	--	ND	ND	ND	ND	ND	ND	ND	0.77 J	--	ND
	ug/L	05/20/10	0.1	1	--	--	ND	ND	ND	ND	ND	ND	ND	0.65 J	--	ND
	ug/L	11/19/10	0.38	1	--	--	ND	ND	ND	ND	ND	ND	ND	0.92 J	--	ND
	ug/L	05/19/11	0.79	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	0.79	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.19	1	--	--	--	--	ND	ND	ND	ND	ND	1.0 J	--	ND
	ug/L	05/21/13	0.19	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	0.19	1	--	--	--	--	ND	ND	ND	ND	--	1.3	--	ND
	ug/L	05/21/14	0.19	1	--	--	--	--	ND	ND	ND	ND	ND	0.72 J	ND	ND
	ug/L	11/24/14	0.19	1	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND
1,1-Dichloroethane	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
NC 2L= 6 ug/L	ug/L	06/28/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
No EPA MCL	ug/L	12/20/04	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/05	0.38	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/30/07	0.09	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.31	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.31	5	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.31	5	--	--	ND	ND	ND	ND	ND	ND	ND	**9.8**	--	ND
	ug/L	06/30/09	0.24	5	--	--	ND	ND	ND	ND	ND	ND	ND	**7.8**	--	ND
	ug/L	11/30/09	0.33	5	--	--	ND	ND	ND	ND	ND	ND	ND	4.2 J	--	ND
	ug/L	05/20/10	0.05	5	--	--	ND	ND	ND	ND	ND	ND	ND	1.6 J	--	ND
	ug/L	11/19/10	0.33	5	--	--	ND	ND	ND	ND	ND	ND	ND	5.3	--	ND
	ug/L	05/19/11	0.8	5	--	--	--	--	ND	ND	ND	ND	ND	3.2 J	--	ND
	ug/L	11/28/11	0.080	5	--	--	--	--	ND	ND	ND	ND	ND	3.1 J	--	ND
	ug/L	05/23/12	--	5	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.13	5	--	--	--	--	ND	0.42 J	ND	ND	ND	**7.1**	--	ND
	ug/L	05/21/13	0.13	5	--	--	--	--	ND	ND	ND	ND	ND	0.96 J	--	ND
	ug/L	11/06/13	0.13	5	--	--	--	--	ND	ND	ND	ND	--	5.9	--	ND
	ug/L	05/21/14	0.13	5	--	--	--	--	ND	ND	ND	-	ND	2.3 J	ND	ND
	ug/L	11/24/14	0.13	5	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND
1,2-Dichloroethane	ug/L	05/30/07	0.36	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
NC 2L= 0.4 ug/L	ug/L	11/19/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
EPA MCL = 5 ug/L	ug/L	5/19/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	11/19/08	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	06/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	11/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	05/20/10	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	11/19/10	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	05/19/11	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	11/28/11	0.47	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.21	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	0.21	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	0.21	1	--	--	--	--	ND	ND	ND	ND	--	**0.54 J**	--	ND
	ug/L	05/21/14	0.21	1	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	11/24/14	0.21	1	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND

TABLE 4

Summary of Detected Constituents in Groundwater
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient					Downgradient						Blanks
					PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3	
cis-1,2-dichloroethene	ug/L	06/10/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
NC 2L= 70 ug/L	ug/L	12/16/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
EPA MCL = 70 ug/L	ug/L	06/09/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/28/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/20/04	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/05	0.47	1	ND	--	ND	ND	--	1.1	--	ND	ND	--	--	ND
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/30/07	0.14	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.38	5	ND	--	ND	ND	--	0.62	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.38	5	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.38	5	--	--	ND	ND	ND	0.84 J	ND	ND	ND	**370**	--	ND
	ug/L	06/30/09	0.36	5	--	--	ND	ND	ND	ND	ND	ND	ND	**370**	--	ND
	ug/L	11/30/09	0.36	5	--	--	ND	ND	ND	ND	ND	ND	ND	**190**	--	ND
	ug/L	05/20/10	0.75	5	--	--	ND	ND	ND	ND	ND	ND	ND	**86**	--	ND
	ug/L	11/19/10	0.36	5	--	--	ND	ND	ND	1.4 J	ND	ND	ND	**210**	--	ND
	ug/L	05/19/11	0.72	5	--	--	--	--	ND	ND	ND	ND	ND	**110**	--	ND
	ug/L	11/28/11	0.72	5	--	--	--	--	ND	3.7 J	ND	ND	ND	**140**	--	ND
	ug/L	05/23/12	--	5	--	--	--	--	ND	ND	ND	ND	ND	**200**	--	ND
	ug/L	11/26/12	0.15	5	--	--	--	--	ND	3.0 J	ND	ND	ND	**260**	--	ND
	ug/L	05/21/13	0.15	5	--	--	--	--	ND	ND	ND	ND	ND	25	--	ND
	ug/L	11/06/13	0.15	5	--	--	--	--	ND	1.7 J	ND	ND	--	**200**	--	ND
	ug/L	05/21/14	0.15	5	--	--	--	--	ND	ND	ND	ND	ND	**72**	ND	ND
	ug/L	11/24/14	0.15	5	--	--	--	--	ND	2.8 J	ND	ND	ND	--	ND	ND
trans-1,2-Dichloroethene	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
NC 2L= 100 ug/L	ug/L	06/28/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
EPA MCL = 100 ug/L	ug/L	12/20/04	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/05	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/05	0.56	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/06	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/06	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/30/07	0.1	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.3	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.3	5	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.3	5	--	--	ND	ND	ND	ND	ND	ND	ND	12.0	--	ND
	ug/L	06/30/09	0.34	5	--	--	ND	ND	ND	ND	ND	ND	ND	9.7	--	ND
	ug/L	11/30/09	0.34	5	--	--	ND	ND	ND	ND	ND	ND	ND	4.7 J	--	ND
	ug/L	05/20/10	0.11	5	--	--	ND	ND	ND	ND	ND	ND	ND	1.8 J	--	ND
	ug/L	11/19/10	0.34	5	--	--	ND	ND	ND	ND	ND	ND	ND	4.9 J	--	ND
	ug/L	05/19/11	0.12	5	--	--	--	--	ND	ND	ND	ND	ND	4.2 J	--	ND
	ug/L	11/28/11	0.12	5	--	--	--	--	ND	ND	ND	ND	ND	3.4 J	--	ND
	ug/L	05/23/12	--	5	--	--	--	--	ND	ND	ND	ND	ND	4.4 J	--	ND
	ug/L	11/26/12	0.21	5	--	--	--	--	ND	ND	ND	ND	ND	6.9	--	ND
	ug/L	05/21/13	0.21	5	--	--	--	--	ND	ND	ND	ND	ND	0.93 J	--	ND
	ug/L	11/06/13	0.21	5	--	--	--	--	ND	ND	ND	ND	--	6.3	--	ND
	ug/L	05/21/14	0.21	5	--	--	--	--	ND	ND	ND	ND	ND	2.0 J	ND	ND
	ug/L	11/24/14	0.21	5	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND
1,2-Dichloropropane	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
NC 2L= 0.6 ug/L	ug/L	06/28/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
EPA MCL = 5 ug/L	ug/L	12/20/04	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/05	0.26	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/30/07	0.18	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.52	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.52	1	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.52	1	--	--	ND	ND	ND	ND	ND	ND	ND	**11.0**	--	ND
	ug/L	06/30/09	0.2	5	--	--	ND	ND	ND	ND	ND	ND	ND	**9.4**	--	ND
	ug/L	11/30/09	0.2	5	--	--	ND	ND	ND	ND	ND	ND	ND	**4.7**	--	ND
	ug/L	05/20/10	0.098	5	--	--	ND	ND	ND	ND	ND	ND	ND	**1.9**	--	ND
	ug/L	11/19/10	0.2	5	--	--	ND	ND	ND	ND	ND	ND	ND	**5.6**	--	ND
	ug/L	05/19/11	0.59	5	--	--	--	--	ND	ND	ND	ND	ND	**2.2**	--	ND
	ug/L	11/28/11	0.59	1	--	--	--	--	ND	ND	ND	ND	ND	**4.0**	--	ND
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	**4.5**	--	ND
	ug/L	11/26/12	0.10	1	--	--	--	--	ND	ND	ND	ND	ND	**6.3**	--	ND
	ug/L	05/21/13	0.10	1	--	--	--	--	ND	ND	ND	ND	ND	**0.79 J**	--	ND
	ug/L	11/06/13	0.10	1	--	--	--	--	ND	ND	ND	ND	--	**5.4**	--	ND
	ug/L	05/21/14	0.10	1	--	--	--	--	ND	ND	ND	ND	ND	**1.2**	ND	ND
	ug/L	11/24/14	0.10	1	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND
Ethylbenzene	ug/L	05/30/07	0.17	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
NC 2L = 600 ug/L	ug/L	11/19/07	0.22	1	0.38	--	ND	ND	--	0.6	--	ND	ND	--	--	ND
EPA MCL = 700 ug/L	ug/L	05/19/08	0.22	1	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.22	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	06/30/09	0.20	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/30/09	0.20	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/20/10	0.10	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/19/10	0.20	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	0.62	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	0.62	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.13	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	0.13	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	0.13	1	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	0.13	1	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	11/24/14	0.13	1	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND
Methylene Chloride	ug/L	09/22/94	--	--	--	**14.6**	--	ND	--	--	--	--	--	--	--	--
NC 2L= 5 ug/L	ug/L	12/02/94	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
EPA MCL = 5 ug/L	ug/L	02/07/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/13/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/01/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	06/07/96	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	11/13/96	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	03/18/97	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	10/02/97	--	5	ND	ND	--	ND	--	ND	--	--	**22**	--	--	--
	ug/L	05/26/98	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--
	ug/L	12/01/98	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	ND
	ug/L	06/07/99	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	ND
	ug/L	07/08/99	--	5	--	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	12/15/99	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/06/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/22/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/04/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/03/01	--	5	**77**	**68**	--	**66**	--	**92**	--	ND	**68**	--	--	ND
	ug/L	06/10/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/16/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/09/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/28/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/20/04	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/05	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/05	0.61	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	06/05/06	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/06	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/30/07	0.088	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.3	1	0.42	--	ND	ND	--	0.47	--	ND	ND	--	--	0.49
	ug/L	05/19/08	0.3	1	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.3	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	06/30/09	0.53	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/30/09	0.53	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/20/10	0.7	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/19/10	0.53	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	0.14	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	0.14	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.23	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	0.23	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	0.23	1	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	0.23	1	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	11/24/14	0.23	1	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND
Tetrachloroethene	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
NC 2L= 0.7 ug/L	ug/L	12/05/05	0.49	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
EPA MCL = 5 ug/L	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/30/07	0.25	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	11/19/07	0.29	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND
	ug/L	05/19/08	0.29	1	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	11/19/08	0.29	1	--	--	ND	ND	ND	ND	ND	ND	ND	**1.8**	--	ND
	ug/L	06/30/09	0.36	1	--	--	ND	ND	ND	ND	ND	ND	ND	**2.6 J**	--	ND
	ug/L	11/30/09	0.36	1	--	--	ND	ND	ND	ND	ND	ND	ND	0.60 J	--	ND
	ug/L	05/20/10	0.099	1	--	--	ND	ND	ND	ND	ND	ND	ND	0.42 J	--	ND
	ug/L	11/19/10	0..36	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/19/11	0.73	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/28/11	0.73	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	0.17	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	05/21/13	0.17	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	0.17	1	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	05/21/14	0.17	1	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	11/24/14	0.17	1	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND

TABLE 4

Summary of Detected Constituents in Groundwater
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient					Downgradient						Blanks	
					PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3		
Toluene	ug/L	09/19/94	--	--	--	ND	--	ND	--	--	--	--	--	--	--	--	
NC 2L= 600 ug/L	ug/L	12/02/94	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--	
EPA MCL = 1000 ug/L	ug/L	02/07/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--	
	ug/L	03/13/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--	
	ug/L	11/01/95	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	--	
	ug/L	06/10/96	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--	
	ug/L	11/12/96	--	1	ND	1.2	--	ND	--	ND	--	--	ND	--	--	--	
	ug/L	03/18/97	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--	
	ug/L	10/02/97	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--	
	ug/L	05/26/98	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	--	
	ug/L	12/01/98	--	1	ND	ND	--	ND	--	ND	--	--	ND	--	--	ND	
	ug/L	06/07/99	--	5	ND	ND	--	ND	--	ND	--	--	ND	--	--	ND	
	ug/L	07/08/99	--	5	--	--	--	--	--	--	--	ND	--	--	--	--	
	ug/L	12/15/99	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/06/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/22/00	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/04/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/03/01	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/10/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/16/02	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/09/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/29/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/20/04	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/05/05	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/05/05	0.39	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/05/06	--	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	05/30/07	0.15	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	0.33	J
	ug/L	11/19/07	0.27	1	ND	--	ND	ND	--	0.37	--	ND	ND	--	--	ND	
	ug/L	05/19/08	0.27	1	--	--	0.45	ND	ND	ND	ND	ND	ND	--	--	0.66	
	ug/L	11/19/08	0.27	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	06/30/09	0.27	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	11/30/09	0.27	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	05/20/10	0.53	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	11/19/10	0.27	1	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	05/19/11	0.85	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	11/28/11	0.85	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	11/26/12	0.14	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	05/21/13	0.14	1	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND	
	ug/L	11/06/13	0.14	1	--	--	--	--	ND	ND	ND	ND	--	ND	--	ND	
	ug/L	05/21/14	0.14	1	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	
	ug/L	11/24/14	0.14	1	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND	
Trichloroethene	ug/L	12/08/03	--	5	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
NC 2L= 3 ug/L	ug/L	06/28/04	--	5	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
EPA MCL = 5 ug/L	ug/L	12/20/04	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/05/05	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/05/05	0.52	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/05/06	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/05/06	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	05/30/07	0.23	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	11/19/07	0.37	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	05/19/08	0.37	1	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND	
	ug/L	11/19/08	0.37	1	--	--	ND	ND	ND	ND	ND	ND	ND	**30.0**	--	ND	
	ug/L	06/30/09	0.36	1	--	--	ND	ND	ND	ND	ND	ND	ND	**38**	--	ND	
	ug/L	11/30/09	0.38	1	--	--	ND	ND	ND	ND	ND	ND	ND	**14**	--	ND	
	ug/L	05/20/10	0.13	1	--	--	ND	ND	ND	ND	ND	ND	ND	**6.9**	--	ND	
	ug/L	11/19/10	0.38	1	--	--	ND	ND	ND	ND	ND	ND	ND	**9.5**	--	ND	
	ug/L	05/19/11	0.72	1	--	--	--	--	ND	ND	ND	ND	ND	**12.0**	--	ND	
	ug/L	11/28/11	0.72	1	--	--	--	--	ND	ND	ND	ND	ND	**5.9**	--	ND	
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	**9.8**	--	ND	
	ug/L	11/26/12	0.15	1	--	--	--	--	ND	ND	ND	ND	ND	**8.1**	--	ND	
	ug/L	05/21/13	0.15	1	--	--	--	--	ND	ND	ND	ND	ND	1.7	--	ND	
	ug/L	11/06/13	0.15	1	--	--	--	--	ND	ND	ND	ND	--	2.3	--	ND	
	ug/L	05/21/14	0.15	1	--	--	--	--	ND	ND	ND	ND	ND	**4.6**	ND	ND	
	ug/L	11/24/14	0.15	1	--	--	--	--	ND	ND	ND	ND	ND	--	ND	ND	
Vinyl Chloride	ug/L	12/08/03	--	10	ND	ND	--	ND	--	ND	--	ND	ND	--	--	ND	
NC 2L= 0.03 ug/L	ug/L	06/28/04	--	10	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
EPA MCL = 2 ug/L	ug/L	12/20/04	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/05/05	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/05/05	0.6	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	06/05/06	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	12/05/06	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	05/30/07	0.15	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	11/19/07	0.27	1	ND	--	ND	ND	--	ND	--	ND	ND	--	--	ND	
	ug/L	05/19/08	0.27	1	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND	
	ug/L	11/19/08	0.27	1	--	--	ND	ND	ND	ND	ND	ND	ND	**25**	--	ND	
	ug/L	06/30/09	0.3	1	--	--	ND	ND	ND	ND	ND	ND	ND	**23**	--	ND	
	ug/L	11/30/09	0.3	1	--	--	ND	ND	ND	ND	ND	ND	ND	**17**	--	ND	
	ug/L	05/20/10	0.083	1	--	--	ND	ND	ND	ND	ND	ND	ND	**6.8**	--	ND	
	ug/L	11/19/10	0.03	1	--	--	ND	ND	ND	ND	ND	ND	ND	**17**	--	ND	
	ug/L	05/19/11	0.03	1	--	--	--	--	ND	ND	ND	ND	ND	**12**	--	ND	
	ug/L	11/28/11	0.60	1	--	--	--	--	ND	ND	ND	ND	ND	**9.9**	--	ND	
	ug/L	05/23/12	--	1	--	--	--	--	ND	ND	ND	ND	ND	**15**	--	ND	
	ug/L	11/26/12	0.32	1	--	--	--	--	ND	ND	ND	ND	ND	**21**	--	ND	
	ug/L	05/21/13	0.32	1	--	--	--	--	ND	ND	ND	ND	ND	**2.1**	--	ND	
	ug/L	11/06/13	0.32	1	--	--	--	--	ND	**0.45**	**J**	ND	ND	--	**17**	--	ND
	ug/L	05/21/14	0.32	1	--	--	--	--	ND	ND	ND	ND	ND	ND	**6.2**	ND	ND
	ug/L	11/24/14	0.32	1	--	--	--	--	ND	**0.68**	**J**	ND	ND	ND	--	ND	ND
Bis(2-ethylhexyl)phthalate	ug/L	05/30/07	1	15	3.0	J --	ND	ND	--	1.2	J --	1.2	J ND	--	--	ND	
NC 2L= 3 ug/L	ug/L	11/19/07	1.3	15	ND	--	--	--	--	--	--	--	--	--	--	--	
EPA MCL = 6 ug/L	ug/L	05/19/08	1.3	10	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND	
	ug/L	11/19/08	1.3	10	--	--	ND	--	ND	--	--	--	--	--	--	--	
	ug/L	06/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/20/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/19/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/19/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/28/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/23/12	--	15	--	--	--	--	ND	ND	ND	ND	**7.7**	**J** ND	--	ND	
Verification Event	ug/L	06/15/12	--	15	--	--	--	--	--	--	--	--	ND	--	--	ND	
	ug/L	11/26/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/06/13	1.7	15	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/21/14	1.7	15	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	
	ug/L	11/24/14	1.7	15	--	--	--	--	--	--	--	--	--	--	--	--	
Di-n-octylphthalate	ug/L	05/30/07	0.9	10	3.5	J --	ND	ND	--	ND	--	1.1	J ND	--	--	--	
NC 2L= 100 ug/L	ug/L	11/19/07	0.94	10	ND	--	--	--	--	--	--	--	--	--	--	--	
No EPA MCL	ug/L	05/19/08	0.94	10	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	--	
	ug/L	11/19/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	06/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/20/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/19/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/19/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/28/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/23/12	--	10	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	
	ug/L	11/26/12	--	10	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/21/13	3.1	10	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	
	ug/L	11/06/13	3.1	10	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/21/14	3.1	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	
	ug?l	11/24/14	3.1	10	--	--	--	--	--	--	--	--	--	--	--	--	
Phenol	ug/L	05/30/07	1.5	10	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--	
NC 2L= 30 ug/L	ug/L	11/19/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
No EPA MCL	ug/L	06/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/30/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/20/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/19/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/19/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	11/28/11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/23/12	--	10	--	--	--	--	ND	ND	ND	1.5	J ND	ND	ND	ND	
	ug/L	11/26/12	--	10	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/21/13	--	10	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	
	ug/L	11/06/13	1.4	10	--	--	--	--	--	--	--	--	--	--	--	--	
	ug/L	05/21/14	1.4	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	
	ug/L	11/24/14	1.4	10	--	--	--	--	--	--	--	--	--	--	--	--	

TABLE 4

Summary of Detected Constituents in Groundwater
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	MDL	SWS Reporting Limit	Upgradient					Downgradient						Blanks
					PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3	
Cyanide	ug/L	06/07/99	--	2	ND	ND	--	ND	--	2	--	--	ND	--	--	--
NC 2L = 70 ug/L	ug/L	07/08/99	--	2	--	--	--	--	--	--	--	ND	--	--	--	--
EPA MCL = 200 ug/L	ug/L	12/15/99	--	2	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/06/00	--	2	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/27/00	--	2	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/04/01	--	2	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/03/01	--	2	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	2	ND	3	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	2	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/09/03	--	2	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	2	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/29/04	--	2	ND	--	2	ND	--	ND	--	ND	ND	--	--	--
	ug/L	09/19/04	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	12/20/04	--	2	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/05	--	2	2.3	--	ND	2.6	--	ND	--	ND	ND	--	--	--
	ug/L	12/05/05	1.6	2	5	--	5.8	3.7	--	4.3	--	5	5.4	--	--	--
	ug/L	06/05/06	--	2	3.6	--	ND	2.2	--	1.9 J	--	1.8 J	2.5	--	--	--
	ug/L	12/05/06	--	2	1.9 J	--	2.1	5.6	--	4.6	--	5.1	4.9	--	--	--
	ug/L	05/30/07	5.8	10	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	11/19/07	1.2	10	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/19/08	1.2	10	--	--	ND	ND	ND	ND	2.5	ND	1.3	--	--	--
	ug/L	11/19/08	1.3	10	--	--	ND	--	ND	--	--	--	--	--	--	--
	ug/L	06/30/09	1.3	10	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/30/09	1.3	10	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/20/10	1.3	10	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/19/10	1.3	10	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/19/11	1.3	10	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/28/11	1.3	10	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/23/12	1.3	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/26/12	1.3	10	--	--	--	--	--	--	--	--	--	--	--	--
	mg/L	05/21/13	4.9	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/06/13	--	10	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/21/14	4.9	10	--	--	--	--	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	11/24/14	--	10	--	--	--	--	--	--	--	--	--	--	--	--
Sulfide	ug/L	06/07/99	--	200	1300	200	--	200	--	ND	--	--	300	--	--	--
No Standard	ug/L	07/08/99	--	--	--	--	--	--	--	--	--	300	--	--	--	--
No EPA MCL	ug/L	12/15/99	--	--	1400	200	--	200	--	600	--	900	400	--	--	--
	ug/L	06/06/00	--	100	400	ND	--	100	--	100	--	600	500	--	--	--
	ug/L	12/27/00	--	--	400	350	--	260	--	300	--	290	520	--	--	--
	ug/L	06/04/01	--	--	600	300	--	300	--	400	--	400	200	--	--	--
	ug/L	12/03/01	--	400	ND	500	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/10/02	--	200	ND	ND	--	ND	--	ND	--	ND	ND	--	--	--
	ug/L	12/16/02	--	200	ND	ND	--	ND	--	300	--	ND	ND	--	--	--
	ug/L	06/09/03	--	200	ND	ND	--	1600	--	ND	--	ND	ND	--	--	--
	ug/L	12/08/03	--	2000	2000	ND	--	ND	--	ND	--	12000	ND	--	--	--
	ug/L	06/29/04	--	2000	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	09/19/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	12/20/04	--	2000	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/05	--	2000	13000	--	14000	15000	--	ND	--	12000	ND	--	--	--
	ug/L	12/05/05	94	2000	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	06/05/06	--	2000	ND	--	ND	ND	--	ND	--	ND	11000	--	--	--
	ug/L	12/05/06	--	--	16000	--	15000	12000	--	16000	--	17000	14000	--	--	--
	ug/L	05/30/07	500	1000	ND	--	ND	ND	--	ND	--	ND	ND	--	--	--
	ug/L	11/19/07	16	1000	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/19/08	16	1000	--	--	22	ND	27	ND	36	ND	21	--	--	--
	ug/L	11/19/08	3.4	1000	--	--	ND	--	5.4	--	--	--	--	--	--	--
	ug/L	06/30/09	3.4	1000	--	--	--	--	--	--	--	--	--	--	--	-- J
	ug/L	11/30/09	3.4	1000	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/20/10	3.4	1000	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/19/10	3.4	1000	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/19/11	3.4	1000	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/28/11	3.4	1000		--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/23/12	3.4	1000	--	--	--	--	ND	ND	120 J	ND	ND	ND	--	ND
	ug/L	11/26/12	3.4	1000	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/21/13	10.00	1000	--	--	--	--	ND	ND	280 J	ND	ND	ND	--	ND
	ug/L	11/06/13	--	1000	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	05/21/14	10.00	1000	--	--	--	--	ND	ND	35 J	ND	ND	31 J	--	ND
	ug/L	11/24/14	--	1000	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
mV= millivolts
ND = Not detected above laboratory detection limit
oC = degrees Celsius
J = estimated concentration
B = blank-qualified result
µS/cm= microsiemens per centimeter
-- = no data available
Blanks = field, trip, and method blanks
Shaded = Concentrations above the NC 2L or Solid Waste Section Groundwater Protection Standards have been shaded
Sample data from September 1994 through December 1998 compiled and reported by Malcolm Pirnie, Inc.
Sample data from June 1999 through December 2006 collected, compiled and reported by Weston Solutions, Inc.
Sample data from May 2007, November 2011 through current collected, compiled, and reported by Golder Associates NC, Inc.
Sample data collected from November 2007 to May 2011 collected, complied, and reported by S&ME.
Laboratory data prior to November 2011 was not validated by Golder Associates.
SWS Reporting Limit = NCPQL from 09/14/94 through 12/05/06 and NCSWSL for 05/30/07 and later
* = EPA Maximum Contaminant Level Secondary Standard
# = EPA Maximum Contaminant Level Action Level
MDL= Method Detection Limit

TABLE 5

Summary of Groundwater Field Parameters
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	Upgradient					Downgradient					
			PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3
pH (field)	S.U.	05/26/98	7.30	7.00	--	7.30	--	6.00	--	--	7.20	--	--
	S.U.	12/01/98	7.10	5.90	--	6.50	--	5.00	--	--	6.70	--	--
	S.U.	06/07/99	6.98	6.45	--	5.98	--	6.19	--	--	6.70	--	--
	S.U.	07/08/99	--	--	--	--	--	--	--	7.29	--	--	--
	S.U.	12/13/99	7.21	6.68	--	5.96	--	5.37	--	6.96	6.88	--	--
	S.U.	06/06/00	7.75	7.04	--	6.38	--	5.80	--	7.31	7.15	--	--
	S.U.	12/11/00	7.92	6.94	--	6.36	--	5.82	--	7.14	7.36	--	--
	S.U.	06/04/01	7.75	6.39	--	6.60	--	5.65	--	7.02	7.27	--	--
	S.U.	12/03/01	7.64	6.27	--	6.40	--	5.45	--	7.04	7.18	--	--
	S.U.	06/10/02	7.71	7.3	--	6.51	--	5.81	--	6.74	6.07	--	--
	S.U.	12/16/02	7.84	7.21	--	6.24	--	5.67	--	7.27	7.60	--	--
	S.U.	06/09/03	7.91	7.18	--	6.46	--	5.44	--	7.08	7.23	--	--
	S.U.	12/09/03	8.71	8.01	--	7.07	--	5.9	--	7.67	--	--	--
	S.U.	06/24/04	7.76	--	7.51	6.37	--	5.78	--	6.96	7.30	--	--
	S.U.	12/20/04	7.78	--	7.85	7.58	--	7.39	--	7.52	7.68	--	--
	S.U.	06/08/05	7.76	--	7.79	6.52	--	5.68	--	6.94	7.23	--	--
	S.U.	12/07/05	7.73	--	7.74	6.09	--	5.76	--	7.13	7.16	--	--
	S.U.	06/05/06	7.63	--	7.78	6.76	--	5.93	--	7.01	7.19	--	--
	S.U.	12/05/06	7.62	--	7.73	6.53	--	5.85	--	7.06	6.95	--	--
	S.U.	05/30/07	7.07	--	7.23	5.55	--	6.12	--	6.67	8.57	--	--
	S.U.	11/19/07	6.21	--	7.3	6.92	--	5.27	--	7.51	6.99	--	--
	S.U.	05/19/08	--	--	7.78	6.14	6.40	5.21	6.27	6.85	7.11	--	--
	S.U.	11/19/08	--	--	7.87	6.19	4.82	5.74	6.4	7.05	7.18	5.87	--
	S.U.	06/30/09	--	--	7.52	6.06	4.63	5.76	6.13	6.82	6.94	5.54	--
	S.U.	11/30/09	--	--	7.72	6.04	4.77	5.38	7.06	7.01	7.10	5.69	--
	S.U.	05/20/10	--	--	7.62	5.92	4.75	5.29	6.63	6.69	7.00	5.57	--
	S.U.	11/19/10	--	--	7.42	6.01	4.53	5.64	6.73	6.59	6.83	5.45	--
	S.U.	05/19/11	--	--	--	--	4.72	5.35	6.6	6.75	6.83	5.53	--
	S.U.	11/28/11	--	--	--	--	4.81	5.35	6.66	6.73	6.77	5.54	--
	S.U.	05/23/12	--	--	--	--	5.16	5.44	8.01	8.00	7.43	6.20	--
Verification Event	S.U.	06/15/12	--	--	--	--	--	--	--	--	6.80	--	--
	S.U.	11/26/12	--	--	--	--	4.34	5.47	6.61	6.69	6.45	5.70	--
	S.U.	05/21/13	--	--	--	--	4.37	5.47	7.04	6.92	7.27	5.53	--
	S.U.	11/06/13	--	--	--	--	4.90	5.67	6.85	6.94	--	5.90	--
	S.U.	05/21/14	--	--	--	--	5.06	5.22	6.88	7.19	6.93	5.81	6.51
	S.U.	11/24/14	--	--	--	--	4.42	5.60	6.67	6.94	6.82	--	5.80
Conductivity (field)	µS/cm	05/26/98	454	338	--	348	--	80	--	--	383	--	--
	µS/cm	12/01/98	394	305	--	406	--	59	--	--	388	--	--
	µS/cm	06/07/99	447	359	--	490	--	95.1	--	--	467	--	--
	µS/cm	07/08/99	--	--	--	--	--	--	--	608	--	--	--
	µS/cm	12/13/99	246	341	--	426	--	81.4	--	692	487	--	--
	µS/cm	06/06/00	461	385	--	479	--	85.8	--	726	474	--	--
	µS/cm	12/11/00	449	367	--	460	--	103	--	463	445	--	--
	µS/cm	06/04/01	432	305	--	334	--	66.5	--	539	366	--	--
	µS/cm	12/03/01	432	309	--	422	--	107	--	534	437.1	--	--
	µS/cm	06/10/02	425	308	--	430	--	78.0	--	625	444	--	--
	µS/cm	12/16/02	460	343	--	242	--	84.0	--	668	529	--	--
	µS/cm	06/09/03	286	322	--	386	--	78.0	--	652	543	--	--
	µS/cm	12/08/03	390	325	--	401	--	103	--	645	--	--	--
	µS/cm	06/28/04	449	--	340	379	--	92.0	--	630	471	--	--
	µS/cm	12/20/04	489	--	431	440	--	87.0	--	689	583	--	--
	µS/cm	06/08/05	429	--	349	386	--	768	--	575	467	--	--
	µS/cm	12/08/05	408	--	450	388	--	171	--	708	623	--	--
	µS/cm	06/05/06	469	--	348	237	--	66	--	604	535	--	--
	µS/cm	12/05/06	545	--	437	269	--	76	--	731	724	--	--
	µS/cm	05/30/07	503	--	427	302	--	67	--	720	748	--	--
	µS/cm	11/19/07	240	--	431	402	--	163	--	587	639	--	--
	µS/cm	05/19/08	--	--	445	146	50	70	1650	770	770	--	--
	µS/cm	11/19/08	--	--	423	231	53	104	1584	711	846	654	--
	µS/cm	06/30/09	--	--	381	250	47	86	1577	652	774	525	--
	µS/cm	11/30/09	--	--	328	138	45	50	895	555	715	244	--
	µS/cm	05/20/10	--	--	401	142	51	61	1269	704	832	173	--
	µS/cm	11/19/10	--	--	334	293	49	167	1055	671	809	373	--
	µS/cm	05/19/11	--	--	--	--	49	54	920	501	637	223	--
	µS/cm	11/28/11	--	--	--	--	65	329	1383	710	1013	389	--
	µS/cm	05/23/12	--	--	--	--	53	82	1413	640	918	614	--
Verification Event	µS/cm	06/15/12	--	--	--	--	--	--	--	--	956	--	--
	µS/cm	11/26/12	--	--	--	--	48	351	1444	633	892	686	--
	µS/cm	05/21/13	--	--	--	--	45	74	1138	643	884	161	--
	µS/cm	11/06/13	--	--	--	--	94	237	1144	478	--	564	--
	µS/cm	05/21/14		--	--	--	88	103	1464	766	1013	291	195
	µS/cm	11/24/14		--	--	--	57	375	1700	687	1004	--	238
Temperature (field)	°C	05/26/98	15.9	14.8	--	15.2	--	14.6	--	--	15.3	--	--
	°C	12/01/98	17.3	12	--	16.8	--	16	--	--	16.5	--	--
	°C	06/07/99	18.0	16.8	--	16.2	--	15.1	--	--	15.3	--	--
	°C	07/08/99	--	--	--	--	--	--	--	17.3	--	--	--
	°C	12/13/99	15.1	11.5	--	16.3	--	13.7	--	16.1	17.5	--	--
	°C	06/06/00	15.4	15.0	--	16.5	--	17.4	--	16.2	15.4	--	--
	°C	12/11/00	13.8	14.8	--	14.2	--	14.2	--	12..6	16.0	--	--
	°C	06/04/01	16.8	14.7	--	15.7	--	15.1	--	13.6	14.7	--	--
	°C	12/03/01	15.1	15.1	--	15.7	--	14.4	--	15.8	19.4	--	--
	°C	06/10/02	18.2	16.4	--	16.3	--	19.0	--	15.8	15.2	--	--
	°C	12/16/02	14.6	11.3	--	14.1	--	12.6	--	14.1	15.9	--	--
	°C	06/09/03	21.9	14.4	--	16.6	--	15.6	--	16.4	14.8	--	--
	°C	12/09/03	15.0	16.1	--	14.6	--	14.8	--	14.0	--	--	--
	°C	06/24/04	17.5	--	14.4	16.8	--	17.0	--	16.3	15.3	--	--
	°C	12/20/04	13.08	--	14.62	13.92	--	12.57	--	13.48	14.59	--	--
	°C	06/08/05	17.14	--	15.08	15.69	--	16.62	--	18.58	15.60	--	--
	°C	12/07/05	14.07	--	14.51	14.53	--	14.40	--	13.36	15.05	--	--
	°C	06/05/06	16.24	--	14.58	15.63	--	15.44	--	15.18	17.50	--	--
	°C	12/05/06	14.01	--	14.04	14.15	--	14.12	--	14.91	16.21	--	--
	°C	05/30/07	17.81	--	17.11	19.31	--	16.10	--	20.39	20.52	--	--
	°C	11/19/07	14.54	--	15.13	17.12	--	16.44	--	16.48	18.07	--	--
	°C	05/19/08	--	--	14.9	14.7	16.20	14.41	14.2	14.7	14.46	--	--
	°C	11/19/08	--	--	14.84	16.01	16.60	14.86	15.84	15.45	17.22	15.99	--
	°C	06/30/09	--	--	15.44	16.38	16.62	17.52	15.43	17.74	15.96	16.57	--
	°C	11/30/09	--	--	15.10	15.47	18.16	15.37	15.28	15.67	17.00	15.65	--
	°C	05/20/10	--	--	14.46	14.27	15.15	14.24	14.28	14.51	15.46	14.45	--
	°C	11/19/10	--	--	14.91	16.09	18.45	16.18	16.29	16.51	17.69	16.89	--
	°C	05/19/11	--	--	--	--	16.3	14.39	13.87	14.45	14.17	14.42	--
	°C	11/28/11	--	--	--	--	17.67	16.91	16.69	17.17	17.38	16.60	--
	°C	05/23/12	--	--	--	--	17.79	15.28	16.07	16.43	16.39	15.64	--
Verification Event	°C	06/15/12	--	--	--	--	--	--	--	--	16.07	--	--
	°C	11/26/12	--	--	--	--	16.85	16.05	14.80	16.60	17.58	16.16	--
	°C	05/21/13	--	--	--	--	17.31	15.84	15.32	16.45	16.51	16.53	--
	°C	11/06/13	--	--	--	--	17.4	16.8	17.3	17.5	--	17.2	--
	°C	05/21/14	--	--	--	--	16.7	14.8	14.5	14.4	15.9	14.6	16.7
	°C	11/24/14	--	--	--	--	17.4	16.4	15.0	17.7	18.0	--	15.2

TABLE 5

Summary of Groundwater Field Parameters
City of Durham Closed Landfill, Permit #32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	Upgradient					Downgradient					
			PZ-6	MW-7	MW-7R	MW-8	MW-9R	MW-2	MW-3R	MW-4R	MW-5	MW-10	NES-3
Turbidity (field)	NTU	05/26/98	>1000	143	--	73.9	--	66.2	--	--	118	--	--
	NTU	12/01/98	585	105	--	14.7	--	34	--	--	201	--	--
	NTU	06/07/99	very turbid	70.8	--	172	--	--	--	--	125	--	--
	NTU	07/08/99	--	--	--	--	--	--	--	turbid	--	--	--
	NTU	12/13/99	--	122.4	--	127.1	--	52.6	--	265	107	--	--
	NTU	06/06/00	105	230	--	75	--	5.74	--	48.2	686	--	--
	NTU	12/11/00	>200	--	--	161	--	>200	--	51.3	>200	--	--
	NTU	06/04/01	>1000	36.7	--	130	--	23.6	--	35	>1000	--	--
	NTU	12/03/01	>999	130	--	65	--	14	--	11	>999	--	--
	NTU	06/10/02	600	--	--	190	--	6.61	--	20	--	--	--
	NTU	12/16/02	>1100	130	--	1000	--	12.0	--	245	130	--	--
	NTU	06/09/03	106	230	--	275	--	128	--	45.0	75.0	--	--
	NTU	12/09/03	>990	>990	--	280	--	110	--	15.0	--	--	--
	NTU	06/04/04	--	--	--	--	--	--	--	--	--	--	--
	NTU	12/20/04	79.8	--	--	32.9	--	48	--	3.5	372	--	--
	NTU	06/08/05	887	--	275	9.1	--	5.0	--	8.9	611	--	--
	NTU	12/07/05	20	--	11	15.0	--	63.0	--	1.0	>1000	--	--
	NTU	06/05/06	254	--	133	100.0	--	70.4	--	5.3	>1000	--	--
	NTU	12/05/06	280	--	45	25.0	--	15.8	--	2.8	597	--	--
	NTU	05/30/07	436	--	>1000	61.8	--	0.0	--	0.0	0	--	--
	NTU	11/19/07	--	--	233	121.4	--	52	--	9.3	259	--	--
	NTU	05/19/08	--	--	3	8.4	21.5	5.6	60.4	3.1	6.9	--	--
	NTU	11/19/08	--	--	10.9	14.7	11.3	11.4	56.3	3.9	7.4	124.2	--
	NTU	06/30/09	--	--	22	9	7.5	9.2	9.9	0	3	98	--
	NTU	11/30/09	--	--	22.5	10	9	22.4	13	12	10	41.5	--
	NTU	05/20/10	--	--	5.5	14	9.8	9.6	8.8	0.4	9.6	19.9	--
	NTU	11/19/10	--	--	16.7	12.2	21	16	10.9	1.2	3.3	9.5	--
	NTU	05/19/11	--	--	--	--	18.5	36	8.4	1.4	11.7	12	--
	NTU	11/28/11	--	--	--	--	86.9	15.1	10.9	2.89	5.51	9.47	--
	NTU	05/23/12	--	--	--	--	40.0	29.5	4.10	2.10	63.5	22.8	--
Verification Event	NTU	06/15/12	--	--	--	--	--	--	--	--	5.84	--	--
	NTU	11/26/12	--	--	--	--	220	15.7	6.54	1.56	4.22	31.1	--
	NTU	05/21/13	--	--	--	--	12.3	48.3	6.57	1.81	57.0	84.3	--
	NTU	11/06/13	--	--	--	--	8.58	5.55	8.04	1.50	--	12.5	--
	NTU	05/21/14	--	--	--	--	26.5	9.57	20.4	5.72	28.2	36.1	26.3
	NTU	11/24/14	--	--	--	--	17.1	0.52	2.27	0.32	1.99	--	31.3
Oxidation Reduction Potential	mV	05/30/07	178	--	193	156	--	228	--	95	--	--	--
(field)	mV	11/19/07	--	--	-103	--	--	218	--	--	-82	--	--
	mV	05/19/08	--	--	-45	49	291	225.1	40	151	-75.2	--	--
	mV	11/19/08	--	--	-69.5	-33.8	199.3	103.7	-92.4	40.9	-103.7	-8.8	--
	mV	06/30/09	--	--	55	137	246	154	-47.7	30.4	-43	20.8	--
	mV	11/30/09	--	--	-109	65.3	238	241	-51.8	-5.4	-107.9	8.8	--
	mV	05/20/10	--	--	-23.4	85.7	286.6	262.5	-23	25.8	-48.7	89.9	--
	mV	11/19/10	--	--	-118.4	16.8	310.2	176	-37.3	12.7	-76.6	49.7	--
	mV	05/19/11	--	--	--	--	194	91	-151	-9.4	-29.9	-23	--
	mV	11/28/11	--	--	--	--	207.7	138.8	4.0	79.0	-26.6	56.1	--
	mV	05/23/12	--	--	--	--	243.7	144.5	-93.4	-35.7	-81.6	3.6	--
Verification Event	mV	06/15/12	--	--	--	--	--	--	--	--	-337.5	--	--
	mV	11/26/12	--	--	--	--	58.2	-9.6	-40.2	-43.2	-64.4	-35.8	--
	mV	05/21/13	--	--	--	--	145.3	112.8	-74.6	37.1	-73.8	47.2	--
	mV	11/06/13	--	--	--	--	352.3	112.6	-84.8	90.4	--	-65.6	--
	mV	05/21/14	--	--	--	--	290.5	257.7	-82.7	46.6	-64.9	-18.4	--
	mV	11/24/14	--	--	--	--	223.8	136.9	31.1	-6.7	-22.4	--	-4.7
Dissolved Oxygen (field)	mg/L	12/01/01	4.70	5.30	--	2.25	--	4.00	--	3.90	3.50	--	--
	mg/L	06/10/02	5.28	4.86	--	5.69	--	9.08	--	7.00	16.85	--	--
	mg/L	12/16/02	5.50	6.72	--	3.30	--	7.92	--	5.99	10.2	--	--
	mg/L	06/09/03	7.65	5.25	--	3.69	--	9.58	--	4.63	2.65	--	--
	mg/L	12/08/03	5.90	2.10	--	4.30	--	5.00	--	7.90	--	--	--
	mg/L	06/24/04	6.50	--	5.23	6.20	--	8.44	--	5.37	2.96	--	--
	mg/L	12/20/04	6.21	--	4.60	4.63	--	7.52	--	3.65	3.61	--	--
	mg/L	06/08/05	--	--	--	--	--	--	--	--	--	--	--
	mg/L	06/05/06	4.00	--	2.19	2.69	--	4.48	--	4.31	3.48	--	--
	mg/L	12/05/06	3.81	--	2.40	3.91	--	7.19	--	2.83	-20.00	--	--
	mg/L	05/30/07	2.1	--	5.6	2.8	--	2.6	--	4.6	--	--	--
	mg/L	11/19/07	--	--	0.12	1.18	--	2.72	--	1.57	0.24	--	--
	mg/L	05/19/08	--	--	--	--	--	--	--	--	--	--	--
	mg/L	11/19/08	--	--	3.48	0.82	4.89	9.21	3.84	7.62	0.89	3.36	--
	mg/L	06/30/09	--	--	24.6	30	8.5	67.5	2.9	33.6	6.1	3.3	--
	mg/L	11/30/09	--	--	3.41	0.31	4.77	8.32	2.84	0.95	0.23	0.34	--
	mg/L	05/20/10	--	--	1.68	0.26	0.54	8.8	0.12	0.37	0.19	0.49	--
	mg/L	11/19/10	--	--	0.48	0.91	0.84	3.4	2.67	2.09	1.82	1.91	--
	mg/L	05/19/11	--	--	--	--	1.83	6.48	0.2	0.77	0.09	0.13	--
	mg/L	11/28/11	--	--	--	--	1.93	1.74	0.93	1.71	0.47	0.56	--
	mg/L	05/23/12	--	--	--	--	1.31	1.67	0.61	0.49	0.37	1.29	--
Verification Event	mg/L	06/15/12	--	--	--	--	--	--	--	--	0.67	--	--
	mg/L	11/26/12	--	--	--	--	1.69	2.51	1.09	1.44	0.64	1.02	--
	mg/L	05/21/13	--	--	--	--	1.65	1.11	1.29	1.81	0.40	1.53	--
	mg/L	11/06/13	--	--	--	--	0.93	0.72	0.78	2.66	--	1.30	--
	mg/L	05/21/14	--	--	--	--	1.19	1.10	0.29	1.05	0.23	0.69	--
	mg/L	11/24/14	--	--	--	--	1.52	1.71	1.37	2.03	0.51	--	0.35

Notes:
mg/L = milligrams per liter
-- = no data available
S.U. = Standard Units
NTU = Nephelometric Turbidity Units
ND = Not detected at the stated reporting limit
uS/cm = microsiemens per centimeter

TABLE 6

Summary of Surface Water Monitoring Results
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream		Downstream						Blanks	
				S-4		S-1		S-2		S-3			
Antimony	ug/L	12/20/04	5	ND		ND		ND		ND		--	
SWS GPS = 1 ug/L	ug/L	06/05/05	5	ND		ND		5		ND		--	
	ug/L	12/07/05	5	ND		ND		ND		ND		--	
	ug/L	06/05/06	5	ND		ND		dry		ND		--	
	ug/L	12/05/06	5	ND		ND		ND		ND		--	
	ug/L	05/30/07	6	ND		dry		dry		ND		ND	
	ug/L	11/30/07	6	0.94	J	dry		dry		0.97	J	ND	
	ug/L	05/19/08	6	0.40	J	ND		0.24	J	0.36	J	ND	
	ug/L	11/19/08	6	0.76	B	0.59	B	0.7	B	0.76	B	0.53	J
	ug/L	06/30/09	6	ND		dry		dry		ND		ND	
	ug/L	11/30/09	6	0.212	J	ND		ND		ND		ND	
	ug/L	05/20/10	6	0.881	J	ND		ND		ND		ND	
	ug/L	11/19/10	6	ND		ND		ND		ND		ND	
	ug/L	05/19/11	6	0.271	J	ND		ND		ND		ND	
	ug/L	11/28/11	6	ND		dry		ND		ND		ND	
	ug/L	05/23/12	6	0.398	J	ND		0.269	J	0.378	J	ND	
	ug/L	11/26/12	6	ND		ND		ND		ND		ND	
	ug/L	05/21/13	6	0.259	J	ND		ND		0.289	J	ND	
	ug/L	11/06/13	6	ND		dry		ND		ND		ND	
	ug/L	05/21/14	6	0.287	B	ND		ND		0.274	B	0.475	J
	ug/L	11/24/14	6	0.301	J	ND		0.330	J	0.301	J	ND	
Arsenic	ug/L	05/30/07	10	ND		dry		dry		ND		3.8	J
SW Standard = 10 ug/L	ug/L	11/30/07	10	1.5	B	dry		dry		1.7	B	0.89	J
	ug/L	05/19/08	10	ND		ND		1.2	J	ND		ND	
	ug/L	11/19/08	10	1.2	J	1.4	J	1.2	J	1	J	ND	
	ug/L	06/30/09	10	ND		dry		dry		ND		4.3	J
	ug/L	11/30/09	10	ND		ND		ND		ND		ND	
	ug/L	05/20/10	10	ND		ND		ND		ND		3.22	J
	ug/L	11/19/10	10	2.94	J	3.35	J	ND		ND		ND	
	ug/L	05/19/11	10	ND		5.0	J	ND		ND		ND	
	ug/L	11/28/11	10	ND		dry		4.77	B	ND		4.35	J
	ug/L	05/23/12	10	ND		ND		ND		ND		ND	
	ug/L	11/26/12	10	ND		ND		ND		ND		ND	
	ug/L	05/21/13	10	ND		ND		ND		ND		ND	
	ug/L	11/06/13	10	ND		dry		ND		ND		ND	
	ug/L	05/21/14	10	ND		ND		ND		ND		ND	
	ug/L	11/24/14	10	ND		ND		ND		ND		ND	
Barium	ug/L	02/07/95	--	27		69		82		39		--	
SW Standard = 1000 ug/L	ug/L	03/13/95	25	51		61		59		ND		--	
	ug/L	06/10/96	25	42		86		75		ND		--	
	ug/L	11/12/96	25	32		37		59		ND		--	
	ug/L	03/18/97	--	44		126		41		27		--	
	ug/L	10/02/97	25	92		162		62		ND		--	
	ug/L	05/26/98	--	35		94		72		106		--	
	ug/L	12/01/98	--	47		dry		dry		25		--	
	ug/L	06/07/99	25	ND		dry		dry		ND		--	
	ug/L	12/01/99	--	54		174		85		96		--	
	ug/L	06/06/00	--	73		dry		dry		dry		--	
	ug/L	12/22/00	--	66		dry		dry		dry		--	
	ug/L	06/04/01	25	ND		97		80		ND		--	
	ug/L	12/03/01	25	ND		dry		dry		ND		--	
	ug/L	06/10/02	25	ND		dry		dry		ND		--	
	ug/L	12/16/02	--	76		58		64		29		--	
	ug/L	06/10/03	25	ND		111		93		28		--	
	ug/L	12/08/03	25	14		59		62		ND		--	
	ug/L	06/29/04	25	ND		83		49		ND		--	
	ug/L	12/20/04	25	ND		42		71		ND		--	
	ug/L	06/05/05	25	ND		73		6		28		--	
	ug/L	12/07/05	--	39		59		52		46		--	
	ug/L	06/05/06	25	ND		126		dry		ND		--	
	ug/L	12/05/06	--	28		106		79		25		--	
	ug/L	05/30/07	100	8.1	J	dry		dry		7.6	J	ND	
	ug/L	11/30/07	100	3.2	J	dry		dry		9.1	J	ND	
	ug/L	05/19/08	100	17	J	64	J	66	J	18	J	ND	
	ug/L	11/19/08	100	13	J	96	J	64	J	11	J	ND	
	ug/L	06/30/09	100	9.78	J	dry		dry		8.29	J	ND	
	ug/L	11/30/09	100	10.5	J	70.1	J	61.4	J	14.1	J	ND	
	ug/L	05/20/10	100	19.6	J	64.1	J	76	J	19.7	J	ND	
	ug/L	11/19/10	100	6.12	J	94.8	J	43.9	J	4.59	J	ND	
	ug/L	05/19/11	100	14.3	J	108		65.2	J	15.5	J	1.14	J
	ug/L	11/28/11	100	63.3	J	dry		72.7	J	8.82	J	ND	
	ug/L	05/23/12	100	34.4	J	96.5	J	70.7	J	38.6	J	ND	
	ug/L	11/26/12	100	6.33	J	104		62.5	J	6.42	J	1.14	J
	ug/L	05/21/13	100	32.6	J	58.3	J	69.1	J	31.7	J	ND	
	ug/L	11/06/13	100	4.34	J	dry		59.3	J	7.44	J	ND	
	ug/L	05/21/14	100	19.8	J	73.0	J	71.3	J	20.4	J	ND	
	ug/L	11/24/14	100	15.7	J	85.7	J	47.8	J	17.5	J	ND	

TABLE 6

Summary of Surface Water Monitoring Results
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream		Downstream						Blanks	
				S-4		S-1		S-2		S-3			
Beryllium	ug/L	05/30/07	1	ND		dry		dry		ND		ND	
SW Standard = 6.5 ug/L #	ug/L	11/30/07	1	0.4	J	dry		dry		0.43	J	ND	
	ug/L	05/19/08	1	ND		ND		0.34	J	ND		ND	
	ug/L	11/19/08	1	ND		0.35	J	ND		ND		ND	
	ug/L	06/30/09	1	ND		dry		dry		ND		ND	
	ug/L	11/30/09	1	ND		ND		ND		ND		0.121	J
	ug/L	05/20/10	1	ND		ND		ND		ND		ND	
	ug/L	11/19/10	1	ND		ND		ND		ND		ND	
	ug/L	05/19/11	1	ND		ND		1.35	J	ND		ND	
	ug/L	11/28/11	1	ND		dry		ND		ND		ND	
	ug/L	05/23/12	1	ND		0.190	J	0.217	J	ND		ND	
	ug/L	11/26/12	1	ND		ND		ND		ND		ND	
	ug/L	05/21/13	1	ND		0.143	J	0.173	J	ND		ND	
	ug/L	11/06/13	1	ND		dry		ND		ND		ND	
	ug/L	05/21/14	1	ND		ND		0.103	J	ND		ND	
	ug/L	11/24/14	1	ND		ND		ND		ND		ND	
Chromium	ug/L	02/07/95	5	ND		ND		ND		ND		--	
SW Standard = 50 ug/L #	ug/L	03/13/95	5	ND		ND		ND		ND		--	
	ug/L	06/10/96	5	ND		ND		ND		ND		--	
	ug/L	11/12/96	5	ND		ND		ND		ND		--	
	ug/L	03/18/97	5	ND		ND		ND		ND		--	
	ug/L	10/02/97	5	ND		5.9		ND		ND		--	
	ug/L	05/26/98	5	ND		5		ND		ND		--	
	ug/L	12/01/98	5	ND		dry		dry		ND		--	
	ug/L	06/07/99	5	ND		dry		dry		ND		--	
	ug/L	12/01/99	--	7		16		8		8		--	
	ug/L	06/06/00	5	ND		dry		dry		dry		--	
	ug/L	12/22/00	5	ND		dry		dry		dry		--	
	ug/L	06/04/01	5	ND		ND		ND		ND		--	
	ug/L	12/03/01	5	ND		dry		dry		ND		--	
	ug/L	06/10/02	5	ND		dry		dry		ND		--	
	ug/L	12/16/02	5	ND		ND		ND		ND		--	
	ug/L	06/10/03	5	ND		5		ND		ND		--	
	ug/L	12/08/03	5	ND		5		ND		ND		--	
	ug/L	06/29/04	5	ND		ND		ND		ND		--	
	ug/L	12/20/04	5	5		ND		ND		ND		--	
	ug/L	06/05/05	5	ND		ND		ND		5		--	
	ug/L	12/07/05	5	5		ND		ND		9		--	
	ug/L	06/05/06	5	ND		ND		dry		ND		--	
	ug/L	12/05/06	5	ND		ND		ND		ND		--	
	ug/L	05/30/07	10	ND		dry		dry		ND		ND	
	ug/L	11/30/07	10	ND		dry		dry		ND		ND	
	ug/L	05/19/08	10	ND		ND		ND		ND		ND	
	ug/L	11/19/08	10	ND		ND		3.0	J	ND		ND	
	ug/L	06/30/09	10	ND		dry		dry		1.1	J	ND	
	ug/L	11/30/09	10	ND		2.64	J	ND		ND		ND	
	ug/L	05/20/10	10	1.18	J	3.03	J	4.65	J	ND		ND	
	ug/L	11/19/10	10	ND		ND		ND		ND		ND	
	ug/L	05/19/11	10	ND		1.44	J	2.95	J	ND		ND	
	ug/L	11/28/11	10	ND		dry		ND		ND		ND	
	ug/L	05/23/12	10	3.73	J	5.48	J	6.08	J	3.57	J	ND	
	ug/L	11/26/12	10	ND		ND		ND		ND		ND	
	ug/L	05/21/13	10	ND		2.08	J	2.18	J	1.57	J	ND	
	ug/L	11/06/13	10	6.44	J	dry		ND		ND		ND	
	ug/L	05/21/14	10	ND		ND		3.33	J	ND		ND	
	ug/L	11/24/14	10	ND		3.48	J	2.28	J	ND		ND	
Cobalt	ug/L	05/30/07	10	ND		dry		dry		ND		ND	
(No Standard)	ug/L	11/30/07	10	ND		dry		dry		ND		ND	
	ug/L	05/19/08	10	ND		ND		ND		ND		ND	
	ug/L	11/19/08	10	ND		1.5	J	1.4	J	ND		ND	
	ug/L	06/30/09	10	0.9	J	dry		dry		0.7	J	ND	
	ug/L	11/30/09	10	ND		ND		1.54	J	ND		ND	
	ug/L	05/20/10	10	ND		1.19	J	2.16	J	ND		ND	
	ug/L	11/19/10	10	ND		5.47	J	ND		ND		ND	
	ug/L	05/19/11	10	ND		4.66	J	1.75	J	1.22	J	ND	
	ug/L	11/28/11	10	ND		dry		ND		ND		ND	
	ug/L	05/23/12	10	2.13	J	3.16	J	2.53	J	1.80	J	ND	
	ug/L	11/26/12	10	ND		4.43	J	1.28	J	ND		ND	
	ug/L	05/21/13	10	ND		ND		ND		ND		ND	
	ug/L	11/06/13	10	1.17	B	dry		2.11	B	1.23	B	1.11	J
	ug/L	05/21/14	10	1.35	J	2.09	J	2.32	J	1.33	J	ND	
	ug/L	11/24/14	10	ND		1.81	J	ND		1.30	J	ND	

TABLE 6

Summary of Surface Water Monitoring Results
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream		Downstream						Blanks	
				S-4		S-1		S-2		S-3			
Copper	ug/L	02/07/95	5	ND		ND		ND		ND		--	
SW Standard = 7 ug/L #**	ug/L	03/13/95	5	5.5		6.8		**8.6**		ND		--	
	ug/L	06/10/96	5	6.3		5.9		5.7		ND		--	
	ug/L	11/12/96	5	ND		ND		ND		ND		--	
	ug/L	03/18/97	5	6		ND		ND		6		--	
	ug/L	10/02/97	5	ND		ND		ND		ND		--	
	ug/L	05/26/98	--	6		**8**		6		**9**		--	
	ug/L	12/01/98	5	ND		dry		dry		ND		--	
	ug/L	06/07/99	5	ND		dry		dry		ND		--	
	ug/L	12/01/99	--	**10**		**14**		**10**		**11**		--	
	ug/L	06/06/00	5	ND		dry		dry		dry		--	
	ug/L	12/22/00	5	ND		dry		dry		dry		--	
	ug/L	06/04/01	5	**13**		ND		**8**		ND		--	
	ug/L	12/03/01	5	ND		dry		dry		ND		--	
	ug/L	06/10/02	5	ND		dry		dry		ND		0.7	J
	ug/L	12/16/02	5	**21**		**8**		**10**		**8**		--	
	ug/L	06/10/03	5	ND		**8**		6		ND		--	
	ug/L	12/08/03	5	ND		5		6		5		--	
	ug/L	06/29/04	5	ND		**8**		ND		ND		--	
	ug/L	12/20/04	5	ND		ND		ND		ND		--	
	ug/L	06/05/05	--	3		5		5		2		--	
	ug/L	12/07/05	--	**9**		**7**		**10**		**11**		--	
	ug/L	06/05/06	--	3		**9**		dry		3		--	
	ug/L	12/05/06	--	2		3		6		3		--	
	ug/L	05/30/07	10	1.3	B	dry		dry		0.8	B	0.7	J
	ug/L	11/30/07	10	1.3	B	dry		dry		2.1	B	1.1	J
	ug/L	05/19/08	10	4	B	6	B	10	B	3.8	B	5.7	J
	ug/L	11/19/08	10	2.7	B	4.3	B	4.7	B	3.3	B	1.1	J
	ug/L	06/30/09	10	ND		dry		dry		ND		2.36	J
	ug/L	11/30/09	10	ND		2.83	J	2.34	J	ND		ND	
	ug/L	05/20/10	10	2.73	J	4.41	J	**9.21**	**J**	ND		ND	
	ug/L	11/19/10	10	ND		ND		ND		ND		ND	
	ug/L	05/19/11	10	1.6	J	2.11	J	3.75	J	1.93	J	ND	
	ug/L	11/28/11	10	3.71	J	dry		2.89	J	2.19	J	ND	
	ug/L	05/23/12	10	6.32	J	**7.36**	**J**	**7.57**	**J**	6.19	J	ND	
	ug/L	11/26/12	10	ND		ND		ND		ND		ND	
	ug/L	05/21/13	10	5.74	J	5.24	J	8.99	J	5.62	J	ND	
	ug/L	11/06/13	10	ND		dry		2.06	J	1.75	J	ND	
	ug/L	05/21/14	10	2.17	J	2.66	J	3.89	J	2.30	J	ND	
	ug/L	11/24/14	10	2.87	J	6.06	J	3.59	J	2.94	J	ND	
Lead	ug/L	02/07/95	5	11		ND		6.2		ND		--	
SW Standard = 25 ug/L #*	ug/L	03/13/95	5	ND		ND		7.5		ND		--	
	ug/L	06/10/96	5	ND		ND		ND		ND		--	
	ug/L	11/12/96	5	ND		ND		ND		ND		--	
	ug/L	03/18/97	5	5		ND		ND		5		--	
	ug/L	10/02/97	5	ND		ND		ND		ND		--	
	ug/L	05/26/98	5	ND		ND		ND		ND		--	
	ug/L	12/01/98	5	5		dry		dry		5		--	
	ug/L	06/07/99	5	ND		dry		dry		ND		--	
	ug/L	12/01/99	--	17		5		5		7		--	
	ug/L	06/06/00	5	ND		dry		dry		dry		--	
	ug/L	12/27/00	5	ND		dry		dry		dry		--	
	ug/L	06/04/01	5	ND		9		ND		ND		--	
	ug/L	12/03/01	5	ND		dry		dry		ND		--	
	ug/L	06/10/02	5	ND		dry		dry		ND		--	
	ug/L	12/16/02	5	ND		ND		ND		ND		--	
	ug/L	06/10/03	5	9		ND		6		ND		--	
	ug/L	12/08/03	5	ND		ND		ND		ND		--	
	ug/L	06/29/04	5	ND		ND		ND		ND		--	
	ug/L	12/20/04	5	ND		ND		ND		ND		--	
	ug/L	06/05/05	5	9		ND		6		ND		--	
	ug/L	12/07/05	5	10		ND		ND		10		--	
	ug/L	06/05/06	5	ND		ND		dry		ND		--	
	ug/L	12/05/06	5	ND		ND		ND		ND		--	
	ug/L	05/30/07	10	ND		dry		dry		ND		3.1	J
	ug/L	11/30/07	5	ND		dry		dry		ND		3.5	J
	ug/L	05/19/08	5	ND		ND		4.1	J	ND		ND	J
	ug/L	11/19/08	5	0.5	B	0.79	B	1.7	B	0.45	B	3.1	J
	ug/L	06/30/09	5	2.4	B	dry		dry		ND		ND	
	ug/L	11/30/09	10	ND		ND		ND		ND		3.09	J
	ug/L	05/20/10	10	ND		3.15	J	3.61	J	ND		ND	
	ug/L	11/19/10	10	ND		ND		ND		ND		ND	
	ug/L	05/19/11	10	2.31	J	ND		2.90	J	ND		ND	
	ug/L	11/28/11	10	ND		dry		ND		ND		ND	
	ug/L	05/23/12	10	7.33	J	7.51	J	6.25	J	9.08	J	ND	
	ug/L	11/26/12	10	ND		ND		ND		ND		ND	
	ug/L	05/21/13	10	ND		ND		3.49	J	3.00	J	ND	
	ug/L	11/06/13	10	ND		dry		ND		ND		ND	
	ug/L	05/21/14	10	2.71	J	3.22	J	4.18	J	2.95	J	ND	
	ug/L	11/24/14	10	ND		ND		ND		ND		ND	

TABLE 6

Summary of Surface Water Monitoring Results
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream		Downstream						Blanks	
				S-4		S-1		S-2		S-3			
Nickel	ug/L	02/07/95	10	ND		ND		ND		ND		--	
SW Standard = 25 ug/L	ug/L	03/13/95	10	ND		13		16		ND		--	
	ug/L	06/10/96	10	ND		ND		ND		ND		--	
	ug/L	11/12/96	10	ND		ND		ND		ND		--	
	ug/L	03/18/97	10	ND		ND		ND		ND		--	
	ug/L	10/02/97	10	ND		ND		ND		ND		--	
	ug/L	05/26/98	10	ND		ND		ND		ND		--	
	ug/L	12/01/98	10	ND		dry		dry		ND		--	
	ug/L	06/07/99	10	ND		dry		dry		ND		--	
	ug/L	12/01/99	--	10		12		10		10		--	
	ug/L	06/06/00	10	ND		dry		dry		dry		--	
	ug/L	12/22/00	10	ND		dry		dry		dry		--	
	ug/L	06/04/01	10	ND		ND		ND		ND		--	
	ug/L	12/03/01	10	ND		dry		dry		ND		--	
	ug/L	06/10/02	10	ND		dry		dry		ND		--	
	ug/L	12/16/02	10	ND		ND		ND		ND		--	
	ug/L	06/10/03	10	ND		ND		ND		ND		--	
	ug/L	12/08/03	10	ND		ND		ND		ND		--	
	ug/L	06/29/04	10	ND		ND		ND		ND		--	
	ug/L	12/20/04	10	ND		ND		ND		ND		--	
	ug/L	06/05/05	10	ND		ND		ND		ND		--	
	ug/L	12/07/05	10	ND		ND		ND		ND		--	
	ug/L	06/05/06	10	ND		ND		dry		ND		--	
	ug/L	12/05/06	10	ND		ND		ND		ND		--	
	ug/L	05/30/07	50	2.7	J	dry		dry		2.7	J	ND	
	ug/L	11/30/07	50	ND		dry		dry		ND		ND	
	ug/L	05/19/08	50	ND		ND		ND		ND		ND	
	ug/L	11/19/08	50	ND		ND		ND		ND		ND	
	ug/L	06/30/09	50	3.1	B	dry		dry		3.8	B	0.6	J
	ug/L	11/30/09	50	ND		2.60	B	3.25	B	ND		4.59	J
	ug/L	05/20/10	50	2.23	J	2.36	J	3.83	J	1.97	J	ND	
	ug/L	11/19/10	50	ND		4.72	J	ND		ND		ND	
	ug/L	05/19/11	50	2.11	J	4.4	J	3.14	J	2.05	J	ND	
	ug/L	11/28/11	50	3.30	J	dry		3.11	J	1.90	J	ND	
	ug/L	05/23/12	50	2.85	J	4.77	J	4.35	J	3.48	J	ND	
	ug/L	11/26/12	50	ND		2.96	J	ND		1.88	J	ND	
	ug/L	05/21/13	50	3.23	J	3.57	J	5.00	J	3.07	J	ND	
	ug/L	11/06/13	50	4.89	J	dry		2.04	J	ND		ND	
	ug/L	05/21/14	50	1.81	J	ND		2.28	J	2.37	J	ND	
	ug/L	11/24/14	50	2.45	J	3.66	J	1.89	J	ND		ND	
Selenium	ug/L	05/30/07	10	2.9	B	dry		dry		2.3	B	5.7	J
SW Standard = 5 ug/L #	ug/L	11/30/07	10	2.6	B	dry		dry		ND		0.52	J
	ug/L	05/19/08	10	ND		ND		ND		ND		ND	
	ug/L	11/19/08	10	1.2	B	ND		0.54	B	0.39	B	0.36	J
	ug/L	06/30/09	10	ND		dry		dry		ND		0.6	J
	ug/L	11/30/09	10	ND		ND		ND		ND		ND	
	ug/L	05/20/10	10	ND		ND		ND		ND		ND	
	ug/L	11/19/10	10	ND		ND		ND		ND		ND	
	ug/L	05/19/11	10	1.88	J	1.7	J	1.32	J	1.81	J	ND	
	ug/L	11/28/11	10	ND		dry		ND		ND		ND	
	ug/L	05/23/12	10	ND		ND		ND		ND		ND	
	ug/L	11/26/12	10	ND		ND		ND		ND		ND	
	ug/L	05/21/13	10	ND		ND		ND		ND		ND	
	ug/L	11/06/13	10	ND		dry		ND		ND		ND	
	ug/L	05/21/14	10	ND		ND		ND		ND		ND	
	ug/L	11/24/14	10	ND		ND		ND		ND		ND	

TABLE 6

Summary of Surface Water Monitoring Results
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream		Downstream				Blanks
				S-4		S-1	S-2	S-3		
Silver	ug/L	02/07/95	1	ND		ND	ND	ND		--
SW Standard = 0.06 ug/L #**	ug/L	03/13/95	1	ND		ND	ND	ND		--
	ug/L	06/10/96	1	ND		1.8	3.3	ND		--
	ug/L	11/12/96	1	ND		ND	ND	ND		--
	ug/L	03/18/97	1	ND		ND	ND	ND		--
	ug/L	10/02/97	1	ND		ND	ND	ND		--
	ug/L	05/26/98	1	ND		ND	ND	ND		--
	ug/L	12/01/98	1	ND		dry	dry	ND		--
	ug/L	06/07/99	1	ND		dry	dry	ND		--
	ug/L	12/01/99	--	**1**		**1**	**1**	**1**		--
	ug/L	06/06/00	1	ND		dry	dry	dry		--
	ug/L	12/22/00	1	ND		dry	dry	dry		--
	ug/L	06/04/01	1	ND		ND	ND	ND		--
	ug/L	12/03/01	1	ND		dry	dry	ND		--
	ug/L	06/10/02	1	ND		dry	dry	ND		--
	ug/L	12/16/02	1	ND		ND	ND	ND		--
	ug/L	06/10/03	1	ND		ND	ND	ND		--
	ug/L	12/08/03	1	ND		ND	ND	ND		--
	ug/L	06/29/04	1	ND		ND	ND	ND		--
	ug/L	12/20/04	1	ND		ND	ND	ND		--
	ug/L	06/05/05	1	ND		ND	ND	ND		--
	ug/L	12/07/05	1	ND		ND	ND	ND		--
	ug/L	06/05/06	1	ND		ND	dry	ND		--
	ug/L	12/05/06	1	ND		ND	ND	ND		--
	ug/L	05/30/07	10	ND		dry	dry	ND		ND
	ug/L	11/30/07	10	**2.7**	**J**	dry	dry	**2.7**	**J**	ND
	ug/L	05/19/08	10	ND		ND	ND	ND		ND
	ug/L	11/19/08	10	ND		ND	ND	ND		ND
	ug/L	06/30/09	10	ND		dry	dry	ND		--
	ug/L	11/30/09	10	ND		ND	ND	ND		ND
	ug/L	05/20/10	10	ND		ND	ND	ND		ND
	ug/L	11/19/10	10	ND		ND	ND	ND		ND
	ug/L	05/19/11	10	ND		ND	ND	ND		ND
	ug/L	11/28/11	10	ND		dry	ND	ND		ND
	ug/L	05/23/12	10	ND		ND	ND	ND		ND
	ug/L	11/26/12	10	ND		ND	ND	ND		ND
	ug/L	05/21/13	10	ND		ND	ND	ND		ND
	ug/L	11/06/13	10	ND		dry	ND	ND		ND
	ug/L	05/21/14	10	ND		ND	ND	ND		ND
	ug/L	11/24/14	10	ND		ND	ND	ND		ND
Thallium	ug/L	05/30/07	5.5	ND		dry	dry	ND		ND
(No Standard)	ug/L	11/30/07	5.5	0.61	J	dry	dry	0.62	J	ND
	ug/L	05/19/08	5.5	ND		ND	ND	ND		ND
	ug/L	11/19/08	5.5	ND		ND	ND	ND		ND
	ug/L	06/30/09	5.5	ND		dry	dry	ND		ND
	ug/L	11/30/09	5.5	ND		ND	ND	0.685	J	ND
	ug/L	05/20/10	5.5	ND		ND	ND	ND		ND
	ug/L	11/19/10	5.5	ND		ND	ND	ND		ND
	ug/L	05/19/11	5.5	ND		ND	ND	ND		ND
	ug/L	11/28/11	5.5	ND		dry	ND	ND		ND
	ug/L	05/23/12	5.5	ND		ND	ND	ND		ND
	ug/L	11/26/12	5.5	ND		ND	ND	ND		ND
	ug/L	05/21/13	5.5	ND		ND	ND	ND		ND
	ug/L	11/06/13	5.5	ND		dry	ND	ND		ND
	ug/L	05/21/14	5.5	ND		ND	ND	ND		ND
	ug/L	11/24/14	5.5	ND		ND	ND	ND		ND

TABLE 6

Summary of Surface Water Monitoring Results
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream		Downstream						Blanks	
				S-4		S-1		S-2		S-3			
Vanadium	ug/L	02/07/95	5	ND		ND		ND		ND		--	
(No Standard)	ug/L	03/13/95	5	ND		ND		ND		ND		--	
	ug/L	06/10/96	5	ND		ND		7.7		ND		--	
	ug/L	11/12/96	5	ND		8		ND		ND		--	
	ug/L	03/18/97	5	ND		ND		ND		ND		--	
	ug/L	10/02/97	5	ND		8.5		ND		5.7		--	
	ug/L	05/26/98	5	ND		5		5		5		--	
	ug/L	12/01/98	5	ND		dry		dry		5		--	
	ug/L	06/07/99	5	ND		dry		dry		ND		--	
	ug/L	12/01/99	--	11		22		10		11		--	
	ug/L	06/06/00	--	5		dry		dry		dry		--	
	ug/L	12/22/00	--	5		dry		dry		dry		--	
	ug/L	06/04/01	5	ND		ND		5		ND		--	
	ug/L	12/03/01	--	6		dry		dry		6		--	
	ug/L	06/10/02	--	6		dry		dry		6		--	
	ug/L	12/16/02	5	7		ND		ND		ND		--	
	ug/L	06/10/03	5	ND		7		5		ND		--	
	ug/L	12/08/03	5	ND		ND		ND		ND		--	
	ug/L	06/29/04	5	ND		ND		ND		ND		--	
	ug/L	12/20/04	5	ND		ND		ND		ND		--	
	ug/L	06/05/05	5	5		ND		ND		ND		--	
	ug/L	12/07/05	5	7		ND		ND		6		--	
	ug/L	06/05/06	5	ND		ND		dry		ND		--	
	ug/L	12/05/06	5	ND		ND		ND		ND		--	
	ug/L	05/30/07	25	ND		dry		dry		1.2	J	ND	
	ug/L	11/30/07	25	ND		dry		dry		ND		ND	
	ug/L	05/19/08	25	ND		ND		3.1	J	ND		ND	
	ug/L	11/19/08	25	ND		ND		2.6	J	ND		ND	
	ug/L	06/30/09	25	2.4	J	dry		dry		2.4	J	ND	
	ug/L	11/30/09	25	1.96	J	1.52	J	1.96	J	2.03	J	ND	
	ug/L	05/20/10	25	4.02	J	5.14	J	7.89	J	5.27	J	ND	
	ug/L	11/19/10	25	1.78	J	ND		ND		1.64	J	ND	
	ug/L	05/19/11	25	2.97	J	ND		5.0	J	2.84	J	ND	
	ug/L	11/28/11	25	ND		dry		ND		ND		ND	
	ug/L	05/23/12	25	6.43	J	8.23	J	9.68	J	5.98	J	ND	
	ug/L	11/26/12	25	4.37	J	ND		ND		4.44	J	ND	
	ug/L	05/21/13	25	3.58	J	3.80	J	4.19	J	3.81	J	ND	
	ug/L	11/06/13	25	3.33	J	dry		ND		3.12	J	ND	
	ug/L	05/21/14	25	3.82	J	2.27	J	4.99	J	3.85	J	ND	
	ug/L	11/24/14	25	3.03	J	4.93	J	2.56	J	3.23	J	ND	
Zinc	ug/L	02/07/95	10	33		ND		ND		21		--	
SW Standard = 50 ug/L #**	ug/L	03/13/95	--	34		**63**		**87**		**67**		--	
	ug/L	06/10/96	10	ND		ND		ND		13		--	
	ug/L	11/12/96	10	20		ND		16		22		--	
	ug/L	03/18/97	10	32		ND		ND		32		--	
	ug/L	10/02/97	10	10		14		21		**146**		--	
	ug/L	05/26/98	--	25		26		19		48		--	
	ug/L	12/01/98	10	ND		dry		dry		**56**		--	
	ug/L	06/07/99	--	**76**		dry		dry		42		--	
	ug/L	12/01/99	--	**89**		**58**		45		**66**		--	
	ug/L	06/06/00	--	10		dry		dry		dry		--	
	ug/L	12/22/00	10	ND		dry		dry		dry		--	
	ug/L	06/04/01	--	39		14		16		28		--	
	ug/L	12/03/01	--	42		dry		dry		**80**		--	
	ug/L	06/10/02	--	25		dry		dry		36		--	
	ug/L	12/16/02	--	**106**		18		16		39		--	
	ug/L	06/10/03	--	18		22		15		19		--	
	ug/L	12/08/03	10	**106**		11		ND		42		--	
	ug/L	06/29/04	10	21		ND		ND		19		--	
	ug/L	12/20/04	10	31		ND		ND		30		--	
	ug/L	06/05/05	10	33		ND		ND		30		--	
	ug/L	12/07/05	--	38		10		16		33		--	
	ug/L	06/05/06	--	21		17		dry		17		--	
	ug/L	12/05/06	10	38		ND		11		41		--	
	ug/L	05/30/07	10	**51.9**		dry		dry		**52.5**		2.4	J
	ug/L	11/30/07	10	73	B	dry		dry		62	B	90.0	
	ug/L	05/19/08	10	48		10		38		47		ND	
	ug/L	11/19/08	10	29		12		12		26		ND	
	ug/L	06/30/09	10	24.7	B	dry		dry		28.3	B	15.2	
	ug/L	11/30/09	10	44.6		8.39	J	8.54	J	39.2		ND	
	ug/L	05/20/10	10	26.6		9.7	J	18.5		29.7		ND	
	ug/L	11/19/10	10	39.5		9.74	J	4.01	J	40.3		ND	
	ug/L	05/19/11	10	37.1		4.56	B	10.1	B	36.8		4.26	J
	ug/L	11/28/11	10	7.24	J	dry		5.77	J	36.6		ND	
	ug/L	05/23/12	10	38.8		17.1		22.1		34.0		ND	
	ug/L	11/26/12	10	20.5		ND		ND		20.2		ND	
	ug/L	05/21/13	10	20.7		5.84	J	16.4		16.8		ND	
	ug/L	11/06/13	10	35.4		dry		4.62	J	28.0		ND	
	ug/L	05/21/14	10	34.6		5.26	J	12.5		35.7		ND	
	ug/L	11/24/14	10	27.0		13.8		8.40	J	26.2		ND	

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Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream		Downstream						Blanks	
				S-4		S-1		S-2		S-3			
Acetone	ug/L	05/30/07	100	ND		dry		dry		5.4	B	3.8	J
(No Standard)	ug/L	11/30/07	100	ND		dry		dry		ND		ND	
	ug/L	05/19/08	100	ND		ND		ND		ND		13.0	J
	ug/L	11/19/08	100	ND		ND		ND		ND		ND	
	ug/L	06/30/09	100	ND		dry		dry		ND		ND	
	ug/L	11/30/09	100	ND		ND		ND		ND		ND	
	ug/L	05/20/10	100	ND		ND		ND		ND		ND	
	ug/L	11/19/10	100	ND		2.0	J	2.5	J	ND		ND	
	ug/L	05/19/11	100	ND		ND		ND		ND		ND	
	ug/L	11/28/11	100	ND		dry		ND		ND		ND	
	ug/L	05/23/12	100	11	B	5.4	B	9.2	B	10	B	16	J
	ug/L	11/26/12	100	ND		ND		ND		ND		ND	
	ug/L	05/21/13	100	ND		ND		ND		ND		ND	
	ug/L	11/06/13	100	ND		dry		ND		ND		ND	
	ug/L	05/21/14	100	ND		4.4	J	ND		ND		ND	
	ug/L	11/24/14	100	ND		ND		ND		ND		ND	
Chloroform	ug/L	09/19/94	--	ND		dry		dry		ND		--	
(No Standard)	ug/L	02/07/95	5	ND		ND		ND		ND		--	
	ug/L	03/13/95	5	ND		ND		ND		ND		--	
	ug/L	06/10/96	1	ND		ND		ND		ND		--	
	ug/L	11/12/96	1	ND		ND		ND		ND		--	
	ug/L	03/18/97	1	ND		ND		ND		ND		--	
	ug/L	10/02/97	1	ND		ND		ND		ND		--	
	ug/L	05/26/98	5	ND		ND		ND		ND		--	
	ug/L	12/01/98	2	ND		ND		ND		ND		--	
	ug/L	06/07/99	5	ND		dry		dry		ND		ND	
	ug/L	12/15/99	5	ND		ND		ND		ND		ND	
	ug/L	06/06/00	5	ND		dry		dry		dry		ND	
	ug/L	12/22/00	5	ND		dry		dry		dry		ND	
	ug/L	06/04/01	5	ND		ND		ND		ND		ND	
	ug/L	12/13/01	5	ND		dry		dry		ND		ND	
	ug/L	06/10/02	5	ND		dry		dry		ND		ND	
	ug/L	12/16/02	5	ND		ND		ND		ND		ND	
	ug/L	06/09/03	5	ND		ND		ND		ND		ND	
	ug/L	12/08/03	5	ND		ND		ND		ND		ND	
	ug/L	06/28/04	5	ND		ND		ND		ND		ND	
	ug/L	12/20/04	1	ND		ND		ND		ND		ND	
	ug/L	06/05/05	1	ND		ND		ND		ND		ND	
	ug/L	12/07/05	1	ND		ND		ND		ND		ND	
	ug/L	06/05/06	1	0.65	J	ND		ND		0.59	J	ND	
	ug/L	12/05/06	1	ND		ND		ND		ND		ND	
	ug/L	05/30/07	5	0.60	J	dry		dry		0.55	J	ND	
	ug/L	11/30/07	5	0.6	J	dry		dry		0.42		--	
	ug/L	05/19/08	5	0.66	J	ND		ND		0.58		--	
	ug/L	11/19/08	5	0.39	J	ND		ND		0.42		--	
	ug/L	06/30/09	5	ND		dry		dry		ND		--	
	ug/L	11/30/09	5	0.52	J	ND		ND		ND		--	
	ug/L	05/20/10	5	ND		ND		ND		ND		--	
	ug/L	11/19/10	5	ND		ND		ND		ND		--	
	ug/L	05/19/11	5	ND		ND		ND		ND		--	
	ug/L	11/28/11	5	ND		dry		ND		ND		ND	
	ug/L	05/23/12	5	ND		ND		ND		ND		ND	
	ug/L	11/26/12	5	ND		ND		ND		ND		ND	
	ug/L	05/21/13	5	ND		ND		ND		ND		ND	
	ug/L	11/06/13	5	ND		dry		ND		ND		ND	
	ug/L	05/21/14	5	ND		ND		ND		ND		ND	
	ug/L	11/24/14	5	ND		ND		ND		ND		ND	

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Summary of Surface Water Monitoring Results
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream		Downstream						Blanks	
				S-4		S-1		S-2		S-3			
Methylene Chloride	ug/L	09/19/94	--	ND		dry		dry		9.5		--	
(No Standard)	ug/L	02/07/95	5	ND		ND		ND		ND		--	
	ug/L	03/13/95	5	ND		ND		ND		ND		--	
	ug/L	06/10/96	5	ND		ND		ND		ND		--	
	ug/L	11/12/96	5	ND		ND		ND		ND		--	
	ug/L	03/18/97	5	ND		ND		ND		ND		--	
	ug/L	10/02/97	5	10		ND		ND		ND		--	
	ug/L	05/26/98	5	ND		ND		ND		ND		--	
	ug/L	12/01/98	5	ND		ND		ND		ND		--	
	ug/L	06/01/99	5	ND		dry		dry		ND		ND	
	ug/L	12/15/99	5	ND		ND		ND		ND		ND	
	ug/L	06/06/00	5	ND		dry		dry		dry		ND	
	ug/L	12/22/00	5	ND		dry		dry		dry		ND	
	ug/L	06/04/01	5	ND		ND		ND		ND		ND	
	ug/L	12/03/01	5	ND		dry		dry		ND		ND	
	ug/L	06/10/02	5	ND		dry		dry		ND		ND	
	ug/L	12/16/02	5	ND		ND		ND		ND		ND	
	ug/L	06/09/03	5	ND		ND		ND		ND		ND	
	ug/L	12/08/03	5	ND		ND		ND		ND		ND	
	ug/L	06/28/04	5	ND		ND		ND		ND		ND	
	ug/L	12/20/04	2	ND		ND		ND		ND		ND	
	ug/L	06/05/05	2	ND		ND		ND		ND		ND	
	ug/L	12/07/05	2	ND		ND		ND		ND		ND	
	ug/L	06/05/06	2	ND		ND		ND		ND		ND	
	ug/L	12/05/06	2	ND		ND		ND		ND		ND	
	ug/L	05/30/07	1	ND		dry		dry		ND		ND	
	ug/L	11/30/07	1	ND		dry		dry		ND		0.49	J
	ug/L	05/19/08	1	ND		ND		ND		ND		ND	
	ug/L	11/19/08	1	ND		ND		ND		ND		ND	
	ug/L	06/30/09	1	ND		dry		dry		ND		ND	
	ug/L	11/30/09	1	ND		ND		ND		ND		ND	
	ug/L	05/20/10	1	ND		ND		ND		ND		ND	
	ug/L	11/19/10	1	ND		ND		ND		ND		ND	
	ug/L	05/19/11	1	ND		ND		ND		ND		ND	
	ug/L	11/28/11	1	ND		dry		ND		ND		ND	
	ug/L	05/23/12	1	ND		ND		ND		ND		ND	
	ug/L	11/26/12	1	ND		ND		ND		ND		ND	
	ug/L	05/21/13	1	ND		ND		ND		ND		ND	
	ug/L	11/06/13	1	ND		dry		ND		ND		ND	
	ug/L	05/21/14	1	ND		ND		ND		ND		ND	
	ug/L	11/24/14	1	ND		ND		ND		ND		ND	
Toluene	ug/L	09/19/94	--	ND		dry		dry		ND		--	
SW Standard = 11 ug/L #	ug/L	02/07/95	5	ND		ND		ND		ND		--	
	ug/L	03/13/95	5	ND		ND		ND		ND		--	
	ug/L	06/10/96	--	1.0	B	1.1	B	1.4	B	1.1	B	--	
	ug/L	11/12/96	1	ND		1		ND		1.7		--	
	ug/L	03/18/97	1	ND		ND		ND		ND		--	
	ug/L	10/02/97	1	ND		ND		ND		ND		--	
	ug/L	05/26/98	1	ND		ND		ND		ND		--	
	ug/L	12/01/98	1	ND		ND		ND		ND		--	
	ug/L	06/07/99	5	ND		dry		dry		ND		ND	
	ug/L	06/07/99	5	ND		ND		ND		ND		ND	
	ug/L	12/15/99	5	ND		ND		ND		ND		ND	
	ug/L	06/06/00	5	ND		dry		dry		dry		ND	
	ug/L	12/22/00	5	ND		dry		dry		dry		ND	
	ug/L	06/04/01	5	ND		ND		ND		ND		ND	
	ug/L	12/03/01	5	ND		dry		dry		ND		ND	
	ug/L	06/10/02	5	ND		dry		dry		ND		ND	
	ug/L	12/16/02	5	ND		ND		ND		ND		ND	
	ug/L	06/09/03	5	ND		ND		ND		ND		ND	
	ug/L	12/08/03	5	ND		ND		ND		ND		ND	
	ug/L	06/28/04	5	ND		ND		ND		ND		ND	
	ug/L	12/20/04	1	ND		ND		ND		ND		ND	
	ug/L	06/05/05	1	ND		ND		ND		ND		ND	
	ug/L	12/07/05	1	ND		ND		ND		ND		ND	
	ug/L	06/05/06	1	ND		ND		ND		ND		ND	
	ug/L	12/05/06	1	ND		ND		ND		ND		ND	
	ug/L	05/30/07	1	ND		dry		dry		ND		0.33	J
	ug/L	11/30/07	1	ND		dry		dry		ND		ND	
	ug/L	05/19/08	1	ND		ND		ND		ND		0.66	J
	ug/L	11/19/08	1	ND		ND		ND		ND		ND	
	ug/L	06/30/09	1	ND		dry		dry		ND		ND	
	ug/L	11/30/09	1	ND		ND		ND		ND		ND	
	ug/L	05/20/10	1	ND		ND		ND		ND		ND	
	ug/L	11/19/10	1	ND		ND		ND		ND		ND	
	ug/L	05/19/11	1	ND		ND		ND		ND		ND	
	ug/L	11/28/11	1	ND		dry		ND		ND		ND	
	ug/L	05/23/12	1	ND		ND		ND		ND		ND	
	ug/L	11/26/12	1	ND		1.7		ND		ND		ND	
	ug/L	05/21/13	1	ND		ND		ND		ND		ND	
	ug/L	11/06/13	1	ND		dry		ND		ND		ND	
	ug/L	05/21/14	1	ND		ND		ND		ND		ND	
	ug/L	11/24/14	1	ND		ND		ND		ND		ND	

TABLE 6

Summary of Surface Water Monitoring Results
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream	Downstream			Blanks
				S-4	S-1	S-2	S-3	

TABLE 6

Summary of Surface Water Monitoring Results
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Notes:

mg/L =	milligrams per liter
ug/L =	micrograms per liter
S.U. =	Standard Units
NTU =	Nephelometric Turbidity Units
ND =	Not detected at the stated reporting limit
J =	estimated concentration
B =	blank-qualified result
dry =	no flowing water at time of sampling
µS/cm =	microsiemens per centimeter
mV =	Millivolts
-- =	no data
Blanks =	field, trip and method blanks
Surface Water Standards =	SW Standards are WS Standards (Ellerbee Creek is a WS-IV Classification) or Freshwater Aquatic Life Standards if no WS Standard exists.
Shaded =	Concentrations above the applicable Surface Water Standards have been shaded.
#	Freshwater Aquatic Life Standards
*	Standard is a Narrative Standard
**	Standard is an Action Limit

Sample data from September 1994 through December 1998 compiled and reported by Malcolm Pirnie, Inc.
Sample data from June 1999 through December 2006 collected, compiled and reported by Weston Solutions, Inc.
Sample data from May 2007, November 2011 through current collected, compiled, and reported by Golder Associates NC, Inc.
Sample data collected from November 2007 to May 2011 collected, complied, and reported by S&ME.
Laboratory data prior to November 2011 was not validated by Golder Associates.

SWS Reporting Limit = NCPQL from 09/14/94 through 12/05/06 and NCSWSL for 05/30/07 and later

TABLE 7

Summary of Surface Water Field Parameters
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	Upstream	Downstream		
			S-4	S-1	S-2	S-3
pH (field)	S.U.	05/26/98	--	--	--	--
	S.U.	12/01/98	--	--	--	--
	S.U.	06/07/99	6	dry	dry	5.76
	S.U.	07/08/99	--	dry	dry	--
	S.U.	12/13/99	6.47	6.3	6.44	6.58
	S.U.	06/06/00	6.54	dry	dry	dry
	S.U.	12/11/00	7.48	dry	dry	dry
	S.U.	06/04/01	7.08	6.92	6.94	7.11
	S.U.	12/03/01	6.59	dry	dry	5.99
	S.U.	06/10/02	7.81	dry	dry	8.13
	S.U.	12/16/02	7.28	7.66	6.81	7.2
	S.U.	06/09/03	7.14	7.58	--	7.49
	S.U.	12/09/03	8.46	7.82	8.58	8.46
	S.U.	06/24/04	7.53	6.91	7.4	7.57
	S.U.	12/20/04	7.64	8	--	7.66
	S.U.	06/08/05	7.5	7.69	7.31	7.59
	S.U.	12/07/05	7.2	7.3	7.14	7.47
	S.U.	06/05/06	7.58	7.24	dry	7.49
	S.U.	12/05/06	7.39	7.63	8.54	15.2
	S.U.	05/31/07	8.55	dry	dry	8.64
	S.U.	11/30/07	--	dry	dry	--
	S.U.	05/19/08	8.26	8.25	8.35	8.3
	S.U.	11/19/08	7.51	7.36	7.53	7.18
	S.U.	06/30/09	7.21	dry	dry	7.36
	S.U.	11/30/09	8.21	7.80	7.75	8.30
	S.U.	05/20/10	7.61	7.83	6.67	7.73
	S.U.	11/19/10	--	7.44	7.71	7.75
	S.U.	05/19/11	7.67	7.50	6.27	7.86
	S.U.	11/28/11	7.41	dry	6.57	6.73
	S.U.	05/23/12	6.68	7.31	6.25	6.21
	S.U.	11/26/12	6.55	6.38	6.44	6.86
	S.U.	05/21/13	6.62	7.30	6.37	6.73
	S.U.	11/06/13	7.24	dry	6.85	7.27
	S.U.	05/21/14	7.78	8.37	7.50	7.48
	S.U.	11/24/14	7.69	6.89	7.40	7.67
Conductivity (field)	µS/cm	05/26/98	--	--	--	--
	µS/cm	12/01/98	--	--	--	--
	µS/cm	06/07/99	198	dry	dry	167
	µS/cm	07/08/99	--	dry	dry	--
	µS/cm	12/13/99	257.4	272.8	137.8	134.5
	µS/cm	06/06/00	202.3	dry	dry	dry
	µS/cm	12/11/00	277.5	dry	dry	dry
	µS/cm	06/04/01	372.6	184.8	166.9	393.4
	µS/cm	12/03/01	445	dry	dry	433.5
	µS/cm	06/10/02	451	dry	dry	250
	µS/cm	12/16/02	123	60	110	341
	µS/cm	06/09/03	186	177	--	316
	µS/cm	12/08/03	411.1	29.9	24.3	410
	µS/cm	06/28/04	451	284	277	431
	µS/cm	12/20/04	434	249	--	424
	µS/cm	06/08/05	336	197.1	190.5	345.8
	µS/cm	12/08/05	250	129	140	176
	µS/cm	06/05/06	391	161	dry	412
	µS/cm	12/05/06	392	194	232	391
	µS/cm	05/31/07	477	dry	dry	485
	µS/cm	11/30/07	--	dry	dry	--
	µS/cm	05/19/08	120	120	300	320
	µS/cm	11/19/08	370	160	160	380
	µS/cm	06/30/09	330	dry	dry	310
	µS/cm	11/30/09	400	190	200	400
	µS/cm	05/20/10	287	99	159	267
	µS/cm	11/19/10	--	226	473	469
	µS/cm	05/19/11	313	163	137	311
	µS/cm	11/28/11	207	dry	251	465
	µS/cm	05/23/12	263	116	78	240
	µS/cm	11/26/12	421	201	208	428
	µS/cm	05/21/13	259	76	147	259
	µS/cm	11/06/13	345	dry	202	351
	µS/cm	05/21/14	433	186	215	432
	µS/cm	11/24/14	397	164	152	381

TABLE 7

Summary of Surface Water Field Parameters
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	Upstream	Downstream		
			S-4	S-1	S-2	S-3
Temperature (field)	°C	05/26/98	--	--	--	--
	°C	12/01/98	--	--	--	--
	°C	06/07/99	17.2	dry	dry	18
	°C	07/08/99	--	dry	dry	--
	°C	12/13/99	18.1	20.1	17.8	19.2
	°C	06/06/00	17.7	dry	dry	dry
	°C	12/11/00	8.9	dry	dry	dry
	°C	06/04/01	22.3	18.7	20.2	22.5
	°C	12/03/01	19.5	dry	dry	16.2
	°C	06/10/02	23.49	dry	dry	23.43
	°C	12/16/02	11.19	3.52	4.3	10.53
	°C	06/09/03	23.36	23.23	--	23.08
	°C	12/09/03	13.3	6.6	7.8	13.2
	°C	06/24/04	22.92	21.22	23.4	22.84
	°C	12/20/04	12.07	1.95	--	9.37
	°C	06/08/05	23.06	20.83	21.45	22.9
	°C	12/07/05	12.26	9.29	8.98	10.33
	°C	06/05/06	21.8	20.12	dry	21.75
	°C	12/05/06	15.02	8.32	8	15.2
	°C	05/31/07	24.28	dry	dry	23.8
	°C	11/30/07	--	dry	dry	--
	°C	05/19/08	19.0	19.0	22.6	21.7
	°C	11/19/08	14.7	7.5	6	14.6
	°C	06/30/09	20.4	dry	dry	20.3
	°C	11/30/09	18.4	17.3	17.6	18.6
	°C	05/20/10	23.04	18.36	20.8	22.38
	°C	11/19/10	--	7.69	19.34	19.43
	°C	05/19/11	21.01	15.61	18.00	21.49
	°C	11/28/11	13.91	dry	15.05	19.17
	°C	05/23/12	21.68	19.79	19.69	21.28
	°C	11/26/12	17.45	5.84	8.90	17.86
	°C	05/21/13	21.32	18.91	21.25	21.30
	°C	05/21/13	20.9	dry	12.9	20.7
	°C	05/21/14	20.0	23.9	17.9	20.0
	°C	11/24/14	17.6	12.4	13.0	17.3
Turbidity (field)	NTU	05/26/98	--	--	--	--
	NTU	12/01/98	--	--	--	--
	NTU	06/07/99	12	dry	dry	--
	NTU	07/08/99	--	dry	dry	--
	NTU	12/13/99	139.2	229	139.8	146.7
	NTU	06/06/00	42.8	dry	dry	dry
	NTU	12/11/00	27.3	dry	dry	dry
	NTU	06/04/01	17.2	18.2	90	7.6
	NTU	12/03/01	--	dry	dry	2.2
	NTU	06/10/02	3.2	dry	dry	2.6
	NTU	12/16/02	6.4	9	10	5.8
	NTU	06/09/03	34	65.2	--	18
	NTU	12/09/03	12	25	23	13
	NTU	06/04/04	--	--	--	--
	NTU	12/20/04	--	--	--	--
	NTU	06/08/05	7.55	22.1	53	8.99
	NTU	12/07/05	88	31	66	120
	NTU	06/05/06	15.6	26.4	dry	17.9
	NTU	12/05/06	4.44	20.6	27.5	8.31
	NTU	05/31/07	0	dry	dry	56.9
	NTU	11/30/07	--	dry	dry	--
	NTU	05/19/08	--	--	--	--
	NTU	11/19/08	--	--	--	--
	NTU	06/30/09	--	dry	dry	--
	NTU	11/30/09	--	--	--	--
	NTU	05/20/10	11.2	38.6	64.6	26
	NTU	11/19/10	--	10.5	0.3	0
	NTU	05/19/11	0.7	13.5	80.2	0.1
	NTU	11/28/11	26.0	dry	30.9	3.37
	NTU	05/23/12	93.2	97.1	179	91.4
	NTU	11/26/12	3.61	8.90	18.9	7.60
	NTU	05/21/13	35.8	56.3	92.7	44.5
	NTU	11/06/13	3.42	dry	21.3	3.12
	NTU	05/21/14	10.1	38.4	115	11.4
	NTU	11/24/14	10.3	36.9	21.4	10.9

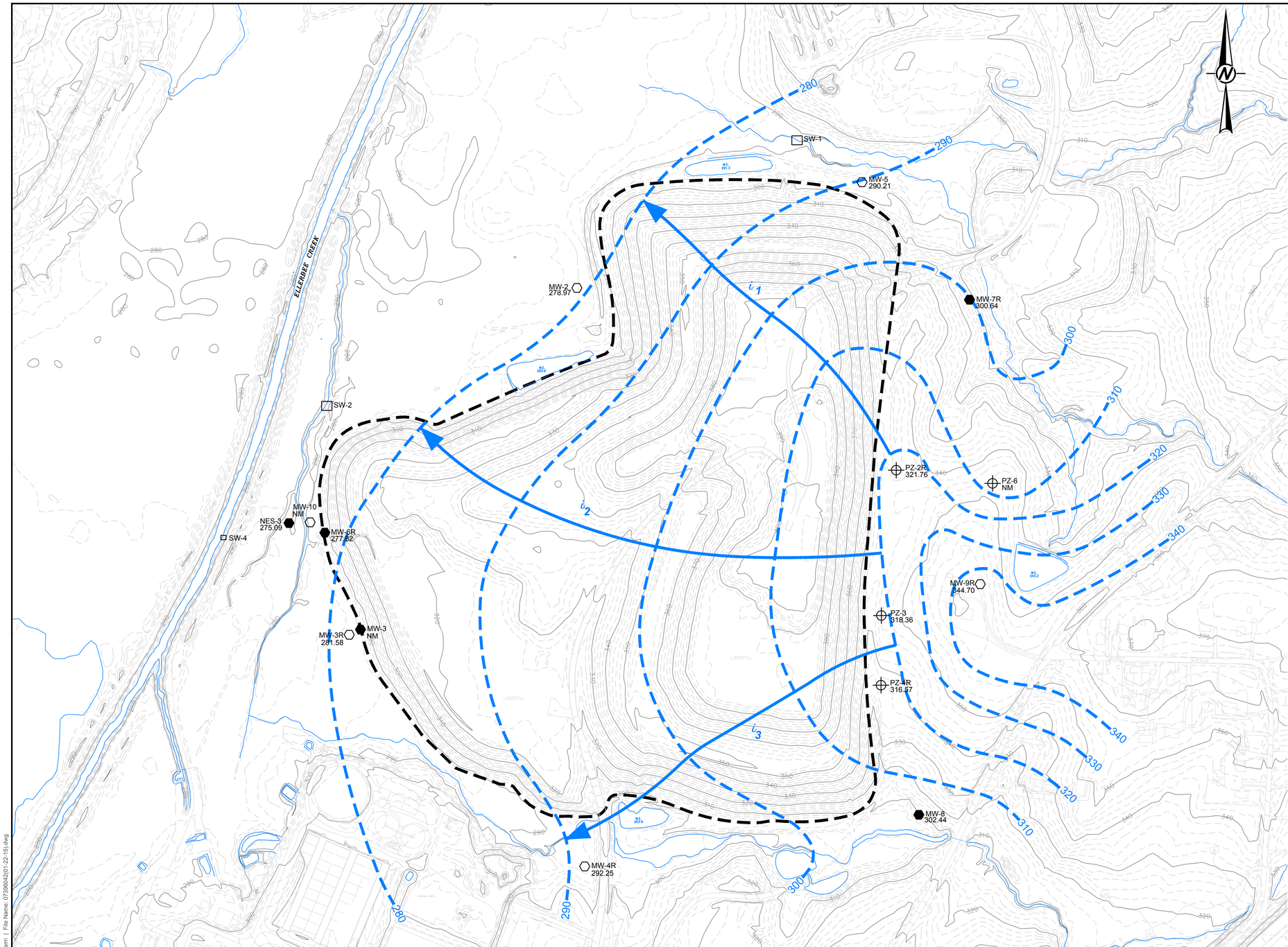
TABLE 7

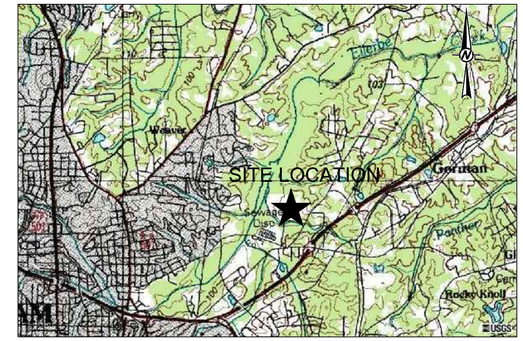
Summary of Surface Water Field Parameters
City of Durham Closed Landfill, Permit No. 32-01
Durham County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	Upstream	Downstream		
			S-4	S-1	S-2	S-3
Oxidation Reduction Potential (field)	mV	05/31/07	70	dry	dry	45
	mV	11/30/07	--	dry	dry	--
	mV	05/19/08	--	--	--	--
	mV	11/19/08	--	--	--	--
	mV	06/30/09	--	dry	dry	--
	mV	11/30/09	--	--	--	--
	mV	05/20/10	91.6	52.4	53.4	7.65
	mV	11/19/10	--	-72	2.6	71.5
	mV	05/19/11	31	-122	5.1	42
	mV	11/28/11	7.2	dry	52.8	106.3
	mV	05/23/12	38.7	21.1	12.8	105.3
	mV	11/26/12	-26.1	-20.2	4.3	-34.9
	mV	05/21/13	52.4	49.2	45.7	54.0
	mV	11/06/13	122.8	dry	56.3	104.2
	mV	05/21/14	72.1	140.1	72.2	58.7
	mV	11/24/14	29.1	71.7	60.9	48.1
Dissolved Oxygen (field)	mg/L	12/01/01	5.9	dry	dry	4.7
	mg/L	06/10/02	9.1	dry	dry	13.3
	mg/L	12/16/02	11.64	10.81	10.51	11.57
	mg/L	06/09/03	10.16	7.8	--	10.04
	mg/L	12/08/03	10.5	12.6	12.5	10.5
	mg/L	06/24/04	8.01	4.53	7.4	7.83
	mg/L	12/20/04	9.93	12.2	--	10.01
	mg/L	06/08/05	--	--	--	--
	mg/L	06/05/06	6.59	5.45	dry	6.74
	mg/L	12/05/06	8.25	4.46	9.89	7.24
	mg/L	05/31/07	8.1	dry	dry	7.7
	mg/L	11/30/07	--	dry	dry	--
	mg/L	05/19/08	--	--	--	--
	mg/L	11/19/08	--	--	--	--
	mg/L	06/30/09	--	dry	dry	--
	mg/L	11/30/09	--	--	--	--
	mg/L	05/20/10	8.08	8.53	7.84	7.85
	mg/L	11/19/10	--	7.57	8.62	10.04
	mg/L	05/19/11	0.56	4.73	0.1	8.8
	mg/L	11/28/11	7.34	dry	8.10	8.87
	mg/L	05/23/12	7.09	7.57	8.68	6.72
	mg/L	11/26/12	9.27	5.05	9.04	9.94
	mg/L	05/21/13	8.38	8.60	7.62	8.10
	mg/L	11/06/13	7.84	dry	6.83	6.77
	mg/L	05/21/14	8.04	7.12	7.88	6.93
	mg/L	11/24/14	7.41	7.00	8.35	8.22

Notes:
mg/L = illigrams per liter
-- = no data available
S.U. = Standard Units
NTU = Nephelometric Turbidity Units
ND = Not detected at the stated reporting limit
uS/cm= microsiemens per centimeter

DRAWING





LEGEND

	EXISTING 10' GROUND SURFACE CONTOUR
	EXISTING 2' GROUND SURFACE CONTOUR
	APPROXIMATE LIMITS OF WASTE
	EXISTING ROAD
300	GROUNDWATER ELEVATION 10' CONTOURS
i_1	GROUNDWATER FLOW ARROW
PZ-2R 321.76	PIEZOMETER LOCATION AND GROUNDWATER ELEVATION
SW-1	SURFACE WATER MONITORING POINT
MW-2 278.97	COMPLIANCE MONITORING WELL AND WATER LEVEL ELEVATION
MW-6R 277.82	NON-COMPLAINACE MONITORING WELL AND WATER LEVEL ELEVATION
NM	NOT MEASURED

NOTES

1) TOPOGRAPHIC CONTOUR INTERVAL = 2 FEET

2) GROUNDWATER SURFACE CONTOUR INTERVAL = 10 FEET

3) GROUNDWATER CONTOURS BASED ON LINEAR INTERPOLATION BETWEEN AND EXTRAPOLATION FROM KNOWN DATA, TOPOGRAPHIC CONTOURS, AND KNOWN FIELD CONDITIONS. THEREFORE, GROUNDWATER CONTOURS MAY NOT REFLECT ACTUAL CONDITIONS.

4) GROUNDWATER ELEVATIONS MEASURED ON NOVEMBER 24-25, 2014.

5) TOC ELEVATIONS WERE SURVEYED BY MULKEY ENGINEERING IN JANUARY 2001. TOC ELEVATIONS WERE SURVEYED FOR WELLS PZ-2R, PZ-4R, MW-6R, MW-7R AND MW-9R IN 2005 BY MULKEY ENGINEERING.

6) MW-10 SURVEYED BY BATEMAN CIVIL SURVEY.

7) MW-3R HAS NOT BEEN SURVEYED AND WAS NOT USED IN THE INTERPRETATION OF CONTOUR LINES.

8) WELLS MW-1, MW-4, MW-6, MW-7, MW-9, PZ-1, PZ-2 AND PZ-4 HAVE BEEN ABANDONED, DAMAGED OR DESTROYED AND ARE NOT SHOWN ON THIS MAP.

9) BASE MAP TOPOGRAPHIC MAP PROVIDED BY WESTON SOLUTIONS, INC. (FROM THEIR GROUNDWATER REPORT FOR THE DECEMBER 2006 SAMPLING EVENT).

0 200 400
SCALE FEET

CLIENT
CITY OF DURHAM

CONSULTANT PG C-399

Golder Associates
GOLDER ASSOCAITES, NC INC.

YYYY-MM-DD	2014-01-22
PREPARED	LKB
DESIGN	AS
REVIEW	DYR
APPROVED	RPK

PROJECT
CITY OF DURHAM
CLOSED LANDFILL PERMIT #32-01
DURHAM, NORTH CAROLINA

TITLE
GROUNDWATER CONTOUR MAP
NOVEMBER 24-25, 2014

PROJECT No.	PHASE	Rev.	TITLE
07396042	100	0	DRAWING 1

Path: \\greensboro\CAD\Projects\07396042 - City of Durham\ | File Name: 07396042(01-22-15).dwg

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D
1 in
0

APPENDIX A

Groundwater and Surface Water Sampling Logs

DATE: 11-24-14

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: City of Durham
Project No./Phase No.: 0739604214
Well ID: MW-2
Sampler(s): A. Stoddard, D. Childress
Well Diameter: 2 inches
Initial Depth to Water: 6.68 feet
Depth to Bottom: 20.00 feet
Water Column Thickness: 13.32 feet
Pumping Rate: 200 mL/min.
System Volume: 1000 mL
Well Location: NW of LF along perimeter trail in treeline cut
Equipment: YSI 556, Hach 2100Q turbidimeter, WL meter,
Pump Type: Grundfos-pump dedicated bladder pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
1044	6.35	0.211	9.46	2.96	17.3	96.6	7.19
1049	6.00	0.342	1.32	2.03	16.9	109.0	7.39
1054	5.86	0.376	0.76	2.08	16.7	115.1	7.60
1059	5.69	0.381	0.72	1.90	16.4	127.3	7.81
1104	5.62	0.379	0.83	1.81	16.4	135.2	8.00
1109	5.60	0.375	0.52	1.71	16.4	136.9	8.14
		Sampled @ 1109					

Comments (weather conditions, color, type of sample, purge-water management, etc.):
60's, sunny, windy

Signature: [signature] **Date:** 11-24-14

QA/QC Sign Off: [signature] **Date:** 1-27-15

DATE: 11-25-14

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham*
Project No./Phase No.: *0739604214*
Well ID: MW-3R (MS/MSD)
Sampler(s): A. Stoddard, D. Childress
Well Diameter: 2 inches
Initial Depth to Water: 3.61 feet
Depth to Bottom: 17.65 feet
Water Column Thickness: 14.04 feet
Pumping Rate: 150 mL/min.
System Volume: 1000 mL
Well Location: W of LF in treeline downhill from GP-14
Equipment: *YSI 556, Hach 2100Q turbidimeter, WL meter,*
Pump Type: ~~*Grundfos pump*~~ dedicated bladder pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
0822	6.29	1.529	4.48	3.10	15.2	155.7	3.96
0828	6.49	1.623	7.87	2.04	15.0	79.2	3.96
0834	6.63	1.690	4.21	1.47	15.0	41.1	3.96
0840	6.66	1.697	3.26	1.39	15.0	34.2	3.96
0846	6.67	1.700	2.27	1.37	15.0	31.1	3.96
		sampled @ 0846					

Comments (weather conditions, color, type of sample, purge-water management, etc.):
60's, cloudy, calm

Signature: Anna Stoddard
Date: 11-25-14

QA/QC Sign Off: [illegible]
Date: 1-27-15

DATE: 11-24-14

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: City of Durham
Project No./Phase No.: 0739604214
Well ID: MW-4R
Sampler(s): A. Stoddard, D. Childress
Well Diameter: 2 inches
Initial Depth to Water: 2.23 feet
Depth to Bottom: 17.39 feet
Water Column Thickness: 15.16 feet
Pumping Rate: 150 mL/min.
System Volume: 1000 mL
Well Location: Next to methane plant in wetland area
Equipment: YSI 556, Hach 2100Q turbidimeter, WL meter,
Pump Type: ~~Grundfos pump~~ dedicated bladder pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
1132	6.59	0.684	2.05	3.54	17.4	98.1	3.45
1138	6.73	0.683	0.88	2.54	17.7	57.3	4.11
1144	6.82	0.685	0.30	2.32	17.5	20.7	4.92
1150	6.89	0.686	0.27	2.11	17.6	3.5	5.38
1156	6.94	0.687	0.34	2.03	17.7	-5.7	5.86
1202	6.94	0.687	0.32	2.03	17.7	-6.7	6.32
			sampled @	1202			

Comments (weather conditions, color, type of sample, purge-water management, etc.):
60's, partly sunny, breeze

Signature: [signature] **Date:** 11-24-14

QA/QC Sign Off: [signature] **Date:** 1-27-15

DATE: 11-24-14

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: City of Durham
Project No./Phase No.: 0739604214
Well ID: MW-5
Sampler(s): A. Stoddard, D. Childress
Well Diameter: 2 inches
Initial Depth to Water: 10.05 feet
Depth to Bottom: 20.00 feet
Water Column Thickness: 9.95 feet
Pumping Rate: 200 mL/min.
System Volume: 1000 mL
Well Location: N of LF along perimeter trail (casing just above grade)
Equipment: YSI 556, Hach 2100Q turbidimeter, WL meter,
Pump Type: Grundfos pump dedicated bladder pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
0958	4.90	0.435	15.4	9.13	17.8	102.4	10.25
1003	6.18	0.971	18.6	1.88	17.71	13.7	10.42
1008	6.53	1.008	1.78	0.83	17.7	-18.5	10.46
1013	6.74	1.010	1.56	0.60	17.9	-25.4	10.48
1018	6.81	1.005	1.78	0.53	17.9	-23.2	10.48
1023	6.82	1.004	1.99	0.51	18.0	-22.4	10.48
			sampled @ 1023				

Comments (weather conditions, color, type of sample, purge-water management, etc.):
100's, sunny, windy

Signature: [signature] **Date:** 11-24-14

QA/QC Sign Off: [signature] **Date:** 1-27-15

DATE: 11-24-14

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *0739604214*
Well ID: MW-9R **Sampler(s):** A. Stoddard, D. Childress
Well Diameter: 2 inches **Initial Depth to Water:** 15.98 feet
Depth to Bottom: 28.50 feet **Water Column Thickness:** 12.62 feet
Pumping Rate: 200 mL/min. **System Volume:** 1000 mL
Well Location: E of LF along property line in K-9 training area
Equipment: *YSI 556, Hach 2100Q turbidimeter, WL meter,*
Pump Type: ~~Grundfos pump~~ dedicated bladder pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
0923	6.47	0.062	11.5	2.81	17.1	223.0	15.98
0928	5.17	0.060	30.8	1.61	17.1	231.6	16.01
0933	4.52	0.059	33.3	1.50	17.3	225.2	16.07
0938	4.46	0.058	30.9	1.54	17.4	223.4	16.09
0943	4.42	0.057	17.1	1.52	17.4	223.8	16.11
		sampled @		0943			

Comments (weather conditions, color, type of sample, purge-water management, etc.):
60's, cloudy, breeze

Signature: Anna Stoddard **Date:** 11-24-14

QA/QC Sign Off: [signature] **Date:** 1-27-15

DATE: 11-25-14

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: City of Durham
Project No./Phase No.: 0739604214
Well ID: NES-3
Sampler(s): A. Stoddard, D. Childress
Well Diameter: 2 inches
Initial Depth to Water: 8.47 feet
Depth to Bottom: 12.19 feet
Water Column Thickness: 3.72 feet
Pumping Rate: 250 mL/min.
System Volume: 1000 mL
Well Location: Across the creek from MW-10, behind GP-13
Equipment: YSI 556, Hach 2100Q turbidimeter, WL meter,
Pump Type: ~~Grundfos pump~~ portable bladder pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
1010	6.81	0.280	>1000	3.26	15.4	-13.4	8.00
1016	6.20	0.252	>1000	0.65	15.5	-8.7	8.66
1022	5.97	0.254	297	0.50	15.3	-11.6	8.73
1028	5.88	0.243	79.0	0.43	15.3	-7.8	8.77
1034	5.83	0.239	42.3	0.38	15.2	-5.4	8.81
1040	5.80	0.238	31.3	0.35	15.2	-4.7	8.85
			sampled @ 1040				

Comments (weather conditions, color, type of sample, purge-water management, etc.):
60's, cloudy, calm

Signature: Anna Stoddard **Date:** 11-25-14

QA/QC Sign Off: [illegible] **Date:** 1-27-15

DATE: 11-24-14

SURFACE WATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** 0739604714

Sample ID: SW-1 **Sampler(s):** A. Stoddard

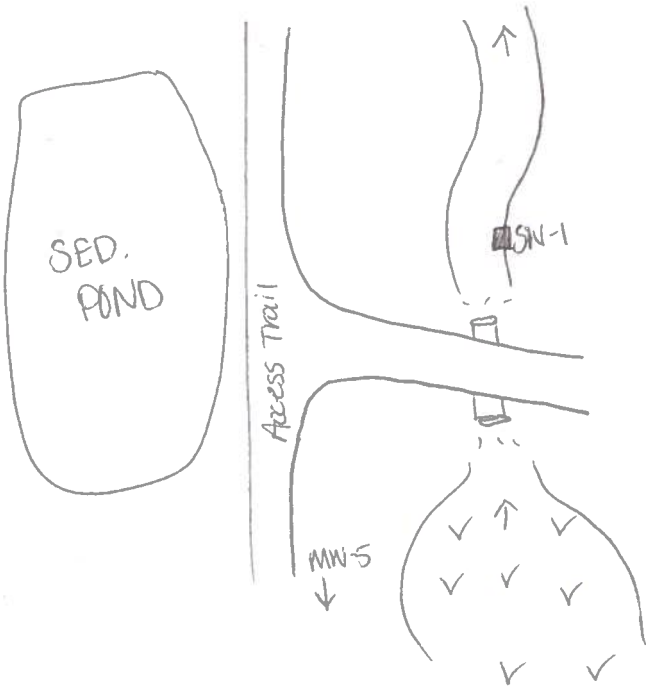
Sampling Location: Stream N of LF near MW-5 and Sed pond

Equipment: *YSI ~~ProPlus~~, Hach 2100Q Turbidimeter*

556

Time	1030
pH s.u.	6.89
Cond. mS/cm	0.164
Turb. ntu	36.9
Dis. O_2 mg/L	7.00
Temp. °C	12.4
ORP mv	71.7

Surface Water Sampling Location Sketch



Comments (sample methodology, weather conditions, color, silt, etc.):

60's, sunny, windy

Signature: Aaron Stoddard **Date:** 11-24-14

QA/QC Sign Off: [illegible] **Date:** 1-27-15

Golder Associates

DATE: 11-25-14

SURFACE WATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** 1739604214

Sample ID: SW-2 **Sampler(s):** A. Stoddard

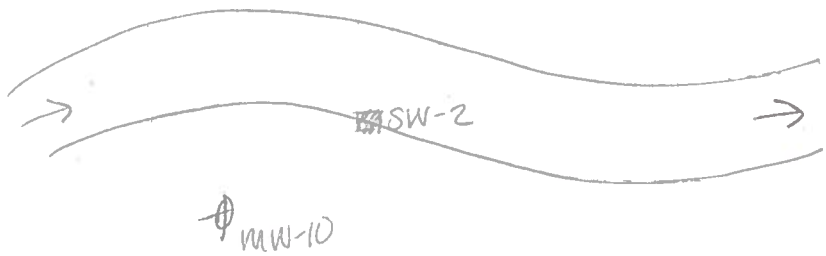
Sampling Location: stream next to MW-10

Equipment: *YSI ~~ProPlus~~, Hach 2100Q Turbidimeter*

550

Time	0905
pH s.u.	7.40
Cond. mS/cm	0.152
Turb. ntu	21.4
Dis. O_2 mg/L	8.35
Temp. °C	13.0
ORP mv	60.9

Surface Water Sampling Location Sketch



Comments (sample methodology, weather conditions, color, silt, etc.):

60's. cloudy. calm

Signature: Anna Stoddard **Date:** 11-25-14

QA/QC Sign Off: [illegible] **Date:** 1-27-15

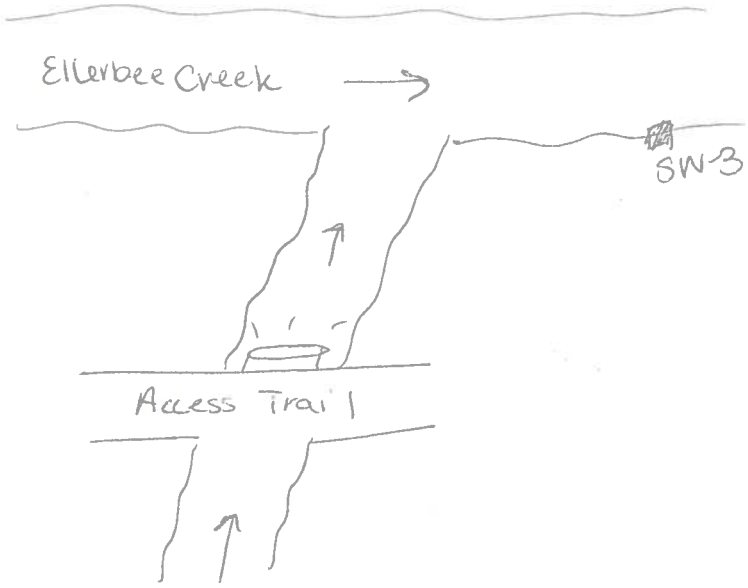
DATE: 11-25-14

SURFACE WATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** 0739604214
Sample ID: SW-3 **Sampler(s):** A. Stoddard
Sampling Location: Ellerbee Creek downstream of tributary
Equipment: *YSI ~~ProPlus~~, Hach 2100Q Turbidimeter*
556

Time	0950
pH s.u.	7.67
Cond. mS/cm	0.381
Turb. ntu	10.9
Dis. O_2 mg/L	8.22
Temp. °C	17.3
ORP mv	48.1

Surface Water Sampling Location Sketch



Comments (sample methodology, weather conditions, color, silt, etc.):
40's, cloudy, calm

Signature: Amber Stoddard **Date:** 11-25-14

QA/QC Sign Off: [signature] **Date:** 1-27-15

DATE: 11-25-14

Golder Associates

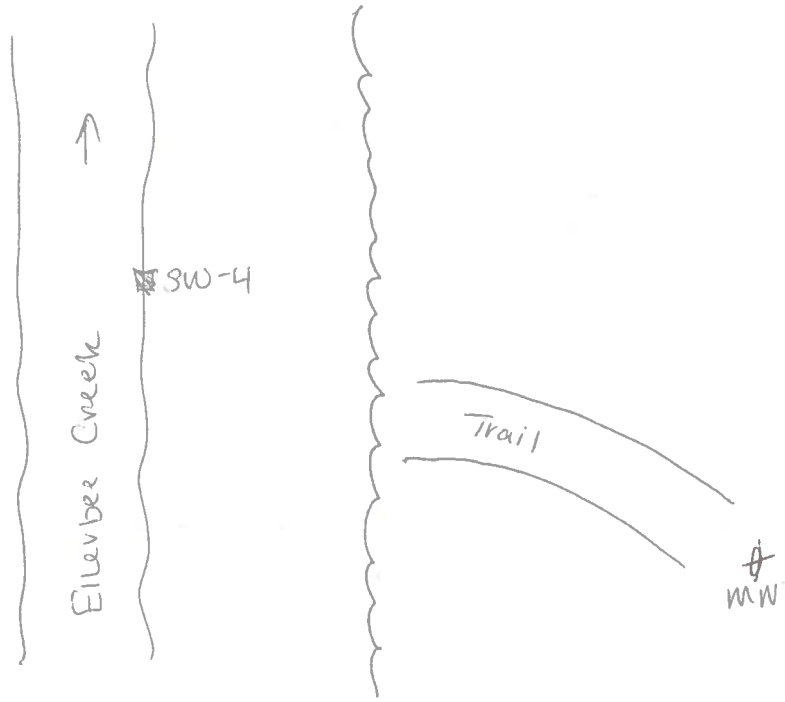
SURFACE WATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** 0739604214
Sample ID: SW-4 **Sampler(s):** A. Stoddard
Sampling Location: Ellerbee Creek upstream of tributary
Equipment: *YSI ProPlus, Hach 2100Q Turbidimeter*

556

Time	0935
pH s.u.	7.69
Cond. mS/cm	0.397
Turb. ntu	10.3
Dis. O_2 mg/L	7.41
Temp. °C	17.6
ORP mv	29.1

Surface Water Sampling Location Sketch



Comments (sample methodology, weather conditions, color, silt, etc.):
60's, cloudy, calm

Signature: Anna Stoddard **Date:** 11-25-14

QA/QC Sign Off: [illegible] **Date:** 1-27-15

APPENDIX B

November 2014 Groundwater Certificate-of-Analysis, Chain of Custody Form(s), and Laboratory Data Review(s)

WORK ORDER

Printed: 12/12/2014 12:11:34PM

C414851

ENCO Cary

Sample Receipt Conditions

Client:	**Golder Associates, Inc. (GO007)**	**Lab Project Mgr:**	**Stephanie Franz**
Project:	**City of Durham**	**Project Number:**	**073-9604214.100**
PO #:			

Report To:

Golder Associates, Inc. (GO007)
Dusty Reedy
5B Oak Branch Drive
Greensboro, NC 27407
Phone: (336) 852-4903
Fax: (336) 852-4904

Invoice To:

Golder Associates, Inc. (GO007)
Accounts Payable
5B Oak Branch Drive
Greensboro, NC 27407
Phone :(804) 358-7900
Fax: 804-358-2900

Received By:	Rachel Ann Yonish	Date Received:	26-Nov-14 09:30
Logged In By:	John C King	Date Logged In:	26-Nov-14 09:34

Work Order Comments:

C-958 received at 1.3°C

Containers Intact	**Y**	Containers Properly Preserved	**Y**	Proper Containers Received	**Y**	All Samples in PreLog Received	**Y**	COC/Labels Agree	**Y**
Custody Seals Intact	**Y**	Volatile Containers Preserved	**Y**	Volatile Containers Headspace Free	**Y**	Aqueous Samples Checked for Residual Cl	**N**	Received On Ice	**Y**
Temperature Corrected	**Y**								

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

Wednesday, January 21, 2015

Golder Associates, Inc. (GO007)

Attn: Dusty Reedy

5B Oak Branch Drive

Greensboro, NC 27407

RE: Laboratory Results for
Project Number: 073-9604214.100, Project Name/Desc: City of Durham
ENCO Workorder(s): C414851

Dear Dusty Reedy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Wednesday, November 26, 2014.

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 52.

PROJECT NARRATIVE

Date: 21 January 2015
Client: Golder Associates, Inc. (GO007)
Project: City of Durham
Lab ID: C414851

Overview

This report is an amendment to the original report dated 12 December 2014 for this work order. This report was revised, at the client's request to verify the concentration of Silver in sample MW-4R.

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

No Comments

Quality Control Remarks

No Comments

Other Comments

The detection of Silver in sample MW-4R was confirmed by secondary prep and analysis via EPA Method 6020A. This additional result is available upon request. At the client's request, MW-4R was reprepped and reanalyzed for Silver via EPA Method 6010C. The resulting concentration is lower than originally reported; both results from the 6010C analyses are included in this report.

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

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 3201-MW2 | Lab ID: C414851-01 | Sampled: 11/24/14 11:09 | Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	05/23/15	12/09/14	15:42	12/10/2014 13:09
EPA 6020A	05/23/15	12/03/14	10:19	12/5/2014 12:12
EPA 8260B	12/08/14	12/04/14	14:14	12/5/2014 02:59

Client ID: 3201-MW3R (MS/MSD) | Lab ID: C414851-02 | Sampled: 11/25/14 08:46 | Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	05/24/15	12/09/14	15:42	12/10/2014 12:38
EPA 6020A	05/24/15	12/03/14	10:19	12/5/2014 13:03
EPA 8260B	12/09/14	12/05/14	11:11	12/5/2014 21:51

Client ID: 3201-MW4R | Lab ID: C414851-03 | Sampled: 11/24/14 12:02 | Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	05/23/15	12/09/14	15:42	12/10/2014 13:12
EPA 6020A	05/23/15	12/03/14	10:19	12/5/2014 12:15
EPA 8260B	12/08/14	12/05/14	11:11	12/5/2014 22:22

Client ID: 3201-MW4R | Lab ID: C414851-03RE1 | Sampled: 11/24/14 12:02 | Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	05/23/15	01/19/15	10:42	1/20/2015 12:22

Client ID: 3201-MW5 | Lab ID: C414851-04 | Sampled: 11/24/14 10:23 | Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	05/23/15	12/09/14	15:42	12/10/2014 13:14
EPA 6020A	05/23/15	12/03/14	10:19	12/5/2014 12:33
EPA 8260B	12/08/14	12/05/14	11:11	12/5/2014 22:53

Client ID: 3201-MW9R | Lab ID: C414851-05 | Sampled: 11/24/14 09:43 | Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	05/23/15	12/09/14	15:42	12/10/2014 13:17
EPA 6020A	05/23/15	12/03/14	10:19	12/5/2014 12:37
EPA 8260B	12/08/14	12/05/14	11:11	12/5/2014 23:23

Client ID: 3201-NES3 | Lab ID: C414851-06 | Sampled: 11/25/14 10:40 | Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	05/24/15	12/09/14	15:42	12/10/2014 13:19
EPA 6020A	05/24/15	12/03/14	10:19	12/5/2014 12:40
EPA 8260B	12/09/14	12/05/14	11:11	12/5/2014 23:53

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Client ID: 3201-S1	Lab ID: C414851-07	Sampled: 11/24/14 10:30	Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	05/23/15	12/09/14 15:42	12/10/2014 13:22
EPA 6020A	05/23/15	12/03/14 10:19	12/5/2014 12:44
EPA 8260B	12/08/14	12/04/14 14:18	12/5/2014 09:30

Client ID: 3201-S2	Lab ID: C414851-08	Sampled: 11/25/14 09:05	Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	05/24/15	12/09/14 15:42	12/10/2014 13:24
EPA 6020A	05/24/15	12/03/14 10:19	12/5/2014 12:48
EPA 8260B	12/09/14	12/05/14 11:11	12/6/2014 00:23

Client ID: 3201-S3	Lab ID: C414851-09	Sampled: 11/25/14 09:50	Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	05/24/15	12/09/14 15:42	12/10/2014 13:27
EPA 6020A	05/24/15	12/03/14 10:19	12/5/2014 12:51
EPA 8260B	12/09/14	12/05/14 11:11	12/6/2014 00:53

Client ID: 3201-S4	Lab ID: C414851-10	Sampled: 11/25/14 09:35	Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	05/24/15	12/09/14 15:42	12/10/2014 13:29
EPA 6020A	05/24/15	12/03/14 10:19	12/5/2014 12:55
EPA 8260B	12/09/14	12/05/14 11:11	12/6/2014 01:23

Client ID: 3201-Field Blank	Lab ID: C414851-11	Sampled: 11/25/14 10:55	Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	05/24/15	12/09/14 15:42	12/10/2014 13:32
EPA 6020A	05/24/15	12/03/14 10:19	12/5/2014 12:59
EPA 8260B	12/09/14	12/05/14 11:11	12/6/2014 01:53

Client ID: 3201-Trip Blank	Lab ID: C414851-12	Sampled: 11/24/14 09:43	Received: 11/26/14 09:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	12/08/14	12/04/14 14:18	12/5/2014 09:59

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 3201-MW2 **Lab ID: C414851-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.357	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Arsenic - Total	7.34	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	224		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.136	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Cadmium - Total	0.490	J	1	0.360	1.00	1	ug/L	EPA 6010C	
cis-1,2-Dichloroethene	2.8	J	1	0.15	1.0	5	ug/L	EPA 8260B	
Copper - Total	1.68	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	6.85	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vinyl chloride	0.68	J	1	0.32	1.0	1	ug/L	EPA 8260B	
Zinc - Total	15.5		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 3201-MW3R (MS/MSD) **Lab ID: C414851-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.324	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	175		1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	2.35	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	1.89	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	4.83	J	1	1.80	10.0	50	ug/L	EPA 6010C	

Client ID: 3201-MW4R **Lab ID: C414851-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.224	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Arsenic - Total	6.64	J	1	5.40	10.0	10	ug/L	EPA 6010C	
Barium - Total	543		1	1.00	10.0	100	ug/L	EPA 6010C	
Silver - Total	35.9		1	1.90	10.0	10	ug/L	EPA 6010C	

Client ID: 3201-MW4R **Lab ID: C414851-03RE1**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Silver - Total	2.32	J	1	1.90	10.0	10	ug/L	EPA 6010C	

Client ID: 3201-MW5 **Lab ID: C414851-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Antimony - Total	0.357	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	1910		1	1.00	10.0	100	ug/L	EPA 6010C	
Nickel - Total	3.84	J	1	1.80	10.0	50	ug/L	EPA 6010C	

Client ID: 3201-MW9R **Lab ID: C414851-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	44.3	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.384	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	2.36	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	6.25	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	1.91	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	6.14	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 3201-NES3 **Lab ID: C414851-06**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	5.80	J	1	5.40	10.0	10	ug/L	EPA 6010C	

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Client ID: 3201-NES3								Lab ID: C414851-06	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	148		1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	4.70	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	10.5		1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	6.19	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	4.24	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	6.58	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 3201-S1								Lab ID: C414851-07	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Barium - Total	85.7	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	3.48	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	1.81	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	6.06	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	3.66	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	4.93	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	13.8		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 3201-S2								Lab ID: C414851-08	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Antimony - Total	0.330	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	47.8	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Chromium - Total	2.28	J	1	1.40	10.0	10	ug/L	EPA 6010C	
Copper - Total	3.59	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	1.89	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	2.56	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	8.40	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 3201-S3								Lab ID: C414851-09	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Antimony - Total	0.301	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	17.5	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Cobalt - Total	1.30	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	2.94	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	3.23	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	26.2		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 3201-S4								Lab ID: C414851-10	
Analyte	**Results**	**Flag**	**DF**	**MDL**	**MRL**	**NC SWSL**	**Units**	**Method**	**Notes**
Antimony - Total	0.301	J	1	0.220	2.00	6	ug/L	EPA 6020A	
Barium - Total	15.7	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	2.87	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.45	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	3.03	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	27.0		1	3.80	10.0	10	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 3201-MW2 | **Lab Sample ID:** C414851-01 | **Received:** 11/26/14 09:30

Matrix: Ground Water | **Sampled:** 11/24/14 11:09 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/05/14 02:59	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/05/14 02:59	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/05/14 02:59	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 02:59	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/05/14 02:59	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/05/14 02:59	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/05/14 02:59	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/05/14 02:59	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/05/14 02:59	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/05/14 02:59	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/05/14 02:59	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/05/14 02:59	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/05/14 02:59	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/05/14 02:59	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/05/14 02:59	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 02:59	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/05/14 02:59	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/05/14 02:59	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	**2.8**	J	ug/L	1	0.15	1.0	5	EPA 8260B	12/05/14 02:59	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 02:59	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/05/14 02:59	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/05/14 02:59	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 02:59	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/05/14 02:59	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/05/14 02:59	MSZ	
Vinyl chloride [75-01-4] ^	**0.68**	J	ug/L	1	0.32	1.0	1	EPA 8260B	12/05/14 02:59	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/05/14 02:59	MSZ	

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Description:	3201-MW2	**Lab Sample ID:**	C414851-01	**Received:**	11/26/14 09:30
Matrix:	Ground Water	**Sampled:**	11/24/14 11:09	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*53-136*	*4L04028*	*EPA 8260B*	*12/05/14 02:59*	*MSZ*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*67-129*	*4L04028*	*EPA 8260B*	*12/05/14 02:59*	*MSZ*	
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*59-134*	*4L04028*	*EPA 8260B*	*12/05/14 02:59*	*MSZ*	

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Description: 3201-MW2 | **Lab Sample ID:** C414851-01 | **Received:** 11/26/14 09:30

Matrix: Ground Water | **Sampled:** 11/24/14 11:09 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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
Antimony [7440-36-0] ^	**0.357**	J	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:12	VLO	
Arsenic [7440-38-2] ^	**7.34**	J	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:09	JDH	
Barium [7440-39-3] ^	**224**		ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:09	JDH	
Beryllium [7440-41-7] ^	**0.136**	J	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:09	JDH	
Cadmium [7440-43-9] ^	**0.490**	J	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:09	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:09	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:09	JDH	
Copper [7440-50-8] ^	**1.68**	J	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:09	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:09	JDH	
Nickel [7440-02-0] ^	**6.85**	J	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:09	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:09	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:09	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:12	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:09	JDH	
Zinc [7440-66-6] ^	**15.5**		ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:09	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: 3201-MW3R (MS/MSD) | **Lab Sample ID:** C414851-02 | **Received:** 11/26/14 09:30

Matrix: Ground Water | **Sampled:** 11/25/14 08:46 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/05/14 21:51	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/05/14 21:51	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/05/14 21:51	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 21:51	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/05/14 21:51	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/05/14 21:51	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/05/14 21:51	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/05/14 21:51	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/05/14 21:51	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/05/14 21:51	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/05/14 21:51	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/05/14 21:51	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/05/14 21:51	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/05/14 21:51	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/05/14 21:51	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 21:51	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/05/14 21:51	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/05/14 21:51	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/05/14 21:51	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 21:51	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/05/14 21:51	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/05/14 21:51	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 21:51	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/05/14 21:51	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/05/14 21:51	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/05/14 21:51	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/05/14 21:51	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*100 %*	*53-136*	*4L05030*	*EPA 8260B*	*12/05/14 21:51*	*MSZ*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*67-129*	*4L05030*	*EPA 8260B*	*12/05/14 21:51*	*MSZ*	

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Description:	3201-MW3R (MS/MSD)	**Lab Sample ID:**	C414851-02	**Received:**	11/26/14 09:30
Matrix:	Ground Water	**Sampled:**	11/25/14 08:46	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*59-134*	*4L05030*	*EPA 8260B*	*12/05/14 21:51*	*MSZ*	

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Description: 3201-MW3R (MS/MSD) | **Lab Sample ID:** C414851-02 | **Received:** 11/26/14 09:30

Matrix: Ground Water | **Sampled:** 11/25/14 08:46 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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
Antimony [7440-36-0] ^	**0.324**	J	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 13:03	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 12:38	JDH	
Barium [7440-39-3] ^	**175**		ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 12:38	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 12:38	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 12:38	JDH	
Chromium [7440-47-3] ^	**2.35**	J	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 12:38	JDH	
Cobalt [7440-48-4] ^	**1.89**	J	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 12:38	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 12:38	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 12:38	JDH	
Nickel [7440-02-0] ^	**4.83**	J	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 12:38	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 12:38	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 12:38	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 13:03	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 12:38	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 12:38	JDH	

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Description: 3201-MW4R
Matrix: Ground Water
Project: City of Durham

Lab Sample ID: C414851-03
Sampled: 11/24/14 12:02
Sampled By: Daniel Childress

Received: 11/26/14 09:30
Work Order: C414851

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/05/14 22:22	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/05/14 22:22	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/05/14 22:22	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 22:22	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/05/14 22:22	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/05/14 22:22	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/05/14 22:22	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/05/14 22:22	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/05/14 22:22	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/05/14 22:22	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/05/14 22:22	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/05/14 22:22	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/05/14 22:22	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/05/14 22:22	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/05/14 22:22	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 22:22	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/05/14 22:22	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/05/14 22:22	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/05/14 22:22	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 22:22	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/05/14 22:22	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/05/14 22:22	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 22:22	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/05/14 22:22	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/05/14 22:22	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/05/14 22:22	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/05/14 22:22	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*101 %*	*53-136*	*4L05030*	*EPA 8260B*	*12/05/14 22:22*	*MSZ*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*67-129*	*4L05030*	*EPA 8260B*	*12/05/14 22:22*	*MSZ*	

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Description:	3201-MW4R	**Lab Sample ID:**	C414851-03	**Received:**	11/26/14 09:30
Matrix:	Ground Water	**Sampled:**	11/24/14 12:02	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*59-134*		*4L05030*	*EPA 8260B*	*12/05/14 22:22*	*MSZ*	

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Description: 3201-MW4R
Matrix: Ground Water
Project: City of Durham

Lab Sample ID: C414851-03
Sampled: 11/24/14 12:02
Sampled By: Daniel Childress

Received: 11/26/14 09:30
Work Order: C414851

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
Antimony [7440-36-0] ^	**0.224**	J	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:15	VLO	
Arsenic [7440-38-2] ^	**6.64**	J	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:12	JDH	
Barium [7440-39-3] ^	**543**		ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:12	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:12	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:12	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:12	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:12	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:12	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:12	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:12	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:12	JDH	
Silver [7440-22-4] ^	**2.32**	J	ug/L	1	1.90	10.0	10	EPA 6010C	01/20/15 12:22	JDH	
Silver [7440-22-4] ^	**35.9**		ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:12	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:15	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:12	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:12	JDH	

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Description: 3201-MW5 | **Lab Sample ID:** C414851-04 | **Received:** 11/26/14 09:30

Matrix: Ground Water | **Sampled:** 11/24/14 10:23 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/05/14 22:53	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/05/14 22:53	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/05/14 22:53	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 22:53	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/05/14 22:53	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/05/14 22:53	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/05/14 22:53	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/05/14 22:53	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/05/14 22:53	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/05/14 22:53	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/05/14 22:53	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/05/14 22:53	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/05/14 22:53	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/05/14 22:53	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/05/14 22:53	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 22:53	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/05/14 22:53	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/05/14 22:53	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/05/14 22:53	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 22:53	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/05/14 22:53	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/05/14 22:53	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 22:53	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/05/14 22:53	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/05/14 22:53	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/05/14 22:53	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/05/14 22:53	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*53-136*	*4L05030*	*EPA 8260B*	*12/05/14 22:53*	*MSZ*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*67-129*	*4L05030*	*EPA 8260B*	*12/05/14 22:53*	*MSZ*	

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Description:	3201-MW5	**Lab Sample ID:**	C414851-04	**Received:**	11/26/14 09:30
Matrix:	Ground Water	**Sampled:**	11/24/14 10:23	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*59-134*		*4L05030*	*EPA 8260B*	*12/05/14 22:53*	*MSZ*	

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Description: 3201-MW5 | **Lab Sample ID:** C414851-04 | **Received:** 11/26/14 09:30

Matrix: Ground Water | **Sampled:** 11/24/14 10:23 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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
Antimony [7440-36-0] ^	**0.357**	J	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:33	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:14	JDH	
Barium [7440-39-3] ^	**1910**		ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:14	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:14	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:14	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:14	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:14	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:14	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:14	JDH	
Nickel [7440-02-0] ^	**3.84**	J	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:14	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:14	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:14	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:33	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:14	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:14	JDH	

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Description: 3201-MW9R
Matrix: Ground Water
Project: City of Durham

Lab Sample ID: C414851-05
Sampled: 11/24/14 09:43
Sampled By: Daniel Childress

Received: 11/26/14 09:30
Work Order: C414851

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/05/14 23:23	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/05/14 23:23	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/05/14 23:23	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 23:23	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/05/14 23:23	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/05/14 23:23	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/05/14 23:23	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/05/14 23:23	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/05/14 23:23	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/05/14 23:23	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/05/14 23:23	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/05/14 23:23	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/05/14 23:23	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/05/14 23:23	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/05/14 23:23	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 23:23	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/05/14 23:23	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/05/14 23:23	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/05/14 23:23	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 23:23	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/05/14 23:23	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/05/14 23:23	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 23:23	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/05/14 23:23	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/05/14 23:23	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/05/14 23:23	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/05/14 23:23	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*101 %*	*53-136*	*4L05030*	*EPA 8260B*	*12/05/14 23:23*	*MSZ*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*67-129*	*4L05030*	*EPA 8260B*	*12/05/14 23:23*	*MSZ*	

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Description:	3201-MW9R	**Lab Sample ID:**	C414851-05	**Received:**	11/26/14 09:30
Matrix:	Ground Water	**Sampled:**	11/24/14 09:43	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*53*	*1*	*50.0*	*106 %*	*59-134*		*4L05030*	*EPA 8260B*	*12/05/14 23:23*	*MSZ*	

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Description: 3201-MW9R
Matrix: Ground Water
Project: City of Durham

Lab Sample ID: C414851-05
Sampled: 11/24/14 09:43
Sampled By: Daniel Childress

Received: 11/26/14 09:30
Work Order: C414851

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
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:37	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:17	JDH	
Barium [7440-39-3] ^	**44.3**	J	ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:17	JDH	
Beryllium [7440-41-7] ^	**0.384**	J	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:17	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:17	JDH	
Chromium [7440-47-3] ^	**2.36**	J	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:17	JDH	
Cobalt [7440-48-4] ^	**6.25**	J	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:17	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:17	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:17	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:17	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:17	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:17	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:37	VLO	
Vanadium [7440-62-2] ^	**1.91**	J	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:17	JDH	
Zinc [7440-66-6] ^	**6.14**	J	ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:17	JDH	

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Description: 3201-NES3 | **Lab Sample ID:** C414851-06 | **Received:** 11/26/14 09:30

Matrix: Ground Water | **Sampled:** 11/25/14 10:40 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/05/14 23:53	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/05/14 23:53	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/05/14 23:53	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 23:53	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/05/14 23:53	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/05/14 23:53	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/05/14 23:53	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/05/14 23:53	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/05/14 23:53	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/05/14 23:53	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/05/14 23:53	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/05/14 23:53	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/05/14 23:53	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/05/14 23:53	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/05/14 23:53	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 23:53	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/05/14 23:53	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/05/14 23:53	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/05/14 23:53	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 23:53	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/05/14 23:53	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/05/14 23:53	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 23:53	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/05/14 23:53	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/05/14 23:53	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/05/14 23:53	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/05/14 23:53	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*101 %*	*53-136*	*4L05030*	*EPA 8260B*	*12/05/14 23:53*	*MSZ*	
Dibromofluoromethane	*54*	*1*	*50.0*	*107 %*	*67-129*	*4L05030*	*EPA 8260B*	*12/05/14 23:53*	*MSZ*	

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Description:	3201-NES3	**Lab Sample ID:**	C414851-06	**Received:**	11/26/14 09:30
Matrix:	Ground Water	**Sampled:**	11/25/14 10:40	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*54*	*1*	*50.0*	*107 %*	*59-134*		*4L05030*	*EPA 8260B*	*12/05/14 23:53*	*MSZ*	

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Description: 3201-NES3 | **Lab Sample ID:** C414851-06 | **Received:** 11/26/14 09:30

Matrix: Ground Water | **Sampled:** 11/25/14 10:40 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:40	VLO	
Arsenic [7440-38-2] ^	**5.80**	J	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:19	JDH	
Barium [7440-39-3] ^	**148**		ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:19	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:19	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:19	JDH	
Chromium [7440-47-3] ^	**4.70**	J	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:19	JDH	
Cobalt [7440-48-4] ^	**10.5**		ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:19	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:19	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:19	JDH	
Nickel [7440-02-0] ^	**6.19**	J	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:19	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:19	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:19	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:40	VLO	
Vanadium [7440-62-2] ^	**4.24**	J	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:19	JDH	
Zinc [7440-66-6] ^	**6.58**	J	ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:19	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: 3201-S1 | **Lab Sample ID:** C414851-07 | **Received:** 11/26/14 09:30

Matrix: Surface Water | **Sampled:** 11/24/14 10:30 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/05/14 09:30	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/05/14 09:30	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/05/14 09:30	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 09:30	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/05/14 09:30	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/05/14 09:30	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/05/14 09:30	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/05/14 09:30	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/05/14 09:30	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/05/14 09:30	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/05/14 09:30	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/05/14 09:30	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/05/14 09:30	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/05/14 09:30	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/05/14 09:30	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 09:30	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/05/14 09:30	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/05/14 09:30	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/05/14 09:30	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 09:30	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/05/14 09:30	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/05/14 09:30	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 09:30	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/05/14 09:30	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/05/14 09:30	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/05/14 09:30	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/05/14 09:30	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*59*	*1*	*50.0*	*118 %*	*53-136*	*4L04029*	*EPA 8260B*	*12/05/14 09:30*	*MSZ*	
Dibromofluoromethane	*57*	*1*	*50.0*	*114 %*	*67-129*	*4L04029*	*EPA 8260B*	*12/05/14 09:30*	*MSZ*	

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Description:	3201-S1	**Lab Sample ID:**	C414851-07	**Received:**	11/26/14 09:30
Matrix:	Surface Water	**Sampled:**	11/24/14 10:30	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
Toluene-d8	*57*	*1*	*50.0*	*114 %*	*59-134*	*4L04029*	*EPA 8260B*	*12/05/14 09:30*	*MSZ*	

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Description: 3201-S1 | **Lab Sample ID:** C414851-07 | **Received:** 11/26/14 09:30

Matrix: Surface Water | **Sampled:** 11/24/14 10:30 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:44	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:22	JDH	
Barium [7440-39-3] ^	**85.7**	J	ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:22	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:22	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:22	JDH	
Chromium [7440-47-3] ^	**3.48**	J	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:22	JDH	
Cobalt [7440-48-4] ^	**1.81**	J	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:22	JDH	
Copper [7440-50-8] ^	**6.06**	J	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:22	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:22	JDH	
Nickel [7440-02-0] ^	**3.66**	J	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:22	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:22	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:22	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:44	VLO	
Vanadium [7440-62-2] ^	**4.93**	J	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:22	JDH	
Zinc [7440-66-6] ^	**13.8**		ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:22	JDH	

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Description: 3201-S2 | **Lab Sample ID:** C414851-08 | **Received:** 11/26/14 09:30

Matrix: Surface Water | **Sampled:** 11/25/14 09:05 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/06/14 00:23	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/06/14 00:23	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/06/14 00:23	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/06/14 00:23	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/06/14 00:23	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/06/14 00:23	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/06/14 00:23	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/06/14 00:23	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/06/14 00:23	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/06/14 00:23	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/06/14 00:23	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/06/14 00:23	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/06/14 00:23	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/06/14 00:23	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/06/14 00:23	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/06/14 00:23	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/06/14 00:23	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/06/14 00:23	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/06/14 00:23	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/06/14 00:23	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/06/14 00:23	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/06/14 00:23	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/06/14 00:23	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/06/14 00:23	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/06/14 00:23	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/06/14 00:23	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/06/14 00:23	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*49*	*1*	*50.0*	*99 %*	*53-136*	*4L05030*	*EPA 8260B*	*12/06/14 00:23*	*MSZ*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*67-129*	*4L05030*	*EPA 8260B*	*12/06/14 00:23*	*MSZ*	

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Description:	3201-S2	**Lab Sample ID:**	C414851-08	**Received:**	11/26/14 09:30
Matrix:	Surface Water	**Sampled:**	11/25/14 09:05	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*53*	*1*	*50.0*	*107 %*	*59-134*		*4L05030*	*EPA 8260B*	*12/06/14 00:23*	*MSZ*	

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Description: 3201-S2 | **Lab Sample ID:** C414851-08 | **Received:** 11/26/14 09:30

Matrix: Surface Water | **Sampled:** 11/25/14 09:05 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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
Antimony [7440-36-0] ^	**0.330**	J	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:48	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:24	JDH	
Barium [7440-39-3] ^	**47.8**	J	ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:24	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:24	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:24	JDH	
Chromium [7440-47-3] ^	**2.28**	J	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:24	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:24	JDH	
Copper [7440-50-8] ^	**3.59**	J	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:24	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:24	JDH	
Nickel [7440-02-0] ^	**1.89**	J	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:24	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:24	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:24	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:48	VLO	
Vanadium [7440-62-2] ^	**2.56**	J	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:24	JDH	
Zinc [7440-66-6] ^	**8.40**	J	ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:24	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: 3201-S3 | **Lab Sample ID:** C414851-09 | **Received:** 11/26/14 09:30

Matrix: Surface Water | **Sampled:** 11/25/14 09:50 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/06/14 00:53	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/06/14 00:53	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/06/14 00:53	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/06/14 00:53	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/06/14 00:53	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/06/14 00:53	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/06/14 00:53	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/06/14 00:53	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/06/14 00:53	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/06/14 00:53	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/06/14 00:53	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/06/14 00:53	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/06/14 00:53	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/06/14 00:53	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/06/14 00:53	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/06/14 00:53	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/06/14 00:53	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/06/14 00:53	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/06/14 00:53	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/06/14 00:53	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/06/14 00:53	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/06/14 00:53	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/06/14 00:53	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/06/14 00:53	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/06/14 00:53	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/06/14 00:53	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/06/14 00:53	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*101 %*	*53-136*	*4L05030*	*EPA 8260B*	*12/06/14 00:53*	*MSZ*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*67-129*	*4L05030*	*EPA 8260B*	*12/06/14 00:53*	*MSZ*	

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Description:	3201-S3	**Lab Sample ID:**	C414851-09	**Received:**	11/26/14 09:30
Matrix:	Surface Water	**Sampled:**	11/25/14 09:50	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
Toluene-d8	*52*	*1*	*50.0*	*104 %*	*59-134*	*4L05030*	*EPA 8260B*	*12/06/14 00:53*	*MSZ*	

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Description: 3201-S3 | **Lab Sample ID:** C414851-09 | **Received:** 11/26/14 09:30

Matrix: Surface Water | **Sampled:** 11/25/14 09:50 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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
Antimony [7440-36-0] ^	**0.301**	J	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:51	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:27	JDH	
Barium [7440-39-3] ^	**17.5**	J	ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:27	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:27	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:27	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:27	JDH	
Cobalt [7440-48-4] ^	**1.30**	J	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:27	JDH	
Copper [7440-50-8] ^	**2.94**	J	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:27	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:27	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:27	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:27	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:27	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:51	VLO	
Vanadium [7440-62-2] ^	**3.23**	J	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:27	JDH	
Zinc [7440-66-6] ^	**26.2**		ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:27	JDH	

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Description: 3201-S4 | **Lab Sample ID:** C414851-10 | **Received:** 11/26/14 09:30

Matrix: Surface Water | **Sampled:** 11/25/14 09:35 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/06/14 01:23	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/06/14 01:23	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/06/14 01:23	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/06/14 01:23	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/06/14 01:23	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/06/14 01:23	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/06/14 01:23	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/06/14 01:23	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/06/14 01:23	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/06/14 01:23	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/06/14 01:23	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/06/14 01:23	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/06/14 01:23	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/06/14 01:23	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/06/14 01:23	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/06/14 01:23	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/06/14 01:23	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/06/14 01:23	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/06/14 01:23	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/06/14 01:23	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/06/14 01:23	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/06/14 01:23	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/06/14 01:23	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/06/14 01:23	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/06/14 01:23	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/06/14 01:23	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/06/14 01:23	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*53-136*	*4L05030*	*EPA 8260B*	*12/06/14 01:23*	*MSZ*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*67-129*	*4L05030*	*EPA 8260B*	*12/06/14 01:23*	*MSZ*	

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Description:	3201-S4	**Lab Sample ID:**	C414851-10	**Received:**	11/26/14 09:30
Matrix:	Surface Water	**Sampled:**	11/25/14 09:35	**Work Order:**	C414851
Project:	City of Durham	**Sampled By:**	Daniel Childress		

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
Surrogates	***Results***	***DF***	***Spike Lvl***	***% Rec***	***% Rec Limits***		***Batch***	***Method***	***Analyzed***	***By***	**Notes**
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*59-134*		*4L05030*	*EPA 8260B*	*12/06/14 01:23*	*MSZ*	

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Description: 3201-S4
Matrix: Surface Water
Project: City of Durham

Lab Sample ID: C414851-10
Sampled: 11/25/14 09:35
Sampled By: Daniel Childress

Received: 11/26/14 09:30
Work Order: C414851

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
Antimony [7440-36-0] ^	**0.301**	J	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:55	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:29	JDH	
Barium [7440-39-3] ^	**15.7**	J	ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:29	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:29	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:29	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:29	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:29	JDH	
Copper [7440-50-8] ^	**2.87**	J	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:29	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:29	JDH	
Nickel [7440-02-0] ^	**2.45**	J	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:29	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:29	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:29	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:55	VLO	
Vanadium [7440-62-2] ^	**3.03**	J	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:29	JDH	
Zinc [7440-66-6] ^	**27.0**		ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:29	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: 3201-Field Blank | **Lab Sample ID:** C414851-11 | **Received:** 11/26/14 09:30

Matrix: Water | **Sampled:** 11/25/14 10:55 | **Work Order:** C414851

Project: City of Durham | **Sampled By:** Daniel Childress

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] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/06/14 01:53	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/06/14 01:53	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/06/14 01:53	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/06/14 01:53	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/06/14 01:53	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/06/14 01:53	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/06/14 01:53	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/06/14 01:53	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/06/14 01:53	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/06/14 01:53	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/06/14 01:53	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/06/14 01:53	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/06/14 01:53	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/06/14 01:53	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/06/14 01:53	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/06/14 01:53	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/06/14 01:53	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/06/14 01:53	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/06/14 01:53	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/06/14 01:53	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/06/14 01:53	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/06/14 01:53	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/06/14 01:53	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/06/14 01:53	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/06/14 01:53	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/06/14 01:53	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/06/14 01:53	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*100 %*	*53-136*	*4L05030*	*EPA 8260B*	*12/06/14 01:53*	*MSZ*	
Dibromofluoromethane	*56*	*1*	*50.0*	*111 %*	*67-129*	*4L05030*	*EPA 8260B*	*12/06/14 01:53*	*MSZ*	

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Description: 3201-Field Blank	**Lab Sample ID:** C414851-11	**Received:** 11/26/14 09:30
Matrix: Water	**Sampled:** 11/25/14 10:55	**Work Order:** C414851
Project: City of Durham	**Sampled By:** Daniel Childress	

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

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
Toluene-d8	*53*	*1*	*50.0*	*105 %*	*59-134*	*4L05030*	*EPA 8260B*	*12/06/14 01:53*	*MSZ*	

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Description: 3201-Field Blank
Matrix: Water
Project: City of Durham

Lab Sample ID: C414851-11
Sampled: 11/25/14 10:55
Sampled By: Daniel Childress

Received: 11/26/14 09:30
Work Order: C414851

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
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	12/05/14 12:59	VLO	
Arsenic [7440-38-2] ^	5.40	U	ug/L	1	5.40	10.0	10	EPA 6010C	12/10/14 13:32	JDH	
Barium [7440-39-3] ^	1.00	U	ug/L	1	1.00	10.0	100	EPA 6010C	12/10/14 13:32	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	12/10/14 13:32	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	12/10/14 13:32	JDH	
Chromium [7440-47-3] ^	1.40	U	ug/L	1	1.40	10.0	10	EPA 6010C	12/10/14 13:32	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	12/10/14 13:32	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	12/10/14 13:32	JDH	
Lead [7439-92-1] ^	2.10	U	ug/L	1	2.10	10.0	10	EPA 6010C	12/10/14 13:32	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	12/10/14 13:32	JDH	
Selenium [7782-49-2] ^	5.00	U	ug/L	1	5.00	10.0	10	EPA 6010C	12/10/14 13:32	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	12/10/14 13:32	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	12/05/14 12:59	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	12/10/14 13:32	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	12/10/14 13:32	JDH	

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Description: 3201-Trip Blank | **Lab Sample ID:** C414851-12 | **Received:** 11/26/14 09:30

Matrix: Water | **Sampled:** 11/24/14 09:43 | **Work Order:** C414851

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	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	12/05/14 09:59	MSZ	
1,1,1-Trichloroethane [71-55-6] ^	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.28	U	ug/L	1	0.28	1.0	3	EPA 8260B	12/05/14 09:59	MSZ	
1,1,2-Trichloroethane [79-00-5] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
1,1-Dichloroethane [75-34-3] ^	0.13	U	ug/L	1	0.13	1.0	5	EPA 8260B	12/05/14 09:59	MSZ	
1,1-Dichloroethene [75-35-4] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 09:59	MSZ	
1,2,3-Trichloropropane [96-18-4] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	12/05/14 09:59	MSZ	
1,2-Dibromoethane [106-93-4] ^	0.66	U	ug/L	1	0.66	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
1,2-Dichlorobenzene [95-50-1] ^	0.19	U	ug/L	1	0.19	1.0	5	EPA 8260B	12/05/14 09:59	MSZ	
1,2-Dichloroethane [107-06-2] ^	0.21	U	ug/L	1	0.21	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
1,2-Dichloropropane [78-87-5] ^	0.10	U	ug/L	1	0.10	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
1,4-Dichlorobenzene [106-46-7] ^	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
2-Butanone [78-93-3] ^	1.3	U	ug/L	1	1.3	5.0	100	EPA 8260B	12/05/14 09:59	MSZ	
2-Hexanone [591-78-6] ^	0.88	U	ug/L	1	0.88	5.0	50	EPA 8260B	12/05/14 09:59	MSZ	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	12/05/14 09:59	MSZ	
Acetone [67-64-1] ^	1.2	U	ug/L	1	1.2	5.0	100	EPA 8260B	12/05/14 09:59	MSZ	
Acrylonitrile [107-13-1] ^	3.5	U	ug/L	1	3.5	10	200	EPA 8260B	12/05/14 09:59	MSZ	
Benzene [71-43-2] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Bromochloromethane [74-97-5] ^	0.48	U	ug/L	1	0.48	1.0	3	EPA 8260B	12/05/14 09:59	MSZ	
Bromodichloromethane [75-27-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Bromoform [75-25-2] ^	0.22	U	ug/L	1	0.22	1.0	3	EPA 8260B	12/05/14 09:59	MSZ	
Bromomethane [74-83-9] ^	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	12/05/14 09:59	MSZ	
Carbon disulfide [75-15-0] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	12/05/14 09:59	MSZ	
Carbon tetrachloride [56-23-5] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Chlorobenzene [108-90-7] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 09:59	MSZ	
Chloroethane [75-00-3] ^	0.23	U	ug/L	1	0.23	1.0	10	EPA 8260B	12/05/14 09:59	MSZ	
Chloroform [67-66-3] ^	0.18	U	ug/L	1	0.18	1.0	5	EPA 8260B	12/05/14 09:59	MSZ	
Chloromethane [74-87-3] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
cis-1,2-Dichloroethene [156-59-2] ^	0.15	U	ug/L	1	0.15	1.0	5	EPA 8260B	12/05/14 09:59	MSZ	
cis-1,3-Dichloropropene [10061-01-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Dibromochloromethane [124-48-1] ^	0.17	U	ug/L	1	0.17	1.0	3	EPA 8260B	12/05/14 09:59	MSZ	
Dibromomethane [74-95-3] ^	0.27	U	ug/L	1	0.27	1.0	10	EPA 8260B	12/05/14 09:59	MSZ	
Ethylbenzene [100-41-4] ^	0.13	U	ug/L	1	0.13	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Iodomethane [74-88-4] ^	1.7	U	ug/L	1	1.7	5.0	10	EPA 8260B	12/05/14 09:59	MSZ	
Methylene chloride [75-09-2] ^	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Styrene [100-42-5] ^	0.11	U	ug/L	1	0.11	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Tetrachloroethene [127-18-4] ^	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Toluene [108-88-3] ^	0.14	U	ug/L	1	0.14	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
trans-1,2-Dichloroethene [156-60-5] ^	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	12/05/14 09:59	MSZ	
trans-1,3-Dichloropropene [10061-02-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.70	U	ug/L	1	0.70	1.0	100	EPA 8260B	12/05/14 09:59	MSZ	
Trichloroethene [79-01-6] ^	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Trichlorofluoromethane [75-69-4] ^	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Vinyl acetate [108-05-4] ^	0.95	U	ug/L	1	0.95	5.0	50	EPA 8260B	12/05/14 09:59	MSZ	
Vinyl chloride [75-01-4] ^	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	12/05/14 09:59	MSZ	
Xylenes (Total) [1330-20-7] ^	0.45	U	ug/L	1	0.45	3.0	5	EPA 8260B	12/05/14 09:59	MSZ	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*59*	*1*	*50.0*	*119 %*	*53-136*	*4L04029*	*EPA 8260B*	*12/05/14 09:59*	*MSZ*	
Dibromofluoromethane	*60*	*1*	*50.0*	*119 %*	*67-129*	*4L04029*	*EPA 8260B*	*12/05/14 09:59*	*MSZ*	

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Description:	3201-Trip Blank	**Lab Sample ID:**	C414851-12	**Received:**	11/26/14 09:30
Matrix:	Water	**Sampled:**	11/24/14 09:43	**Work Order:**	C414851
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	NC SWSL	Method	Analyzed	By	Notes

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	**Notes**
Toluene-d8	*57*	*1*	*50.0*	*113 %*	*59-134*	*4L04029*	*EPA 8260B*	*12/05/14 09:59*	*MSZ*	

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

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4L04028 - EPA 5030B_MS

Blank (4L04028-BLK1) Prepared: 12/04/2014 14:14 Analyzed: 12/04/2014 18:24

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	*50*			*ug/L*	*50.0*		*99*	*53-136*			

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4L04028 - EPA 5030B_MS

Blank (4L04028-BLK1) Continued Prepared: 12/04/2014 14:14 Analyzed: 12/04/2014 18:24

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*51*			*ug/L*	*50.0*		*102*	*67-129*			
Surrogate: Toluene-d8	*53*			*ug/L*	*50.0*		*105*	*59-134*			

LCS (4L04028-BS1) Prepared: 12/04/2014 14:14 Analyzed: 12/04/2014 18:54

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		113	75-133			
Benzene	20		1.0	ug/L	20.0		98	81-134			
Chlorobenzene	21		1.0	ug/L	20.0		106	83-117			
Toluene	19		1.0	ug/L	20.0		96	71-118			
Trichloroethene	19		1.0	ug/L	20.0		96	74-119			

Matrix Spike (4L04028-MS1) Prepared: 12/04/2014 14:14 Analyzed: 12/04/2014 19:27

Source: C415575-06

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	0.21 U	111	75-133			
Benzene	19		1.0	ug/L	20.0	0.15 U	96	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	103	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	95	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	94	74-119			

Matrix Spike Dup (4L04028-MSD1) Prepared: 12/04/2014 14:14 Analyzed: 12/04/2014 19:57

Source: C415575-06

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	0.21 U	112	75-133	1	20	
Benzene	19		1.0	ug/L	20.0	0.15 U	96	81-134	0.5	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	103	83-117	0.1	16	
Toluene	19		1.0	ug/L	20.0	0.14 U	95	71-118	0.1	17	
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	95	74-119	1	22	

Batch 4L04029 - EPA 5030B_MS

Blank (4L04029-BLK1) Prepared: 12/04/2014 14:18 Analyzed: 12/05/2014 07:05

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							

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4L04029 - EPA 5030B_MS

Blank (4L04029-BLK1) Continued Prepared: 12/04/2014 14:18 Analyzed: 12/05/2014 07:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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	*58*			*ug/L*	*50.0*		*116*	*53-136*			
Surrogate: Dibromofluoromethane	*56*			*ug/L*	*50.0*		*111*	*67-129*			
Surrogate: Toluene-d8	*56*			*ug/L*	*50.0*		*112*	*59-134*			

LCS (4L04029-BS1) Prepared: 12/04/2014 14:18 Analyzed: 12/05/2014 07:34

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		104	75-133			
Benzene	19		1.0	ug/L	20.0		95	81-134			
Chlorobenzene	19		1.0	ug/L	20.0		97	83-117			
Toluene	20		1.0	ug/L	20.0		99	71-118			

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4L04029 - EPA 5030B_MS

LCS (4L04029-BS1) Continued Prepared: 12/04/2014 14:18 Analyzed: 12/05/2014 07:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Trichloroethene	19		1.0	ug/L	20.0		95	74-119			

Matrix Spike (4L04029-MS1) Prepared: 12/04/2014 14:18 Analyzed: 12/05/2014 08:03

Source: C415575-05

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	0.21 U	98	75-133			
Benzene	19		1.0	ug/L	20.0	0.15 U	93	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	101	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	97	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	98	74-119			

Matrix Spike Dup (4L04029-MSD1) Prepared: 12/04/2014 14:18 Analyzed: 12/05/2014 08:32

Source: C415575-05

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	0.21 U	94	75-133	5	20	
Benzene	18		1.0	ug/L	20.0	0.15 U	91	81-134	2	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.17 U	96	83-117	5	16	
Toluene	20		1.0	ug/L	20.0	0.14 U	99	71-118	3	17	
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	98	74-119	0.7	22	

Batch 4L05030 - EPA 5030B_MS

Blank (4L05030-BLK1) Prepared: 12/05/2014 11:11 Analyzed: 12/05/2014 19:19

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							

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4L05030 - EPA 5030B_MS

Blank (4L05030-BLK1) Continued Prepared: 12/05/2014 11:11 Analyzed: 12/05/2014 19:19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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	*51*			*ug/L*	*50.0*		*102*	*53-136*			
Surrogate: Dibromofluoromethane	*52*			*ug/L*	*50.0*		*103*	*67-129*			
Surrogate: Toluene-d8	*53*			*ug/L*	*50.0*		*107*	*59-134*			

LCS (4L05030-BS1) Prepared: 12/05/2014 11:11 Analyzed: 12/05/2014 19:50

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		114	75-133			
Benzene	19		1.0	ug/L	20.0		96	81-134			
Chlorobenzene	21		1.0	ug/L	20.0		103	83-117			
Toluene	19		1.0	ug/L	20.0		96	71-118			
Trichloroethene	18		1.0	ug/L	20.0		92	74-119			

Matrix Spike (4L05030-MS1) Prepared: 12/05/2014 11:11 Analyzed: 12/05/2014 20:20

Source: C414851-02

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	0.21 U	112	75-133			
Benzene	19		1.0	ug/L	20.0	0.15 U	93	81-134			
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	101	83-117			
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118			
Trichloroethene	19		1.0	ug/L	20.0	0.15 U	93	74-119			

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 4L05030 - EPA 5030B_MS

Matrix Spike Dup (4L05030-MSD1) Prepared: 12/05/2014 11:11 Analyzed: 12/05/2014 20:50

Source: C414851-02

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	113	75-133	0.6	20	
Benzene	19		1.0	ug/L	20.0	0.15 U	93	81-134	0.3	17	
Chlorobenzene	20		1.0	ug/L	20.0	0.17 U	99	83-117	1	16	
Toluene	19		1.0	ug/L	20.0	0.14 U	93	71-118	0.2	17	
Trichloroethene	18		1.0	ug/L	20.0	0.15 U	89	74-119	4	22	

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

Batch 4L02014 - EPA 3005A

Blank (4L02014-BLK1) Prepared: 12/03/2014 10:19 Analyzed: 12/05/2014 11:46

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (4L02014-BS1) Prepared: 12/03/2014 10:19 Analyzed: 12/05/2014 11:50

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	204		2.00	ug/L	200		102	80-120			
Thallium	207		1.00	ug/L	200		104	80-120			

Matrix Spike (4L02014-MS1) Prepared: 12/03/2014 10:19 Analyzed: 12/05/2014 11:57

Source: C414851-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	205		2.00	ug/L	200	0.324	102	75-125			
Thallium	169		1.00	ug/L	200	0.110 U	84	75-125			

Matrix Spike Dup (4L02014-MSD1) Prepared: 12/03/2014 10:19 Analyzed: 12/05/2014 12:01

Source: C414851-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	206		2.00	ug/L	200	0.324	103	75-125	0.6	20	
Thallium	169		1.00	ug/L	200	0.110 U	84	75-125	0.06	20	

Post Spike (4L02014-PS1) Prepared: 12/03/2014 10:19 Analyzed: 12/05/2014 12:05

Source: C414851-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	198		2.00	ug/L	200	0.324	99	80-120			
Thallium	163		1.00	ug/L	200	0.00473	81	80-120			

Batch 4L09022 - EPA 3005A

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QUALITY CONTROL

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

Batch 4L09022 - EPA 3005A

Blank (4L09022-BLK1) Prepared: 12/09/2014 15:42 Analyzed: 12/10/2014 12:25

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	5.40	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.40	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	2.10	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Selenium	5.00	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

LCS (4L09022-BS1) Prepared: 12/09/2014 15:42 Analyzed: 12/10/2014 12:35

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	214		10.0	ug/L	200		107	80-120			
Barium	211		10.0	ug/L	200		106	80-120			
Beryllium	21.0		1.00	ug/L	20.0		105	80-120			
Cadmium	21.0		1.00	ug/L	20.0		105	80-120			
Chromium	207		10.0	ug/L	200		104	80-120			
Cobalt	217		10.0	ug/L	200		109	80-120			
Copper	204		10.0	ug/L	200		102	80-120			
Lead	211		10.0	ug/L	200		105	80-120			
Nickel	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			
Vanadium	202		10.0	ug/L	200		101	80-120			
Zinc	215		10.0	ug/L	200		108	80-120			

Matrix Spike (4L09022-MS1) Prepared: 12/09/2014 15:42 Analyzed: 12/10/2014 12:41

Source: C414851-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	218		10.0	ug/L	200	5.40 U	109	75-125			
Barium	390		10.0	ug/L	200	175	107	75-125			
Beryllium	20.9		1.00	ug/L	20.0	0.100 U	104	75-125			
Cadmium	21.6		1.00	ug/L	20.0	0.360 U	108	75-125			
Chromium	207		10.0	ug/L	200	2.35	103	75-125			
Cobalt	214		10.0	ug/L	200	1.89	106	75-125			
Copper	212		10.0	ug/L	200	1.60 U	106	75-125			
Lead	208		10.0	ug/L	200	2.10 U	104	75-125			
Nickel	218		10.0	ug/L	200	4.83	106	75-125			
Selenium	216		10.0	ug/L	200	5.00 U	108	75-125			
Silver	206		10.0	ug/L	200	1.90 U	103	75-125			
Vanadium	203		10.0	ug/L	200	1.40 U	102	75-125			
Zinc	219		10.0	ug/L	200	3.80 U	110	75-125			

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QUALITY CONTROL

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

Batch 4L09022 - EPA 3005A

Matrix Spike Dup (4L09022-MSD1) Prepared: 12/09/2014 15:42 Analyzed: 12/10/2014 12:43

Source: C414851-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	219		10.0	ug/L	200	5.40 U	110	75-125	0.6	20	
Barium	395		10.0	ug/L	200	175	110	75-125	1	20	
Beryllium	21.2		1.00	ug/L	20.0	0.100 U	106	75-125	2	20	
Cadmium	21.6		1.00	ug/L	20.0	0.360 U	108	75-125	0.2	20	
Chromium	209		10.0	ug/L	200	2.35	103	75-125	0.8	20	
Cobalt	215		10.0	ug/L	200	1.89	107	75-125	0.4	20	
Copper	214		10.0	ug/L	200	1.60 U	107	75-125	0.9	20	
Lead	207		10.0	ug/L	200	2.10 U	103	75-125	0.5	20	
Nickel	219		10.0	ug/L	200	4.83	107	75-125	0.5	20	
Selenium	212		10.0	ug/L	200	5.00 U	106	75-125	2	20	
Silver	207		10.0	ug/L	200	1.90 U	103	75-125	0.4	20	
Vanadium	206		10.0	ug/L	200	1.40 U	103	75-125	1	20	
Zinc	219		10.0	ug/L	200	3.80 U	109	75-125	0.3	20	

Post Spike (4L09022-PS1) Prepared: 12/09/2014 15:42 Analyzed: 12/10/2014 12:46

Source: C414851-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.201		0.0100	mg/L	0.200	0.00382	99	80-120			
Barium	0.378		0.0100	mg/L	0.200	0.175	102	80-120			
Beryllium	0.0197		0.00100	mg/L	0.0200	-0.000107	99	80-120			
Cadmium	0.0200		0.00100	mg/L	0.0200	0.000233	99	80-120			
Chromium	0.195		0.0100	mg/L	0.200	0.00235	96	80-120			
Cobalt	0.199		0.0100	mg/L	0.200	0.00189	99	80-120			
Copper	0.199		0.0100	mg/L	0.200	0.000284	99	80-120			
Lead	0.195		0.0100	mg/L	0.200	-0.00265	97	80-120			
Nickel	0.203		0.0100	mg/L	0.200	0.00483	99	80-120			
Selenium	0.202		0.0100	mg/L	0.200	-0.00324	101	80-120			
Silver	0.196		0.0100	mg/L	0.200	0.000459	98	80-120			
Vanadium	0.191		0.0100	mg/L	0.200	-2.96E-6	95	80-120			
Zinc	0.203		0.0100	mg/L	0.200	0.00282	100	80-120			

Batch 5A19014 - EPA 3005A

Blank (5A19014-BLK1) Prepared: 01/19/2015 10:42 Analyzed: 01/20/2015 12:01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	1.90	U	10.0	ug/L							

LCS (5A19014-BS1) Prepared: 01/19/2015 10:42 Analyzed: 01/20/2015 12:05

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	199		10.0	ug/L	200		100	80-120			

Matrix Spike (5A19014-MS1) Prepared: 01/19/2015 10:42 Analyzed: 01/20/2015 12:12

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QUALITY CONTROL

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

Batch 5A19014 - EPA 3005A

Matrix Spike (5A19014-MS1) Continued Prepared: 01/19/2015 10:42 Analyzed: 01/20/2015 12:12

Source: C500186-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	208		10.0	ug/L	200	1.90 U	104	75-125			

Matrix Spike Dup (5A19014-MSD1) Prepared: 01/19/2015 10:42 Analyzed: 01/20/2015 12:14

Source: C500186-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	208		10.0	ug/L	200	1.90 U	104	75-125	0.08	20	

Post Spike (5A19014-PS1) Prepared: 01/19/2015 10:42 Analyzed: 01/20/2015 12:17

Source: C500186-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Silver	0.190		0.0100	mg/L	0.200	0.000396	95	80-120			

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FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.

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ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

www.encolabs.com

10775 Central Port Dr. Orlando, FL 32824 (407) 826-5314 Fax (407) 850-6945
4810 Executive Park Court, Suite 111 Jacksonville, FL 32216-6069 (904) 296-3007 Fax (904) 296-6210
102-A Woodwinds Industrial Ct. Cary, NC 27511 (919) 467-3090 Fax (919) 467-3515

Client Name: Golder Associates, Inc. (GO007)	Project Number: 073-9604214.100
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): DAN CHILDRESS, GOLDER	Billing Contact: Accounts Payable
Sampler(s) Signature: Daniel Childress	Site Location / Time Zone: DURHAM, NC / EST

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

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

X Standard

___ Expedited

Due ___/___/___

Lab Workorder: C414851

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	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Se,Tl,V,Zn	Sample Comments
	3201-MW2	11/24/14	1109	G	GW	4	X	X	
	3201-MW3R (MS/MSD)	11/25/14	0846		GW	8	X	X	
	3201-MW4R	11/24/14	1202		GW	4	X	X	
	3201-MW5	11/24/14	1023		GW	4	X	X	
	3201-MW9R	11/24/14	0943		GW	4	X	X	
	3201-NES3	11/25/14	1040		GW	4	X	X	
	3201-S1	11/24/14	1030		SW	4	X	X	
	3201-S2	11/25/14	0905		SW	4	X	X	
	3201-S3	11/25/14	0950		SW	4	X	X	
	3201-S4	11/25/14	0935		SW	4	X	X	
	3201-Field Blank	11/25/14	1055		WA	4	X	X	
	3201-Trip Blank	—	—		WA	2	X		

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
MM	11-15-14/1645	Daniel Childress	11/26/14 0900	Rachel C	11/26/14 9:00
		Rachel C	11/26/14 930	[illegible]	11/26/14 9:30

Comments/Special Reporting Requirements
1) PLEASE PROVIDE A "LEVEL 2" DATA REPORT.
2) UNIT RATES PER "BASIC ORDERING AGMT FOR LAB SERV." 4/9/04 + 2013 UNIT PRICE SHEET
3) EST. FEE = $1950

Cooler #'s & Temps on Receipt: 13°C

Condition Upon Receipt: ✓ Acceptable ___ Unacceptable

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments) Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

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

GOLDER ASSOCIATES INC.
QUALITY ASSURANCE & QUALITY CONTROL
LABORATORY DATA REVIEW

Project Name: City of Durham Closed MSW Landfill

Project Reference Number: 0739-604214.100

Sampling Event Date: November 24-25, 2014

Review Date: December 12, 2014 *Initials:* AS

Report #: C414851

Person(s) performing the review are to initial each item on this form as acknowledgement of data acceptance, or as acknowledgement of a review issue. In the case of the latter, a brief explanation should follow the applicable item.

Golder Associates Inc. has reviewed the laboratory certificates of analysis, chain-of-custody form, and laboratory provided sample group quality assurance and quality control data for the above referenced sample group to identify potential bias or inaccuracy, in general accordance with the following United States Environmental Protection Agency documents:

- Region III Modifications to Functional Guidelines for Organic Data Review Multi-Media, Multi-Concentration, September 1994;
- Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, April 1993; and
- Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, July 1998.

COMPLIANCE ANALYTE LIST(S) (check all that apply)

_____ NC Closed Facility List (.500 Rules)

_____ NC C & D List (New Rules)

__X__ NC Appendix I

_____ NC Appendix I + Detects

_____ NC Appendix II

_____ NC Subtitle D Leachate List

Other:

1.0 CHAIN OF CUSTODY (COC) REVIEW

AS COC was properly signed by all parties.

AS Correct project name and number are on the form.

AS Sample receipt condition at laboratory was acceptable.

AS Each sample and blank submitted for analysis appears in the report.

2.0 SAMPLE HOLDING TIMES

AS Holding times for extraction and/or analysis were met for each analytical Method (see below for reference).

Notes: _____

Review Criteria		
Method	**Analytes**	**Holding Time**
SW-846 Method 8260 and 8011	VOCs	14 days
SW-846 Methods 8270, 8080, 8081, 8082, and 8151	SVOCs, PCBs, pesticides and herbicides	7 days for extraction, 40 days from extraction for analysis
SW-846 Methods 6000 and 7000 Series	Metals except mercury	6 months (no temperature requirements)
SW-846 Method 7470	Mercury	28 days
SW-846 Method 376.1	Sulfide	7 days
SW-846 Method 9010	Cyanide	14 days
EPA Method 300	Nitrate/Sulfate	48 hours/28 days
EPA Method 405.1	BOD	48 hours
EPA Method 410.4	COD	28 days
EPA Method 365.4	Phosphorous	28 days

3.0 LABORATORY QUALITY CONTROL REVIEW

AS Laboratory analyzed at least one internal blank for each method, where applicable.

AS Laboratory blank is interference-free.

AS Surrogate recoveries are provided for each analytical method, where applicable.

AS Surrogate recoveries for each method are within the acceptable limits (i.e., at least 50% of the surrogates were within range).

AS MS/MSD/LCS data results are provided for each analytical method.

AS MS/MSD/LCS recoveries for each method are within the acceptable limits (i.e., at least 1 of the 3 were within range).

4.0 ANALYTE LISTS/METHODS

AS The proper number of constituents are present for each analyte list as identified above (including detects where applicable).

AS Proper EPA SW-846 analytical methods were used for analysis.

5.0 DATA REPORTING

AS All analytical reporting associated with the event was performed by the contracted lab.

AS Trip, field and/or equipment, and laboratory blank results have all been reported. All detects for blanks are listed below by constituent. All laboratory method blanks, if any, have been 'flagged' with a 'B' where detected in other samples as appropriate and a laboratory narrative was provided. If the sample was flagged by the laboratory and is not within 5X of the concentration in the blank (or 10X for commonly detected laboratory contaminants-acetone, methylene chloride and phthalates), list below with explanation if flags should be removed. If flags need to be added for samples, also list below.

AS It is clear from the laboratory report that samples have or have not been diluted during analysis, and if the samples have been diluted, the result is reported as a multiple of the dilution (e.g., a sample diluted 10x resulting in an analytical detection of 1.0 should be reported as 10). Those that have been diluted are listed below with the dilution factor.

AS The report provides the reporting limit for each constituent.

AS The results were reported at or below their proper reporting limits (i.e., MDLs with SWSLs reported). Those that are not reported correctly are listed below (by constituent) with the proper reporting limit listed beside them. State if the reporting limit error is due to dilutions.

AS No organic constituents were reported above their respective SWSLs, and no inorganic or organic constituents were reported above their respective NC 2L Drinking Water Standards/GWPS in wells, or field/equipment/trip blanks, or above applicable surface water standards in surface water points.

- **Barium** **(SWSL = 100 ug/L, NC 2L = 700 ug/L)**
  - ***MW-2 @ 224 ug/L***
  - ***MW-3R @ 175 ug/L***
  - ***MW-4R @ 543 ug/L***
  - ***MW-5 @ 1910 ug/L***
  - ***NES-3 @ 148 ug/L***

- **Cobalt** **(SWSL = 10 ug/L, GWPS = 1 ug/L)**
  - ***MW-3R @ 1.89 ug/L (J)***
  - ***MW-9R @ 6.25 ug/L (J)***
  - ***NES-3 @ 10.5 ug/L***
  - ***S-1 @ 1.81 ug/L (J)***
  - ***S-3 @ 1.30 ug/L (J)***

- **Vanadium** **(SWSL = 25 ug/L, NC 2L = 0.3 ug/L)**
  - ***MW-9R @ 1.91 ug/L (J)***
  - ***NES-3 @ 4.24 ug/L (J)***
  - ***S-1 @ 4.93 ug/L (J)***
  - ***S-2 @ 2.56 ug/L (J)***
  - ***S-3 @ 3.23 ug/L (J)***

- ***S-4 @ 3.03 ug/L (J)***

- **Zinc** **(SWSL = 10 ug/L, NC 2L = 1000 ug/L, SW Standard = 50 ug/L)**
  - ***MW-2 @ 15.5 ug/L***
  - ***S-1 @ 13.8 ug/L***
  - ***S-3 @ 26.2 ug/L***
  - ***S-4 @ 27.0 ug/L***

- **Vinyl Chloride** **(SWSL = 1 ug/L, NC 2L = 0.03 ug/L)**
  - ***MW-2 @ 0.68 ug/L***

AS No inorganic or organic constituents were detected in a well or surface water point at quantified concentrations outside of their historical range (more than 5X previous concentrations or first-time detections).

n/a Other report issues/Communications with laboratory/etc.:

- **The detection of Silver in sample MW-4R was confirmed by secondary prep and analysis via EPA Method 6020A. This additional result is available upon request. At the client's request, MW-4 R was reprepped and reanalyzed for Silver via EPA Method 6010C. The resulting concentration is lower than originally reported; both results from the 6010C analyses are included in the report.**

APPENDIX C

Statistical Evaluation Summary Table and Worksheets

Summary of Statistical Analysis

City of Durham Closed Landfill, Permit No. 32-01

Durham County, North Carolina

November 2014									
Detected Monitoring Constituent/ Analytes	Reporting Units	SWS Reporting Limit	Groundwater Standard		Downgradient Monitoring Well	Constituent/ Analyte Concentration	Statistical Analysis		Statistical Determination
			NC 2L	GPS			Interwell	Intrawell	
Barium	ug/L	100	700	--	MW-5	1880	5664	-	Not SSI
Cobalt	ug/L	10	1	--	NES-3	10.5	145	-	Not SSI

Notes:

1. Statistical worksheets are provided as Appendix C.
2. ug/L = micrograms per liter
3. NC 2L = North Carolina 2L Groundwater Standard
4. GWPS = North Carolina Solid Waste Section Groundwater Protection Standard
5. NA = not applicable
6. SSI = statistically significant increase
7. SWS = Solid Waste Section
8. North Carolina Appendix I Inorganic constituents detected above their respective Solid Waste Section Reporting Limit and Groundwater Standard in samples from downgradient monitoring wells were statistically evaluated.

Project Name: City of Durham Closed Landfill
Project No: 0739-604214.100
Date: 01/14/15

Shapiro-Francia Test Statistic (W') for log normality of total Barium

Complete the following table where

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
m(i) = ith order Normal quantile

i	ln(X(i))	ith/n	m(i)	m(i)^2	m(i)X(i)
1	3.50	0.0088	-2.38	5.64	-8.30
2	3.64	0.0175	-2.11	4.44	-7.67
3	3.67	0.0263	-1.94	3.76	-7.12
4	3.73	0.0351	-1.81	3.28	-6.75
5	3.76	0.0439	-1.71	2.92	-6.42
6	3.79	0.0526	-1.62	2.62	-6.14
7	3.79	0.0614	-1.54	2.38	-5.85
8	3.81	0.0702	-1.47	2.17	-5.62
9	3.82	0.0789	-1.41	1.99	-5.40
10	3.90	0.0877	-1.35	1.84	-5.28
11	3.92	0.0965	-1.30	1.69	-5.11
12	3.94	0.1053	-1.25	1.57	-4.93
13	3.97	0.1140	-1.21	1.45	-4.79
14	3.98	0.1228	-1.16	1.35	-4.62
15	4.01	0.1316	-1.12	1.25	-4.48
16	4.03	0.1404	-1.08	1.16	-4.34
17	4.16	0.1491	-1.04	1.08	-4.33
18	4.23	0.1579	-1.00	1.01	-4.25
19	4.26	0.1667	-0.97	0.94	-4.12
20	4.36	0.1754	-0.93	0.87	-4.07
21	4.39	0.1842	-0.90	0.81	-3.95
22	4.43	0.1930	-0.87	0.75	-3.84
23	4.50	0.2018	-0.84	0.70	-3.76
24	4.52	0.2105	-0.80	0.65	-3.64
25	4.53	0.2193	-0.77	0.60	-3.51
26	4.63	0.2281	-0.75	0.56	-3.45
27	4.64	0.2368	-0.72	0.51	-3.33
28	4.66	0.2456	-0.69	0.47	-3.21
29	4.71	0.2544	-0.66	0.44	-3.11
30	4.71	0.2632	-0.63	0.40	-2.98
31	4.73	0.2719	-0.61	0.37	-2.87
32	4.74	0.2807	-0.58	0.34	-2.75
33	4.75	0.2895	-0.55	0.31	-2.64
34	4.77	0.2982	-0.53	0.28	-2.53
35	4.77	0.3070	-0.50	0.25	-2.41
36	4.78	0.3158	-0.48	0.23	-2.29
37	4.79	0.3246	-0.45	0.21	-2.18
38	4.79	0.3333	-0.43	0.19	-2.06
39	4.81	0.3421	-0.41	0.17	-1.96
40	4.93	0.3509	-0.38	0.15	-1.89
41	4.93	0.3596	-0.36	0.13	-1.77
42	4.95	0.3684	-0.34	0.11	-1.66
43	5.34	0.3772	-0.31	0.10	-1.67
44	5.70	0.3860	-0.29	0.08	-1.65
45	5.74	0.3947	-0.27	0.07	-1.53
46	5.90	0.4035	-0.24	0.06	-1.44
47	5.92	0.4123	-0.22	0.05	-1.31
48	6.06	0.4211	-0.20	0.04	-1.21
49	6.07	0.4298	-0.18	0.03	-1.07
50	6.08	0.4386	-0.15	0.02	-0.94
51	6.11	0.4474	-0.13	0.02	-0.81
52	6.13	0.4561	-0.11	0.01	-0.68
53	6.16	0.4649	-0.09	0.01	-0.54
54	6.18	0.4737	-0.07	0.00	-0.41
55	6.23	0.4825	-0.04	0.00	-0.27
56	6.24	0.4912	-0.02	0.00	-0.14
57	6.25	0.5000	0.00	0.00	0.00
58	6.26	0.5088	0.02	0.00	0.14
59	6.32	0.5175	0.04	0.00	0.28
60	6.32	0.5263	0.07	0.00	0.42
61	6.35	0.5351	0.09	0.01	0.56

62	6.35	0.5439	0.11	0.01	0.70
63	6.36	0.5526	0.13	0.02	0.84
64	6.36	0.5614	0.15	0.02	0.98
65	6.36	0.5702	0.18	0.03	1.13
66	6.36	0.5789	0.20	0.04	1.27
67	6.40	0.5877	0.22	0.05	1.42
68	6.43	0.5965	0.24	0.06	1.57
69	6.43	0.6053	0.27	0.07	1.72
70	6.43	0.6140	0.29	0.08	1.86
71	6.43	0.6228	0.31	0.10	2.01
72	6.45	0.6316	0.34	0.11	2.17
73	6.46	0.6404	0.36	0.13	2.32
74	6.47	0.6491	0.38	0.15	2.48
75	6.48	0.6579	0.41	0.17	2.64
76	6.56	0.6667	0.43	0.19	2.82
77	6.57	0.6754	0.45	0.21	2.99
78	6.62	0.6842	0.48	0.23	3.17
79	6.63	0.6930	0.50	0.25	3.35
80	6.64	0.7018	0.53	0.28	3.51
81	6.65	0.7105	0.55	0.31	3.69
82	6.66	0.7193	0.58	0.34	3.87
83	6.66	0.7281	0.61	0.37	4.04
84	6.71	0.7368	0.63	0.40	4.25
85	6.71	0.7456	0.66	0.44	4.43
86	6.73	0.7544	0.69	0.47	4.63
87	6.74	0.7632	0.72	0.51	4.83
88	6.74	0.7719	0.75	0.56	5.03
89	6.75	0.7807	0.77	0.60	5.22
90	6.76	0.7895	0.80	0.65	5.44
91	6.78	0.7982	0.84	0.70	5.66
92	6.79	0.8070	0.87	0.75	5.89
93	6.83	0.8158	0.90	0.81	6.14
94	6.85	0.8246	0.93	0.87	6.39
95	6.86	0.8333	0.97	0.94	6.64
96	6.87	0.8421	1.00	1.01	6.89
97	6.88	0.8509	1.04	1.08	7.15
98	6.93	0.8596	1.08	1.16	7.47
99	7.17	0.8684	1.12	1.25	8.02
100	7.30	0.8772	1.16	1.35	8.48
101	7.35	0.8860	1.21	1.45	8.86
102	7.48	0.8947	1.25	1.57	9.37
103	7.51	0.9035	1.30	1.69	9.78
104	7.51	0.9123	1.35	1.84	10.18
105	7.52	0.9211	1.41	1.99	10.62
106	7.66	0.9298	1.47	2.17	11.29
107	7.78	0.9386	1.54	2.38	12.00
108	7.82	0.9474	1.62	2.62	12.67
109	7.88	0.9561	1.71	2.92	13.46
110	7.93	0.9649	1.81	3.28	14.36
111	7.94	0.9737	1.94	3.76	15.38
112	7.97	0.9825	2.11	4.44	16.79
113	8.64	0.9912	2.38	5.64	20.53
			Sum	52.5	134.752

The test statistic W' can be found using:

W' = [(sum(mi*x(I))/((n-1)^.5*SD*(sum(mi^2))^.5]

where:	SD =	standard deviation of the sample	=	1.279
	X =	Mean of the sample	=	5.816
	n =	number of samples	=	113
			W' =	1.374

Compare this value to the critical value in Table A-2 of Statistical Analysisof Ground-Water Monitoring Data at RCRA Facilities, Addendum to Interim Final Guidance (Draft) July, 1992, to determine if the data is normally distributed.

From Table A-2 with (n) samples and a 95% confidence level, the critical value is

W(crit) = 0.982
and the calculated W' = 1.374

Therefore the data set is Non Normal

Project Name: City of Durham Closed Landfill
Project No: 0739-604214.100
Date: 01/15/15

Parametric Tolerance Interval for Aitchison's adjusted data

Analyte: Cobalt

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)	ln(Concentration)
1	12/02/94	PZ-6	ND		ND
2	02/07/95	PZ-6	30		3.401
3	11/01/95	PZ-6	12		2.485
4	06/10/96	PZ-6	ND		ND
5	11/12/96	PZ-6	34		3.526
6	03/18/97	PZ-6	16		2.773
7	10/02/97	PZ-6	20.6		3.025
8	05/26/98	PZ-6	45		3.807
9	12/01/98	PZ-6	ND		ND
10	06/07/99	PZ-6	34		3.526
11	12/15/99	PZ-6	16		2.773
12	06/06/00	PZ-6	32		3.466
13	12/27/00	PZ-6	ND		ND
14	06/04/01	PZ-6	50		3.912
15	12/03/01	PZ-6	33		3.497
16	06/10/02	PZ-6	16		2.773
17	12/16/02	PZ-6	14		2.639
18	06/09/03	PZ-6	ND		ND
19	12/08/03	PZ-6	87		4.466
20	06/29/04	PZ-6	91		4.511
21	12/20/04	PZ-6	7.4		2.001
22	05/30/07	PZ-6	3.2	J	1.163
23	11/19/07	PZ-6	16		2.773
24	09/19/94	MW-7	ND		ND
25	12/02/94	MW-7	11		2.398
26	02/07/95	MW-7	14		2.639
27	03/13/95	MW-7	12		2.485
28	11/01/95	MW-7	ND		ND
29	06/10/96	MW-7	ND		ND
30	11/12/96	MW-7	ND		ND
31	03/18/97	MW-7	ND		ND
32	10/02/97	MW-7	ND		ND
33	05/26/98	MW-7	ND		ND
34	12/01/98	MW-7	ND		ND
35	06/07/99	MW-7	55		4.007
36	12/15/99	MW-7	ND		ND
37	06/06/00	MW-7	ND		ND
38	12/27/00	MW-7	ND		ND
39	06/04/01	MW-7	ND		ND
40	12/03/01	MW-7	26		3.258
41	06/10/02	MW-7	12		2.485
42	12/16/02	MW-7	ND		ND
43	06/09/03	MW-7	ND		ND
44	12/08/03	MW-7	ND		ND
45	06/29/04	MW-7R	ND		ND
46	12/20/04	MW-7R	ND		ND
47	05/30/07	MW-7R	ND		ND
48	11/19/07	MW-7R	7	J	1.946
49	05/19/08	MW-7R	ND		ND
50	11/19/08	MW-7R	ND		ND
51	06/30/09	MW-7R	ND		ND
52	11/30/09	MW-7R	ND		ND
53	05/20/10	MW-7R	ND		ND
54	11/19/10	MW-7R	ND		ND
55	09/19/94	MW-8	32		3.466
56	12/02/94	MW-8	ND		ND

57	02/07/95	MW-8	ND		ND
58	03/13/95	MW-8	ND		ND
59	11/01/95	MW-8	ND		ND
60	06/10/96	MW-8	12		2.485
61	11/12/96	MW-8	13		2.565
62	03/18/97	MW-8	16		2.773
63	10/02/97	MW-8	21.5		3.068
64	05/26/98	MW-8	15		2.708
65	12/01/98	MW-8	ND		ND
66	06/07/99	MW-8	14		2.639
67	07/08/99	MW-8	--		ND
68	12/15/99	MW-8	14		2.639
69	06/06/00	MW-8	14		2.639
70	12/27/00	MW-8	19		2.944
71	06/04/01	MW-8	13		2.565
72	12/03/01	MW-8	17		2.833
73	06/10/02	MW-8	20		2.996
74	12/16/02	MW-8	25		3.219
75	06/09/03	MW-8	16		2.773
76	12/08/03	MW-8	16		2.773
77	06/29/04	MW-8	26		3.258
78	12/20/04	MW-8	20		2.996
79	05/30/07	MW-8	11.2		2.416
80	11/19/07	MW-8	21		3.045
81	05/19/08	MW-8	2.6	J	0.956
82	11/19/08	MW-8	7.8	J	2.054
83	06/30/09	MW-8	5.7	J	1.740
84	11/30/09	MW-8	4.28	J	1.454
85	05/20/10	MW-8	6.01	J	1.793
86	11/19/10	MW-8	4.41	J	1.484
87	05/19/08	MW-9R	5.1	J	1.629
88	11/19/08	MW-9R	5	J	1.609
89	06/30/09	MW-9R	5.9	J	1.775
90	11/30/09	MW-9R	5.43	J	1.692
91	05/20/10	MW-9R	5.75	J	1.749
92	11/19/10	MW-9R	6.12	J	1.812
93	05/19/11	MW-9R	6.93	J	1.936
94	11/28/11	MW-9R	7.63	J	2.032
95	05/23/12	MW-9R	5.64	J	1.730
96	11/26/12	MW-9R	6.61	J	1.889
97	05/21/13	MW-9R	5.19	J	1.647
98	05/21/14	MW-9R	6.1	J	1.808
99	11/24/14	MW-9R	6.25	J	1.833

Note: All sample concentrations are micrograms per liter

The background mean and standard deviation were modified using Aitchison's Adjustment.
The adjusted mean and standard deviation are as follows:

The ln(adjusted mean) and ln(standard deviation) are

ln(adjusted mean) = 1.67
ln(adjusted standard deviation) = 1.39

Using the background data, the upper Tolerance Limit can be determined using

Upper Tolerance Limit = (Mean Concentration) + K x (Standard Deviation Samples)

where: K = factor for constructing one sided normal tolerance limit taken from table 4-2, page 87, Statistical Methods for Groundwater Monitoring, Gibbons, 1994
n = number of background samples

For: K = 1.926
n = 99

UTL = 76.9 ug/L

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