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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 North Carolina, Inc.

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

Name: Rachel P. Kirkman, P.G. Phone: 336-852-4903

E-mail: rkirkman@golder.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
City of Durham - Closed Landfill	1600 Mist Lake Drive Durham, NC 27704	32-01	.1600	May 30-31, 2007

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)

Received SEP 2007 Solid Waste Section

Notification attached?

☐ No. No groundwater or surface water standards or explosive methane gas limits 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.

Rachel P. Kirkman, P.G.	Senior Project Geologist	336-852-4903
Facility Representative Name (Print)	Title	(Area Code) Telephone Number

Signature: Rachel P. Kirkman Date: 9-5-07

Affix NC Licensed Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1811 GEOLOGIST RACHEL P. KIRKMAN 9-5-07

Revised 10/2006

Golder Associates NC, Inc.

4900 Koger Boulevard, Suite 140
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Telephone (336) 852-4903
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September 5, 2007 Project No. 073-96042.100

Department of Environment and Natural Resources
Division of Waste Management
Solid Waste Section
401 Oberlin Road, Suite 150
Raleigh, North Carolina 27605
919-508-8520

Attention: Mr. Donald Herndon
Environmental Specialist

Re: City of Durham Closed Municipal Solid Waste Landfill, Permit No. 32-01
Durham County, North Carolina
Groundwater Monitoring Report, First Semiannual 2007 Sampling Event

Dear Donald:

On behalf of the City of Durham Department of Water Management, Golder Associates NC, Inc. (Golder) is submitting this *Groundwater Monitoring Report*, which documents the results of the May 30-31, 2007, compliance monitoring event at the above-referenced facility.

As presented, barium, cobalt and zinc were detected in one or more downgradient monitoring wells above their respective SWSLs. The concentrations of cobalt in MW-6R and MW-8 are above the Solid Waste Section Groundwater Protection Standard (GPS). Cadmium and mercury were also detected in well MW-6R above their SWSLs. However, the reported concentrations do not exceed the calculated facility background concentrations for these constituents, and are generally consistent with historical results for these wells. In addition, several organic constituents including 1,2-dichloropropane; 1,4-dichlorobenzene; benzene; cis-1,2-dichloroethene; trichloroethene and vinyl chloride were detected above their respective SWSLs in MW-6R. Of these benzene; 1,4-dichlorobenzene; cis-1,2-dichloroethene; 1,2-dichloropropane; and vinyl chloride were detected above their applicable NC 2L Groundwater Protection Standards, as they have been during recent events. Zinc was the only regulated constituent detected in surface water samples above the SWSLs during the May 2007 sampling event; concentrations upstream and downstream are similar.

Based on these results, the City of Durham Department of Water Management will continue monitoring the uppermost aquifer beneath this facility in accordance with the requirements of the Assessment Monitoring Program as outlined in Title 15A NCAC 13B.1634. If you have any questions, please contact the undersigned at 336-852-4903.

Sincerely,
GOLDER ASSOCIATES NC, INC.

Benjamin S. Draper
Geologist

Rachel P. Kirkman, P.G.
Senior Project Geologist

Enclosure

C: Ms. Nancy Lee Newell, P.E., Water Management Engineer, City of Durham Department of Water Management, 1600 Mist Lake Drive, Durham, NC 27704

GROUNDWATER MONITORING REPORT
FIRST SEMIANNUAL 2007 SAMPLING EVENT

CITY OF DURHAM CLOSED MUNICIPAL SOLID WASTE LANDFILL, PERMIT NO. 32-01
DURHAM COUNTY, NORTH CAROLINA

SEPTEMBER 2007

PREPARED FOR:

CITY OF DURHAM
DEPARTMENT OF WATER MANAGEMENT
1600 MIST LAKE DRIVE
DURHAM, NORTH CAROLINA 27704

PREPARED BY:

GOLDER ASSOCIATES NC, INC.
4900 KOGER BOULEVARD, SUITE 140
GREENSBORO, NC 27407

PROJECT NO. 073-96042.100

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DRAWING

Drawing 1 Groundwater Contour Map, May 30-31, 2007

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Appendix I Groundwater and Surface Water Sampling Logs
Appendix II May 2007 Certificates-of-Analysis, Chain-of-Custody Forms and Laboratory Data Review
Appendix III Statistical Evaluation Worksheets

1.0 INTRODUCTION

This report summarizes the monitoring results from the May 30-31, 2007, groundwater and surface sampling and analysis event at the City of Durham Closed 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 Department of Water Management 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 City of Durham Closed Landfill is located in Durham County, 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 stormwater control structures toward Ellerbee Creek to the west of the facility. Locally, surface water flows in a radial direction, 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 semiannually in accordance with the approved Water Quality Monitoring Plan (WQMP) prepared by Malcolm Pirnie, Inc. in April 1994 (MP, 1994).

Assessment Monitoring was conducted at the landfill from November 1996 through June 1999 due to after the detection of benzene monitoring well MW-3. Following the June 1999 monitoring event, the NCDENR Solid Waste Section (SWS) 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, 2006). The facility's approved monitoring network consists of one upgradient/background monitoring well (PZ-6) and seven downgradient compliance monitoring wells (MW-2, MW-3, MW-4R, MW-5, MW-6R, MW-7R and MW-8) which monitor the uppermost aquifer. Groundwater samples are analyzed for the NC Appendix II list during the May events and for the NC Appendix I plus detected NC Appendix II constituents during the November events. The facility's monitoring network also includes one upstream surface water monitoring point (S-4) and three downstream surface water sampling points (S-1, S-2 and S-3), which are sampled in conjunction with the groundwater monitoring wells. Surface water samples are analyzed semiannually 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, 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 (MP 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 static water level 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 well, 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 affect of hydraulic discharge boundaries.

Static water level measurements obtained on May 30-31, 2007, 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 May 30-31, 2007, groundwater contour map, the hydraulic gradient in the uppermost aquifer underlying the site was measured along the conceptual flow paths shown on Drawing 1. The average hydraulic gradient for the groundwater flow was calculated to be approximately 0.04 (Table 2). 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.

The average estimated linear groundwater flow velocity under the waste management unit is approximately 200 feet/year to the northwest, west and southwest, which is generally consistent with previous estimates (Table 2).

2.0 FIELD PROGRAM, MONITORING RESULTS, AND DISCUSSION

Field activities conducted as part of the May 2007 sampling event are discussed in the following sections.

2.1 Visual Inspection Program

In order to ensure that a potential release is detected at the earliest possible time, the visual inspection program is used at the City of Durham Closed 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 May 2007 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 City of Durham Closed Landfill consists of PZ-6, MW-2, MW-3, MW-4R, MW-5, MW-6R, MW-7R and MW-8. 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.

Monitoring well PZ-6 is the facility's background well and is located hydraulically upgradient of the waste disposal area. PZ-6 replaced well MW-1, which was damaged in 1996. Monitoring wells MW-2, MW-3, MW-4R, MW-5, MW-6R, MW-7R and MW-8 are located downgradient or sidegradient of the waste disposal area and represent the facility's downgradient compliance wells.

Depth-to-water measurements were recorded to the nearest 0.01 foot prior to initiating groundwater purging and sampling activities. The monitoring point summary and respective water level elevations for this event are presented in Table 1.

2.3 May 2007 Groundwater Monitoring Event

Personnel from Golder visited the facility on May 30-31, 2007, to purge and sample monitoring wells MW-2, MW-3, MW-4R, MW-5, MW-6R, MW-7R, MW-8 and PZ-6. In addition to the groundwater samples, surface water samples were collected from locations S-4 (upstream) and S-3 (downstream). Downstream surface water points SW-1 and SW-2 were dry during the May 2007 sampling event. Additional depth-to-water measurements were obtained from MW-9R, PZ-2R, PZ-3 and PZ-4R to construct the groundwater contour map.

Monitoring wells MW-2, MW-3, MW-4R, MW-6R, MW-8 and PZ-6 were purged and sampled using dedicated bladder pumps and low-flow micropurge techniques. Wells MW-5 and MW-7R were purged and sampled using the disposable bailers due to pump malfunctions. 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, temperature, and turbidity were recorded on 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 bailer or 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 I. 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 May 2007 groundwater samples were received by Environmental Conservation Laboratories, Inc. (ENCO) of Cary, North Carolina on June 1, 2007, under chain-of-custody control for analysis of NC Appendix II constituents. Surface water samples were analyzed for NC Appendix I constituents.

2.5 May 2007 Sampling Results

Analytical results for the May 2007 groundwater and surface water samples are summarized in Tables 4 and 5 with available historical data. The laboratory certificates-of-analysis, chain-of-custody forms and laboratory data reviews for the sampling event are included in Appendix II.

As presented in Table 4 and the laboratory certificates-of-analysis, two constituents, barium and zinc were detected in the upgradient well PZ-6, above their respective Solid Waste Section Reporting Limits (SWSLs). Barium, cadmium, cobalt, mercury and zinc were detected in one or more downgradient monitoring wells above their respective SWSLs. In addition, several organic constituents including 1,2-dichloropropane; 1,4-dichlorobenzene; benzene; cis-1,2-dichloroethene; trichloroethene and vinyl chloride were detected above their respective SWSLs in MW-6R.

As presented in Table 5, zinc was the only regulated solid waste constituent detected above the SWSLs in samples collected from two of the surface water monitoring points in the facility's monitoring network. The zinc concentration downstream point is similar to the upstream concentration.

3.0 LABORATORY AND FIELD QA/QC

A field blank was collected by Golder personnel as part of the May 2007 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 volatile organic compounds. A review of the laboratory data was performed by Golder personnel.

Acetone, lead, tin and zinc were detected in the field blank at estimated concentrations. Acetone and toluene were detected in the trip blank at estimated concentrations. Acetone, arsenic, copper, selenium and tin were detected in the method blank at estimated concentrations. All the concentrations of arsenic, lead, selenium, and acetone were blank-qualified based on concentrations detected in the blanks. Copper detections in wells MW-2, MW-4R, MW-6R, MW-7R, SW-3 and SW-4, and zinc detections in wells MW-2, MW-4R, MW-5, MW-6R and MW-8 were also blank-qualified.

4.0 DATA EVALUATION

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

4.1 Statistical Evaluations

Barium, cadmium, cobalt, mercury and zinc were detected in one or more downgradient monitoring wells at levels above their respective SWSLs. Pursuant to the requirements of 15A NCAC 13B.1633, these concentrations were statistically evaluated in accordance with the procedures outlined in 15A NCAC 13B.1632(g) and (h) to determine if the reported concentrations exceeded the facility background concentration. The statistical worksheets for barium, cadmium, cobalt, mercury and zinc are presented in Appendix III. As presented, the reported concentrations are below their respective background concentrations.

4.2 North Carolina Groundwater and Surface Water Quality Standard Comparisons

Benzene; 1,4-dichlorobenzene; cis-1,2-dichloroethene; 1,2-dichloropropane; and vinyl chloride in MW6R were detected above their respective Groundwater Quality Standards (2L Standards) during the May 2007 event, as they have been during recent events. Cobalt was detected in wells PZ-6, MW-3, MW-6R and MW-8 above the Solid Waste Section Groundwater Protection Standards (GPS) during this event; concentrations in wells PZ-6 and MW-3 were estimated. An estimated concentration of bis(2ethylhexyl) phthalate was detected in upgradient well PZ-6 above its 2L Standard. No other organic or inorganic constituents were detected above their respective NC 2L Standards or GPS during this event. Zinc was detected in both upstream and downstream samples just above the surface water standard (action limit). Concentrations are consistent with historical data and do not indicate an impact to surface water by the facility.

5.0 CONCLUSIONS

During the May 2007 event, no inorganic constituents were detected at statistically significant concentrations. Several organic constituents in MW-6R were detected at statistically significant concentrations, five of which are also above their applicable Groundwater Quality Standards. Based on the results summarized herein, the City of Durham will continue monitoring the uppermost aquifer beneath this facility in accordance with the requirements of the Assessment Monitoring Program as outlined in Title 15A NCAC 13B.1634. The next compliance monitoring event for this facility is tentatively scheduled for November 2007.

6.0 REFERENCES

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

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

MP 1996 (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.

Weston 2006 (Weston Solutions, Inc.), February 2006. *December 2005 Semiannual Event—Closed Durham City Landfill*.

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TABLES

Table 1

Summary of Historical Groundwater Elevation Data

City of Durham Closed Landfill
Permit No. 32-01

Well #	MW-1	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R[1]	MW-7	MW-7R[1]	MW-8	MW-9	MW-9R[1]	PZ-1	PZ-2	PZ-2R[1]	PZ-3	PZ-4	PZ-4R	PZ-6
TOC Elevation (ft AMSL)	346.80	286.50	285.80	294.70	295.60	299.80	289.30	291.39	318.30	318.21	313.10	358.10	361.47	347.00	346.10	346.56	350.00	342.30	339.42	350.10
Date	**Static Water Elevation (ft AMSL)**																			
05/26/98	313.90	280.20	283.50	294.20	NI	290.20	285.00	NI	300.40	NI	304.40	350.50	NI	NM	313.90	NI	318.80	NM	NI	308.10
12/01/98	316.30	280.06	282.97	destroyed	NI	298.43	282.42	NI	298.68	NI	304.40	345.74	NI	NM	316.57	NI	321.29	NM	NI	304.79
06/07/99	316.09	275.71	275.30	destroyed	NI	285.79	NM	NI	295.77	NI	300.87	NM	NI	NM	316.09	NI	319.05	NM	NI	303.68
07/08/99	NM	NM	NM	destroyed	289.09	NM	280.03	NI	NM	NI	NM	NM	NI	NM	NM	NI	NM	NM	NI	NM
12/13/99	316.58	279.09	280.10	destroyed	289.49	288.28	281.28	NI	296.74	NI	302.19	NM	NI	342.40	316.55	NI	319.83	NM	NI	303.64
06/06/00	317.23	277.15	279.28	destroyed	289.37	287.10	280.82	NI	297.00	NI	301.98	347.43	NI	Dry	316.84	NI	319.45	NM	NI	305.02
12/11/00	316.90	277.10	279.50	destroyed	289.15	288.05	282.11	NI	296.65	NI	302.01	344.55	NI	Dry	316.33	NI	320.27	NM	NI	303.71
06/04/01	abandoned	278.37	279.67	destroyed	289.67	286.67	281.63	NI	297.31	NI	301.42	346.98	NI	Dry	316.02	NI	318.52	322.40	NI	304.90
12/04/01	abandoned	275.19	278.85	destroyed	289.15	288.25	280.30	NI	294.85	NI	299.32	341.46	NI	Dry	NM	NI	319.11	damaged	NI	304.71
06/10/02	abandoned	275.59	277.77	destroyed	288.52	288.38	279.50	NI	296.30	NI	302.55	343.48	NI	Dry	315.62	NI	317.57	damaged	NI	304.11
12/16/02	abandoned	280.13	282.09	destroyed	290.51	292.22	283.55	NI	300.01	NI	305.28	349.62	NI	343.16	316.39	NI	318.72	damaged	NI	305.12
06/09/03	abandoned	278.90	280.11	destroyed	290.04	288.21	281.05	NI	297.61	NI	301.45	347.70	NI	NM	damaged	NI	317.81	damaged	NI	305.75
12/08/03	abandoned	278.49	279.69	destroyed	289.82	288.06	281.21	NI	297.92	NI	310.00	abandoned	NI	342.91	damaged	NI	319.84	damaged	NI	305.53
06/28/04	abandoned	276.34	279.29	destroyed	290.00	287.15	NM	275.79	NM	297.73	300.87	abandoned	349.02	abandoned	damaged	318.70	319.37	damaged	313.74	308.83
12/20/04	abandoned	275.48	279.70	destroyed	289.78	288.18	NM	276.89	NM	299.55	301.72	abandoned	334.52	abandoned	damaged	318.98	321.02	damaged	319.78	307.16
06/06/05	abandoned	280.35	279.12	destroyed	289.87	287.31	NM	275.79	NM	297.82	300.74	abandoned	349.62	abandoned	damaged	320.93	321.07	damaged	320.42	306.90
12/05/05	abandoned	274.26	279.46	destroyed	289.94	287.72	NM	275.59	NM	299.17	300.09	abandoned	346.25	abandoned	damaged	319.65	320.75	damaged	317.42	302.60
06/05/06	abandoned	277.45	279.24	destroyed	291.10	287.45	NM	275.81	NM	298.91	300.51	abandoned	347.47	abandoned	damaged	319.74	318.85	damaged	317.89	304.85
12/04/06	abandoned	279.40	279.90	destroyed	290.02	288.80	NM	277.18	NM	300.86	301.80	abandoned	349.22	abandoned	damaged	319.56	319.30	damaged	317.42	304.10
05/30/07	abandoned	279.38	281.60	destroyed	291.00	289.89	NM	278.59	NM	300.48	303.60	abandoned	348.47	abandoned	damaged	320.18	318.56	damaged	319.08	300.51
MEAN	*316.17*	*277.82*	*279.85*	*294.20*	*289.80*	*288.74*	*281.58*	*276.52*	*297.44*	*299.22*	*302.38*	*346.38*	*346.37*	*342.82*	*316.03*	*319.68*	*319.43*	*322.40*	*317.96*	*304.95*
MAXIMUM	*317.23*	*280.35*	*283.50*	*294.20*	*291.10*	*298.43*	*285.00*	*278.59*	*300.40*	*300.86*	*310.00*	*350.50*	*349.62*	*343.16*	*316.84*	*320.93*	*321.29*	*322.40*	*320.42*	*308.83*
MINIMUM	*313.90*	*274.26*	*275.30*	*294.20*	*288.52*	*285.79*	*279.50*	*275.59*	*294.85*	*297.73*	*299.32*	*341.46*	*334.52*	*342.40*	*313.90*	*318.70*	*317.57*	*322.40*	*313.74*	*300.51*

Notes:
AMSL = Above Mean Sea Level
NA= Not Applicable
NM=Not Measured
TOC=Top of Well Casing
NI=Not Installed
TOC elevations were surveyed by Barbara H. Mulkey Engineering in January 2001.
1. TOC elevations surveyed for new wells PZ-2R, PZ-4R, MW-6R, MW-7R and MW-9R in 2005 by Mulkey Engineering.

TABLE 2

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

May 2007							
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	914	310 / 280	0.0328	0.2	8.87E-04	150.56
i_2	W	1547	330 / 280	0.0323	0.2	8.87E-04	148.27
i_3	SW	458	330 / 300	0.0655	0.2	8.87E-04	300.49

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

Well Identification	Ground Surface Elevation (ft AMSL)	TOC Elevation (ft AMSL)	Well Depth (feet)	Well Diameter (inches)	Screened Interval (ft AMSL)
MW-1	344.80	346.80	80.0	2	266.80 - 278.80
MW-2	284.70	286.50	20.0	2	266.70 - 276.70
MW-3	284.20	285.50	25.0	2	261.20 - 271.20
MW-4	293.10	294.70	23.0	2	272.60 - 282.60
MW-4R	293.00	295.60	11.91*	2	--
MW-5	297.70	299.80	20.0	2	277.70 - 287.70
MW-6	287.60	289.30	10.0	2	277.60 - 286.10
MW-6R	288.64	291.39	20.0*	2	--
MW-7	316.50	318.30	29.0	2	287.50 - 297.50
MW-7R	315.70	318.21	45.0	2	--
MW-8	309.50	313.10	13.5	2	296.00 - 303.50
MW-9	357.70	358.10	--	2	--
MW-9R	358.81	361.47	28.48*	2	--
P-1	344.32	347.00	38.0	2	306.32 - 321.23
P-2	344.00	346.10	40.0	2	304.00 - 319.00
P-2R	348.83	346.56	35.6*	2	--
P-3	346.80	350.00	39.0	2	307.80 - 322.80
P-4	340.30	342.30	43.0	2	297.30 - 312.30
P-4R	336.40	339.42	30.3*	2	--
P-6	347.60	350.10	59.0	2	288.60 - 308.60

Notes:
ft AMSL= feet above mean sea level
TOC=Top of Well Casing Elevation
-- = no data available

TOC and Ground Surface elevations were surveyed by Barbara H. Mulkey Engineering in January 2001.

TOC and Ground Surface elevations surveyed for new wells P2-R, P-4R, MW-6R, MW-7R and MW-9R in 2005 by Mulkey Engineering.

*Depth to bottom measurements taken on May 30, 2007. No screen interval data available.

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Antimony	ug/L	9/19/94	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
GPS = 1.4 ug/L	ug/L	12/2/94	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	6/10/96	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	5	ND	6	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	5	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	5	ND	ND	ND	--	--	ND	--	--	ND	--	ND	--
	ug/L	7/8/99	--	--	5	--	--	--	--	ND	--	ND	--	--	--	--	--
	ug/L	12/15/99	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/6/00	--	--	5	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	--
	ug/L	12/27/00	--	--	5	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	--
	ug/L	6/4/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/3/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/10/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/16/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/8/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/29/04	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/20/04	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/05	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/5/05	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	5/30/07	0.58	2	6	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
Arsenic	ug/L	9/19/94	--	--	5	11	ND	ND	ND	--	ND	6.8	--	ND	--	ND	
NC 2L = 50 ug/L	ug/L	12/2/94	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	5	9.1	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--	8.2	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	5	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	5	ND	ND	ND	ND	--	ND	7	--	ND	--	ND	--
	ug/L	12/1/98	--	--	5	5	ND	6	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	5	6	ND	6	--	--	ND	--	--	ND	--	--	--
	ug/L	7/8/99	--	--	5	--	--	--	--	5	--	7	--	--	--	ND	--
	ug/L	12/15/99	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/6/00	--	--	5	6	ND	6	--	ND	7	--	--	ND	--	ND	--
	ug/L	12/27/00	--	--	5	ND	ND	18	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/4/01	--	--	5	ND	ND	6	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/3/01	--	--	5	ND	ND	ND	--	ND	6	ND	--	ND	--	ND	--
	ug/L	6/10/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/16/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/8/03	--	--	5	ND	ND	6	--	ND	6	ND	--	ND	--	ND	--
	ug/L	6/29/04	--	--	5	ND	ND	5	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/20/04	--	--	5	ND	ND	5	--	ND	7	--	ND	--	ND	ND	--
	ug/L	6/5/05	--	--	5	ND	ND	ND	--	ND	6	--	ND	--	6	ND	--
	ug/L	12/5/05	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	5	ND	ND	5	--	ND	7	--	ND	--	ND	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	5	--	ND	6	--	ND	--	ND	ND	--
	ug/L	5/30/07	2	10	10	ND	ND	ND	--	ND	3.4 B	--	ND	--	2.0 B	3.1 B	3.8 J

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Barium	ug/L	9/19/94	--	--	--	1834	199	810	590	--	9400	531	--	113	--	2115	--
NC 2L= 2000 ug/L	ug/L	12/2/94	--	--	--	760	32	492	580	--	2300	84	--	1775	--	119	--
	ug/L	2/7/95	--	--	--	2648	48	1047	737	--	2436	118	--	1484	--	111	--
	ug/L	3/13/95	--	--	--	524	37	706	534	--	1630	144	--	716	--	118	--
	ug/L	11/1/95	--	--	--	970	25	1500	1030	--	3360	90	--	770	--	120	--
	ug/L	6/10/96	--	--	--	891	50	1246	683	--	992	140	--	459	--	123	--
	ug/L	11/12/96	--	--	--	1555	47	879	547	--	976	104	--	512	--	84	--
	ug/L	3/18/97	--	--	--	850	70	1287	774	--	1154	87	--	509	--	138	--
	ug/L	10/2/97	--	--	--	840	48	3390	623	--	1250	111	--	558	--	312	--
	ug/L	5/26/98	--	--	--	779	48	1177	600	--	1637	249	--	482	--	103	--
	ug/L	12/1/98	--	--	--	2390	45	1024	--	--	867	126	--	655	--	118	--
	ug/L	6/7/99	--	--	--	1850	106	1498	--	--	996	--	--	2780	--	373	--
	ug/L	7/8/99	--	--	--	--	--	--	--	1217	--	507	--	--	--	--	--
	ug/L	12/15/99	--	--	--	944	84	1510	--	315	942	122	--	366	--	116	--
	ug/L	6/6/00	--	--	--	2488	46	1281	--	377	3979	--	--	1018	--	114	--
	ug/L	12/27/00	--	--	--	1826	144	1504	--	1120	5757	768	--	518	--	104	--
	ug/L	6/4/01	--	--	--	2804	128	1433	--	964	3649	284	--	862	--	475	--
	ug/L	12/3/01	--	--	--	965	153	1219	--	1053	1441	723	--	750	--	778	--
	ug/L	6/10/02	--	--	--	849	53	1117	--	943	1167	295	--	554	--	843	--
	ug/L	12/16/02	--	--	--	620	59	1121	--	544	909	128	--	429	--	209	--
	ug/L	6/9/03	--	--	--	432	67	1175	--	437	941	103	--	450	--	120	--
	ug/L	12/8/03	--	--	--	2881	85	1115	--	544	3692	221	--	648	--	141	--
	ug/L	6/29/04	--	--	--	5664	97	1024	--	551	1899	--	3039	--	763	139	--
	ug/L	12/20/04	--	--	--	578	90	1236	--	543	4192	--	1444	--	639	111	--
	ug/L	6/5/05	--	--	--	952	64	1065	--	607	1845	--	589	--	817	93	--
	ug/L	12/5/05	--	--	--	435	126	1331	--	585	1758	--	512	--	703	92	--
	ug/L	6/5/06	--	--	--	575	97	1339	--	796	3778	--	939	--	880	90	--
	ug/L	12/5/06	--	--	--	635	63	2018	--	890	3134	--	819	--	924	71	--
	ug/L	5/30/07	0.2	10	100	619	67.2 J	1490	--	472	1240	--	400	--	622	69.0 J	ND
Beryllium	ug/L	9/19/94	--	--	1	8.1	1.5	ND	ND	--	9.8	6.9	--	ND	--	7.3	--
GPS = 4 ug/L	ug/L	12/2/94	--	--	1	3.1	ND	ND	ND	--	5	ND	--	3.9	--	ND	--
	ug/L	2/7/95	--	--	1	8.6	ND	ND	ND	--	4.7	ND	--	1.9	--	ND	--
	ug/L	3/13/95	--	--	1	1.5	ND	ND	ND	--	5.2	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	1	18	ND	ND	ND	--	8	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	1	3	1.5	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	1	5	ND	3	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	1	1.5	ND	1.3	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	1	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	1	2	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	1	5	ND	3	--	--	ND	--	--	4	--	ND	--
	ug/L	7/8/99	--	--	1	--	--	--	--	2	--	2	--	--	--	--	--
	ug/L	12/15/99	--	--	1	2	ND	2	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/6/00	--	--	1	7	ND	ND	--	ND	5	2	--	2	--	ND	--
	ug/L	12/27/00	--	--	1	2	ND	ND	--	ND	8	1	--	ND	--	ND	--
	ug/L	6/4/01	--	--	1	4	ND	ND	--	ND	2	3	--	ND	--	ND	--
	ug/L	12/3/01	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/10/02	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/16/02	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/8/03	--	--	1	2	ND	ND	--	ND	2	--	--	ND	--	ND	--
	ug/L	6/29/04	--	--	1	2	ND	ND	--	ND	ND	--	2	--	ND	ND	--
	ug/L	12/20/04	--	--	1	ND	ND	ND	--	ND	2	--	1	--	ND	ND	--
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	2	--	ND	--	ND	ND	--
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	1	--	ND	--	ND	ND	--
	ug/L	5/30/07	0.7	1	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Cadmium	ug/L	9/19/94	--	--	1	ND	ND	ND	ND	--	1.6	4	--	ND	--	ND	--
NC 2L = 1.75 ug/L	ug/L	12/2/94	--	--	1	ND	1	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	1	2.2	ND	ND	ND	--	1.6	ND	--	32	--	ND	--
	ug/L	3/13/95	--	--	1	ND	ND	ND	ND	--	ND	1.2	--	ND	--	ND	--
	ug/L	11/1/95	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	1	ND	1.8	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	1	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	1	ND	ND	ND	--	--	3	--	--	ND	--	ND	--
	ug/L	7/8/99	--	--	1	--	--	--	--	ND	--	1	--	--	--	--	--
	ug/L	12/15/99	--	--	1	ND	ND	ND	--	ND	ND	1	--	ND	--	ND	--
	ug/L	6/6/00	--	--	1	ND	ND	ND	--	ND	1	--	--	ND	--	ND	--
	ug/L	12/27/00	--	--	1	ND	ND	ND	--	ND	1	2	--	ND	--	ND	--
	ug/L	6/4/01	--	--	1	ND	ND	ND	--	ND	ND	1	--	ND	--	ND	--
	ug/L	12/3/01	--	--	1	ND	ND	ND	--	ND	ND	2	--	ND	--	ND	--
	ug/L	6/10/02	--	--	1	ND	7	ND	--	ND	2	3	--	ND	--	ND	--
	ug/L	12/16/02	--	--	1	ND	1	ND	--	ND	ND	2	--	ND	--	ND	--
	ug/L	6/9/03	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/8/03	--	--	1	ND	ND	ND	--	ND	ND	7	--	ND	--	ND	--
	ug/L	6/29/04	--	--	1	1	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/20/04	--	--	1	1	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	5/30/07	0.5	1	1	ND	ND	ND	--	ND	ND	--	1.1	--	ND	ND	ND
Chromium	ug/L	9/19/94	--	--	5	207	25	5.4	ND	--	699	148	--	12	--	139	--
NC 2L = 50 ug/L	ug/L	12/2/94	--	--	5	71	ND	ND	ND	--	142	13	--	95	--	9.7	--
	ug/L	2/7/95	--	--	5	271	ND	ND	ND	--	128	9.6	--	45	--	8.3	--
	ug/L	3/13/95	--	--	5	5.8	ND	ND	ND	--	36	5.7	--	14	--	13	--
	ug/L	11/1/95	--	--	5	40	ND	21	8	--	129	5	--	7	--	6	--
	ug/L	6/10/96	--	--	5	65	ND	49	ND	--	12	122	--	ND	--	ND	--
	ug/L	11/12/96	--	--	5	133	ND	96	7	--	19	5	--	10	--	9	--
	ug/L	3/18/97	--	--	5	ND	ND	22	ND	--	ND	165	--	ND	--	ND	--
	ug/L	10/2/97	--	--	5	65	ND	15	ND	--	ND	ND	--	7	--	ND	--
	ug/L	5/26/98	--	--	5	37	ND	6	ND	--	6	8	--	5	--	ND	--
	ug/L	12/1/98	--	--	5	176	ND	47	--	--	ND	5	--	9	--	11	--
	ug/L	6/7/99	--	--	5	46	ND	69	--	--	7	--	--	35	--	ND	--
	ug/L	7/8/99	--	--	5	--	--	--	--	108	--	89	--	--	--	--	--
	ug/L	12/15/99	--	--	5	121	5	68	--	5	5	5	--	5	--	5	--
	ug/L	6/6/00	--	--	5	297	5	40	--	5	7	--	--	33	--	5	--
	ug/L	12/27/00	--	--	5	102	7	6	--	ND	150	40	--	ND	--	ND	--
	ug/L	6/4/01	--	--	5	41	ND	ND	--	ND	ND	ND	--	25	--	13	--
	ug/L	12/3/01	--	--	5	54	ND	23	--	ND	24	12	--	16	--	ND	--
	ug/L	6/10/02	--	--	5	21	ND	16	--	ND	7	26	--	ND	--	6	--
	ug/L	12/16/02	--	--	5	32	ND	19	--	30	ND	ND	--	5	--	17	--
	ug/L	6/9/03	--	--	5	88	5	28	--	9	ND	9	--	7	--	10	--
	ug/L	12/8/03	--	--	5	89	ND	62	--	17	40	11	--	19	--	10	--
	ug/L	6/29/04	--	--	5	104	13	71	--	ND	16	--	65	--	13	12	--
	ug/L	12/20/04	--	--	5	11	6	9	--	ND	67	--	41	--	7	ND	--
	ug/L	6/5/05	--	--	5	32	ND	32	--	ND	14	--	5	--	18	ND	--
	ug/L	12/5/05	--	--	5	ND	5	53	--	5	22	--	ND	--	7	ND	--
	ug/L	6/5/06	--	--	5	69	6	39	--	ND	41	--	8	--	9	ND	--
	ug/L	12/5/06	--	--	5	9	ND	ND	--	ND	5	--	ND	--	ND	ND	--
	ug/L	5/30/07	2	10	10	7.0 J	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Cobalt	ug/L	9/19/94	--	--	--	--	ND	ND	ND	--	89	26	--	ND	--	32	--
GPS = 2 ug/L	ug/L	12/2/94	--	--	--	ND	ND	ND	ND	--	39	26	--	11	--	ND	--
	ug/L	2/7/95	--	--	--	30	ND	ND	ND	--	23	18	--	14	--	ND	--
	ug/L	3/13/95	--	--	--	--	ND	ND	ND	--	18	24	--	12	--	ND	--
	ug/L	11/1/95	--	--	10	12	ND	11	ND	--	47	13	--	ND	--	ND	--
	ug/L	6/10/96	--	--	10	ND	ND	15	ND	--	ND	ND	--	ND	--	12	--
	ug/L	11/12/96	--	--	10	34	ND	25	ND	--	ND	ND	--	ND	--	13	--
	ug/L	3/18/97	--	--	10	16	ND	15	ND	--	ND	12	--	ND	--	16	--
	ug/L	10/2/97	--	--	10	20.6	ND	40	ND	--	ND	ND	--	ND	--	21.5	--
	ug/L	5/26/98	--	--	10	45	ND	ND	ND	--	ND	ND	--	ND	--	15	--
	ug/L	12/1/98	--	--	25	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	10	34	ND	25	--	--	ND	--	--	55	--	14	--
	ug/L	7/8/99	--	--	10	--	--	--	--	29	--	14	--	--	--	--	--
	ug/L	12/15/99	--	--	10	16	ND	24	--	ND	ND	ND	--	ND	--	14	--
	ug/L	6/6/00	--	--	10	32	ND	19	--	ND	76	--	--	ND	--	14	--
	ug/L	12/27/00	--	--	10	ND	ND	19	--	ND	150	210	--	ND	--	19	--
	ug/L	6/4/01	--	--	10	50	ND	30	--	ND	60	85	--	ND	--	13	--
	ug/L	12/3/01	--	--	10	33	ND	31	--	ND	11	200	--	26	--	17	--
	ug/L	6/10/02	--	--	10	16	ND	24	--	ND	14	--	--	12	--	20	--
	ug/L	12/16/02	--	--	10	14	ND	21	--	11	ND	27	--	ND	--	25	--
	ug/L	6/9/03	--	--	10	ND	ND	24	--	ND	ND	12	--	ND	--	16	--
	ug/L	12/8/03	--	--	10	87	ND	21	--	ND	65	13	--	ND	--	16	--
	ug/L	6/29/04	--	--	10	91	ND	24	--	ND	ND	--	48	--	ND	26	--
	ug/L	12/20/04	--	--	5	7.4	ND	19	--	ND	47	--	25	--	ND	20	--
	ug/L	6/5/05	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	--
	ug/L	12/5/05	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	--
	ug/L	6/5/06	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	--
	ug/L	12/5/06	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	--
	ug/L	5/30/07	2	10	10	3.2 J	ND	4.3 J	--	ND	ND	--	10.2	--	ND	11.2	ND
Copper	ug/L	9/19/94	--	--	5	109	7	ND	ND	--	598	119	--	ND	--	73	--
NC 2L = 1000 ug/L	ug/L	12/2/94	--	--	5	44	ND	ND	ND	--	113	14	--	43	--	7.3	--
	ug/L	2/7/95	--	--	5	150	ND	ND	ND	--	75	9.9	--	50	--	5.2	--
	ug/L	3/13/95	--	--	5	17	ND	ND	ND	--	58	13	--	11	--	6.8	--
	ug/L	11/1/95	--	--	5	20	ND	7	11	--	145	ND	--	7	--	ND	--
	ug/L	6/10/96	--	--	5	62	ND	50	6	--	8.7	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	5	73	ND	50	ND	--	10	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	5	ND	ND	50	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	5	27	ND	16	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	5	30	ND	6	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	5	60	ND	8	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	5	69	ND	23	--	--	10	--	--	43	--	ND	--
	ug/L	7/8/99	--	--	5	--	--	--	--	89	--	30	--	--	--	--	--
	ug/L	12/15/99	--	--	5	30	5	30	--	5	6	5	--	5	--	5	--
	ug/L	6/6/00	--	--	5	101	5	12	--	5	--	--	--	17	--	5	--
	ug/L	12/27/00	--	--	5	48	5	ND	--	5	34	34	--	ND	--	ND	--
	ug/L	6/4/01	--	--	5	95	ND	20	--	ND	28	28	--	ND	--	ND	--
	ug/L	12/3/01	--	--	5	28	ND	13	--	ND	15	15	--	14	--	ND	--
	ug/L	6/10/02	--	--	5	30	ND	10	--	ND	20	20	--	5	--	7	--
	ug/L	12/16/02	--	--	5	16	ND	15	--	20	16	16	--	10	--	23	--
	ug/L	6/9/03	--	--	5	52	ND	16	--	ND	14	14	--	5	--	8	--
	ug/L	12/8/03	--	--	5	92	ND	7	--	6	26	26	--	6	--	7	--
	ug/L	6/29/04	--	--	5	211	5	6	--	ND	--	--	75	--	12	5	--
	ug/L	12/20/04	--	--	5	7	ND	ND	--	ND	--	--	39	--	ND	6	--
	ug/L	6/5/05	--	--	2	28	ND	ND	--	ND	--	--	8	--	11	ND	--
	ug/L	12/5/05	--	--	2	ND	4	10	--	4	--	--	3	--	ND	ND	--
	ug/L	6/5/06	--	--	2	6	3	4	--	3	--	--	14	--	7	4	--
	ug/L	12/5/06	--	--	2	4	ND	2	--	ND	--	--	3	--	ND	ND	--
	ug/L	5/30/07	0.6	10	10	7.2 J	1.1 B	ND	--	1.7 B	ND	--	1.8 B	--	0.6 B	ND	0.7 J

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Lead	ug/L	9/19/94	--	--	5	40	ND	ND	ND	--	199	46	--	8.8	--	47	--
NC 2L = 15 ug/L	ug/L	12/2/94	--	--	5	30	14	6.6	ND	--	77	19	--	53	--	10	--
	ug/L	2/7/95	--	--	5	76	7.8	6.3	7	--	63	7.1	--	34	--	12	--
	ug/L	3/13/95	--	--	5	11	ND	ND	ND	--	35	12	--	14	--	63	--
	ug/L	11/1/95	--	--	5	14	ND	12	5	--	60	ND	--	9	--	ND	--
	ug/L	6/10/96	--	--	5	25	ND	42	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	5	30	ND	29	ND	--	8	ND	--	10	--	ND	--
	ug/L	3/18/97	--	--	5	ND	ND	8	ND	--	ND	ND	--	10	--	ND	--
	ug/L	10/2/97	--	--	5	16	ND	55	ND	--	14	ND	--	22	--	7	--
	ug/L	5/26/98	--	--	5	11	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	5	36	ND	8	--	--	ND	ND	--	8	--	ND	--
	ug/L	6/7/99	--	--	5	19	ND	29	--	--	8	--	--	54	--	ND	--
	ug/L	7/8/99	--	--	5	--	--	--	--	29	--	30	--	--	--	--	--
	ug/L	12/15/99	--	--	5	14	ND	33	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/6/00	--	--	5	37	ND	12	--	ND	16	--	--	28	--	ND	--
	ug/L	12/27/00	--	--	5	20	10	ND	--	ND	82	52	--	ND	--	ND	--
	ug/L	6/4/01	--	--	5	35	8	20	--	ND	68	21	--	ND	--	ND	--
	ug/L	12/3/01	--	--	5	23	ND	13	--	ND	23	36	--	30	--	ND	--
	ug/L	6/10/02	--	--	5	6	ND	10	--	ND	7	13	--	ND	--	ND	--
	ug/L	12/16/02	--	--	5	ND	5	11	--	8	ND	8	--	5	--	12	--
	ug/L	6/9/03	--	--	5	ND	ND	24	--	ND	ND	ND	--	8	--	ND	--
	ug/L	12/8/03	--	--	5	35	ND	ND	--	ND	47	14	--	8	--	ND	--
	ug/L	6/29/04	--	--	5	83	ND	ND	--	28	11	--	51	--	6	ND	--
	ug/L	12/20/04	--	--	5	ND	ND	5	--	ND	75	--	19	--	ND	ND	--
	ug/L	6/5/05	--	--	5	13	ND	ND	--	ND	39	--	ND	--	7	ND	--
	ug/L	12/5/05	--	--	5	ND	ND	9	--	ND	13	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	5	ND	ND	ND	--	ND	38	--	6	--	ND	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	ND	--	ND	12	--	ND	--	ND	ND	--
	ug/L	5/30/07	2	10	10	3.5 B	ND	ND	--	ND	ND	--	ND	--	ND	ND	3.1 J
Mercury	ug/L	12/1/98	--	--	0.2	0.2	ND	0.2	--	--	ND	ND	--	ND	--	ND	--
NC 2L=1.05 ug/L	ug/L	6/7/99	--	--	0.2	0.2	ND	0.2	--	--	ND	--	--	ND	--	ND	--
	ug/L	7/8/99	--	--	0.2	--	--	--	--	ND	--	ND	--	--	--	---	--
	ug/L	12/15/99	--	--	5	14	ND	33	--	ND	ND	<5	--	ND	--	ND	--
	ug/L	6/6/00	--	--	5	37	ND	12	--	ND	16	---	--	28	--	ND	--
	ug/L	12/22/00	--	--	5	20	10	<5	--	ND	82	52	--	ND	--	ND	--
	ug/L	6/4/01	--	--	5	35	8	20	--	ND	68	21	--	ND	--	ND	--
	ug/L	12/3/01	--	--	5	23	ND	13	--	ND	23	36	--	30	--	ND	--
	ug/L	6/10/02	--	--	5	6	ND	10	--	ND	7	13	--	ND	--	ND	--
	ug/L	12/16/02	--	--	5	ND	5	11	--	8	ND	8	--	5	--	12	--
	ug/L	6/9/03	--	--	5	ND	ND	24	--	ND	ND	ND	--	8	--	ND	--
	ug/L	12/8/03	--	--	5	35	ND	ND	--	ND	47.0	14.0	--	8.0	--	ND	--
	ug/L	6/28/04	--	--	5	83	ND	ND	--	28	11	--	51	--	6	ND	--
	ug/L	12/20/04	--	--	5	ND	ND	5	--	ND	75	--	19	--	ND	ND	--
	ug/L	6/5/05	--	--	5	13	ND	ND	--	ND	39	--	ND	--	7	ND	--
	ug/L	12/7/05	--	--	5	ND	ND	9.0	--	ND	13	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	5	ND	ND	ND	--	ND	38	--	6	--	ND	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	ND	--	ND	12	--	ND	--	ND	ND	--
	ug/L	5/30/07	0.11	0.2	0.2	ND	ND	ND	--	ND	ND	--	0.2	--	ND	ND	ND

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Nickel	ug/L	9/19/94	--	--	10	17	15	ND	ND	--	468	13	--	13	--	77	--
NC 2L = 100 ug/L	ug/L	12/2/94	--	--	10	56	ND	10	ND	--	96	35	--	55	--	14	--
	ug/L	2/7/95	--	--	10	211	ND	ND	ND	--	64	26	--	31	--	ND	--
	ug/L	3/13/95	--	--	10	30	ND	9.1	ND	--	61	40	--	25	--	11	--
	ug/L	11/1/95	--	--	10	32	ND	15	ND	--	68	28	--	16	--	ND	--
	ug/L	6/10/96	--	--	10	49	ND	22	ND	--	ND	100	--	ND	--	ND	--
	ug/L	11/12/96	--	--	10	103	ND	24	49	--	12	10	--	ND	--	ND	--
	ug/L	3/18/97	--	--	10	50	ND	16	ND	--	ND	29	--	ND	--	ND	--
	ug/L	10/2/97	--	--	10	52	ND	18	ND	--	ND	11	--	ND	--	ND	--
	ug/L	5/26/98	--	--	10	43	ND	19	11	--	ND	23	--	ND	--	ND	--
	ug/L	12/1/98	--	--	10	124	ND	12	--	--	ND	10	--	ND	--	ND	--
	ug/L	6/7/99	--	--	10	126	ND	35	--	--	16	--	--	34	--	ND	--
	ug/L	7/8/99	--	--	10	--	--	--	--	37	--	57	--	--	--	--	--
	ug/L	12/15/99	--	--	10	227	10	64	--	ND	ND	44	--	ND	--	ND	--
	ug/L	6/6/00	--	--	10	343	ND	37	--	ND	13	--	--	25	--	ND	--
	ug/L	12/27/00	--	--	10	144	ND	14	--	ND	132	34	--	ND	--	ND	--
	ug/L	6/4/01	--	--	10	88	ND	13	--	11	20	13	--	ND	--	ND	--
	ug/L	12/3/01	--	--	10	54	ND	21	--	ND	19	34	--	16	--	ND	--
	ug/L	6/10/02	--	--	10	21	ND	16	--	ND	ND	27	--	ND	--	ND	--
	ug/L	12/16/02	--	--	10	33	ND	19	--	ND	ND	25	--	ND	--	14	--
	ug/L	6/9/03	--	--	10	26	ND	23	--	ND	ND	19	--	ND	--	11	--
	ug/L	12/8/03	--	--	10	99	ND	13	--	ND	29	36	--	ND	--	ND	--
	ug/L	6/29/04	--	--	10	130	12	15	--	ND	14	--	10	--	10	ND	--
	ug/L	12/20/04	--	--	10	10	ND	ND	--	ND	46	--	37	--	10	ND	--
	ug/L	6/5/05	--	--	10	35	ND	ND	--	ND	13	--	18	--	11	ND	--
	ug/L	12/5/05	--	--	10	ND	10	19	--	ND	15	--	18	--	ND	ND	--
	ug/L	6/5/06	--	--	10	61	ND	21	--	ND	33	--	19	--	ND	ND	--
	ug/L	12/5/06	--	--	10	32	ND	10	--	ND	ND	--	18	--	ND	ND	--
	ug/L	5/30/07	2	10	50	27.4 J	ND	2.5 J	--	2.9 J	4.0 J	--	23.1 J	--	ND	2.9 J	ND
Selenium	ug/L	9/19/94	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
NC 2L = 50 ug/L	ug/L	12/2/94	--	--	5	ND	7.6	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	5	ND	ND	9	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	5	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	5	ND	ND	ND	--	--	ND	--	--	ND	--	ND	--
	ug/L	7/8/99	--	--	5	--	--	--	--	ND	--	ND	--	--	--	--	--
	ug/L	12/15/99	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/6/00	--	--	5	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	--
	ug/L	12/27/00	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/4/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/3/01	--	--	5	ND	ND	9	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/10/02	--	--	5	ND	ND	9	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/16/02	--	--	5	ND	ND	6	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/8/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/29/04	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/20/04	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/05	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/5/05	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	5/30/07	2	10	10	ND	ND	ND	--	ND	ND	--	2.8 B	--	ND	3.2 B	5.7 J

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Silver	ug/L	9/19/94	--	--	1	ND	ND	ND	ND	--	ND	2.2	--	ND	--	ND	--
NC 2L = 17.5 ug/L	ug/L	12/2/94	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	1	5	2	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	1	ND	ND	ND	ND	--	ND	7	--	ND	--	ND	--
	ug/L	10/2/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	1	--
	ug/L	12/1/98	--	--	1	1	ND	ND	--	--	ND	ND	--	2	--	ND	--
	ug/L	6/7/99	--	--	1	ND	ND	ND	--	--	ND	--	--	ND	--	ND	--
	ug/L	7/8/99	--	--	1	--	--	--	--	ND	--	ND	--	--	--	--	--
	ug/L	12/15/99	--	--	1	ND	10	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/6/00	--	--	1	ND	ND	1	--	ND	ND	--	--	ND	--	ND	--
	ug/L	12/27/00	--	--	1	ND	ND	ND	--	ND	2	2	--	ND	--	ND	--
	ug/L	6/4/01	--	--	1	ND	3	1	--	ND	2	1	--	ND	--	ND	--
	ug/L	12/3/01	--	--	1	ND	ND	1	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/10/02	--	--	1	ND	ND	1	--	1	ND	ND	--	ND	--	ND	--
	ug/L	12/16/02	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/8/03	--	--	1	ND	ND	ND	--	ND	3	ND	--	ND	--	ND	--
	ug/L	6/29/04	--	--	1	8	1	ND	--	ND	ND	ND	--	ND	ND	ND	--
	ug/L	12/20/04	--	--	1	ND	1	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	2	ND	--
	ug/L	12/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	1	--	ND	--	ND	ND	--
	ug/L	12/5/06	--	--	1	ND	ND	1	--	ND	2	--	ND	--	ND	ND	--
	ug/L	5/30/07	2	10	10	ND	ND	ND	--	2.0 J	ND	--	2.8 J	--	ND	ND	ND
Thallium	ug/L	9/19/94	--	--	5	ND	ND	ND	ND	--	6.1	ND	--	ND	--	ND	--
GPS = 0.28 ug/L	ug/L	12/2/94	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	5	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	1	ND	ND	ND	--	--	ND	--	--	ND	--	ND	--
	ug/L	7/8/99	--	--	1	--	--	--	--	ND	--	ND	--	--	--	--	--
	ug/L	12/15/99	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	--	--
	ug/L	6/6/00	--	--	1	ND	ND	ND	--	ND	ND	--	--	ND	--	--	--
	ug/L	12/27/00	--	--	1	ND	ND	ND	--	ND	1	ND	--	ND	--	--	--
	ug/L	6/4/01	--	--	1	ND	ND	ND	--	ND	1	ND	--	ND	--	--	--
	ug/L	12/3/01	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	--	--
	ug/L	6/10/02	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	--	--
	ug/L	12/16/02	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	--	--
	ug/L	6/9/03	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	--	--
	ug/L	12/8/03	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	--	--
	ug/L	6/29/04	--	--	1	2	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/20/04	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	5/30/07	0.044	0.05	5.5	0.108 J	ND	0.086 J	--	ND	ND	--	ND	--	ND	ND	ND

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Tin	ug/L	12/1/98	--	--	50	ND	ND #	ND #	--	--	ND	ND	--	ND	--	ND	--
(No NC 2L)	ug/L	6/7/99	--	--	50	ND	ND	ND	--	--	ND	---	--	ND	--	ND	--
	ug/L	7/8/99	--	--	50	--	--	--	--	ND	--	ND	--	---	--	---	--
	ug/L	12/15/99	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/6/00	--	--	1	ND	ND	ND	--	ND	ND	---	--	ND	--	ND	--
	ug/L	12/22/00	--	--	1	ND	ND	ND	--	ND	1	ND	--	ND	--	ND	--
	ug/L	6/4/01	--	--	1	ND	ND	ND	--	ND	1	ND	--	ND	--	ND	--
	ug/L	12/3/01	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/10/02	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/16/02	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/8/03	--	--	1	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/29/04	--	--	1	2	ND	ND	--	ND	ND	--	ND	---	ND	ND	--
	ug/L	12/20/04	--	--	1	ND	ND	ND	--	ND	ND	--	ND	---	ND	ND	--
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	---	ND	ND	--
	ug/L	12/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	---	ND	ND	--
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	ND	---	ND	ND	--
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	ND	---	ND	ND	--
	ug/L	5/30/07	2	10	100	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	3.6 J
Vanadium	ug/L	9/19/94	--	--	5	203	23	ND	ND	--	411	167	--	16	--	122	--
GPS = 25 ug/L	ug/L	12/2/94	--	--	5	51	ND	ND	ND	--	124	6.7	--	68	--	7.9	--
	ug/L	2/7/95	--	--	5	206	ND	ND	ND	--	99	6.9	--	37	--	6	--
	ug/L	3/13/95	--	--	5	16	ND	ND	ND	--	85	6.7	--	9.7	--	9.4	--
	ug/L	11/1/95	--	--	5	37	ND	17	8	--	16	ND	--	5	--	7	--
	ug/L	6/10/96	--	--	5	50	ND	34	67	--	14	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	5	141	ND	52	9	--	25	ND	--	11	--	12	--
	ug/L	3/18/97	--	--	5	141	ND	16	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	5	65	ND	17	ND	--	ND	ND	--	8.5	--	5.8	--
	ug/L	5/26/98	--	--	5	20	ND	5	ND	--	ND	ND	--	5	--	5	--
	ug/L	12/1/98	--	--	5	110	ND	10	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	5	45	ND	59	--	--	11	--	--	45	--	ND	--
	ug/L	7/8/99	--	--	5	--	--	--	--	16	--	48	--	--	--	--	--
	ug/L	12/15/99	--	--	5	38	ND	14	--	ND	6	ND	--	ND	--	6	--
	ug/L	6/6/00	--	--	5	109	ND	34	--	ND	23	--	--	36	--	6	--
	ug/L	12/27/00	--	--	5	26	ND	11	--	ND	44	38	--	ND	--	ND	--
	ug/L	6/4/01	--	--	5	22	ND	ND	--	ND	ND	6	--	ND	--	ND	--
	ug/L	12/3/01	--	--	5	25	ND	19	--	ND	26	38	--	16	--	ND	--
	ug/L	6/10/02	--	--	5	12	ND	13	--	ND	8	27	--	ND	--	9	--
	ug/L	12/16/02	--	--	5	7	ND	ND	--	ND	ND	ND	--	ND	--	17	--
	ug/L	6/9/03	--	--	5	5	ND	ND	--	ND	ND	8	--	6	--	9	--
	ug/L	12/8/03	--	--	5	46	ND	8	--	ND	43	13	--	ND	--	5	--
	ug/L	6/29/04	--	--	5	59	ND	6	--	ND	17	--	49	--	12	ND	--
	ug/L	12/20/04	--	--	5	8	ND	7	--	ND	69	--	34	--	5	5	--
	ug/L	6/5/05	--	--	5	27	ND	ND	--	ND	17	--	ND	--	17	ND	--
	ug/L	12/5/05	--	--	5	ND	ND	14	--	ND	16	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	5	ND	ND	ND	--	ND	42	--	9	--	7	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	ND	--	ND	7	--	ND	--	ND	ND	--
	ug/L	5/30/07	1	10	25	5.4 J	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Zinc	ug/L	9/19/94	--	--	10	303	34	ND	ND	--	1030	445	--	ND	--	207	--
NC 2L = 1050 ug/L	ug/L	12/2/94	--	--	10	106	ND	17	ND	--	202	169	--	140	--	ND	--
	ug/L	2/7/95	--	--	10	477	ND	ND	ND	--	183	76	--	74	--	70	--
	ug/L	3/13/95	--	--	10	291	ND	17	17	--	185	150	--	114	--	59	--
	ug/L	11/1/95	--	--	10	65	ND	12	13	--	225	ND	--	15	--	ND	--
	ug/L	6/10/96	--	--	10	125	ND	69	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	10	134	ND	132	12	--	26	22	--	16	--	11	--
	ug/L	3/18/97	--	--	10	ND	ND	30	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	10	96	23	52	ND	--	ND	ND	--	19	--	ND	--
	ug/L	5/26/98	--	--	10	20	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	10	121	11	16	--	--	ND	12	--	ND	--	ND	--
	ug/L	6/7/99	--	--	10	77	31	87	--	--	31	--	--	156	--	92	--
	ug/L	7/8/99	--	--	10	--	--	--	--	64	--	198	--	--	--	--	--
	ug/L	12/15/99	--	--	10	100	38	56	--	56	50	22	--	26	--	33	--
	ug/L	6/6/00	--	--	10	267	17	20	--	ND	28	--	--	67	--	ND	--
	ug/L	12/27/00	--	--	10	100	28	22	--	257	414	200	--	46	--	ND	--
	ug/L	6/4/01	--	--	10	80	24	60	--	162	269	96	--	191	--	121	--
	ug/L	12/3/01	--	--	10	73	59	39	--	214	55	87	--	37	--	249	--
	ug/L	6/10/02	--	--	10	41	52	27	--	141	20	93	--	68	--	168	--
	ug/L	12/16/02	--	--	10	27	12	34	--	26	14	150	--	28	--	37	--
	ug/L	6/9/03	--	--	10	12	19	49	--	10	ND	72	--	19	--	27	--
	ug/L	12/8/03	--	--	10	261	18	16	--	13	216	212	--	11	--	11	--
	ug/L	6/29/04	--	--	10	369	18	15	--	ND	35	--	226	--	59	ND	--
	ug/L	12/20/04	--	--	10	17	52	35	--	ND	134	--	77	--	15	13	--
	ug/L	6/5/05	--	--	10	56	44	ND	--	ND	103	--	16	--	55	20	--
	ug/L	12/5/05	--	--	10	ND	74	28	--	ND	35	--	10	--	ND	ND	--
	ug/L	6/5/06	--	--	10	14	31	11	--	ND	98	--	24	--	18	ND	--
	ug/L	12/5/06	--	--	10	ND	14	16	--	ND	26	--	ND	--	ND	ND	--
	ug/L	5/30/07	1	10	10	18.4	10.4 B	ND	--	1.1 B	3.3 B	--	6.8 B	--	12.3	4.4 B	2.4 J
Acetone	ug/L	9/19/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NC 2L = 700 ug/L	ug/L	12/2/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	2/7/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	49.8	--
	ug/L	3/13/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	25	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	25	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	25	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	25	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	20	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	20	ND	ND	ND	--	--	ND	ND	--	ND	--	235	ND
	ug/L	2/26/99	--	--	20	--	--	--	--	--	--	--	--	--	--	ND	--
	ug/L	6/7/99	--	--	20	ND	ND	ND	--	--	ND	--	--	ND	--	ND	ND
	ug/L	7/8/99	--	--	20	--	--	--	--	ND	--	ND	--	--	--	--	--
	ug/L	12/15/99	--	--	50	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/6/00	--	--	50	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	ND
	ug/L	12/27/00	--	--	20	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/4/01	--	--	20	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/3/01	--	--	20	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/10/02	--	--	20	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/16/02	--	--	20	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	20	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/8/03	--	--	20	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/29/04	--	--	20	ND	ND	ND	--	ND	ND	ND	ND	--	ND	ND	ND
	ug/L	12/20/04	--	--	10	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/05	--	--	10	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/5/05	2.5	--	10	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/06	--	--	10	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/5/06	--	--	10	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	5/30/07	0.9	5	100	ND	ND	ND	--	ND	ND	--	ND	--	ND	1.7 B	3.8 J

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Benzene	ug/L	9/19/94	--	--	--	--	--	--	--	--	--	--	--	ND	--	ND	--
NC 2L= 1 ug/L	ug/L	12/2/94	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	1	ND	ND	2	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	9/3/96	--	--	--	--	--	1.8	--	--	--	--	--	--	--	--	--
	ug/L	10/2/96	--	--	--	--	--	1.2	--	--	--	--	--	--	--	--	--
	ug/L	11/12/96	--	--	1	ND	ND	1.7	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	1	ND	ND	1.6	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	1	ND	ND	2.1	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND
	ug/L	12/1/98	--	--	1	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	ND
	ug/L	6/7/99	--	--	5	ND	ND	ND	--	--	ND	--	--	ND	--	ND	--
	ug/L	7/8/99	--	--	5	--	--	--	--	ND	--	ND	--	--	--	--	ND
	ug/L	12/15/99	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/6/00	--	--	5	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	ND
	ug/L	12/27/00	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/4/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/3/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/10/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/16/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/9/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/8/03	--	--	3	ND	ND	0.83 J	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/29/04	--	--	3	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/20/04	--	--	0.5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/05	--	--	0.5	ND	ND	1.1	--	ND	ND	--	2.7	--	ND	ND	ND
	ug/L	12/5/05	0.14	--	0.5	ND	ND	0.9	--	ND	ND	--	2.8	--	ND	ND	ND
	ug/L	6/5/06	--	--	0.5	ND	ND	0.87	--	ND	ND	--	3.8	--	ND	ND	ND
	ug/L	12/5/06	--	--	0.5	ND	ND	ND	--	ND	ND	--	3.4	--	ND	ND	ND
	ug/L	5/30/07	0.12	1	1	ND	ND	0.47 J	--	ND	ND	--	2.6	--	ND	ND	ND
Chlorobenzene	ug/L	9/19/94	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
NC 2L= 50 ug/L	ug/L	12/2/94	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	9/3/96	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/96	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/99	--	--	--	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	--
	ug/L	7/8/99	--	--	--	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/15/99	--	--	--	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/6/00	--	--	--	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/27/00	--	--	--	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/4/01	--	--	--	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/3/01	--	--	--	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/10/02	--	--	--	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/16/02	--	--	--	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	--	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/8/03	--	--	1	ND	ND	1 J	--	ND	ND	ND	ND	ND	--	ND	ND
	ug/L	6/29/04	--	--	1	ND	ND	ND	--	ND	ND	ND	ND	ND	--	ND	ND
	ug/L	12/20/04	--	--	1	ND	ND	1.2	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/05	--	--	1	ND	ND	1.4	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/5/05	0.24	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/06	--	--	1	ND	ND	1.6	--	ND	ND	--	0.73 J	--	ND	ND	ND
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	--	--	ND	ND	ND
	ug/L	5/30/07	0.16	1	3	ND	ND	ND	--	ND	ND	--	1.6 J	--	ND	ND	ND

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Chloroethane	ug/L	12/2/94	--	--	10	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
NC 2L= 2800 ug/L	ug/L	9/22/94	--	--	--	--	--	--	--	--	--	--	--	ND	--	ND	--
	ug/L	2/7/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	10	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/96	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	9/3/96	--	--	--	--	--	1.2	--	--	--	--	--	--	--	--	--
	ug/L	11/13/96	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	5	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	ND
	ug/L	6/7/99	--	--	10	ND	ND	ND	--	--	ND	--	--	ND	--	ND	ND
	ug/L	7/8/99	--	--	10	--	--	--	--	ND	--	ND	--	--	--	--	--
	ug/L	12/15/99	--	--	10	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/6/00	--	--	10	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	ND
	ug/L	12/13/00	--	--	10	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/4/01	--	--	10	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/3/01	--	--	10	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/10/02	--	--	10	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/16/02	--	--	10	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/9/03	--	--	10	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/8/03	--	--	10	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/28/04	--	--	10	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/20/04	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/05	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/5/05	1.6	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/06	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/5/06	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	5/30/07	0.4	1	10	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
1,2-Dichlorobenzene	ug/L	5/30/07	0.17	1	5	ND	ND	ND	--	ND	ND	--	0.51 J	--	ND	ND	ND
NC 2L= 24 ug/L																	
1,4-Dichlorobenzene	ug/L	12/8/03	--	--	1	ND	ND	0.87 J	--	ND	ND	ND	--	ND	--	ND	ND
NC 2L= 1.4 ug/L	ug/L	6/28/04	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/20/04	--	--	1	ND	ND	ND	--	ND	ND	--	2.5	--	ND	ND	ND
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	2.5	--	ND	ND	ND
	ug/L	12/5/05	0.32	--	1	ND	ND	1.0	--	ND	ND	--	3.5	--	ND	ND	ND
	ug/L	6/5/06	--	--	1	ND	ND	1.2	--	ND	ND	--	3.6	--	ND	ND	ND
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	4.4	--	ND	ND	ND
	ug/L	5/30/07	0.15	1	1	ND	ND	ND	--	ND	ND	--	3.4	--	ND	ND	ND
1,1-Dichloroethane	ug/L	12/8/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
NC 2L= 70 ug/L	ug/L	6/28/04	--	--	5	ND	ND	ND	--	ND	ND	--	3.7 J	--	ND	ND	ND
	ug/L	12/20/04	--	--	1	ND	ND	ND	--	ND	ND	--	4.4	--	ND	ND	ND
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	5.3	--	ND	ND	ND
	ug/L	12/5/05	0.38	--	1	ND	ND	ND	--	ND	ND	--	4.3	--	ND	ND	ND
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	4.5	--	ND	ND	ND
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	4.2	--	ND	ND	ND
	ug/L	5/30/07	0.09	1	5	ND	ND	ND	--	ND	ND	--	3.6 J	--	ND	ND	ND

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
cis-1,2-dichloroethene	ug/L	9/22/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NC 2L= 70 ug/L	ug/L	12/2/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	2/7/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	--	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/96	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	9/3/96	--	--	--	--	--	1.0	--	--	--	--	--	--	--	--	--
	ug/L	11/13/96	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	2	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	ND
	ug/L	6/7/99	--	--	5	ND	ND	ND	--	--	ND	--	--	ND	--	ND	ND
	ug/L	7/8/99	--	--	5	--	--	--	--	ND	--	ND	--	--	--	--	--
	ug/L	12/15/99	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/6/00	--	--	5	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	ND
	ug/L	12/13/00	--	--	5	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	ND
	ug/L	6/4/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/3/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/10/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/16/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/9/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/8/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/28/04	--	--	5	ND	ND	ND	--	ND	ND	--	46	--	ND	ND	ND
	ug/L	12/20/04	--	--	1	ND	ND	ND	--	ND	ND	--	45	--	ND	ND	ND
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	90	--	ND	ND	ND
	ug/L	12/5/05	0.47	--	1	ND	1.1	ND	--	ND	ND	--	68	--	ND	ND	ND
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	97	--	ND	ND	ND
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	78	--	ND	ND	ND
	ug/L	5/30/07	0.14	1	5	ND	ND	ND	--	ND	ND	--	89	--	ND	ND	ND
trans-1,2-Dichloroethene	ug/L	12/8/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
NC 2L= 100 ug/L	ug/L	6/28/04	--	--	5	ND	ND	ND	--	ND	ND	--	2.6 J	--	ND	ND	ND
	ug/L	12/20/04	--	--	2	ND	ND	ND	--	ND	ND	--	3.5	--	ND	ND	ND
	ug/L	6/5/05	--	--	2	ND	ND	ND	--	ND	ND	--	4.4	--	ND	ND	ND
	ug/L	12/5/05	0.56	--	2	ND	ND	ND	--	ND	ND	--	3.8	--	ND	ND	ND
	ug/L	6/5/06	--	--	2	ND	ND	ND	--	ND	ND	--	5.1	--	ND	ND	ND
	ug/L	12/5/06	--	--	2	ND	ND	ND	--	ND	ND	--	4.5	--	ND	ND	ND
	ug/L	5/30/07	0.1	1	5	ND	ND	ND	--	ND	ND	--	3.7 J	--	ND	ND	ND
1,2-Dichloropropane	ug/L	12/8/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
NC 2L= 0.51 ug/L	ug/L	6/28/04	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/20/04	--	--	1	ND	ND	ND	--	ND	ND	--	1.8	--	ND	ND	ND
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	2.4	--	ND	ND	ND
	ug/L	12/5/05	0.26	--	1	ND	ND	ND	--	ND	ND	--	2.4	--	ND	ND	ND
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	3.5	--	ND	ND	ND
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	2.3	--	ND	ND	ND
	ug/L	5/30/07	0.18	1	1	ND	ND	ND	--	ND	ND	--	2.0	--	ND	ND	ND

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Methylene Chloride	ug/L	9/22/94	--	--	--	--	--	--	--	--	--	--	--	14.6	--	ND	--
NC 2L= 4.6 ug/L	ug/L	12/2/94	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/7/96	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/13/96	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/18/97	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	5	ND	ND	ND	ND	--	22	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	5	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	ND
	ug/L	6/7/99	--	--	5	ND	ND	ND	--	--	ND	--	--	ND	--	ND	ND
	ug/L	7/8/99	--	--	5	--	--	--	--	ND	--	ND	--	--	--	--	--
	ug/L	12/15/99	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/6/00	--	--	5	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	ND
	ug/L	12/22/00	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/4/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/3/01	--	--	5	77	92	66	--	ND	68	91	--	68	--	66	ND
	ug/L	6/10/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/16/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/9/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/8/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/28/04	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/20/04	--	--	2	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/05	--	--	2	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/5/05	0.61	--	2	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/06	--	--	2	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/5/06	--	--	2	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	5/30/07	0.088	1	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
Tetrachloroethene	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	1.9	--	ND	ND	ND
NC 2L= 0.7 ug/L	ug/L	12/5/05	0.49	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	1.9	--	ND	ND	ND
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	0.55 J	--	ND	ND	ND
	ug/L	5/30/07	0.25	1	1	ND	ND	ND	--	ND	ND	--	0.64 J	--	ND	ND	ND
Toluene	ug/L	9/19/94	--	--	--	--	--	--	--	--	--	--	--	ND	--	ND	--
NC 2L= 1000 ug/L	ug/L	12/2/94	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	11/1/95	--	--	5	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	6/10/96	--	--	1	ND	ND	ND	1.9 B	--	ND	ND	--	ND	--	ND	--
	ug/L	11/12/96	--	--	1	ND	ND	1.7	1.2	--	ND	ND	--	1.2	--	ND	--
	ug/L	3/18/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	10/2/97	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	5/26/98	--	--	1	ND	ND	ND	ND	--	ND	ND	--	ND	--	ND	--
	ug/L	12/1/98	--	--	1	ND	ND	ND	--	--	ND	ND	--	ND	--	ND	ND
	ug/L	6/7/99	--	--	5	ND	ND	ND	--	--	ND	--	--	ND	--	ND	ND
	ug/L	7/8/99	--	--	5	--	--	--	--	ND	--	ND	--	--	--	--	--
	ug/L	12/15/99	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/6/00	--	--	5	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	ND
	ug/L	12/22/00	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/4/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/3/01	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/10/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/16/02	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/9/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	12/8/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
	ug/L	6/29/04	--	--	5	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/20/04	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/05	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/5/05	0.39	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	6/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
	ug/L	12/5/06	--	--	1	ND	ND	ND	--	ND	ND	--	1.2	--	ND	ND	ND
	ug/L	5/30/07	0.15	1	1	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	0.33 J

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Trichloroethene	ug/L	12/8/03	--	--	5	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
NC 2L= 2.8 ug/L	ug/L	6/28/04	--	--	5	ND	ND	ND	--	ND	ND	--	3.4 J	--	ND	ND	ND
	ug/L	12/20/04	--	--	2	ND	ND	ND	--	ND	ND	--	3.5	--	ND	ND	ND
	ug/L	6/5/05	--	--	2	ND	ND	ND	--	ND	ND	--	4.7	--	ND	ND	ND
	ug/L	12/5/05	0.52	--	2	ND	ND	ND	--	ND	ND	--	3.9	--	ND	ND	ND
	ug/L	6/5/06	--	--	2	ND	ND	ND	--	ND	ND	--	2.9	--	ND	ND	ND
	ug/L	12/5/06	--	--	2	ND	ND	ND	--	ND	ND	--	2.2	--	ND	ND	ND
	ug/L	5/30/07	0.23	1	1	ND	ND	ND	--	ND	ND	--	2.6	--	ND	ND	ND
Vinyl Chloride	ug/L	12/8/03	--	--	10	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	ND
NC 2L= 0.015 ug/L	ug/L	6/28/04	--	--	10	ND	ND	ND	--	ND	ND	--	9.9 J	--	ND	ND	ND
	ug/L	12/20/04	--	--	2	ND	ND	ND	--	ND	ND	--	12	--	ND	ND	ND
	ug/L	6/5/05	--	--	2	ND	ND	ND	--	ND	ND	--	16	--	ND	ND	ND
	ug/L	12/5/05	0.6	--	2	ND	ND	ND	--	ND	ND	--	13	--	ND	ND	ND
	ug/L	6/5/06	--	--	2	ND	ND	ND	--	ND	ND	--	16	--	ND	ND	ND
	ug/L	12/5/06	--	--	2	ND	ND	ND	--	ND	ND	--	15	--	ND	ND	ND
	ug/L	5/30/07	0.15	1	1	ND	ND	ND	--	ND	ND	--	14	--	ND	ND	ND
Bis(2-ethylhexyl)phthalate	ug/L	5/30/07	1	10	15	3.0 J	1.2 J	1.1 J	--	1.2 J	ND	--	ND	--	ND	ND	ND
NC 2L= 2.5 ug/L																	
Di-n-octylphthalate	ug/L	5/30/07	0.9	10	10	3.5 J	ND	ND	--	1.1 J	ND	--	ND	--	ND	ND	ND
NC 2L= 140 ug/L																	
Cyanide	ug/L	12/2/94	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
NC 2L = 70 ug/L	ug/L	2/7/95	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	3/13/95	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/1/95	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	6/10/96	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/12/96	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	3/18/97	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	10/2/97	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	5/26/98	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	12/1/98	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	6/7/99	--	--	2	ND	2	ND	--	--	ND	--	--	ND	--	ND	--
	ug/L	7/8/99	--	--	2	--	--	--	--	ND	--	3	--	--	--	--	--
	ug/L	12/15/99	--	--	2	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/6/00	--	--	2	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	--
	ug/L	12/27/00	--	--	2	ND	ND	ND	--	ND	ND	5	--	ND	--	ND	--
	ug/L	6/4/01	--	--	2	ND	ND	ND	--	ND	ND	3	--	ND	--	ND	--
	ug/L	12/3/01	--	--	2	ND	ND	ND	--	ND	ND	--	--	ND	--	ND	--
	ug/L	6/10/02	--	--	2	ND	ND	ND	--	ND	ND	--	--	3	--	ND	--
	ug/L	12/16/02	--	--	2	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	2	ND	ND	5	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	12/8/03	--	--	2	ND	ND	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/29/04	--	--	2	ND	ND	ND	--	ND	ND	--	ND	--	2	ND	--
	ug/L	9/19/04	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	12/20/04	--	--	2	ND	ND	17	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/05	--	--	2	2.3	ND	ND	--	ND	ND	--	ND	--	ND	2.6	--
	ug/L	12/5/05	1.6	--	2	5	4.3	3.1	--	5	5.4	--	2.8	--	5.8	3.7	--
	ug/L	6/5/06	--	--	2	3.6	1.9 J	1.9 J	--	1.8 J	2.5	--	1.6 J	--	ND	2.2	--
	ug/L	12/5/06	--	--	2	1.9 J	4.6	2.5	--	5.1	4.9	--	ND	--	2.1	5.6	--
	ug/L	5/30/07	5.8	10	10000	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Sulfide	ug/L	12/2/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(No NC 2L)	ug/L	2/7/95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	3/13/95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/1/95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	6/10/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/12/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	3/18/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	10/2/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	5/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	12/1/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	6/7/99	--	--	200	1300	ND	200	--	--	300	--	--	200	--	200	--
	ug/L	7/8/99	--	--	--	--	--	--	--	300	--	500	--	--	--	--	--
	ug/L	12/15/99	--	--	--	1400	600	1800	--	900	400	600	--	200	--	200	--
	ug/L	6/6/00	--	--	100	400	100	300	--	600	500	--	--	ND	--	100	--
	ug/L	12/27/00	--	--	--	400	300	720	--	290	520	880	--	350	--	260	--
	ug/L	6/4/01	--	--	--	600	400	200	--	400	200	600	--	300	--	300	--
	ug/L	12/3/01	--	--	400	ND	ND	ND	--	ND	ND	--	--	500	--	ND	--
	ug/L	6/10/02	--	--	200	ND	ND	1000	--	ND	ND	--	--	ND	--	ND	--
	ug/L	12/16/02	--	--	200	ND	300	ND	--	ND	ND	ND	--	ND	--	ND	--
	ug/L	6/9/03	--	--	200	ND	ND	ND	--	ND	ND	ND	--	ND	--	1600	--
	ug/L	12/8/03	--	--	2000	2000	ND	16000	--	12000	ND	3800	--	ND	--	ND	--
	ug/L	6/29/04	--	--	2000	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	9/19/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	12/20/04	--	--	2000	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/05	--	--	2000	13000	ND	ND	--	12000	ND	--	12000	--	14000	15000	--
	ug/L	12/5/05	94	--	2000	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	--
	ug/L	6/5/06	--	--	2000	ND	ND	ND	--	ND	11000	--	ND	--	ND	ND	--
	ug/L	12/5/06	--	--	--	16000	16000	1800 J	--	17000	14000	--	5200	--	15000	12000	--
	ug/L	5/30/07	500	1000	1000	ND	ND	ND	--	ND	ND	--	ND	--	ND	ND	ND
pH (field)	S.U.	5/26/98	--	--	--	7.30	6.00	6.20	7.4	--	7.20	6.50	--	7.00	--	7.30	--
	S.U.	12/1/98	--	--	--	7.10	5.00	6.00	--	--	6.70	6.60	--	5.90	--	6.50	--
	S.U.	6/7/99	--	--	--	6.98	6.19	5.99	--	--	6.70	--	--	6.45	--	5.98	--
	S.U.	7/8/99	--	--	--	--	--	--	--	7.29	--	6.36	--	--	--	--	--
	S.U.	12/13/99	--	--	--	7.21	5.37	5.72	--	6.96	6.88	--	--	6.68	--	5.96	--
	S.U.	6/6/00	--	--	--	7.75	5.80	6.14	--	7.31	7.15	dry	--	7.04	--	6.38	--
	S.U.	12/11/00	--	--	--	7.92	5.82	6.11	--	7.14	7.36	6.47	--	6.94	--	6.36	--
	S.U.	6/4/01	--	--	--	7.75	5.65	6.21	--	7.02	7.27	6.43	--	6.39	--	6.60	--
	S.U.	12/3/01	--	--	--	7.64	5.45	5.92	--	7.04	7.18	6.40	--	6.27	--	6.40	--
	S.U.	6/10/02	--	--	--	7.71	5.81	5.95	--	6.74	6.07	6.50	--	7.3	--	6.51	--
	S.U.	12/16/02	--	--	--	7.84	5.67	6.20	--	7.27	7.60	5.83	--	7.21	--	6.24	--
	S.U.	6/9/03	--	--	--	7.91	5.44	6.08	--	7.08	7.23	5.78	--	7.18	--	6.46	--
	S.U.	12/9/03	--	--	--	8.71	5.9	6.87	--	7.67	--	6.76	--	8.01	--	7.07	--
	S.U.	6/24/04	--	--	--	7.76	5.78	6.12	--	6.96	7.30	--	5.84	--	7.51	6.37	--
	S.U.	12/20/04	--	--	--	7.78	7.39	7.70	--	7.52	7.68	--	7.71	--	7.85	7.58	--
	S.U.	6/8/05	--	--	--	7.76	5.68	6.20	--	6.94	7.23	--	5.71	--	7.79	6.52	--
	S.U.	12/7/05	--	--	--	7.73	5.76	6.08	--	7.13	7.16	--	5.63	--	7.74	6.09	--
	S.U.	6/5/06	--	--	--	7.63	5.93	6.13	--	7.01	7.19	--	5.81	--	7.78	6.76	--
	S.U.	12/5/06	--	--	--	7.62	5.85	6.23	--	7.06	6.95	--	5.65	--	7.73	6.53	--
	S.U.	5/30/07	--	--	--	7.07	6.12	7.17	--	6.67	8.57	--	6.52	--	7.23	5.55	--

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Conductivity (field)	µS/cm	5/26/98	--	--	--	454	80	1200	460	--	383	518	--	338	--	348	--
	µS/cm	12/1/98	--	--	--	394	59	1660	--	--	388	456	--	305	--	406	--
	µS/cm	6/7/99	--	--	--	447	95.1	1511	--	--	467	--	--	359	--	490	--
	µS/cm	7/8/99	--	--	--	--	--	--	--	608	--	439	--	--	--	--	--
	µS/cm	12/13/99	--	--	--	246	81.4	1564	--	692	487	--	--	341	--	426	--
	µS/cm	6/6/00	--	--	--	461	85.8	1626	--	726	474	dry	--	385	--	479	--
	µS/cm	12/11/00	--	--	--	449	103	1239	--	463	445	559	--	367	--	460	--
	µS/cm	6/4/01	--	--	--	432	66.5	1240	--	539	366	365	--	305	--	334	--
	µS/cm	12/3/01	--	--	--	432	107	1389	--	534	437.1	561	--	309	--	422	--
	µS/cm	6/10/02	--	--	--	425	78.0	1545	--	625	444	450	--	308	--	430	--
	µS/cm	12/16/02	--	--	--	460	84.0	1601	--	668	529	344	--	343	--	242	--
	µS/cm	6/9/03	--	--	--	286	78.0	1713	--	652	543	267	--	322	--	386	--
	µS/cm	12/8/03	--	--	--	390	103	1442	--	645	--	220	--	325	--	401	--
	µS/cm	6/28/04	--	--	--	449	92.0	1642	--	630	471	--	467	--	340	379	--
	µS/cm	12/20/04	--	--	--	489	87.0	1660	--	689	583	--	553	--	431	440	--
	µS/cm	6/8/05	--	--	--	429	768	1343	--	575	467	--	443	--	349	386	--
	µS/cm	12/8/05	--	--	--	408	171	1712	--	708	623	--	590	--	450	388	--
	µS/cm	6/5/06	--	--	--	469	66	1397	--	604	535	--	488	--	348	237	--
	µS/cm	12/5/06	--	--	--	545	76	1998	--	731	724	--	665	--	437	269	--
	µS/cm	5/30/07	--	--	--	503	67	192	--	720	748	--	621	--	427	302	--
Temperature (field)	°C	5/26/98	--	--	--	15.9	14.6	14.4	14.3	--	15.3	16	--	14.8	--	15.2	--
	°C	12/1/98	--	--	--	17.3	16	15	--	--	16.5	15.7	--	12	--	16.8	--
	°C	6/7/99	--	--	--	18.0	15.1	15.8	--	--	15.3	--	--	16.8	--	16.2	--
	°C	7/8/99	--	--	--	--	--	--	--	17.3	--	16.2	--	--	--	--	--
	°C	12/13/99	--	--	--	15.1	13.7	17.9	--	16.1	17.5	--	--	11.5	--	16.3	--
	°C	6/6/00	--	--	--	15.4	17.4	14.8	--	16.2	15.4	dry	--	15.0	--	16.5	--
	°C	12/11/00	--	--	--	13.8	14.2	15.3	--	12..6	16.0	14.4	--	14.8	--	14.2	--
	°C	6/4/01	--	--	--	16.8	15.1	14.3	--	13.6	14.7	14.7	--	14.7	--	15.7	--
	°C	12/3/01	--	--	--	15.1	14.4	15.7	--	15.8	19.4	15.3	--	15.1	--	15.7	--
	°C	6/10/02	--	--	--	18.2	19.0	14.8	--	15.8	15.2	17.0	--	16.4	--	16.3	--
	°C	12/16/02	--	--	--	14.6	12.6	14.9	--	14.1	15.9	14.0	--	11.3	--	14.1	--
	°C	6/9/03	--	--	--	21.9	15.6	15.1	--	16.4	14.8	16.3	--	14.4	--	16.6	--
	°C	12/9/03	--	--	--	15.0	14.8	15.9	--	14.0	--	15.4	--	16.1	--	14.6	--
	°C	6/24/04	--	--	--	17.5	17.0	14.8	--	16.3	15.3	--	14.65	--	14.4	16.8	--
	°C	12/20/04	--	--	--	13.08	12.57	15.30	--	13.48	14.59	--	15.72	--	14.62	13.92	--
	°C	6/8/05	--	--	--	17.14	16.62	14.95	--	18.58	15.60	--	14.5	--	15.08	15.69	--
	°C	12/7/05	--	--	--	14.07	14.40	15.10	--	13.36	15.05	--	15.86	--	14.51	14.53	--
	°C	6/5/06	--	--	--	16.24	15.44	14.91	--	15.18	17.50	--	14.43	--	14.58	15.63	--
	°C	12/5/06	--	--	--	14.01	14.12	15.46	--	14.91	16.21	--	16.1	--	14.04	14.15	--
	°C	5/30/07	--	--	--	17.81	16.10	15.41	--	20.39	20.52	--	16.53	--	17.11	19.31	--

TABLE 4

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

Detected Monitoring Constituents/Analytes	Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	Background Well PZ-6	MW-2	MW-3	MW-4	MW-4R	MW-5	MW-6	MW-6R	MW-7	MW-7R	MW-8	Blanks
Turbidity (field)	NTU	5/26/98	--	--	--	>1000	66.2	479	46.1	--	118	29.2	--	143	--	73.9	--
	NTU	12/1/98	--	--	--	585	34	>1000	--	--	201	12.1	--	105	--	14.7	--
	NTU	6/7/99	--	--	--	very turbid	--	very turbid	--	--	125	--	--	70.8	--	172	--
	NTU	7/8/99	--	--	--	--	--	--	--	turbid	--	--	--	--	--	--	--
	NTU	12/13/99	--	--	--	--	52.6	1278	--	265	107	--	--	122.4	--	127.1	--
	NTU	6/6/00	--	--	--	105	5.74	365	--	48.2	686	dry	--	230	--	75	--
	NTU	12/11/00	--	--	--	>200	>200	>200	--	51.3	>200	>200	--	--	--	161	--
	NTU	6/4/01	--	--	--	>1000	23.6	>1000	--	35	>1000	130	--	36.7	--	130	--
	NTU	12/3/01	--	--	--	>999	14	>999	--	11	>999	>999	--	130	--	65	--
	NTU	6/10/02	--	--	--	600	6.61	500	--	20	--	--	--	--	--	190	--
	NTU	12/16/02	--	--	--	>1100	12.0	406	--	245	130	200	--	130	--	1000	--
	NTU	6/9/03	--	--	--	106	128	510	--	45.0	75.0	69.5	--	230	--	275	--
	NTU	12/9/03	--	--	--	>990	110	400	--	15.0	--	990	--	>990	--	280	--
	NTU	6/4/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	NTU	12/20/04	--	--	--	79.8	48	68.4	--	3.5	372	--	472	--	--	32.9	--
	NTU	6/8/05	--	--	--	887	5.0	67.0	--	8.9	611	--	140	--	275	9.1	--
	NTU	12/7/05	--	--	--	20	63.0	983.0	--	1.0	>1000	--	40	--	11	15.0	--
	NTU	6/5/06	--	--	--	254	70.4	102.0	--	5.3	>1000	--	383	--	133	100.0	--
	NTU	12/5/06	--	--	--	280	15.8	58.0	--	2.8	597	--	64.54	--	45	25.0	--
	NTU	5/30/07	--	--	--	436	0.0	1.8	--	0.0	0	--	0	--	>1000	61.8	--
ORP (field)	mV	5/30/07				178	228.0	-43.0	--	95.0	--	--	82	--	193	156.0	--
Dissolved Oxygen (field)	mg/L	12/1/01	--	--	--	4.70	4.00	2.05	--	3.90	3.50	2.80	--	5.30	--	2.25	--
	mg/L	6/10/02	--	--	--	5.28	9.08	18.58	--	7.00	16.85	4.03	--	4.86	--	5.69	--
	mg/L	12/16/02	--	--	--	5.50	7.92	12.38	--	5.99	10.2	8.67	--	6.72	--	3.30	--
	mg/L	6/9/03	--	--	--	7.65	9.58	3.02	--	4.63	2.65	9.92	--	5.25	--	3.69	--
	mg/L	12/8/03	--	--	--	5.90	5.00	3.60	--	7.90	--	3.60	--	2.10	--	4.30	--
	mg/L	6/24/04	--	--	--	6.50	8.44	2.84	--	5.37	2.96	--	5.69	--	5.23	6.20	--
	mg/L	12/20/04	--	--	--	6.21	7.52	3.29	--	3.65	3.61	--	4.69	--	4.60	4.63	--
	mg/L	6/8/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	mg/L	6/5/06	--	--	--	4.00	4.48	4.19	--	4.31	3.48	--	2.77	--	2.19	2.69	--
	mg/L	12/5/06	--	--	--	3.81	7.19	3.32	--	2.83	-20.00	--	4.06	--	2.40	3.91	--
	mg/L	5/30/07	--	--	--	2.1	2.6	5.7	--	4.6	--	--	7.4	--	5.6	2.8	--

Notes:

ug/L = micrograms per liter
mg/L= milligrams per liter
S.U. = Standard Units
NTU = Nephelometric Turbidity Units
mV= millivolts
ND = Not detected at the stated reporting limit
ORP= Oxidation Reduction Potential
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
NM= not measured/analyzed
* Sample data from 9/94 through 12/98 compiled and reported by Malcolm Pirnie, Inc.
* Sample data from 6/99 through 12/06 collected, compiled and reported by Weston Solutions, Inc.
* Laboratory data prior to May 2007 was not validated by Golder Associates.
SWS Reporting Limit = NCPQL from 9/14/94 through 12/5/06 and NCSWSL for 5/30/07 and later

TABLE 5

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

Detected Monitoring Constituent/Analyte	Reporting Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	SW-4 (Upstream)	SW-1	SW-2	SW-3	Blanks
Antimony	ug/L	12/20/04	--	--	5	ND	ND	ND	ND	--
(No Standard)	ug/L	6/5/05	--	--	5	ND	ND	5	ND	--
	ug/L	12/7/05	--	--	5	ND	ND	ND	ND	--
	ug/L	6/5/06	--	--	5	ND	ND	dry	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	ND	ND	--
	ug/L	5/30/07	0.58	2	6	ND	dry	dry	ND	ND
Arsenic	ug/L	5/30/07	2	10	10	ND	dry	dry	ND	3.8 J
SW Standard = 10 ug/L										
Barium	ug/L	2/7/95	--	--	--	27	69	82	39	--
SW Standard = 1000 ug/L	ug/L	3/13/95	--	--	25	51	61	59	ND	--
	ug/L	6/10/96	--	--	25	42	86	75	ND	--
	ug/L	11/12/96	--	--	25	32	37	59	ND	--
	ug/L	3/18/97	--	--	--	44	126	41	27	--
	ug/L	10/2/97	--	--	25	92	162	62	ND	--
	ug/L	5/26/98	--	--	--	35	94	72	106	--
	ug/L	12/1/98	--	--	--	47	dry	dry	25	--
	ug/L	6/7/99	--	--	25	ND	dry	dry	ND	--
	ug/L	12/1/99	--	--	--	54	174	85	96	--
	ug/L	6/6/00	--	--	--	73	dry	dry	dry	--
	ug/L	12/22/00	--	--	--	66	dry	dry	dry	--
	ug/L	6/4/01	--	--	25	ND	97	80	ND	--
	ug/L	12/3/01	--	--	25	ND	dry	dry	ND	--
	ug/L	6/10/02	--	--	25	ND	dry	dry	ND	--
	ug/L	12/16/02	--	--	--	76	58	64	29	--
	ug/L	6/10/03	--	--	25	ND	111	93	28	--
	ug/L	12/8/03	--	--	25	14	59	62	ND	--
	ug/L	6/29/04	--	--	25	ND	83	49	ND	--
	ug/L	12/20/04	--	--	25	ND	42	71	ND	--
	ug/L	6/5/05	--	--	25	ND	73	6	28	--
	ug/L	12/7/05	--	--	--	39	59	52	46	--
	ug/L	6/5/06	--	--	25	ND	126	dry	ND	--
	ug/L	12/5/06	--	--	--	28	106	79	25	--
	ug/L	5/30/07	0.2	10	100	8.1 J	dry	dry	7.6 J	ND
Chromium	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--
SW Standard = 50 ug/L	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--
	ug/L	6/10/96	--	--	5	ND	ND	ND	ND	--
	ug/L	11/12/96	--	--	5	ND	ND	ND	ND	--
	ug/L	3/18/97	--	--	5	ND	ND	ND	ND	--
	ug/L	10/2/97	--	--	5	ND	5.9	ND	ND	--
	ug/L	5/26/98	--	--	5	ND	5	ND	ND	--
	ug/L	12/1/98	--	--	5	ND	dry	dry	ND	--
	ug/L	6/7/99	--	--	5	ND	dry	dry	ND	--
	ug/L	12/1/99	--	--	--	7	16	8	8	--
	ug/L	6/6/00	--	--	5	ND	dry	dry	dry	--
	ug/L	12/22/00	--	--	5	ND	dry	dry	dry	--
	ug/L	6/4/01	--	--	5	ND	ND	ND	ND	--
	ug/L	12/3/01	--	--	5	ND	dry	dry	ND	--
	ug/L	6/10/02	--	--	5	ND	dry	dry	ND	--
	ug/L	12/16/02	--	--	5	ND	ND	ND	ND	--
	ug/L	6/10/03	--	--	5	ND	5	ND	ND	--
	ug/L	12/8/03	--	--	5	ND	5	ND	ND	--
	ug/L	6/29/04	--	--	5	ND	ND	ND	ND	--
	ug/L	12/20/04	--	--	5	5	ND	ND	ND	--
	ug/L	6/5/05	--	--	5	ND	ND	ND	5	--
	ug/L	12/7/05	--	--	5	5	ND	ND	9	--
	ug/L	6/5/06	--	--	5	ND	ND	dry	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	ND	ND	--
	ug/L	5/30/07	2	10	10	ND	dry	dry	ND	ND

TABLE 5

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

Detected Monitoring Constituent/Analyte	Reporting Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	SW-4 (Upstream)	SW-1	SW-2	SW-3	Blanks
Copper	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--
SW Standard = 7 ug/L**	ug/L	3/13/95	--	--	5	5.5	6.8	8.6	ND	--
	ug/L	6/10/96	--	--	5	6.3	5.9	5.7	ND	--
	ug/L	11/12/96	--	--	5	ND	ND	ND	ND	--
	ug/L	3/18/97	--	--	5	6	ND	ND	6	--
	ug/L	10/2/97	--	--	5	ND	ND	ND	ND	--
	ug/L	5/26/98	--	--	--	6	8	6	9	--
	ug/L	12/1/98	--	--	5	ND	dry	dry	ND	--
	ug/L	6/7/99	--	--	5	ND	dry	dry	ND	--
	ug/L	12/1/99	--	--	--	10	14	10	11	--
	ug/L	6/6/00	--	--	5	ND	dry	dry	dry	--
	ug/L	12/22/00	--	--	5	ND	dry	dry	dry	--
	ug/L	6/4/01	--	--	5	13	ND	8	ND	--
	ug/L	12/3/01	--	--	5	ND	dry	dry	ND	--
	ug/L	6/10/02	--	--	5	ND	dry	dry	ND	0.7 J
	ug/L	12/16/02	--	--	5	21	8	10	8	--
	ug/L	6/10/03	--	--	5	ND	8	6	ND	--
	ug/L	12/8/03	--	--	5	ND	5	6	5	--
	ug/L	6/29/04	--	--	5	ND	8	ND	ND	--
	ug/L	12/20/04	--	--	5	ND	ND	ND	ND	--
	ug/L	6/5/05	--	--	--	3	5	5	2	--
	ug/L	12/7/05	--	--	--	9	7	10	11	--
	ug/L	6/5/06	--	--	--	3	9	dry	3	--
	ug/L	12/5/06	--	--	--	2	3	6	3	--
	ug/L	5/30/07	0.6	10	10	1.3 B	dry	dry	0.8 B	0.7 J
Lead	ug/L	2/7/95	--	--	5	11	ND	6.2	ND	--
SW Standard = 25 ug/L	ug/L	3/13/95	--	--	5	ND	ND	7.5	ND	--
	ug/L	6/10/96	--	--	5	ND	ND	ND	ND	--
	ug/L	11/12/96	--	--	5	ND	ND	ND	ND	--
	ug/L	3/18/97	--	--	5	5	ND	ND	5	--
	ug/L	10/2/97	--	--	5	ND	ND	ND	ND	--
	ug/L	5/26/98	--	--	5	ND	ND	ND	ND	--
	ug/L	12/1/98	--	--	5	5	dry	dry	5	--
	ug/L	6/7/99	--	--	5	ND	dry	dry	ND	--
	ug/L	12/1/99	--	--	--	17	5	5	7	--
	ug/L	6/6/00	--	--	5	ND	dry	dry	dry	--
	ug/L	12/27/00	--	--	5	ND	dry	dry	dry	--
	ug/L	6/4/01	--	--	5	ND	9	ND	ND	--
	ug/L	12/3/01	--	--	5	ND	dry	dry	ND	--
	ug/L	6/10/02	--	--	5	ND	dry	dry	ND	--
	ug/L	12/16/02	--	--	5	ND	ND	ND	ND	--
	ug/L	6/10/03	--	--	5	9	ND	6	ND	--
	ug/L	12/8/03	--	--	5	ND	ND	ND	ND	--
	ug/L	6/29/04	--	--	5	ND	ND	ND	ND	--
	ug/L	12/20/04	--	--	5	ND	ND	ND	ND	--
	ug/L	6/5/05	--	--	5	9	ND	6	ND	--
	ug/L	12/7/05	--	--	5	10	ND	ND	10	--
	ug/L	6/5/06	--	--	5	ND	ND	dry	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	ND	ND	--
	ug/L	5/30/07	2	10	10	ND	dry	dry	ND	3.1 J
Nickel	ug/L	2/7/95	--	--	10	ND	ND	ND	ND	--
SW Standard = 25 ug/L	ug/L	3/13/95	--	--	10	ND	13	16	ND	--
	ug/L	6/10/96	--	--	10	ND	ND	ND	ND	--
	ug/L	11/12/96	--	--	10	ND	ND	ND	ND	--
	ug/L	3/18/97	--	--	10	ND	ND	ND	ND	--
	ug/L	10/2/97	--	--	10	ND	ND	ND	ND	--
	ug/L	5/26/98	--	--	10	ND	ND	ND	ND	--
	ug/L	12/1/98	--	--	10	ND	dry	dry	ND	--
	ug/L	6/7/99	--	--	10	ND	dry	dry	ND	--
	ug/L	12/1/99	--	--	--	10	12	10	10	--
	ug/L	6/6/00	--	--	10	ND	dry	dry	dry	--
	ug/L	12/22/00	--	--	10	ND	dry	dry	dry	--
	ug/L	6/4/01	--	--	10	ND	ND	ND	ND	--
	ug/L	12/3/01	--	--	10	ND	dry	dry	ND	--
	ug/L	6/10/02	--	--	10	ND	dry	dry	ND	--
	ug/L	12/16/02	--	--	10	ND	ND	ND	ND	--
	ug/L	6/10/03	--	--	10	ND	ND	ND	ND	--
	ug/L	12/8/03	--	--	10	ND	ND	ND	ND	--
	ug/L	6/29/04	--	--	10	ND	ND	ND	ND	--
	ug/L	12/20/04	--	--	10	ND	ND	ND	ND	--
	ug/L	6/5/05	--	--	10	ND	ND	ND	ND	--
	ug/L	12/7/05	--	--	10	ND	ND	ND	ND	--
	ug/L	6/5/06	--	--	10	ND	ND	dry	ND	--
	ug/L	12/5/06	--	--	10	ND	ND	ND	ND	--
	ug/L	5/30/07	2	10	50	2.7 J	dry	dry	2.7 J	ND

TABLE 5

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

Detected Monitoring Constituent/Analyte	Reporting Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	SW-4 (Upstream)	SW-1	SW-2	SW-3	Blanks
Selenium	ug/L	5/30/07	2	10	10	2.9 B	dry	dry	2.3 B	5.7 J
SW Standard = 5 ug/L										
Silver	ug/L	2/7/95	--	--	1	ND	ND	ND	ND	--
SW Standard = 0.06 ug/L**	ug/L	3/13/95	--	--	1	ND	ND	ND	ND	--
	ug/L	6/10/96	--	--	1	ND	1.8	3.3	ND	--
	ug/L	11/12/96	--	--	1	ND	ND	ND	ND	--
	ug/L	3/18/97	--	--	1	ND	ND	ND	ND	--
	ug/L	10/2/97	--	--	1	ND	ND	ND	ND	--
	ug/L	5/26/98	--	--	1	ND	ND	ND	ND	--
	ug/L	12/1/98	--	--	1	ND	dry	dry	ND	--
	ug/L	6/7/99	--	--	1	ND	dry	dry	ND	--
	ug/L	12/1/99	--	--	--	1	1	1	1	--
	ug/L	6/6/00	--	--	1	ND	dry	dry	dry	--
	ug/L	12/22/00	--	--	1	ND	dry	dry	dry	--
	ug/L	6/4/01	--	--	1	ND	ND	ND	ND	--
	ug/L	12/3/01	--	--	1	ND	dry	dry	ND	--
	ug/L	6/10/02	--	--	1	ND	dry	dry	ND	--
	ug/L	12/16/02	--	--	1	ND	ND	ND	ND	--
	ug/L	6/10/03	--	--	1	ND	ND	ND	ND	--
	ug/L	12/8/03	--	--	1	ND	ND	ND	ND	--
	ug/L	6/29/04	--	--	1	ND	ND	ND	ND	--
	ug/L	12/20/04	--	--	1	ND	ND	ND	ND	--
	ug/L	6/5/05	--	--	1	ND	ND	ND	ND	--
	ug/L	12/7/05	--	--	1	ND	ND	ND	ND	--
	ug/L	6/5/06	--	--	1	ND	ND	dry	ND	--
	ug/L	12/5/06	--	--	1	ND	ND	ND	ND	--
	ug/L	5/30/07	2	10	10	ND	dry	dry	ND	ND
Vanadium	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--
(No Standard)	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--
	ug/L	6/10/96	--	--	5	ND	ND	7.7	ND	--
	ug/L	11/12/96	--	--	5	ND	8	ND	ND	--
	ug/L	3/18/97	--	--	5	ND	ND	ND	ND	--
	ug/L	10/2/97	--	--	5	ND	8.5	ND	5.7	--
	ug/L	5/26/98	--	--	5	ND	5	5	5	--
	ug/L	12/1/98	--	--	5	ND	dry	dry	5	--
	ug/L	6/7/99	--	--	5	ND	dry	dry	ND	--
	ug/L	12/1/99	--	--	--	11	22	10	11	--
	ug/L	6/6/00	--	--	--	5	dry	dry	dry	--
	ug/L	12/22/00	--	--	--	5	dry	dry	dry	--
	ug/L	6/4/01	--	--	5	ND	ND	5	ND	--
	ug/L	12/3/01	--	--	--	6	dry	dry	6	--
	ug/L	6/10/02	--	--	--	6	dry	dry	6	--
	ug/L	12/16/02	--	--	5	7	ND	ND	ND	--
	ug/L	6/10/03	--	--	5	ND	7	5	ND	--
	ug/L	12/8/03	--	--	5	ND	ND	ND	ND	--
	ug/L	6/29/04	--	--	5	ND	ND	ND	ND	--
	ug/L	12/20/04	--	--	5	ND	ND	ND	ND	--
	ug/L	6/5/05	--	--	5	5	ND	ND	ND	--
	ug/L	12/7/05	--	--	5	7	ND	ND	6	--
	ug/L	6/5/06	--	--	5	ND	ND	dry	ND	--
	ug/L	12/5/06	--	--	5	ND	ND	ND	ND	--
	ug/L	5/30/07	1	10	25	ND	dry	dry	1.2 J	ND
Zinc	ug/L	2/7/95	--	--	10	33	ND	ND	21	--
SW Standard = 50 ug/L**	ug/L	3/13/95	--	--	--	34	63	87	67	--
	ug/L	6/10/96	--	--	10	ND	ND	ND	13	--
	ug/L	11/12/96	--	--	10	20	ND	16	22	--
	ug/L	3/18/97	--	--	10	32	ND	ND	32	--
	ug/L	10/2/97	--	--	10	10	14	21	146	--
	ug/L	5/26/98	--	--	--	25	26	19	48	--
	ug/L	12/1/98	--	--	10	ND	dry	dry	56	--
	ug/L	6/7/99	--	--	--	76	dry	dry	42	--
	ug/L	12/1/99	--	--	--	89	58	45	66	--
	ug/L	6/6/00	--	--	--	10	dry	dry	dry	--
	ug/L	12/22/00	--	--	10	ND	dry	dry	dry	--
	ug/L	6/4/01	--	--	--	39	14	16	28	--
	ug/L	12/3/01	--	--	--	42	dry	dry	80	--
	ug/L	6/10/02	--	--	--	25	dry	dry	36	--
	ug/L	12/16/02	--	--	--	106	18	16	39	--
	ug/L	6/10/03	--	--	--	18	22	15	19	--
	ug/L	12/8/03	--	--	10	106	11	ND	42	--
	ug/L	6/29/04	--	--	10	21	ND	ND	19	--
	ug/L	12/20/04	--	--	10	31	ND	ND	30	--
	ug/L	6/5/05	--	--	10	33	ND	ND	30	--
	ug/L	12/7/05	--	--	--	38	10	16	33	--
	ug/L	6/5/06	--	--	--	21	17	dry	17	--
	ug/L	12/5/06	--	--	10	38	ND	11	41	--
	ug/L	5/30/07	1	10	10	51.9	dry	dry	52.5	2.4 J

TABLE 5

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

Detected Monitoring Constituent/Analyte	Reporting Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	SW-4 (Upstream)	SW-1	SW-2	SW-3	Blanks
Acetone	ug/L	5/30/07	0.9	5	100	ND	dry	dry	5.4 B	3.8 J
(No Standard)										
Chloroform	ug/L	9/19/94	--	--	--	ND	dry	dry	ND	--
(No Standard)	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--
	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--
	ug/L	6/10/96	--	--	1	ND	ND	ND	ND	--
	ug/L	11/12/96	--	--	1	ND	ND	ND	ND	--
	ug/L	3/18/97	--	--	1	ND	ND	ND	ND	--
	ug/L	10/2/97	--	--	1	ND	ND	ND	ND	--
	ug/L	5/26/98	--	--	5	ND	ND	ND	ND	--
	ug/L	12/1/98	--	--	2	ND	ND	ND	ND	--
	ug/L	6/7/99	--	--	5	ND	dry	dry	ND	ND
	ug/L	12/15/99	--	--	5	ND	ND	ND	ND	ND
	ug/L	6/6/00	--	--	5	ND	dry	dry	dry	ND
	ug/L	12/22/00	--	--	5	ND	dry	dry	dry	ND
	ug/L	6/4/01	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/13/01	--	--	5	ND	dry	dry	ND	ND
	ug/L	6/10/02	--	--	5	ND	dry	dry	ND	ND
	ug/L	12/16/02	--	--	5	ND	ND	ND	ND	ND
	ug/L	6/9/03	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/8/03	--	--	5	ND	ND	ND	ND	ND
	ug/L	6/28/04	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/20/04	--	--	1	ND	ND	ND	ND	ND
	ug/L	6/5/05	--	--	1	ND	ND	ND	ND	ND
	ug/L	12/7/05	0.35	--	1	ND	ND	ND	ND	ND
	ug/L	6/5/06	--	--	1	0.65 J	ND	ND	0.59 J	ND
	ug/L	12/5/06	--	--	1	ND	ND	ND	ND	ND
	ug/L	5/30/07	0.16	1	5	0.60 J	dry	dry	0.55 J	ND
Methylene Chloride	ug/L	9/19/94	--	--	--	ND	dry	dry	9.5	--
(No Standard)	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--
	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--
	ug/L	6/10/96	--	--	5	ND	ND	ND	ND	--
	ug/L	11/12/96	--	--	5	ND	ND	ND	ND	--
	ug/L	3/18/97	--	--	5	ND	ND	ND	ND	--
	ug/L	10/2/97	--	--	5	10	ND	ND	ND	--
	ug/L	5/26/98	--	--	5	ND	ND	ND	ND	--
	ug/L	12/1/98	--	--	5	ND	ND	ND	ND	--
	ug/L	6/1/99	--	--	5	ND	dry	dry	ND	ND
	ug/L	12/15/99	--	--	5	ND	ND	ND	ND	ND
	ug/L	6/6/00	--	--	5	ND	dry	dry	dry	ND
	ug/L	12/22/00	--	--	5	ND	dry	dry	dry	ND
	ug/L	6/4/01	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/3/01	--	--	5	ND	dry	dry	ND	ND
	ug/L	6/10/02	--	--	5	ND	dry	dry	ND	ND
	ug/L	12/16/02	--	--	5	ND	ND	ND	ND	ND
	ug/L	6/9/03	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/8/03	--	--	5	ND	ND	ND	ND	ND
	ug/L	6/28/04	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/20/04	--	--	2	ND	ND	ND	ND	ND
	ug/L	6/5/05	--	--	2	ND	ND	ND	ND	ND
	ug/L	12/7/05	0.61	--	2	ND	ND	ND	ND	ND
	ug/L	6/5/06	--	--	2	ND	ND	ND	ND	ND
	ug/L	12/5/06	--	--	2	ND	ND	ND	ND	ND
	ug/L	5/30/07	0.088	1	1	ND	dry	dry	ND	ND

TABLE 5

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

Detected Monitoring Constituent/Analyte	Reporting Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	SW-4 (Upstream)	SW-1	SW-2	SW-3	Blanks
Toluene	ug/L	9/19/94	--	--	--	ND	dry	dry	ND	--
SW Standard = 11 ug/L	ug/L	2/7/95	--	--	5	ND	ND	ND	ND	--
	ug/L	3/13/95	--	--	5	ND	ND	ND	ND	--
	ug/L	6/10/96	--	--	--	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	3/18/97	--	--	1	ND	ND	ND	ND	--
	ug/L	10/2/97	--	--	1	ND	ND	ND	ND	--
	ug/L	5/26/98	--	--	1	ND	ND	ND	ND	--
	ug/L	12/1/98	--	--	1	ND	ND	ND	ND	--
	ug/L	6/7/99	--	--	5	ND	dry	dry	ND	ND
	ug/L	6/7/99	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/15/99	--	--	5	ND	ND	ND	ND	ND
	ug/L	6/6/00	--	--	5	ND	dry	dry	dry	ND
	ug/L	12/22/00	--	--	5	ND	dry	dry	dry	ND
	ug/L	6/4/01	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/3/01	--	--	5	ND	dry	dry	ND	ND
	ug/L	6/10/02	--	--	5	ND	dry	dry	ND	ND
	ug/L	12/16/02	--	--	5	ND	ND	ND	ND	ND
	ug/L	6/9/03	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/8/03	--	--	5	ND	ND	ND	ND	ND
	ug/L	6/28/04	--	--	5	ND	ND	ND	ND	ND
	ug/L	12/20/04	--	--	1	ND	ND	ND	ND	ND
	ug/L	6/5/05	--	--	1	ND	ND	ND	ND	ND
	ug/L	12/7/05	0.39	--	1	ND	ND	ND	ND	ND
	ug/L	6/5/06	--	--	1	ND	ND	ND	ND	ND
	ug/L	12/5/06	--	--	1	ND	ND	ND	ND	ND
	ug/L	5/30/07	0.15	1	1	ND	dry	dry	ND	0.33 J
Cyanide	ug/L	12/1/98	--	--	10	ND	dry	dry	ND	--
SW Standard = 5 ug/L	ug/L	6/7/99	--	--	2	2	dry	dry	ND	--
	ug/L	12/1/99	--	--	--	5	2	2	2	--
	ug/L	6/6/00	--	--	2	ND	dry	dry	dry	--
	ug/L	12/22/00	--	--	2	ND	dry	dry	dry	--
	ug/L	6/4/01	--	--	2	ND	2	ND	ND	--
	ug/L	12/3/01	--	--	2	ND	dry	dry	ND	--
	ug/L	6/10/02	--	--	2	3	dry	dry	ND	--
	ug/L	12/16/02	--	--	2	2	ND	ND	ND	--
	ug/L	6/10/03	--	--	2	ND	ND	ND	ND	--
	ug/L	12/8/03	--	--	2	ND	ND	ND	ND	--
	ug/L	6/29/04	--	--	2	ND	ND	ND	ND	--
	ug/L	12/20/04	--	--	2	6.1	ND	ND	4.8	--
	ug/L	6/5/05	--	--	2	ND	ND	ND	ND	--
	ug/L	12/7/05	--	--	2	ND	4.9	4.9	5.4	--
	ug/L	6/5/06	--	--	--	3.1	2.2	dry	3.1	--
	ug/L	12/5/06	--	--	--	4.8	2.9	7.2	6.9	--
	ug/L	5/30/07	--	--	--	--	--	--	--	--
Sulfide	ug/L	12/1/98	--	--	1000	ND	dry	dry	ND	--
(No Standard)	ug/L	6/7/99	--	--	200	600	dry	dry	ND	--
	ug/L	12/1/99	--	--	--	--	--	--	--	--
	ug/L	6/6/00	--	--	--	500	dry	dry	dry	--
	ug/L	12/22/00	--	--	--	760	dry	dry	dry	--
	ug/L	6/4/01	--	--	--	800	400	400	800	--
	ug/L	12/3/01	--	--	200	ND	dry	dry	300	--
	ug/L	6/10/02	--	--	200	ND	dry	dry	ND	--
	ug/L	12/16/02	--	--	200	300	600	ND	400	--
	ug/L	6/10/03	--	--	200	2600	800	ND	ND	--
	ug/L	12/8/03	--	--	2000	ND	ND	ND	3700	--
	ug/L	6/29/04	--	--	2000	ND	ND	ND	ND	--
	ug/L	12/20/04	--	--	2000	ND	ND	ND	ND	--
	ug/L	6/5/05	--	--	--	2500	15000	16000	15000	--
	ug/L	12/7/05	--	--	2000	ND	ND	ND	ND	--
	ug/L	6/5/06	--	--	2000	ND	120 J	dry	ND	--
	ug/L	12/5/06	--	--	--	16000	16000	16000	15000	--
	ug/L	5/30/07	--	--	--	--	--	--	--	--

TABLE 5

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

Detected Monitoring Constituent/Analyte	Reporting Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	SW-4 (Upstream)	SW-1	SW-2	SW-3	Blanks
pH (field)	S.U.	5/26/98	--	--	--	--	--	--	--	--
	S.U.	12/1/98	--	--	--	--	--	--	--	--
	S.U.	6/7/99	--	--	--	6	dry	dry	5.76	--
	S.U.	7/8/99	--	--	--	--	dry	dry	--	--
	S.U.	12/13/99	--	--	--	6.47	6.3	6.44	6.58	--
	S.U.	6/6/00	--	--	--	6.54	dry	dry	dry	--
	S.U.	12/11/00	--	--	--	7.48	dry	dry	dry	--
	S.U.	6/4/01	--	--	--	7.08	6.92	6.94	7.11	--
	S.U.	12/3/01	--	--	--	6.59	dry	dry	5.99	--
	S.U.	6/10/02	--	--	--	7.81	dry	dry	8.13	--
	S.U.	12/16/02	--	--	--	7.28	7.66	6.81	7.2	--
	S.U.	6/9/03	--	--	--	7.14	7.58	--	7.49	--
	S.U.	12/9/03	--	--	--	8.46	7.82	8.58	8.46	--
	S.U.	6/24/04	--	--	--	7.53	6.91	7.4	7.57	--
	S.U.	12/20/04	--	--	--	7.64	8	--	7.66	--
	S.U.	6/8/05	--	--	--	7.5	7.69	7.31	7.59	--
	S.U.	12/7/05	--	--	--	7.2	7.3	7.14	7.47	--
	S.U.	6/5/06	--	--	--	7.58	7.24	dry	7.49	--
	S.U.	12/5/06	--	--	--	7.39	7.63	8.54	15.2	--
	S.U.	5/31/07	--	--	--	8.55	dry	dry	8.64	--
Conductivity (field)	µS/cm	5/26/98	--	--	--	--	--	--	--	--
	µS/cm	12/1/98	--	--	--	--	--	--	--	--
	µS/cm	6/7/99	--	--	--	198	dry	dry	167	--
	µS/cm	7/8/99	--	--	--	--	dry	dry	--	--
	µS/cm	12/13/99	--	--	--	257.4	272.8	137.8	134.5	--
	µS/cm	6/6/00	--	--	--	202.3	dry	dry	dry	--
	µS/cm	12/11/00	--	--	--	277.5	dry	dry	dry	--
	µS/cm	6/4/01	--	--	--	372.6	184.8	166.9	393.4	--
	µS/cm	12/3/01	--	--	--	445	dry	dry	433.5	--
	µS/cm	6/10/02	--	--	--	451	dry	dry	250	--
	µS/cm	12/16/02	--	--	--	123	60	110	341	--
	µS/cm	6/9/03	--	--	--	186	177	--	316	--
	µS/cm	12/8/03	--	--	--	411.1	29.9	24.3	410	--
	µS/cm	6/28/04	--	--	--	451	284	277	431	--
	µS/cm	12/20/04	--	--	--	434	249	--	424	--
	µS/cm	6/8/05	--	--	--	336	197.1	190.5	345.8	--
	µS/cm	12/8/05	--	--	--	250	129	140	176	--
	µS/cm	6/5/06	--	--	--	391	161	dry	412	--
	µS/cm	12/5/06	--	--	--	392	194	232	391	--
	µS/cm	5/31/07	--	--	--	477	dry	dry	485	--
Temperature (field)	°C	5/26/98	--	--	--	--	--	--	--	--
	°C	12/1/98	--	--	--	--	--	--	--	--
	°C	6/7/99	--	--	--	17.2	dry	dry	18	--
	°C	7/8/99	--	--	--	--	dry	dry	--	--
	°C	12/13/99	--	--	--	18.1	20.1	17.8	19.2	--
	°C	6/6/00	--	--	--	17.7	dry	dry	dry	--
	°C	12/11/00	--	--	--	8.9	dry	dry	dry	--
	°C	6/4/01	--	--	--	22.3	18.7	20.2	22.5	--
	°C	12/3/01	--	--	--	19.5	dry	dry	16.2	--
	°C	6/10/02	--	--	--	23.49	dry	dry	23.43	--
	°C	12/16/02	--	--	--	11.19	3.52	4.3	10.53	--
	°C	6/9/03	--	--	--	23.36	23.23	--	23.08	--
	°C	12/9/03	--	--	--	13.3	6.6	7.8	13.2	--
	°C	6/24/04	--	--	--	22.92	21.22	23.4	22.84	--
	°C	12/20/04	--	--	--	12.07	1.95	--	9.37	--
	°C	6/8/05	--	--	--	23.06	20.83	21.45	22.9	--
	°C	12/7/05	--	--	--	12.26	9.29	8.98	10.33	--
	°C	6/5/06	--	--	--	21.8	20.12	dry	21.75	--
	°C	12/5/06	--	--	--	15.02	8.32	8	15.2	--
	°C	5/31/07	--	--	--	24.28	dry	dry	23.8	--

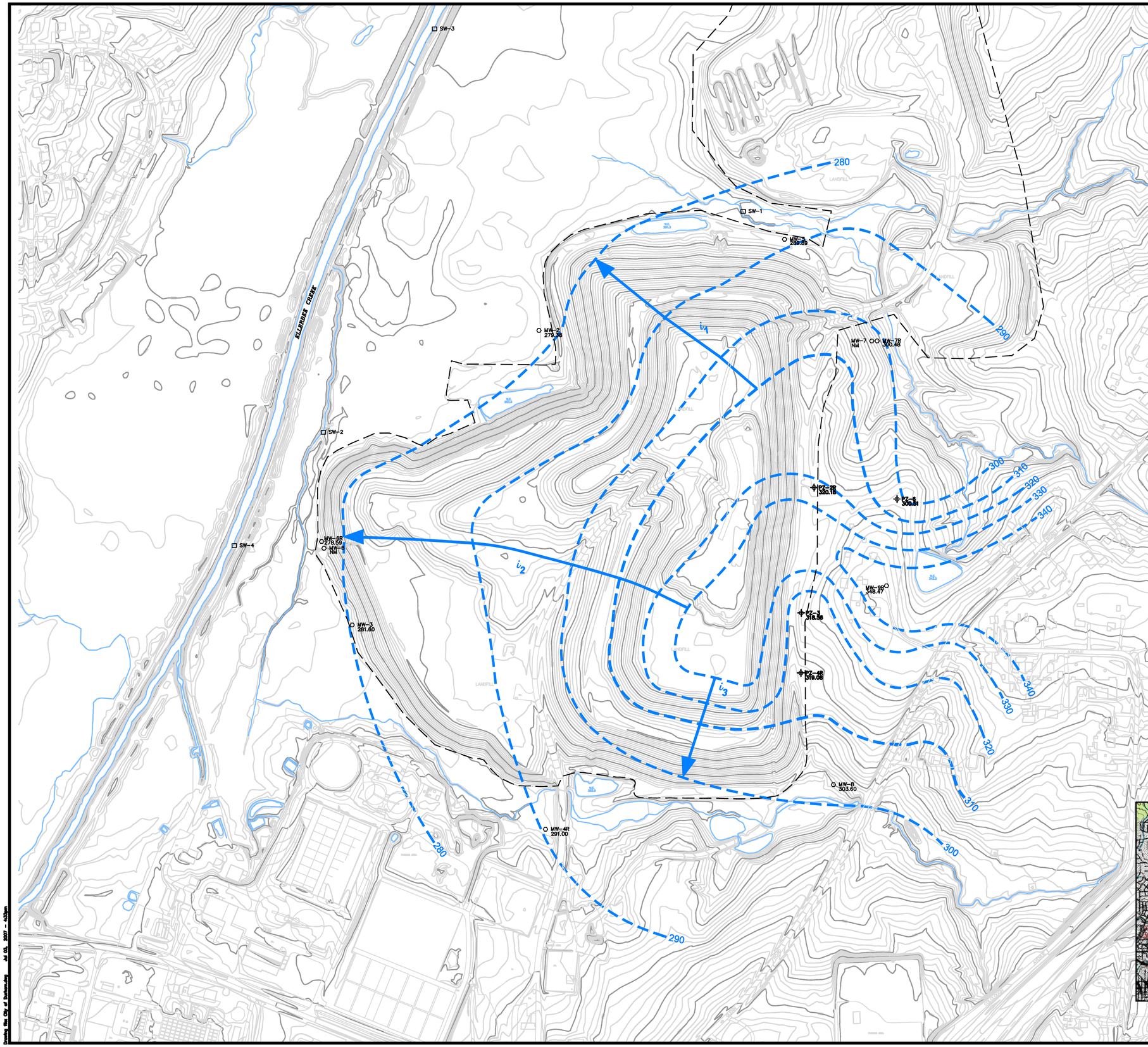
TABLE 5

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

Detected Monitoring Constituent/Analyte	Reporting Units	Sample Date	Detection Limit	Quantitation Limit	SWS Reporting Limit	SW-4 (Upstream)	SW-1	SW-2	SW-3	Blanks
Turbidity (field)	NTU	5/26/98	--	--	--	--	--	--	--	--
	NTU	12/1/98	--	--	--	--	--	--	--	--
	NTU	6/7/99	--	--	--	12	dry	dry	--	--
	NTU	7/8/99	--	--	--	--	dry	dry	--	--
	NTU	12/13/99	--	--	--	139.2	229	139.8	146.7	--
	NTU	6/6/00	--	--	--	42.8	dry	dry	dry	--
	NTU	12/11/00	--	--	--	27.3	dry	dry	dry	--
	NTU	6/4/01	--	--	--	17.2	18.2	90	7.6	--
	NTU	12/3/01	--	--	--	--	dry	dry	2.2	--
	NTU	6/10/02	--	--	--	3.2	dry	dry	2.6	--
	NTU	12/16/02	--	--	--	6.4	9	10	5.8	--
	NTU	6/9/03	--	--	--	34	65.2	--	18	--
	NTU	12/9/03	--	--	--	12	25	23	13	--
	NTU	6/4/04	--	--	--	--	--	--	--	--
	NTU	12/20/04	--	--	--	--	--	--	--	--
	NTU	6/8/05	--	--	--	7.55	22.1	53	8.99	--
	NTU	12/7/05	--	--	--	88	31	66	120	--
	NTU	6/5/06	--	--	--	15.6	26.4	dry	17.9	--
	NTU	12/5/06	--	--	--	4.44	20.6	27.5	8.31	--
	NTU	5/31/07	--	--	--	0	dry	dry	56.9	--
ORP (field)	mV	5/31/07	--	--	--	70	dry	dry	45	--
Dissolved Oxygen (field)	mg/L	12/1/01	--	--	--	5.9	dry	dry	4.7	--
	mg/L	6/10/02	--	--	--	9.1	dry	dry	13.3	--
	mg/L	12/16/02	--	--	--	11.64	10.81	10.51	11.57	--
	mg/L	6/9/03	--	--	--	10.16	7.8	--	10.04	--
	mg/L	12/8/03	--	--	--	10.5	12.6	12.5	10.5	--
	mg/L	6/24/04	--	--	--	8.01	4.53	7.4	7.83	--
	mg/L	12/20/04	--	--	--	9.93	12.2	--	10.01	--
	mg/L	6/8/05	--	--	--	--	--	--	--	--
	mg/L	6/5/06	--	--	--	6.59	5.45	dry	6.74	--
	mg/L	12/5/06	--	--	--	8.25	4.46	9.89	7.24	--
	mg/L	5/31/07	--	--	--	8.1	dry	dry	7.7	--

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
NR= Not reported
ORP= Oxidation Reduction Potential
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.
** Standard is an Action Limit
* Sample data from 9/94 through 12/98 compiled and reported by Malcolm Pirnie, Inc.
* Sample data from 6/99 through 12/06 collected, compiled and reported by Weston Solutions, Inc.
* Laboratory data prior to May 2007 was not validated by Golder Associates.
SWS Reporting Limit = NCPQL from 9/14/94 through 12/5/06 and NCSWSL for 5/30/07 and later

DRAWING



LEGEND

- EXISTING 10-FOOT GROUND SURFACE CONTOUR
- EXISTING 2-FOOT GROUND SURFACE CONTOUR
- APPROXIMATE LIMITS OF WASTE
- EXISTING ROAD
- 300 GROUNDWATER ELEVATION 10 FT CONTOURS
- i_1 GROUNDWATER FLOW ARROW
- PZ-2R 346.98 PIEZOMETER LOCATION AND GROUNDWATER ELEVATION
- SW-1 291.69 SURFACE WATER MONITORING POINT
- MW-2 279.38 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.

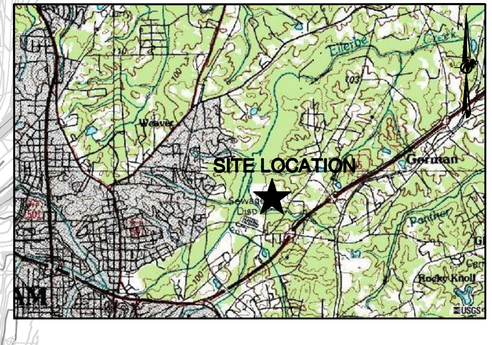
4) GROUNDWATER ELEVATIONS MEASURED ON MAY 30, 2007.

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

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

7) MW-6 AND MW-7 WERE NOT GAUGED DURING THE MAY 2007 SAMPLING EVENT.

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



200 0 200 400
SCALE FEET

Golder Associates
Golder Associates NC, Inc

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW

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

TITLE
GROUNDWATER CONTOUR MAP
MAY 30, 2007

PROJECT No.		073-96042
FILE No.		
REV/REV	SCALE	1'=200'
DESIGN	JAD	7/03/07
CADD	LKB	7/03/07
CHECK		
REVIEW		

DWG 1

APPENDIX I

GROUNDWATER, SURFACE WATER, AND LEACHATE SAMPLING LOGS

DATE: *05/30/07*

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042*
Well ID: *PZ-6* **Sampler(s):** *B. Draper/W. Jappe*
Well Diameter: *2* **inches** **Initial Depth to Water:** *49.59* **feet**
Depth to Bottom: *48.65* **feet** **Water Column Thickness:** *<3.00* **feet**
Purge Volume: -- **gallon(s)** **3 x Purge Volume:** -- **gallon(s)**
Well Location: *Outside of gate to the left*
Equipment: *Horiba U-22 Water Quality Meter, Disposable Bailer, Slope 150' Waterlevel Meter*

Time	DTW (feet)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O2 (mg/L)	Temp. (oC)	ORP (millivolts)
12:05	49.59	7.01	0.558	>1000	4.7	17.40	209
12:08	49.59	7.05	0.538	>1000	3.6	17.20	203
12:11	49.59	7.09	0.529	>1000	3.5	17.20	201
12:14	49.59	7.08	0.523	>1000	3.1	17.02	196
12:17	49.59	7.08	0.517	>1000	2.9	17.23	194
12:20	49.59	7.12	0.507	913	7.5	17.51	195
12:23	49.59	7.07	0.505	803	2.3	17.49	190
12:26	49.59	7.08	0.499	730	2.4	17.47	187
12:29	49.59	7.09	0.497	675	2.3	17.24	183
12:32	49.59	7.08	0.495	578	2.3	17.36	183
12:35	49.59	7.09	0.497	595	2.3	17.45	178
12:38	49.59	7.07	0.500	541	2.3	17.86	188
12:41	49.59	7.07	0.503	451	2.3	17.80	181
12:44	49.59	7.07	0.503	436	2.1	17.81	178
Sampled @ 12:44							
13:03	--	7.25	0.483	406	2.2	18.31	190

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Pumping rate = 300 mL/min
System Volume = 2500 mL

Signature: [signature] **Date:** 5-30-2007
QA/QC Sign Off: [signature] **Date:** 9-5-07

DATE: *05/31/07*

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Well ID: *MW-2* **Sampler(s):** *B. Draper/W. Jappe*
Well Diameter: *2* **inches** **Initial Depth to Water:** *7.12* **feet**
Depth to Bottom: *15.35* **feet** **Water Column Thickness:** *8.23* **feet**
Purge Volume: *1.35* **gallon(s)** **3 x Purge Volume:** *4.05* **gallon(s)**
Well Location: *Downhill next to sediment pond back in woods*
Equipment: *Horiba U-22 Water Quality Meter, Dedicated Bladder Pump, Slope 150' Waterlevel Meter*

Time	DTW (feet)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O2 (mg/L)	Temp. (oC)	ORP (millivolts)
9:30	9.40	6.84	0.108	24.1	3.2	14.69	152
9:33	9.60	6.55	0.085	1.8	2.3	14.93	173
9:36	9.93	6.34	0.074	1.3	2.7	15.07	193
9:39	9.99	6.24	0.076	0	2.4	15.37	205
9:42	10.00	6.18	0.068	0	2.6	15.79	215
9:45	10.05	6.14	0.067	0	2.5	15.97	222
9:48	10.00	6.12	0.067	0	2.6	16.10	228
Sampled @ 9:50							
10:12	11.00	6.22	0.066	0	7.8	17.56	225

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Pumping rate = 300 mL/min
System Volume = 1120 mL

Signature: [signature] **Date:** 5-31-2007
QA/QC Sign Off: [signature] **Date:** 9-5-07

Golder Associates

DATE: *05/31/07*

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Well ID: *MW-3* **Sampler(s):** *B. Draper/W. Jappe*
Well Diameter: *2* **inches** **Initial Depth to Water:** *4.20* **feet**
Depth to Bottom: *19.75* **feet** **Water Column Thickness:** *15.55* **feet**
Purge Volume: *2.55* **gallon(s)** **3 x Purge Volume:** *7.65* **gallon(s)**
Well Location: *Downhill off access road, can see from road*
Equipment: *Horiba U-22 Water Quality Meter, Dedicated Bladder Pump, Slope 150' Waterlevel Meter*

Time	DTW (feet)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O2 (mg/L)	Temp. (oC)	ORP (millivolts)
11:27	4.80	7.21	2.010	>1000	1.7	15.88	-43
11:30	4.83	7.18	1.990	755	3.5	15.62	-41
11:33	4.92	7.17	1.97	342	4.4	15.53	-41
11:36	4.80	7.19	1.97	144	5	15.57	-43
11:39	5.06	7.17	1.950	62.9	5.4	15.57	-42
11:42	5.13	7.17	1.940	17.6	5.6	15.42	-42
11:45	5.00	7.17	1.920	1.8	5.7	15.41	-43
Sampled @ 11:45							
12:05	5.1	7.17	1.81	0	4.4	15.9	-45

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Pumping Rate = 200 ml/min
System Volume = 1290 mL

Signature: [signature] **Date:** 5-31-2007
QA/QC Sign Off: [signature] **Date:** 9-5-07

DATE: *05/30/07*

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Well ID: *MW-4R* **Sampler(s):** *B. Draper/W. Jappe*
Well Diameter: *2* **inches** **Initial Depth to Water:** *4.60* **feet**
Depth to Bottom: *11.91* **feet** **Water Column Thickness:** *7.31* **feet**
Purge Volume: *1.20* **gallon(s)** **3 x Purge Volume:** *3.60* **gallon(s)**
Well Location: *At entrance of landfill near large rock next to LFG Flare*
Equipment: *Horiba U-22 Water Quality Meter, Dedicated Bladder Pump, Slope 150' Waterlevel Meter*

Time	DTW (feet)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O2 (mg/L)	Temp. (oC)	ORP (millivolts)
16:37	7.4	6.67	0.732	0	2.9	18.65	64
16:40	8.1	6.62	0.728	0	3.7	17.66	83
16:43	8.5	6.66	0.734	0	4.2	17.92	89
16:46	8.3	6.65	0.731	0	4.2	19.13	92
16:49	8.3	6.67	0.720	0	4.6	20.39	95
Sampled @ 16:50							
17:08	8.6	6.88	0.717	0	3	18.34	134

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Pumping Rate = 200 ml/min
System Volume = 800 mL

Signature: [signature] **Date:** 5-30-2007
QA/QC Sign Off: [signature] **Date:** 9-5-07

DATE: *5/30-31/2007*

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Well ID: *MW-5* **Sampler(s):** *B. Draper/W. Jappe*
Well Diameter: *2* **inches** **Initial Depth to Water:** *9.91* **feet**
Depth to Bottom: *22.10* **feet** **Water Column Thickness:** *12.19* **feet**
Purge Volume: *1.99* **gallon(s)** **3 x Purge Volume:** *5.97* **gallon(s)**
Well Location: *Next to access road on the backside of the landfill*
Equipment: *Horiba U-22 Water Quality Meter, Dedicated Bladder Pump, Slope 150' Waterlevel Meter*

Time	Volume (gallons)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Temp. (oC)	Vol (gallons)
15:58	0.0	7.13	0.728	>1000	19.22	0.0
16:02	2.0	7.15	0.714	>1000	16.53	2.0
16:04	4.0	7.02	0.706	>1000	16.08	4.0
16:08	6.0	7.16	0.706	>1000	15.92	6.0
Sampled 5/31/07 @ 14:45						
14:45	--	8.57	0.748	0	20.52	--

Comments (weather conditions, color, type of sample, purge-water management, etc.):
**NOTE: Bailed well due to pump malfunction. Pulled pump for repairs.*

Signature: [signature] **Date:** 5-31-2007
QA/QC Sign Off: [signature] **Date:** 9-5-07

DATE: *05/31/07*

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Well ID: *MW-6R* **Sampler(s):** *B. Draper/W. Jappe*
Well Diameter: *2* **inches** **Initial Depth to Water:** *12.80* **feet**
Depth to Bottom: *20.00* **feet** **Water Column Thickness:** *7.20* **feet**
Purge Volume: *1.18* **gallon(s)** **3 x Purge Volume:** *3.54* **gallon(s)**
Well Location: *Downhill off access road, can be seen from road*
Equipment: *Horiba U-22 Water Quality Meter, Dedicated Bladder Pump, Slope 150' Waterlevel Meter*

Time	DTW (feet)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O2 (mg/L)	Temp. (oC)	ORP (millivolts)
8:37	13.11	6.48	0.632	57.6	2.3	16.87	83
8:40	13.11	6.47	0.623	17	7.1	16.55	87
8:43	13.11	6.48	0.62	0.9	8.1	16.54	84
8:46	13.11	6.50	0.619	0	7.9	16.58	82
8:49	13.11	6.52	0.621	0	7.4	16.53	82
Sampled @ 8:49							
9:06	13.11	6.67	0.661	0	5.2	16.65	99

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Pumping Rate =250 mL/min

Signature: [signature] **Date:** 5-31-2007
QA/QC Sign Off: [signature] **Date:** 9-5-07

DATE: *5/30-31/2007*

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Well ID: *MW-7R* **Sampler(s):** *B. Draper/W. Jappe*
Well Diameter: *2* **inches** **Initial Depth to Water:** *17.73* **feet**
Depth to Bottom: *45.00* **feet** **Water Column Thickness:** *27.27* **feet**
Purge Volume: *4.45* **gallon(s)** **3 x Purge Volume:** *13.34* **gallon(s)**
Well Location: *Outside side gate down hill in woods*
Equipment: *Horiba U-22 Water Quality Meter, Dedicated Bladder Pump, Slope 150' Waterlevel Meter*

Time	Volume (gallons)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Temp. (oC)	Volume (gallons)
11:20	0.0	6.09	0.521	4.37	16.3	216
11:25	4.5	6.54	0.446	>1000	15.31	200
11:30	8.9	6.75	0.433	>1000	15.13	182
11:36	13.34	6.76	0.435	>1000	17.11	193
Sampled on 5-31-07 @ 10:45						
10:45	--	7.23	0.427	0	17.11	193

Comments (weather conditions, color, type of sample, purge-water management, etc.):
**NOTE: Bailed well due to pump malfunction. Pulled pump for repairs.*

Signature: [signature] **Date:** 5-31-2007
QA/QC Sign Off: [signature] **Date:** 9-5-07

DATE: *05/30/07*

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Well ID: *MW-8* **Sampler(s):** *B. Draper/W. Jappe*
Well Diameter: *2* **inches** **Initial Depth to Water:** *9.50* **feet**
Depth to Bottom: *13.50* **feet** **Water Column Thickness:** *4.00* **feet**
Purge Volume: *1.55* **gallon(s)** **3 x Purge Volume:** *4.65* **gallon(s)**
Well Location:
Equipment: *Horiba U-22 Water Quality Meter, Dedicated Bladder Pump, Slope 150' Waterlevel Meter*

Time	DTW (feet)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O2 (mg/L)	Temp. (oC)	ORP (millivolts)
2:20	11.0	5.69	0.310	29.5	2.3	17.19	144
2:23	11.0	5.61	0.304	24.2	2.8	17.78	151
2:26	11.0	5.57	0.304	42.1	2.9	18.60	154
2:29	11.0	5.55	0.302	61.8	2.8	19.31	156
Sampled @ 2:30							
2:45	11.0	6.27	0.289	50.7	8.4	18.07	143

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Purge Rate = 300 ml/min
System Volume = 1040 mL

Signature: [signature] **Date:** 5-30-2007
QA/QC Sign Off: [signature] **Date:** 9-5-07

DATE: *05/31/07*

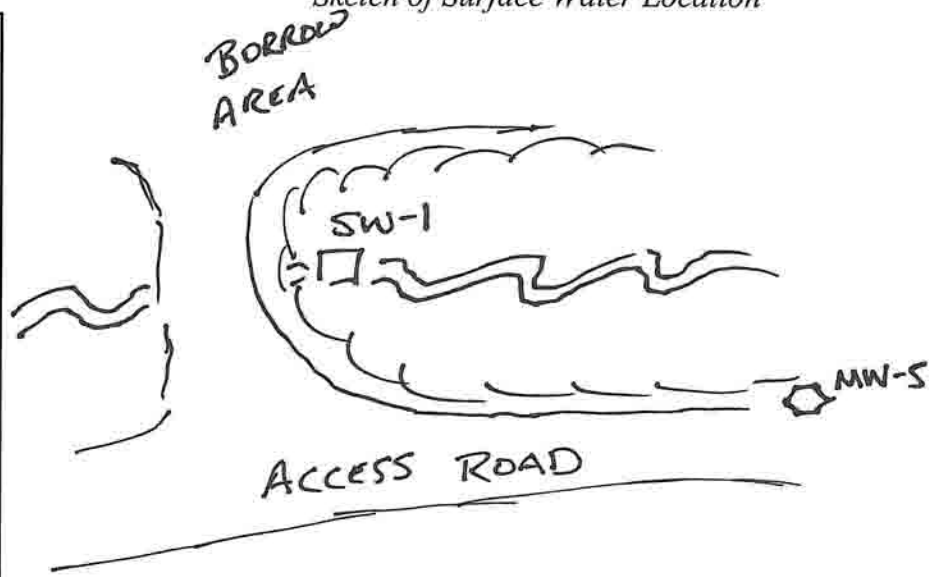
Golder Associates

SURFACE WATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Sample ID: *SW-1* **Sampler(s):** *B. Draper/ W. Jappe*
Sampling Location: *Located in stream behind MW-5*
Equipment: *Horiba U-22 Water Quality Meter*

Time	14:50
pH s.u.	DRY
Cond. mS/cm	DRY
Turb. ntu	DRY
Dis. O2 mg/L	DRY
Temp. oC	DRY
ORP mv	DRY

Sketch of Surface Water Location



Comments (sample methodology, weather conditions, color, silt, etc.):
Dry-- no flowing water

Signature: Date: 5-31-2007
QA/QC Sign Off: Date: 9-5-07

DATE: *05/31/07*

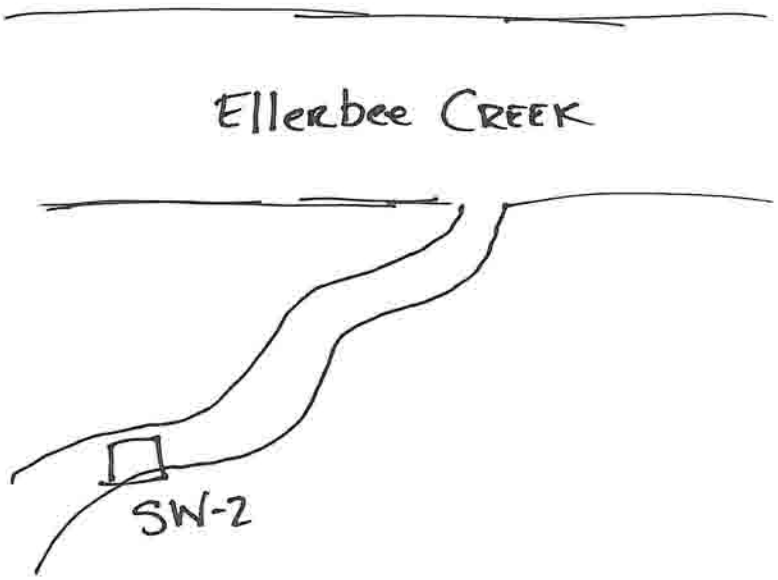
Golder Associates

SURFACE WATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Sample ID: *SW-2* **Sampler(s):** *B. Draper/ W. Jappe*
Sampling Location: *Tributary of Ellerbee Creek*
Equipment: *Horiba U-22 Water Quality Meter*

Time	12:30
pH s.u.	DRY
Cond. mS/cm	DRY
Turb. ntu	DRY
Dis. O2 mg/L	DRY
Temp. oC	DRY
ORP mv	DRY

Sketch of Surface Water Location



Comments (sample methodology, weather conditions, color, silt, etc.):
Dry--no flowing water

Signature: [signature] Date: 5-31-2007
QA/QC Sign Off: [signature] Date: 9-5-07

DATE: *05/31/07*

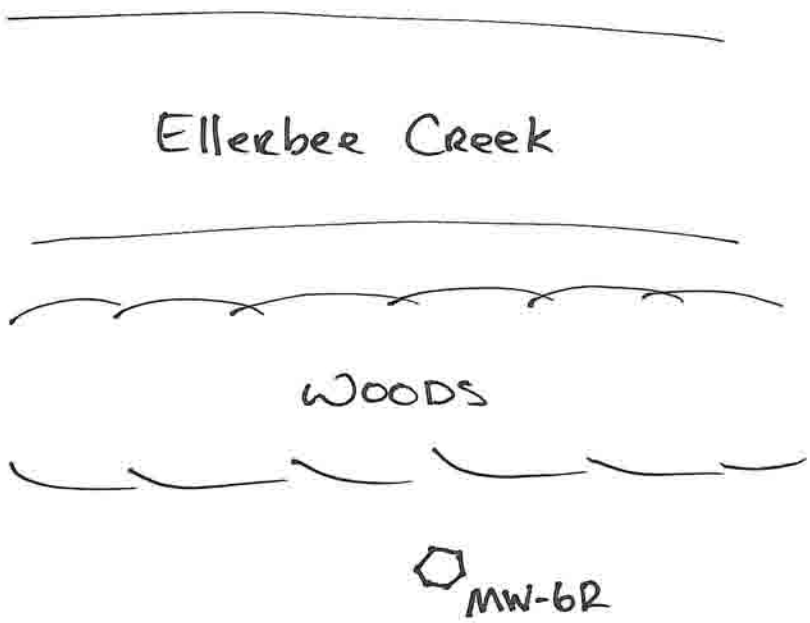
Golder Associates

SURFACE WATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Sample ID: *SW-3* **Sampler(s):** *B. Draper/ W. Jappe*
Sampling Location: *Downstream sample Ellerbee Creek*
Equipment: *Horiba U-22 Water Quality Meter*

Time	12:45
pH s.u.	8.64
Cond. mS/cm	0.485
Turb. ntu	56.9
Dis. O2 mg/L	7.7
Temp. oC	23.8
ORP mv	45

Sketch of Surface Water Location



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

Signature: Date: 5-31-2007
QA/QC Sign Off: Date: 9-5-07

DATE: *05/31/07*

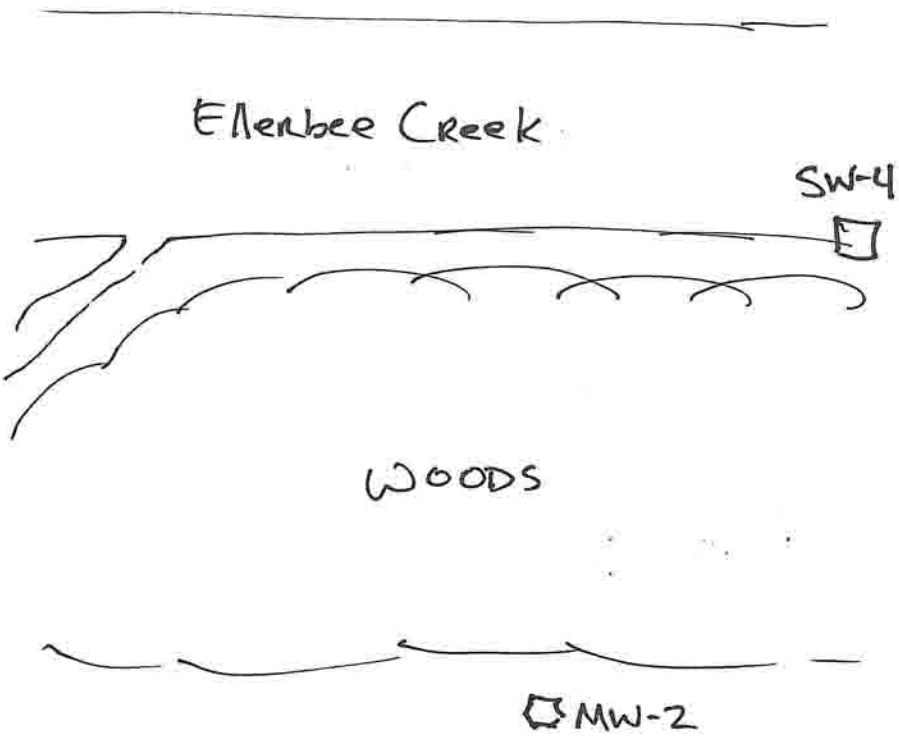
Golder Associates

SURFACE WATER SAMPLING LOG

Project Name: *City of Durham* **Project No./Phase No.:** *073-96042.100*
Sample ID: *SW-4* **Sampler(s):** *B. Draper/ W. Jappe*
Sampling Location: *Upstream sample Ellerbee Creek*
Equipment: *Horiba U-22 Water Quality Meter*

Time	12:15
pH s.u.	8.55
Cond. mS/cm	0.477
Turb. ntu	0.0
Dis. O2 mg/L	8.1
Temp. oC	24.28
TDS Sal	-
ORP mv	70

Sketch of Surface Water Location



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

Signature: Date: 5-31-2007
QA/QC Sign Off: Date: 9-5-07

APPENDIX II

MAY 2007 CERTIFICATES-OF-ANALYSIS, CHAIN-OF-CUSTODY FORMS AND LABORATORY DATA REVIEWS

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

www.encolabs.com

RECEIVED JUN 26 2007

Monday, June 25, 2007

Golder Associates, Inc. (GO007)
Attn: Rachel Kirkman
The Wingate Building 4900 Koger Blvd., Suite 140
Greensboro, NC 27407

RE: Project Number: [none], Project Name/Desc: City of Durham
ENCO Workorder: C706524

Dear Rachel Kirkman,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, June 1, 2007.

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.

This data has been produced in accordance with NELAC standards (June, 2003). 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. Data from outside organizations will be reported under separate cover.

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

Sincerely,

Chuck Smith

Chuck Smith
Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 142.

CASE NARRATIVE

Date: June 25, 2007
Client: Golder Associates
Project #: City of Durham
Lab ID: C706524

Overview

All samples submitted were analyzed by Environmental Conservation Laboratories, Inc. in accordance with the methods referenced in the laboratory report. Any particular difficulties encountered during sample handling by Environmental Conservation Laboratories, Inc. will be discussed in the QC Remarks section below.

Quality Control Samples

No Comments

Quality Control Remarks

VGCMS Toluene was found in the trip blank. This detection was verified. The associated method blank was clean.

At this time, Environmental Conservation Laboratories is investigating to determine if this contamination originated in the laboratory or the containers.

Other Comments

The sample containers were not checked for residual Chlorine upon receipt as this is not a requirement for groundwater samples.

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.

Released By:
Environmental Conservation Laboratories, Inc.

Chuck Smith
Project Manager

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 3201-P6 **Lab ID:** C706524-01

Sampled: 05/30/07 12:44 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 335.2	06/13/07		06/05/07 10:45	6/5/2007 19:02
EPA 376.1	06/06/07		06/06/07 08:00	6/6/2007 09:30
EPA 6010B	11/26/07		06/06/07 08:59	6/7/2007 13:08
EPA 6020	11/26/07		06/08/07 10:36	6/11/2007 13:08
EPA 7470A	06/27/07		06/13/07 11:07	6/14/2007 13:05
EPA 8081A	06/06/07	07/14/07	06/04/07 08:58	6/4/2007 22:16
EPA 8082	06/06/07	07/14/07	06/04/07 08:58	6/4/2007 22:16
EPA 8151A	06/06/07	07/14/07	06/04/07 16:36	6/8/2007 01:36
EPA 8260B	06/13/07		06/08/07 12:00	6/8/2007 15:16
EPA 8270C	06/06/07	07/15/07	06/05/07 08:28	6/9/2007 07:58

Client ID: 3201-MW2 **Lab ID:** C706524-02

Sampled: 05/31/07 09:50 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 335.2	06/14/07		06/05/07 10:45	6/5/2007 19:02
EPA 376.1	06/07/07		06/06/07 08:00	6/6/2007 09:30
EPA 6010B	11/27/07		06/06/07 08:59	6/7/2007 13:15
EPA 6020	11/27/07		06/08/07 10:36	6/11/2007 13:10
EPA 7470A	06/28/07		06/13/07 11:07	6/14/2007 13:07
EPA 8081A	06/07/07	07/14/07	06/04/07 08:58	6/4/2007 22:40
EPA 8082	06/07/07	07/14/07	06/04/07 08:58	6/4/2007 22:40
EPA 8151A	06/07/07	07/14/07	06/04/07 16:36	6/8/2007 02:09
EPA 8260B	06/14/07		06/08/07 12:00	6/8/2007 15:43
EPA 8270C	06/07/07	07/15/07	06/05/07 08:28	6/9/2007 08:26

Client ID: 3201-MW3 MS/MSD **Lab ID:** C706524-03

Sampled: 05/31/07 11:45 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 335.2	06/14/07		06/05/07 10:45	6/5/2007 19:02
EPA 376.1	06/07/07		06/06/07 08:00	6/6/2007 09:30
EPA 6010B	11/27/07		06/06/07 08:59	6/7/2007 12:43
EPA 6020	11/27/07		06/08/07 10:36	6/11/2007 13:00
EPA 7470A	06/28/07		06/13/07 11:07	6/14/2007 13:10
EPA 8081A	06/07/07	07/14/07	06/04/07 08:58	6/4/2007 20:42
EPA 8082	06/07/07	07/14/07	06/04/07 08:58	6/4/2007 20:42
EPA 8151A	06/07/07	07/14/07	06/04/07 16:36	6/8/2007 08:40
EPA 8260B	06/14/07		06/08/07 12:00	6/8/2007 14:23
EPA 8270C	06/07/07	07/15/07	06/05/07 08:28	6/9/2007 08:54

Client ID: 3201-MW4R **Lab ID:** C706524-04

Sampled: 05/30/07 16:50 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 335.2	06/13/07		06/05/07 10:45	6/5/2007 19:02
EPA 376.1	06/06/07		06/06/07 08:00	6/6/2007 09:30
EPA 6010B	11/26/07		06/06/07 08:59	6/7/2007 13:22
EPA 6020	11/26/07		06/08/07 10:36	6/11/2007 13:13
EPA 7470A	06/27/07		06/13/07 11:07	6/14/2007 13:12
EPA 8081A	06/06/07	07/14/07	06/04/07 08:58	6/4/2007 23:04
EPA 8082	06/06/07	07/14/07	06/04/07 08:58	6/4/2007 23:04
EPA 8151A	06/06/07	07/14/07	06/04/07 16:36	6/8/2007 02:41
EPA 8260B	06/13/07		06/08/07 12:00	6/8/2007 16:10
EPA 8270C	06/06/07	07/15/07	06/05/07 08:28	6/9/2007 09:22

www.encolabs.com

Client ID: 3201-MW5 **Lab ID:** C706524-05

Sampled: 05/31/07 14:45 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 335.2	06/14/07		06/06/07 07:07	6/6/2007 21:30
EPA 376.1	06/07/07		06/06/07 08:00	6/6/2007 09:30
EPA 6010B	11/27/07		06/06/07 08:59	6/7/2007 13:29
EPA 6020	11/27/07		06/08/07 10:36	6/11/2007 13:20
EPA 7470A	06/28/07		06/13/07 11:07	6/14/2007 13:14
EPA 8081A	06/07/07	07/14/07	06/04/07 08:58	6/4/2007 23:28
EPA 8082	06/07/07	07/14/07	06/04/07 08:58	6/4/2007 23:28
EPA 8151A	06/07/07	07/14/07	06/04/07 16:36	6/8/2007 03:14
EPA 8260B	06/14/07		06/08/07 12:00	6/8/2007 14:49
EPA 8270C	06/07/07	07/15/07	06/05/07 08:28	6/9/2007 09:50

Client ID: 3201-MW6R **Lab ID:** C706524-06

Sampled: 05/31/07 08:49 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 335.2	06/14/07		06/06/07 07:07	6/6/2007 21:30
EPA 376.1	06/07/07		06/06/07 08:00	6/6/2007 09:30
EPA 6010B	11/27/07		06/06/07 08:59	6/7/2007 13:36
EPA 6020	11/27/07		06/08/07 10:36	6/11/2007 13:23
EPA 7470A	06/28/07		06/13/07 11:07	6/14/2007 13:21
EPA 8081A	06/07/07	07/14/07	06/04/07 08:58	6/5/2007 07:01
EPA 8082	06/07/07	07/14/07	06/04/07 08:58	6/5/2007 07:01
EPA 8151A	06/07/07	07/14/07	06/04/07 16:36	6/8/2007 03:47
EPA 8260B	06/14/07		06/08/07 12:00	6/8/2007 16:37
EPA 8270C	06/07/07	07/15/07	06/05/07 08:28	6/9/2007 10:19

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Client ID: 3201-MW7R **Lab ID:** C706524-07

Sampled: 05/31/07 10:45 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 335.2	06/14/07		06/05/07 10:45	6/5/2007 19:02
EPA 376.1	06/07/07		06/06/07 08:00	6/6/2007 09:30
EPA 6010B	11/27/07		06/06/07 08:59	6/7/2007 14:06
EPA 6020	11/27/07		06/08/07 10:36	6/11/2007 13:25
EPA 7470A	06/28/07		06/13/07 11:07	6/14/2007 13:23
EPA 8081A	06/07/07	07/14/07	06/04/07 08:58	6/5/2007 07:25
EPA 8082	06/07/07	07/14/07	06/04/07 08:58	6/5/2007 07:25
EPA 8151A	06/07/07	07/14/07	06/04/07 16:36	6/8/2007 04:19
EPA 8260B	06/14/07		06/08/07 12:00	6/8/2007 17:04
EPA 8270C	06/07/07	07/15/07	06/05/07 08:28	6/9/2007 10:47

Client ID: 3201-MW8 **Lab ID:** C706524-08

Sampled: 05/30/07 14:30 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 335.2	06/13/07		06/05/07 10:45	6/5/2007 19:02
EPA 376.1	06/06/07		06/06/07 08:00	6/6/2007 09:30
EPA 6010B	11/26/07		06/06/07 08:59	6/7/2007 14:13
EPA 6020	11/26/07		06/08/07 10:36	6/11/2007 13:28
EPA 7470A	06/27/07		06/13/07 11:07	6/14/2007 13:25
EPA 8081A	06/06/07	07/14/07	06/04/07 08:58	6/5/2007 07:49
EPA 8082	06/06/07	07/14/07	06/04/07 08:58	6/5/2007 07:49
EPA 8151A	06/06/07	07/14/07	06/04/07 16:36	6/8/2007 04:52
EPA 8260B	06/13/07		06/08/07 12:00	6/8/2007 17:33
EPA 8270C	06/06/07	07/15/07	06/05/07 08:28	6/9/2007 11:15

Client ID: 3201-S3 **Lab ID:** C706524-11

Sampled: 05/31/07 12:45 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	11/27/07	06/06/07 08:59	6/7/2007 14:20
EPA 6020	11/27/07	06/08/07 10:36	6/11/2007 13:30
EPA 8260B	06/14/07	06/08/07 12:00	6/8/2007 18:02

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Client ID: 3201-S4 **Lab ID:** C706524-12

Sampled: 05/31/07 12:15 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	11/27/07		06/06/07 08:59	6/7/2007 14:27
EPA 6020	11/27/07		06/08/07 10:36	6/11/2007 13:33
EPA 8260B	06/14/07		06/08/07 12:00	6/8/2007 18:29

Client ID: 3201-Field Blank **Lab ID:** C706524-13

Sampled: 05/31/07 15:15 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 335.2	06/14/07		06/06/07 07:07	6/6/2007 21:30
EPA 376.1	06/07/07		06/06/07 08:00	6/6/2007 09:30
EPA 6010B	11/27/07		06/06/07 08:59	6/7/2007 14:34
EPA 6020	11/27/07		06/08/07 10:36	6/11/2007 13:35
EPA 7470A	06/28/07		06/13/07 11:07	6/14/2007 13:28
EPA 8081A	06/07/07	07/14/07	06/04/07 08:58	6/5/2007 08:12
EPA 8082	06/07/07	07/14/07	06/04/07 08:58	6/5/2007 08:12
EPA 8151A	06/07/07	07/14/07	06/04/07 16:36	6/8/2007 05:24
EPA 8260B	06/14/07		06/08/07 12:00	6/8/2007 18:55
EPA 8270C	06/07/07	07/15/07	06/05/07 08:28	6/9/2007 11:43

Client ID: 3201-Trip Blank **Lab ID:** C706524-14

Sampled: 05/31/07 00:00 **Received:** 06/01/07 17:00

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	06/14/07	06/08/07 12:00	6/8/2007 19:22

NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 3201-P6 — **Lab ID: C706524-01**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Barium	619		1	0.2	10.0	100	ug/L	EPA 6010B
Bis(2-ethylhexyl)phthalate	3.0	J	1	1.0	10	15	ug/L	EPA 8270C
Chromium	7.0	J	1	2.0	10.0	10	ug/L	EPA 6010B
Cobalt	3.2	J	1	2.0	10.0	10	ug/L	EPA 6010B
Copper	7.2	J	1	0.6	10.0	10	ug/L	EPA 6010B
Di-n-octylphthalate	3.5	J	1	0.90	10	10	ug/L	EPA 8270C
Lead	3.5	J	1	2.0	10.0	10	ug/L	EPA 6010B
Nickel	27.4	J	1	2.0	10.0	50	ug/L	EPA 6010B
Thallium	0.108	J	1	0.044	0.050	5.5	ug/L	EPA 6020
Vanadium	5.4	J	1	1.0	10.0	25	ug/L	EPA 6010B
Zinc	18.4		1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-MW2 — **Lab ID: C706524-02**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Barium	67.2	J	1	0.2	10.0	100	ug/L	EPA 6010B
Bis(2-ethylhexyl)phthalate	1.2	J	1	1.0	10	15	ug/L	EPA 8270C
Copper	1.1	J	1	0.6	10.0	10	ug/L	EPA 6010B
Zinc	10.4		1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-MW3 MS/MSD — **Lab ID: C706524-03**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Barium	1490		1	0.2	10.0	100	ug/L	EPA 6010B
Benzene	0.47	J	1	0.12	1.0	1	ug/L	EPA 8260B
Bis(2-ethylhexyl)phthalate	1.1	J	1	1.0	10	15	ug/L	EPA 8270C
Cobalt	4.3	J	1	2.0	10.0	10	ug/L	EPA 6010B
Nickel	2.5	J	1	2.0	10.0	50	ug/L	EPA 6010B
Thallium	0.086	J	1	0.044	0.050	5.5	ug/L	EPA 6020

Client ID: 3201-MW4R — **Lab ID: C706524-04**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Barium	472		1	0.2	10.0	100	ug/L	EPA 6010B
Bis(2-ethylhexyl)phthalate	1.2	J	1	1.0	10	15	ug/L	EPA 8270C
Copper	1.7	J	1	0.6	10.0	10	ug/L	EPA 6010B
Di-n-octylphthalate	1.1	J	1	0.90	10	10	ug/L	EPA 8270C
Nickel	2.9	J	1	2.0	10.0	50	ug/L	EPA 6010B
Silver	2.0	J	1	2.0	10.0	10	ug/L	EPA 6010B
Zinc	1.1	J	1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-MW5 — **Lab ID: C706524-05**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Arsenic	3.4	J	1	2.0	10.0	10	ug/L	EPA 6010B
Barium	1240		1	0.2	10.0	100	ug/L	EPA 6010B
Nickel	4.0	J	1	2.0	10.0	50	ug/L	EPA 6010B
Zinc	3.3	J	1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-MW6R — **Lab ID: C706524-06**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
1,1-Dichloroethane	3.6	J	1	0.090	1.0	5	ug/L	EPA 8260B

Client ID: 3201-MW6R **Lab ID: C706524-06**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
1,2-Dichlorobenzene	0.51	J	1	0.17	1.0	5	ug/L	EPA 8260B
1,2-Dichloropropane	2.0		1	0.18	1.0	1	ug/L	EPA 8260B
1,4-Dichlorobenzene	3.4		1	0.15	1.0	1	ug/L	EPA 8260B
Barium	400		1	0.2	10.0	100	ug/L	EPA 6010B
Benzene	2.6		1	0.12	1.0	1	ug/L	EPA 8260B
Cadmium	1.10		1	0.50	1.00	1	ug/L	EPA 6010B
Chlorobenzene	1.6	J	1	0.16	1.0	3	ug/L	EPA 8260B
cis-1,2-Dichloroethene	89		1	0.14	1.0	5	ug/L	EPA 8260B
Cobalt	10.2		1	2.0	10.0	10	ug/L	EPA 6010B
Copper	1.8	J	1	0.6	10.0	10	ug/L	EPA 6010B
Mercury	0.20		1	0.11	0.20	0.2	ug/L	EPA 7470A
Nickel	23.1	J	1	2.0	10.0	50	ug/L	EPA 6010B
Selenium	2.8	J	1	2.0	10.0	10	ug/L	EPA 6010B
Silver	2.8	J	1	2.0	10.0	10	ug/L	EPA 6010B
Tetrachloroethene	0.64	J	1	0.25	1.0	1	ug/L	EPA 8260B
trans-1,2-Dichloroethene	3.7	J	1	0.10	1.0	5	ug/L	EPA 8260B
Trichloroethene	2.6		1	0.23	1.0	1	ug/L	EPA 8260B
Vinyl chloride	14		1	0.15	1.0	1	ug/L	EPA 8260B
Zinc	6.8	J	1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-MW7R **Lab ID: C706524-07**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Arsenic	2.0	J	1	2.0	10.0	10	ug/L	EPA 6010B
Barium	622		1	0.2	10.0	100	ug/L	EPA 6010B
Copper	0.6	J	1	0.6	10.0	10	ug/L	EPA 6010B
Zinc	12.3		1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-MW8 **Lab ID: C706524-08**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Acetone	1.7	J	1	0.90	5.0	100	ug/L	EPA 8260B
Arsenic	3.1	J	1	2.0	10.0	10	ug/L	EPA 6010B
Barium	69.0	J	1	0.2	10.0	100	ug/L	EPA 6010B
Cobalt	11.2		1	2.0	10.0	10	ug/L	EPA 6010B
Nickel	2.9	J	1	2.0	10.0	50	ug/L	EPA 6010B
Selenium	3.2	J	1	2.0	10.0	10	ug/L	EPA 6010B
Zinc	4.4	J	1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-S3 **Lab ID: C706524-11**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Acetone	5.4	J	1	0.90	5.0	100	ug/L	EPA 8260B
Barium	7.6	J	1	0.2	10.0	100	ug/L	EPA 6010B
Chloroform	0.55	J	1	0.16	1.0	5	ug/L	EPA 8260B
Copper	0.8	J	1	0.6	10.0	10	ug/L	EPA 6010B
Nickel	2.7	J	1	2.0	10.0	50	ug/L	EPA 6010B
Selenium	2.3	J	1	2.0	10.0	10	ug/L	EPA 6010B
Vanadium	1.2	J	1	1.0	10.0	25	ug/L	EPA 6010B
Zinc	52.5		1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-S4 **Lab ID: C706524-12**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Barium	8.1	J	1	0.2	10.0	100	ug/L	EPA 6010B

Client ID: 3201-S4 **Lab ID: C706524-12**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Chloroform	0.60	J	1	0.16	1.0	5	ug/L	EPA 8260B
Copper	1.3	J	1	0.6	10.0	10	ug/L	EPA 6010B
Nickel	2.7	J	1	2.0	10.0	50	ug/L	EPA 6010B
Selenium	2.9	J	1	2.0	10.0	10	ug/L	EPA 6010B
Zinc	51.9		1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-Field Blank **Lab ID: C706524-13**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Acetone	3.8	J	1	0.90	5.0	100	ug/L	EPA 8260B
Lead	3.1	J	1	2.0	10.0	10	ug/L	EPA 6010B
Tin	3.6	J	1	2.0	10.0	100	ug/L	EPA 6010B
Zinc	2.4	J	1	1.0	10.0	10	ug/L	EPA 6010B

Client ID: 3201-Trip Blank **Lab ID: C706524-14**

Analyte	Results/Qual		DF	MDL	MRL	NC SWSL	Units	Method
Acetone	3.2	J	1	0.90	5.0	100	ug/L	EPA 8260B
Toluene	0.33	J	1	0.15	1.0	1	ug/L	EPA 8260B

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ANALYTICAL REPORT

Sample ID:	3201-P6	Project:	City of Durham
Lab #:	C706524-01	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	0.90 U	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-P6	Project:	City of Durham
Lab #:	C706524-01	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	44	50.0	88 %	67-125
Dibromofluoromethane	1868-53-7	42	50.0	85 %	69-111
Toluene-d8	2037-26-5	42 S-GC	50.0	84 %	85-120

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ANALYTICAL REPORT

Sample ID:	3201-P6	Project:	City of Durham
Lab #:	C706524-01	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,2,4,5-Tetrachlorobenzene	95-94-3	1.7 U	1.7	10	10	ug/L
1,3,5-Trinitrobenzene	99-35-4	1.4 U	1.4	10	10	ug/L
1,3-Dinitrobenzene	99-65-0	1.0 U	1.0	10	20	ug/L
1,4-Naphthoquinone	130-15-4	3.2 U	3.2	10	10	ug/L
1,4-Phenylenediamine	106-50-3	4.0 U	4.0	10	10	ug/L
1-Naphthylamine	134-32-7	2.5 U	2.5	10	10	ug/L
2,3,4,6-Tetrachlorophenol	58-90-2	1.0 U	1.0	10	10	ug/L
2,4,5-Trichlorophenol	95-95-4	1.1 U	1.1	10	10	ug/L
2,4,6-Trichlorophenol	88-06-2	1.4 U	1.4	10	10	ug/L
2,4-Dichlorophenol	120-83-2	1.6 U	1.6	10	10	ug/L
2,4-Dimethylphenol	105-67-9	3.0 U	3.0	10	10	ug/L
2,4-Dinitrophenol	51-28-5	1.7 U	1.7	10	50	ug/L
2,4-Dinitrotoluene	121-14-2	1.1 U	1.1	10	10	ug/L
2,6-Dichlorophenol	87-65-0	1.7 U	1.7	10	10	ug/L
2,6-Dinitrotoluene	606-20-2	1.0 U	1.0	10	10	ug/L
2-Acetylaminofluorene	53-96-3	1.3 U	1.3	10	20	ug/L
2-Chloronaphthalene	91-58-7	1.6 U	1.6	10	10	ug/L
2-Chlorophenol	95-57-8	2.0 U	2.0	10	10	ug/L
2-Methyl-4,6-dinitrophenol	534-52-1	1.2 U	1.2	10	50	ug/L
2-Methylnaphthalene	91-57-6	2.0 U	2.0	10	10	ug/L
2-Methylphenol	95-48-7	2.0 U	2.0	10	10	ug/L
2-Naphthylamine	91-59-8	4.0 U	4.0	10	10	ug/L
2-Nitroaniline	88-74-4	1.2 U	1.2	10	50	ug/L
2-Nitrophenol	88-75-5	1.8 U	1.8	10	10	ug/L
3 & 4-Methylphenol		1.9 U	1.9	20	10	ug/L
3,3'-Dichlorobenzidine	91-94-1	1.8 U	1.8	10	20	ug/L
3,3'-Dimethylbenzidine	119-93-7	3.0 U	3.0	10	10	ug/L
3-Methylcholanthrene	56-49-5	1.3 U	1.3	10	10	ug/L
3-Nitroaniline	99-09-2	0.70 U	0.70	10	50	ug/L
4-Aminobiphenyl	92-67-1	3.1 U	3.1	10	15	ug/L
4-Bromophenyl-phenylether	101-55-3	1.1 U	1.1	10	10	ug/L
4-Chloro-3-methylphenol	59-50-7	1.4 U	1.4	10	20	ug/L
4-Chloroaniline	106-47-8	1.6 U	1.6	10	20	ug/L
4-Chlorophenyl-phenylether	7005-72-3	1.2 U	1.2	10	10	ug/L
4-Nitroaniline	100-01-6	0.70 U	0.70	10	20	ug/L
4-Nitrophenol	100-02-7	1.2 U	1.2	10	50	ug/L
5-Nitro-o-toluidine	99-55-8	0.60 U	0.60	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-P6	Project:	City of Durham
Lab #:	C706524-01	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
7,12-Dimethylbenz(a)anthracene	57-97-6	1.1 U	1.1	10	10	ug/L
Acenaphthene	83-32-9	1.4 U	1.4	10	10	ug/L
Acenaphthylene	208-96-8	1.4 U	1.4	10	10	ug/L
Acetophenone	98-86-2	2.0 U	2.0	10	10	ug/L
Anthracene	120-12-7	0.90 U	0.90	10	10	ug/L
Benzo(a)anthracene	56-55-3	1.0 U	1.0	10	10	ug/L
Benzo(a)pyrene	50-32-8	1.1 U	1.1	10	10	ug/L
Benzo(b)fluoranthene	205-99-2	0.70 U	0.70	10	10	ug/L
Benzo(g,h,i)perylene	191-24-2	1.3 U	1.3	10	10	ug/L
Benzo(k)fluoranthene	207-08-9	1.8 U	1.8	10	10	ug/L
Benzyl alcohol	100-51-6	2.0 U	2.0	10	20	ug/L
Bis(2-chloroethoxy)methane	111-91-1	2.0 U	2.0	10	10	ug/L
Bis(2-chloroethyl)ether	111-44-4	2.1 U	2.1	10	10	ug/L
Bis(2-chloroisopropyl)ether	108-60-1	2.2 U	2.2	10	10	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	**3.0** J	1.0	10	15	ug/L
Butylbenzylphthalate	85-68-7	1.0 U	1.0	10	10	ug/L
Chlorobenzilate	510-15-6	1.2 U	1.2	10	10	ug/L
Chrysene	218-01-9	1.0 U	1.0	10	10	ug/L
Diallate	2303-16-4	1.3 U	1.3	10	10	ug/L
Dibenzo(a,h)anthracene	53-70-3	1.0 U	1.0	10	10	ug/L
Dibenzofuran	132-64-9	1.3 U	1.3	10	10	ug/L
Diethylphthalate	84-66-2	1.0 U	1.0	10	10	ug/L
Dimethoate	60-51-5	1.0 U	1.0	10	20	ug/L
Dimethylphthalate	131-11-3	1.1 U	1.1	10	10	ug/L
Di-n-butylphthalate	84-74-2	1.0 U	1.0	10	10	ug/L
Di-n-octylphthalate	117-84-0	**3.5** J	0.90	10	10	ug/L
Disulfoton	298-04-4	1.0 U	1.0	10	10	ug/L
Ethyl methanesulfonate	62-50-0	2.0 U	2.0	10	20	ug/L
Famphur	52-85-7	2.0 U	2.0	10	20	ug/L
Fluoranthene	206-44-0	0.90 U	0.90	10	10	ug/L
Fluorene	86-73-7	1.1 U	1.1	10	10	ug/L
Hexachlorobenzene	118-74-1	1.1 U	1.1	10	10	ug/L
Hexachlorobutadiene	87-68-3	2.0 U	2.0	10	10	ug/L
Hexachlorocyclopentadiene	77-47-4	2.0 U	2.0	10	10	ug/L
Hexachloroethane	67-72-1	2.4 U	2.4	10	10	ug/L
Hexachloropropene	1888-71-7	1.1 U	1.1	10	10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	1.1 U	1.1	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-P6	Project:	City of Durham
Lab #:	C706524-01	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Isodrin	465-73-6	1.0 U	1.0	10	20	ug/L
Isophorone	78-59-1	1.8 U	1.8	10	10	ug/L
Isosafrole	120-58-1	1.8 U	1.8	10	10	ug/L
Kepone	143-50-0	1.5 U	1.5	20	20	ug/L
Methapyrilene	91-80-5	3.8 U	3.8	10	100	ug/L
Methyl Methanesulfonate	66-27-3	2.0 U	2.0	10	10	ug/L
Methyl parathion	298-00-0	1.1 U	1.1	10	10	ug/L
Nitrobenzene	98-95-3	1.9 U	1.9	10	10	ug/L
N-Nitrosodiethylamine	55-18-5	1.9 U	1.9	10	20	ug/L
N-Nitrosodimethylamine	62-75-9	1.9 U	1.9	10	10	ug/L
N-Nitrosodi-n-butylamine	924-16-3	1.7 U	1.7	10	10	ug/L
N-Nitroso-di-n-propylamine	621-64-7	2.1 U	2.1	10	10	ug/L
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	1.1 U	1.1	10	10	ug/L
N-Nitrosomethylethylamine	10595-95-6	1.9 U	1.9	10	10	ug/L
N-Nitrosopiperidine	100-75-4	1.5 U	1.5	10	20	ug/L
N-Nitrosopyrrolidine	930-55-2	1.9 U	1.9	10	10	ug/L
O,O,O-Triethyl phosphorothioate	126-68-1	2.0 U	2.0	10	10	ug/L
o-Toluidine	95-53-4	1.5 U	1.5	10	10	ug/L
Parathion	56-38-2	1.0 U	1.0	10	10	ug/L
p-Dimethylaminoazobenzene	60-11-7	1.2 U	1.2	10	10	ug/L
Pentachlorobenzene	608-93-5	1.2 U	1.2	10	10	ug/L
Pentachloronitrobenzene	82-68-8	1.1 U	1.1	10	20	ug/L
Phenacetin	62-44-2	1.0 U	1.0	10	20	ug/L
Phenanthrene	85-01-8	0.90 U	0.90	10	10	ug/L
Phenol	108-95-2	1.5 U	1.5	10	10	ug/L
Phorate	298-02-2	4.1 U	4.1	10	10	ug/L
Pronamide	23950-58-5	1.0 U	1.0	10	10	ug/L
Pyrene	129-00-0	0.90 U	0.90	10	10	ug/L
Safrole	94-59-7	1.9 U	1.9	10	10	ug/L
Thionazin	297-97-2	1.0 U	1.0	10	20	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,6-Tribromophenol	118-79-6	97	100	97 %	55-159
2-Fluorobiphenyl	321-60-8	39	50.0	78 %	44-131
2-Fluorophenol	367-12-4	59	100	59 %	30-114
Nitrobenzene-d5	NA	40	50.0	80 %	39-131
Phenol-d5	NA	46	100	46 %	12-122
Terphenyl-d14	NA	60	50.0	120 %	47-160

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ANALYTICAL REPORT

Sample ID:	3201-P6	Project:	City of Durham
Lab #:	C706524-01	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8081A	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Organochlorine Pesticides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
4,4'-DDD	72-54-8	0.0050 U	0.0050	0.050	0.1	ug/L
4,4'-DDE	72-55-9	0.0060 U	0.0060	0.050	0.1	ug/L
4,4'-DDT	50-29-3	0.0050 U	0.0050	0.050	0.1	ug/L
Aldrin	309-00-2	0.0030 U	0.0030	0.050	0.05	ug/L
alpha-BHC	319-84-6	0.0010 U	0.0010	0.050	0.05	ug/L
beta-BHC	319-85-7	0.0030 U	0.0030	0.050	0.05	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
delta-BHC	319-86-8	0.0020 U	0.0020	0.050	0.05	ug/L
Dieldrin	60-57-1	0.0060 U	0.0060	0.050	0.075	ug/L
Endosulfan I	959-98-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan II	33213-65-9	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan sulfate	1031-07-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin	72-20-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin aldehyde	7421-93-4	0.0040 U	0.0040	0.050	0.1	ug/L
gamma-BHC	58-89-9	0.0020 U	0.0020	0.050	0.05	ug/L
Heptachlor	76-44-8	0.0030 U	0.0030	0.050	0.05	ug/L
Heptachlor epoxide	1024-57-3	0.0040 U	0.0040	0.050	0.075	ug/L
Methoxychlor	72-43-5	0.0060 U	0.0060	0.050	1	ug/L
Toxaphene	8001-35-2	0.67 U	0.67	1.0	1.5	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.95	1.00	95 %	27-125
DBC	NA	1.1	1.00	114 %	46-130

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ANALYTICAL REPORT

Sample ID:	3201-P6	Project:	City of Durham
Lab #:	C706524-01	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8082	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Polychlorinated Biphenyls by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
PCB-1016/1242	12674-11-2/53469-:	0.34 U	0.34	1.0		ug/L
PCB-1221	11104-28-2	0.70 U	0.70	1.0	NE	ug/L
PCB-1232	11141-16-5	0.80 U	0.80	1.0	NE	ug/L
PCB-1248	12672-29-6	0.70 U	0.70	1.0	NE	ug/L
PCB-1254	11097-69-1	0.50 U	0.50	1.0	NE	ug/L
PCB-1260	11096-82-5	0.21 U	0.21	1.0	NE	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.95	1.00	95 %	27-125
DBC	NA	1.1	1.00	114 %	46-130

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ANALYTICAL REPORT

Sample ID: 3201-P6
Lab #: C706524-01

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**619**	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	**7.0** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	**3.2** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	**7.2** J	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	**3.5** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	**27.4** J	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	**0.108** J	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Tin	7440-31-5	2.0 U	1	2.0	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Vanadium	7440-62-2	**5.4** J	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**18.4**	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID:	3201-P6	Project:	City of Durham
Lab #:	C706524-01	Work Order #:	C706524
		Matrix:	Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Sulfide	18496-25-8	0.50 U	1	0.50	1.0	1	mg/L	EPA 376.1	NO PREP	7F07026

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ANALYTICAL REPORT

Sample ID:	3201-P6	Project:	City of Durham
Lab #:	C706524-01	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/08/07 By: RB/	Unit:	ug/L
Anal. Method:	EPA 8151A	Dilution Factor:	1
Anal. Batch:	AA00987		
QC Batch:	7F04031		

Chlorinated Herbicides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
2,4,5-T	93-76-5	0.11 U	0.11	0.30	2	ug/L
2,4,5-TP (Silvex)	93-72-1	0.11 U	0.11	0.30	2	ug/L
2,4-D	94-75-7	0.12 U	0.12	0.30	2	ug/L
Dinoseb	88-85-7	0.23 U	0.23	0.30	1	ug/L
Pentachlorophenol	87-86-5	0.13 U	0.13	0.30	25.05	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4-DCAA	94-75-7	2.4	2.00	121 %	61-177

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ANALYTICAL REPORT

Sample ID: 3201-P6
Lab #: C706524-01

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Cyanide (total)	57-12-5	0.0058 U	1	0.0058	0.010	10	mg/L	EPA 335.2	NO PREP	7F04002

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ANALYTICAL REPORT

Sample ID: 3201-P6
Lab #: C706524-01

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Mercury	7439-97-6	0.11 U	1	0.11	0.20	0.2	ug/L	EPA 7470A	EPA 7470A	7F13013

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ANALYTICAL REPORT

Sample ID:	3201-MW2	Project:	City of Durham
Lab #:	C706524-02	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	0.90 U	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW2	Project:	City of Durham
Lab #:	C706524-02	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	45	50.0	89 %	67-125
Dibromofluoromethane	1868-53-7	43	50.0	85 %	69-111
Toluene-d8	2037-26-5	44	50.0	87 %	85-120

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ANALYTICAL REPORT

Sample ID:	3201-MW2	Project:	City of Durham
Lab #:	C706524-02	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,2,4,5-Tetrachlorobenzene	95-94-3	1.7 U	1.7	10	10	ug/L
1,3,5-Trinitrobenzene	99-35-4	1.4 U	1.4	10	10	ug/L
1,3-Dinitrobenzene	99-65-0	1.0 U	1.0	10	20	ug/L
1,4-Naphthoquinone	130-15-4	3.2 U	3.2	10	10	ug/L
1,4-Phenylenediamine	106-50-3	4.0 U	4.0	10	10	ug/L
1-Naphthylamine	134-32-7	2.5 U	2.5	10	10	ug/L
2,3,4,6-Tetrachlorophenol	58-90-2	1.0 U	1.0	10	10	ug/L
2,4,5-Trichlorophenol	95-95-4	1.1 U	1.1	10	10	ug/L
2,4,6-Trichlorophenol	88-06-2	1.4 U	1.4	10	10	ug/L
2,4-Dichlorophenol	120-83-2	1.6 U	1.6	10	10	ug/L
2,4-Dimethylphenol	105-67-9	3.0 U	3.0	10	10	ug/L
2,4-Dinitrophenol	51-28-5	1.7 U	1.7	10	50	ug/L
2,4-Dinitrotoluene	121-14-2	1.1 U	1.1	10	10	ug/L
2,6-Dichlorophenol	87-65-0	1.7 U	1.7	10	10	ug/L
2,6-Dinitrotoluene	606-20-2	1.0 U	1.0	10	10	ug/L
2-Acetylaminofluorene	53-96-3	1.3 U	1.3	10	20	ug/L
2-Chloronaphthalene	91-58-7	1.6 U	1.6	10	10	ug/L
2-Chlorophenol	95-57-8	2.0 U	2.0	10	10	ug/L
2-Methyl-4,6-dinitrophenol	534-52-1	1.2 U	1.2	10	50	ug/L
2-Methylnaphthalene	91-57-6	2.0 U	2.0	10	10	ug/L
2-Methylphenol	95-48-7	2.0 U	2.0	10	10	ug/L
2-Naphthylamine	91-59-8	4.0 U	4.0	10	10	ug/L
2-Nitroaniline	88-74-4	1.2 U	1.2	10	50	ug/L
2-Nitrophenol	88-75-5	1.8 U	1.8	10	10	ug/L
3 & 4-Methylphenol		1.9 U	1.9	20	10	ug/L
3,3'-Dichlorobenzidine	91-94-1	1.8 U	1.8	10	20	ug/L
3,3'-Dimethylbenzidine	119-93-7	3.0 U	3.0	10	10	ug/L
3-Methylcholanthrene	56-49-5	1.3 U	1.3	10	10	ug/L
3-Nitroaniline	99-09-2	0.70 U	0.70	10	50	ug/L
4-Aminobiphenyl	92-67-1	3.1 U	3.1	10	15	ug/L
4-Bromophenyl-phenylether	101-55-3	1.1 U	1.1	10	10	ug/L
4-Chloro-3-methylphenol	59-50-7	1.4 U	1.4	10	20	ug/L
4-Chloroaniline	106-47-8	1.6 U	1.6	10	20	ug/L
4-Chlorophenyl-phenylether	7005-72-3	1.2 U	1.2	10	10	ug/L
4-Nitroaniline	100-01-6	0.70 U	0.70	10	20	ug/L
4-Nitrophenol	100-02-7	1.2 U	1.2	10	50	ug/L
5-Nitro-o-toluidine	99-55-8	0.60 U	0.60	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW2	Project:	City of Durham
Lab #:	C706524-02	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
7,12-Dimethylbenz(a)anthracene	57-97-6	1.1 U	1.1	10	10	ug/L
Acenaphthene	83-32-9	1.4 U	1.4	10	10	ug/L
Acenaphthylene	208-96-8	1.4 U	1.4	10	10	ug/L
Acetophenone	98-86-2	2.0 U	2.0	10	10	ug/L
Anthracene	120-12-7	0.90 U	0.90	10	10	ug/L
Benzo(a)anthracene	56-55-3	1.0 U	1.0	10	10	ug/L
Benzo(a)pyrene	50-32-8	1.1 U	1.1	10	10	ug/L
Benzo(b)fluoranthene	205-99-2	0.70 U	0.70	10	10	ug/L
Benzo(g,h,i)perylene	191-24-2	1.3 U	1.3	10	10	ug/L
Benzo(k)fluoranthene	207-08-9	1.8 U	1.8	10	10	ug/L
Benzyl alcohol	100-51-6	2.0 U	2.0	10	20	ug/L
Bis(2-chloroethoxy)methane	111-91-1	2.0 U	2.0	10	10	ug/L
Bis(2-chloroethyl)ether	111-44-4	2.1 U	2.1	10	10	ug/L
Bis(2-chloroisopropyl)ether	108-60-1	2.2 U	2.2	10	10	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	**1.2 J**	1.0	10	15	ug/L
Butylbenzylphthalate	85-68-7	1.0 U	1.0	10	10	ug/L
Chlorobenzilate	510-15-6	1.2 U	1.2	10	10	ug/L
Chrysene	218-01-9	1.0 U	1.0	10	10	ug/L
Diallate	2303-16-4	1.3 U	1.3	10	10	ug/L
Dibenzo(a,h)anthracene	53-70-3	1.0 U	1.0	10	10	ug/L
Dibenzofuran	132-64-9	1.3 U	1.3	10	10	ug/L
Diethylphthalate	84-66-2	1.0 U	1.0	10	10	ug/L
Dimethoate	60-51-5	1.0 U	1.0	10	20	ug/L
Dimethylphthalate	131-11-3	1.1 U	1.1	10	10	ug/L
Di-n-butylphthalate	84-74-2	1.0 U	1.0	10	10	ug/L
Di-n-octylphthalate	117-84-0	0.90 U	0.90	10	10	ug/L
Disulfoton	298-04-4	1.0 U	1.0	10	10	ug/L
Ethyl methanesulfonate	62-50-0	2.0 U	2.0	10	20	ug/L
Famphur	52-85-7	2.0 U	2.0	10	20	ug/L
Fluoranthene	206-44-0	0.90 U	0.90	10	10	ug/L
Fluorene	86-73-7	1.1 U	1.1	10	10	ug/L
Hexachlorobenzene	118-74-1	1.1 U	1.1	10	10	ug/L
Hexachlorobutadiene	87-68-3	2.0 U	2.0	10	10	ug/L
Hexachlorocyclopentadiene	77-47-4	2.0 U	2.0	10	10	ug/L
Hexachloroethane	67-72-1	2.4 U	2.4	10	10	ug/L
Hexachloropropene	1888-71-7	1.1 U	1.1	10	10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	1.1 U	1.1	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW2	Project:	City of Durham
Lab #:	C706524-02	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Isodrin	465-73-6	1.0 U	1.0	10	20	ug/L
Isophorone	78-59-1	1.8 U	1.8	10	10	ug/L
Isosafrole	120-58-1	1.8 U	1.8	10	10	ug/L
Kepone	143-50-0	1.5 U	1.5	20	20	ug/L
Methapyrilene	91-80-5	3.8 U	3.8	10	100	ug/L
Methyl Methanesulfonate	66-27-3	2.0 U	2.0	10	10	ug/L
Methyl parathion	298-00-0	1.1 U	1.1	10	10	ug/L
Nitrobenzene	98-95-3	1.9 U	1.9	10	10	ug/L
N-Nitrosodiethylamine	55-18-5	1.9 U	1.9	10	20	ug/L
N-Nitrosodimethylamine	62-75-9	1.9 U	1.9	10	10	ug/L
N-Nitrosodi-n-butylamine	924-16-3	1.7 U	1.7	10	10	ug/L
N-Nitroso-di-n-propylamine	621-64-7	2.1 U	2.1	10	10	ug/L
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	1.1 U	1.1	10	10	ug/L
N-Nitrosomethylethylamine	10595-95-6	1.9 U	1.9	10	10	ug/L
N-Nitrosopiperidine	100-75-4	1.5 U	1.5	10	20	ug/L
N-Nitrosopyrrolidine	930-55-2	1.9 U	1.9	10	10	ug/L
O,O,O-Triethyl phosphorothioate	126-68-1	2.0 U	2.0	10	10	ug/L
o-Toluidine	95-53-4	1.5 U	1.5	10	10	ug/L
Parathion	56-38-2	1.0 U	1.0	10	10	ug/L
p-Dimethylaminoazobenzene	60-11-7	1.2 U	1.2	10	10	ug/L
Pentachlorobenzene	608-93-5	1.2 U	1.2	10	10	ug/L
Pentachloronitrobenzene	82-68-8	1.1 U	1.1	10	20	ug/L
Phenacetin	62-44-2	1.0 U	1.0	10	20	ug/L
Phenanthrene	85-01-8	0.90 U	0.90	10	10	ug/L
Phenol	108-95-2	1.5 U	1.5	10	10	ug/L
Phorate	298-02-2	4.1 U	4.1	10	10	ug/L
Pronamide	23950-58-5	1.0 U	1.0	10	10	ug/L
Pyrene	129-00-0	0.90 U	0.90	10	10	ug/L
Safrole	94-59-7	1.9 U	1.9	10	10	ug/L
Thionazin	297-97-2	1.0 U	1.0	10	20	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,6-Tribromophenol	118-79-6	83	100	83 %	55-159
2-Fluorobiphenyl	321-60-8	34	50.0	68 %	44-131
2-Fluorophenol	367-12-4	52	100	52 %	30-114
Nitrobenzene-d5	NA	35	50.0	71 %	39-131
Phenol-d5	NA	40	100	40 %	12-122
Terphenyl-d14	NA	59	50.0	117 %	47-160

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ANALYTICAL REPORT

Sample ID:	3201-MW2	Project:	City of Durham
Lab #:	C706524-02	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8081A	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Organochlorine Pesticides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
4,4'-DDD	72-54-8	0.0050 U	0.0050	0.050	0.1	ug/L
4,4'-DDE	72-55-9	0.0060 U	0.0060	0.050	0.1	ug/L
4,4'-DDT	50-29-3	0.0050 U	0.0050	0.050	0.1	ug/L
Aldrin	309-00-2	0.0030 U	0.0030	0.050	0.05	ug/L
alpha-BHC	319-84-6	0.0010 U	0.0010	0.050	0.05	ug/L
beta-BHC	319-85-7	0.0030 U	0.0030	0.050	0.05	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
delta-BHC	319-86-8	0.0020 U	0.0020	0.050	0.05	ug/L
Dieldrin	60-57-1	0.0060 U	0.0060	0.050	0.075	ug/L
Endosulfan I	959-98-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan II	33213-65-9	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan sulfate	1031-07-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin	72-20-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin aldehyde	7421-93-4	0.0040 U	0.0040	0.050	0.1	ug/L
gamma-BHC	58-89-9	0.0020 U	0.0020	0.050	0.05	ug/L
Heptachlor	76-44-8	0.0030 U	0.0030	0.050	0.05	ug/L
Heptachlor epoxide	1024-57-3	0.0040 U	0.0040	0.050	0.075	ug/L
Methoxychlor	72-43-5	0.0060 U	0.0060	0.050	1	ug/L
Toxaphene	8001-35-2	0.67 U	0.67	1.0	1.5	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.97	1.00	97 %	27-125
DBC	NA	1.2	1.00	116 %	46-130

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ANALYTICAL REPORT

Sample ID:	3201-MW2	Project:	City of Durham
Lab #:	C706524-02	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8082	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Polychlorinated Biphenyls by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
PCB-1016/1242	12674-11-2/53469-:	0.34 U	0.34	1.0		ug/L
PCB-1221	11104-28-2	0.70 U	0.70	1.0	NE	ug/L
PCB-1232	11141-16-5	0.80 U	0.80	1.0	NE	ug/L
PCB-1248	12672-29-6	0.70 U	0.70	1.0	NE	ug/L
PCB-1254	11097-69-1	0.50 U	0.50	1.0	NE	ug/L
PCB-1260	11096-82-5	0.21 U	0.21	1.0	NE	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.97	1.00	97 %	27-125
DBC	NA	1.2	1.00	116 %	46-130

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ANALYTICAL REPORT

Sample ID: 3201-MW2
Lab #: C706524-02

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**67.2** J	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	**1.1** J	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	2.0 U	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	0.044 U	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Tin	7440-31-5	2.0 U	1	2.0	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Vanadium	7440-62-2	1.0 U	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**10.4**	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID: 3201-MW2
Lab #: C706524-02

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Sulfide	18496-25-8	0.50 U	1	0.50	1.0	1	mg/L	EPA 376.1	NO PREP	7F07026

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ANALYTICAL REPORT

Sample ID:	3201-MW2	Project:	City of Durham
Lab #:	C706524-02	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/08/07 By: RB/	Unit:	ug/L
Anal. Method:	EPA 8151A	Dilution Factor:	1
Anal. Batch:	AA00987		
QC Batch:	7F04031		

Chlorinated Herbicides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
2,4,5-T	93-76-5	0.11 U	0.11	0.30	2	ug/L
2,4,5-TP (Silvex)	93-72-1	0.11 U	0.11	0.30	2	ug/L
2,4-D	94-75-7	0.12 U	0.12	0.30	2	ug/L
Dinoseb	88-85-7	0.23 U	0.23	0.30	1	ug/L
Pentachlorophenol	87-86-5	0.13 U	0.13	0.30	25.05	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4-DCAA	94-75-7	2.3	2.00	115 %	61-177

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ANALYTICAL REPORT

Sample ID: 3201-MW2
Lab #: C706524-02

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Cyanide (total)	57-12-5	0.0058 U	1	0.0058	0.010	10	mg/L	EPA 335.2	NO PREP	7F04002

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ANALYTICAL REPORT

Sample ID: 3201-MW2
Lab #: C706524-02

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Mercury	7439-97-6	0.11 U	1	0.11	0.20	0.2	ug/L	EPA 7470A	EPA 7470A	7F13013

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ANALYTICAL REPORT

Sample ID:	3201-MW3 MS/MSD	Project:	City of Durham
Lab #:	C706524-03	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	0.90 U	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	**0.47** J	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW3 MS/MSD	Project:	City of Durham
Lab #:	C706524-03	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	45	50.0	90 %	67-125
Dibromofluoromethane	1868-53-7	41	50.0	81 %	69-111
Toluene-d8	2037-26-5	41 S-GC	50.0	82 %	85-120

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ANALYTICAL REPORT

Sample ID:	3201-MW3 MS/MSD	Project:	City of Durham
Lab #:	C706524-03	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,2,4,5-Tetrachlorobenzene	95-94-3	1.7 U	1.7	10	10	ug/L
1,3,5-Trinitrobenzene	99-35-4	1.4 U	1.4	10	10	ug/L
1,3-Dinitrobenzene	99-65-0	1.0 U	1.0	10	20	ug/L
1,4-Naphthoquinone	130-15-4	3.2 U	3.2	10	10	ug/L
1,4-Phenylenediamine	106-50-3	4.0 U	4.0	10	10	ug/L
1-Naphthylamine	134-32-7	2.5 U	2.5	10	10	ug/L
2,3,4,6-Tetrachlorophenol	58-90-2	1.0 U	1.0	10	10	ug/L
2,4,5-Trichlorophenol	95-95-4	1.1 U	1.1	10	10	ug/L
2,4,6-Trichlorophenol	88-06-2	1.4 U	1.4	10	10	ug/L
2,4-Dichlorophenol	120-83-2	1.6 U	1.6	10	10	ug/L
2,4-Dimethylphenol	105-67-9	3.0 U	3.0	10	10	ug/L
2,4-Dinitrophenol	51-28-5	1.7 U	1.7	10	50	ug/L
2,4-Dinitrotoluene	121-14-2	1.1 U	1.1	10	10	ug/L
2,6-Dichlorophenol	87-65-0	1.7 U	1.7	10	10	ug/L
2,6-Dinitrotoluene	606-20-2	1.0 U	1.0	10	10	ug/L
2-Acetylaminofluorene	53-96-3	1.3 U	1.3	10	20	ug/L
2-Chloronaphthalene	91-58-7	1.6 U	1.6	10	10	ug/L
2-Chlorophenol	95-57-8	2.0 U	2.0	10	10	ug/L
2-Methyl-4,6-dinitrophenol	534-52-1	1.2 U	1.2	10	50	ug/L
2-Methylnaphthalene	91-57-6	2.0 U	2.0	10	10	ug/L
2-Methylphenol	95-48-7	2.0 U	2.0	10	10	ug/L
2-Naphthylamine	91-59-8	4.0 U	4.0	10	10	ug/L
2-Nitroaniline	88-74-4	1.2 U	1.2	10	50	ug/L
2-Nitrophenol	88-75-5	1.8 U	1.8	10	10	ug/L
3 & 4-Methylphenol		1.9 U	1.9	20	10	ug/L
3,3'-Dichlorobenzidine	91-94-1	1.8 U	1.8	10	20	ug/L
3,3'-Dimethylbenzidine	119-93-7	3.0 U	3.0	10	10	ug/L
3-Methylcholanthrene	56-49-5	1.3 U	1.3	10	10	ug/L
3-Nitroaniline	99-09-2	0.70 U	0.70	10	50	ug/L
4-Aminobiphenyl	92-67-1	3.1 U	3.1	10	15	ug/L
4-Bromophenyl-phenylether	101-55-3	1.1 U	1.1	10	10	ug/L
4-Chloro-3-methylphenol	59-50-7	1.4 U	1.4	10	20	ug/L
4-Chloroaniline	106-47-8	1.6 U	1.6	10	20	ug/L
4-Chlorophenyl-phenylether	7005-72-3	1.2 U	1.2	10	10	ug/L
4-Nitroaniline	100-01-6	0.70 U	0.70	10	20	ug/L
4-Nitrophenol	100-02-7	1.2 U	1.2	10	50	ug/L
5-Nitro-o-toluidine	99-55-8	0.60 U	0.60	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW3 MS/MSD	Project:	City of Durham
Lab #:	C706524-03	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
7,12-Dimethylbenz(a)anthracene	57-97-6	1.1 U	1.1	10	10	ug/L
Acenaphthene	83-32-9	1.4 U	1.4	10	10	ug/L
Acenaphthylene	208-96-8	1.4 U	1.4	10	10	ug/L
Acetophenone	98-86-2	2.0 U	2.0	10	10	ug/L
Anthracene	120-12-7	0.90 U	0.90	10	10	ug/L
Benzo(a)anthracene	56-55-3	1.0 U	1.0	10	10	ug/L
Benzo(a)pyrene	50-32-8	1.1 U	1.1	10	10	ug/L
Benzo(b)fluoranthene	205-99-2	0.70 U	0.70	10	10	ug/L
Benzo(g,h,i)perylene	191-24-2	1.3 U	1.3	10	10	ug/L
Benzo(k)fluoranthene	207-08-9	1.8 U	1.8	10	10	ug/L
Benzyl alcohol	100-51-6	2.0 U	2.0	10	20	ug/L
Bis(2-chloroethoxy)methane	111-91-1	2.0 U	2.0	10	10	ug/L
Bis(2-chloroethyl)ether	111-44-4	2.1 U	2.1	10	10	ug/L
Bis(2-chloroisopropyl)ether	108-60-1	2.2 U	2.2	10	10	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	**1.1** J	1.0	10	15	ug/L
Butylbenzylphthalate	85-68-7	1.0 U	1.0	10	10	ug/L
Chlorobenzilate	510-15-6	1.2 U	1.2	10	10	ug/L
Chrysene	218-01-9	1.0 U	1.0	10	10	ug/L
Diallate	2303-16-4	1.3 U	1.3	10	10	ug/L
Dibenzo(a,h)anthracene	53-70-3	1.0 U	1.0	10	10	ug/L
Dibenzofuran	132-64-9	1.3 U	1.3	10	10	ug/L
Diethylphthalate	84-66-2	1.0 U	1.0	10	10	ug/L
Dimethoate	60-51-5	1.0 U	1.0	10	20	ug/L
Dimethylphthalate	131-11-3	1.1 U	1.1	10	10	ug/L
Di-n-butylphthalate	84-74-2	1.0 U	1.0	10	10	ug/L
Di-n-octylphthalate	117-84-0	0.90 U	0.90	10	10	ug/L
Disulfoton	298-04-4	1.0 U	1.0	10	10	ug/L
Ethyl methanesulfonate	62-50-0	2.0 U	2.0	10	20	ug/L
Famphur	52-85-7	2.0 U	2.0	10	20	ug/L
Fluoranthene	206-44-0	0.90 U	0.90	10	10	ug/L
Fluorene	86-73-7	1.1 U	1.1	10	10	ug/L
Hexachlorobenzene	118-74-1	1.1 U	1.1	10	10	ug/L
Hexachlorobutadiene	87-68-3	2.0 U	2.0	10	10	ug/L
Hexachlorocyclopentadiene	77-47-4	2.0 U	2.0	10	10	ug/L
Hexachloroethane	67-72-1	2.4 U	2.4	10	10	ug/L
Hexachloropropene	1888-71-7	1.1 U	1.1	10	10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	1.1 U	1.1	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW3 MS/MSD	Project:	City of Durham
Lab #:	C706524-03	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Isodrin	465-73-6	1.0 U	1.0	10	20	ug/L
Isophorone	78-59-1	1.8 U	1.8	10	10	ug/L
Isosafrole	120-58-1	1.8 U	1.8	10	10	ug/L
Kepone	143-50-0	1.5 U	1.5	20	20	ug/L
Methapyrilene	91-80-5	3.8 U	3.8	10	100	ug/L
Methyl Methanesulfonate	66-27-3	2.0 U	2.0	10	10	ug/L
Methyl parathion	298-00-0	1.1 U	1.1	10	10	ug/L
Nitrobenzene	98-95-3	1.9 U	1.9	10	10	ug/L
N-Nitrosodiethylamine	55-18-5	1.9 U	1.9	10	20	ug/L
N-Nitrosodimethylamine	62-75-9	1.9 U	1.9	10	10	ug/L
N-Nitrosodi-n-butylamine	924-16-3	1.7 U	1.7	10	10	ug/L
N-Nitroso-di-n-propylamine	621-64-7	2.1 U	2.1	10	10	ug/L
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	1.1 U	1.1	10	10	ug/L
N-Nitrosomethylethylamine	10595-95-6	1.9 U	1.9	10	10	ug/L
N-Nitrosopiperidine	100-75-4	1.5 U	1.5	10	20	ug/L
N-Nitrosopyrrolidine	930-55-2	1.9 U	1.9	10	10	ug/L
O,O,O-Triethyl phosphorothioate	126-68-1	2.0 U	2.0	10	10	ug/L
o-Toluidine	95-53-4	1.5 U	1.5	10	10	ug/L
Parathion	56-38-2	1.0 U	1.0	10	10	ug/L
p-Dimethylaminoazobenzene	60-11-7	1.2 U	1.2	10	10	ug/L
Pentachlorobenzene	608-93-5	1.2 U	1.2	10	10	ug/L
Pentachloronitrobenzene	82-68-8	1.1 U	1.1	10	20	ug/L
Phenacetin	62-44-2	1.0 U	1.0	10	20	ug/L
Phenanthrene	85-01-8	0.90 U	0.90	10	10	ug/L
Phenol	108-95-2	1.5 U	1.5	10	10	ug/L
Phorate	298-02-2	4.1 U	4.1	10	10	ug/L
Pronamide	23950-58-5	1.0 U	1.0	10	10	ug/L
Pyrene	129-00-0	0.90 U	0.90	10	10	ug/L
Safrole	94-59-7	1.9 U	1.9	10	10	ug/L
Thionazin	297-97-2	1.0 U	1.0	10	20	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,6-Tribromophenol	118-79-6	100	100	104 %	55-159
2-Fluorobiphenyl	321-60-8	38	50.0	77 %	44-131
2-Fluorophenol	367-12-4	52	100	52 %	30-114
Nitrobenzene-d5	NA	35	50.0	71 %	39-131
Phenol-d5	NA	42	100	42 %	12-122
Terphenyl-d14	NA	47	50.0	93 %	47-160

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ANALYTICAL REPORT

Sample ID:	3201-MW3 MS/MSD	Project:	City of Durham
Lab #:	C706524-03	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8081A	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Organochlorine Pesticides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
4,4'-DDD	72-54-8	0.0050 U	0.0050	0.050	0.1	ug/L
4,4'-DDE	72-55-9	0.0060 U	0.0060	0.050	0.1	ug/L
4,4'-DDT	50-29-3	0.0050 U	0.0050	0.050	0.1	ug/L
Aldrin	309-00-2	0.0030 U	0.0030	0.050	0.05	ug/L
alpha-BHC	319-84-6	0.0010 U	0.0010	0.050	0.05	ug/L
beta-BHC	319-85-7	0.0030 U	0.0030	0.050	0.05	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
delta-BHC	319-86-8	0.0020 U	0.0020	0.050	0.05	ug/L
Dieldrin	60-57-1	0.0060 U	0.0060	0.050	0.075	ug/L
Endosulfan I	959-98-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan II	33213-65-9	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan sulfate	1031-07-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin	72-20-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin aldehyde	7421-93-4	0.0040 U	0.0040	0.050	0.1	ug/L
gamma-BHC	58-89-9	0.0020 U	0.0020	0.050	0.05	ug/L
Heptachlor	76-44-8	0.0030 U	0.0030	0.050	0.05	ug/L
Heptachlor epoxide	1024-57-3	0.0040 U	0.0040	0.050	0.075	ug/L
Methoxychlor	72-43-5	0.0060 U	0.0060	0.050	1	ug/L
Toxaphene	8001-35-2	0.67 U	0.67	1.0	1.5	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.86	1.00	86 %	27-125
DBC	NA	1.1	1.00	112 %	46-130

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ANALYTICAL REPORT

Sample ID:	3201-MW3 MS/MSD	Project:	City of Durham
Lab #:	C706524-03	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8082	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Polychlorinated Biphenyls by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
PCB-1016/1242	12674-11-2/53469-:	0.34 U	0.34	1.0		ug/L
PCB-1221	11104-28-2	0.70 U	0.70	1.0	NE	ug/L
PCB-1232	11141-16-5	0.80 U	0.80	1.0	NE	ug/L
PCB-1248	12672-29-6	0.70 U	0.70	1.0	NE	ug/L
PCB-1254	11097-69-1	0.50 U	0.50	1.0	NE	ug/L
PCB-1260	11096-82-5	0.21 U	0.21	1.0	NE	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.86	1.00	86 %	27-125
DBC	NA	1.1	1.00	112 %	46-130

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ANALYTICAL REPORT

Sample ID: 3201-MW3 MS/MSD
Lab #: C706524-03

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**1490**	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	**4.3** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	0.6 U	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	**2.5** J	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	**0.086** J	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Tin	7440-31-5	2.0 U	1	2.0	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Vanadium	7440-62-2	1.0 U	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	1.0 U	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID: 3201-MW3 MS/MSD
Lab #: C706524-03

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Sulfide	18496-25-8	0.50 U	1	0.50	1.0	1	mg/L	EPA 376.1	NO PREP	7F07026

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ANALYTICAL REPORT

Sample ID:	3201-MW3 MS/MSD	Project:	City of Durham
Lab #:	C706524-03	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/08/07 By: RB/	Unit:	ug/L
Anal. Method:	EPA 8151A	Dilution Factor:	5
Anal. Batch:	AA00987		
QC Batch:	7F04031		

Chlorinated Herbicides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
2,4,5-T	93-76-5	0.55 R-05, U, D	0.55	1.5	2	ug/L
2,4,5-TP (Silvex)	93-72-1	0.55 R-05, U, D	0.55	1.5	2	ug/L
2,4-D	94-75-7	0.60 R-05, U, D	0.60	1.5	2	ug/L
Dinoseb	88-85-7	1.2 R-05, U, D	1.2	1.5	1	ug/L
Pentachlorophenol	87-86-5	0.65 R-05, U, D	0.65	1.5	25.05	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4-DCAA	94-75-7	2.9 R-05	2.00	144 %	61-177

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ANALYTICAL REPORT

Sample ID:	3201-MW3 MS/MSD	Project:	City of Durham
Lab #:	C706524-03	Work Order #:	C706524
		Matrix:	Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Cyanide (total)	57-12-5	0.0058 U	1	0.0058	0.010	10	mg/L	EPA 335.2	NO PREP	7F04002

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ANALYTICAL REPORT

Sample ID: 3201-MW3 MS/MSD
Lab #: C706524-03

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Mercury	7439-97-6	0.11 U	1	0.11	0.20	0.2	ug/L	EPA 7470A	EPA 7470A	7F13013

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	0.90 U	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	46	50.0	91 %	67-125
Dibromofluoromethane	1868-53-7	42	50.0	83 %	69-111
Toluene-d8	2037-26-5	43	50.0	87 %	85-120

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,2,4,5-Tetrachlorobenzene	95-94-3	1.7 U	1.7	10	10	ug/L
1,3,5-Trinitrobenzene	99-35-4	1.4 U	1.4	10	10	ug/L
1,3-Dinitrobenzene	99-65-0	1.0 U	1.0	10	20	ug/L
1,4-Naphthoquinone	130-15-4	3.2 U	3.2	10	10	ug/L
1,4-Phenylenediamine	106-50-3	4.0 U	4.0	10	10	ug/L
1-Naphthylamine	134-32-7	2.5 U	2.5	10	10	ug/L
2,3,4,6-Tetrachlorophenol	58-90-2	1.0 U	1.0	10	10	ug/L
2,4,5-Trichlorophenol	95-95-4	1.1 U	1.1	10	10	ug/L
2,4,6-Trichlorophenol	88-06-2	1.4 U	1.4	10	10	ug/L
2,4-Dichlorophenol	120-83-2	1.6 U	1.6	10	10	ug/L
2,4-Dimethylphenol	105-67-9	3.0 U	3.0	10	10	ug/L
2,4-Dinitrophenol	51-28-5	1.7 U	1.7	10	50	ug/L
2,4-Dinitrotoluene	121-14-2	1.1 U	1.1	10	10	ug/L
2,6-Dichlorophenol	87-65-0	1.7 U	1.7	10	10	ug/L
2,6-Dinitrotoluene	606-20-2	1.0 U	1.0	10	10	ug/L
2-Acetylaminofluorene	53-96-3	1.3 U	1.3	10	20	ug/L
2-Chloronaphthalene	91-58-7	1.6 U	1.6	10	10	ug/L
2-Chlorophenol	95-57-8	2.0 U	2.0	10	10	ug/L
2-Methyl-4,6-dinitrophenol	534-52-1	1.2 U	1.2	10	50	ug/L
2-Methylnaphthalene	91-57-6	2.0 U	2.0	10	10	ug/L
2-Methylphenol	95-48-7	2.0 U	2.0	10	10	ug/L
2-Naphthylamine	91-59-8	4.0 U	4.0	10	10	ug/L
2-Nitroaniline	88-74-4	1.2 U	1.2	10	50	ug/L
2-Nitrophenol	88-75-5	1.8 U	1.8	10	10	ug/L
3 & 4-Methylphenol		1.9 U	1.9	20	10	ug/L
3,3'-Dichlorobenzidine	91-94-1	1.8 U	1.8	10	20	ug/L
3,3'-Dimethylbenzidine	119-93-7	3.0 U	3.0	10	10	ug/L
3-Methylcholanthrene	56-49-5	1.3 U	1.3	10	10	ug/L
3-Nitroaniline	99-09-2	0.70 U	0.70	10	50	ug/L
4-Aminobiphenyl	92-67-1	3.1 U	3.1	10	15	ug/L
4-Bromophenyl-phenylether	101-55-3	1.1 U	1.1	10	10	ug/L
4-Chloro-3-methylphenol	59-50-7	1.4 U	1.4	10	20	ug/L
4-Chloroaniline	106-47-8	1.6 U	1.6	10	20	ug/L
4-Chlorophenyl-phenylether	7005-72-3	1.2 U	1.2	10	10	ug/L
4-Nitroaniline	100-01-6	0.70 U	0.70	10	20	ug/L
4-Nitrophenol	100-02-7	1.2 U	1.2	10	50	ug/L
5-Nitro-o-toluidine	99-55-8	0.60 U	0.60	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
7,12-Dimethylbenz(a)anthracene	57-97-6	1.1 U	1.1	10	10	ug/L
Acenaphthene	83-32-9	1.4 U	1.4	10	10	ug/L
Acenaphthylene	208-96-8	1.4 U	1.4	10	10	ug/L
Acetophenone	98-86-2	2.0 U	2.0	10	10	ug/L
Anthracene	120-12-7	0.90 U	0.90	10	10	ug/L
Benzo(a)anthracene	56-55-3	1.0 U	1.0	10	10	ug/L
Benzo(a)pyrene	50-32-8	1.1 U	1.1	10	10	ug/L
Benzo(b)fluoranthene	205-99-2	0.70 U	0.70	10	10	ug/L
Benzo(g,h,i)perylene	191-24-2	1.3 U	1.3	10	10	ug/L
Benzo(k)fluoranthene	207-08-9	1.8 U	1.8	10	10	ug/L
Benzyl alcohol	100-51-6	2.0 U	2.0	10	20	ug/L
Bis(2-chloroethoxy)methane	111-91-1	2.0 U	2.0	10	10	ug/L
Bis(2-chloroethyl)ether	111-44-4	2.1 U	2.1	10	10	ug/L
Bis(2-chloroisopropyl)ether	108-60-1	2.2 U	2.2	10	10	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	**1.2** J	1.0	10	15	ug/L
Butylbenzylphthalate	85-68-7	1.0 U	1.0	10	10	ug/L
Chlorobenzilate	510-15-6	1.2 U	1.2	10	10	ug/L
Chrysene	218-01-9	1.0 U	1.0	10	10	ug/L
Diallate	2303-16-4	1.3 U	1.3	10	10	ug/L
Dibenzo(a,h)anthracene	53-70-3	1.0 U	1.0	10	10	ug/L
Dibenzofuran	132-64-9	1.3 U	1.3	10	10	ug/L
Diethylphthalate	84-66-2	1.0 U	1.0	10	10	ug/L
Dimethoate	60-51-5	1.0 U	1.0	10	20	ug/L
Dimethylphthalate	131-11-3	1.1 U	1.1	10	10	ug/L
Di-n-butylphthalate	84-74-2	1.0 U	1.0	10	10	ug/L
Di-n-octylphthalate	117-84-0	**1.1** J	0.90	10	10	ug/L
Disulfoton	298-04-4	1.0 U	1.0	10	10	ug/L
Ethyl methanesulfonate	62-50-0	2.0 U	2.0	10	20	ug/L
Famphur	52-85-7	2.0 U	2.0	10	20	ug/L
Fluoranthene	206-44-0	0.90 U	0.90	10	10	ug/L
Fluorene	86-73-7	1.1 U	1.1	10	10	ug/L
Hexachlorobenzene	118-74-1	1.1 U	1.1	10	10	ug/L
Hexachlorobutadiene	87-68-3	2.0 U	2.0	10	10	ug/L
Hexachlorocyclopentadiene	77-47-4	2.0 U	2.0	10	10	ug/L
Hexachloroethane	67-72-1	2.4 U	2.4	10	10	ug/L
Hexachloropropene	1888-71-7	1.1 U	1.1	10	10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	1.1 U	1.1	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Isodrin	465-73-6	1.0 U	1.0	10	20	ug/L
Isophorone	78-59-1	1.8 U	1.8	10	10	ug/L
Isosafrole	120-58-1	1.8 U	1.8	10	10	ug/L
Kepone	143-50-0	1.5 U	1.5	20	20	ug/L
Methapyrilene	91-80-5	3.8 U	3.8	10	100	ug/L
Methyl Methanesulfonate	66-27-3	2.0 U	2.0	10	10	ug/L
Methyl parathion	298-00-0	1.1 U	1.1	10	10	ug/L
Nitrobenzene	98-95-3	1.9 U	1.9	10	10	ug/L
N-Nitrosodiethylamine	55-18-5	1.9 U	1.9	10	20	ug/L
N-Nitrosodimethylamine	62-75-9	1.9 U	1.9	10	10	ug/L
N-Nitrosodi-n-butylamine	924-16-3	1.7 U	1.7	10	10	ug/L
N-Nitroso-di-n-propylamine	621-64-7	2.1 U	2.1	10	10	ug/L
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	1.1 U	1.1	10	10	ug/L
N-Nitrosomethylethylamine	10595-95-6	1.9 U	1.9	10	10	ug/L
N-Nitrosopiperidine	100-75-4	1.5 U	1.5	10	20	ug/L
N-Nitrosopyrrolidine	930-55-2	1.9 U	1.9	10	10	ug/L
O,O,O-Triethyl phosphorothioate	126-68-1	2.0 U	2.0	10	10	ug/L
o-Toluidine	95-53-4	1.5 U	1.5	10	10	ug/L
Parathion	56-38-2	1.0 U	1.0	10	10	ug/L
p-Dimethylaminoazobenzene	60-11-7	1.2 U	1.2	10	10	ug/L
Pentachlorobenzene	608-93-5	1.2 U	1.2	10	10	ug/L
Pentachloronitrobenzene	82-68-8	1.1 U	1.1	10	20	ug/L
Phenacetin	62-44-2	1.0 U	1.0	10	20	ug/L
Phenanthrene	85-01-8	0.90 U	0.90	10	10	ug/L
Phenol	108-95-2	1.5 U	1.5	10	10	ug/L
Phorate	298-02-2	4.1 U	4.1	10	10	ug/L
Pronamide	23950-58-5	1.0 U	1.0	10	10	ug/L
Pyrene	129-00-0	0.90 U	0.90	10	10	ug/L
Safrole	94-59-7	1.9 U	1.9	10	10	ug/L
Thionazin	297-97-2	1.0 U	1.0	10	20	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,6-Tribromophenol	118-79-6	91	100	91 %	55-159
2-Fluorobiphenyl	321-60-8	36	50.0	72 %	44-131
2-Fluorophenol	367-12-4	52	100	52 %	30-114
Nitrobenzene-d5	NA	37	50.0	73 %	39-131
Phenol-d5	NA	41	100	41 %	12-122
Terphenyl-d14	NA	59	50.0	117 %	47-160

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8081A	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Organochlorine Pesticides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
4,4'-DDD	72-54-8	0.0050 U	0.0050	0.050	0.1	ug/L
4,4'-DDE	72-55-9	0.0060 U	0.0060	0.050	0.1	ug/L
4,4'-DDT	50-29-3	0.0050 U	0.0050	0.050	0.1	ug/L
Aldrin	309-00-2	0.0030 U	0.0030	0.050	0.05	ug/L
alpha-BHC	319-84-6	0.0010 U	0.0010	0.050	0.05	ug/L
beta-BHC	319-85-7	0.0030 U	0.0030	0.050	0.05	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
delta-BHC	319-86-8	0.0020 U	0.0020	0.050	0.05	ug/L
Dieldrin	60-57-1	0.0060 U	0.0060	0.050	0.075	ug/L
Endosulfan I	959-98-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan II	33213-65-9	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan sulfate	1031-07-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin	72-20-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin aldehyde	7421-93-4	0.0040 U	0.0040	0.050	0.1	ug/L
gamma-BHC	58-89-9	0.0020 U	0.0020	0.050	0.05	ug/L
Heptachlor	76-44-8	0.0030 U	0.0030	0.050	0.05	ug/L
Heptachlor epoxide	1024-57-3	0.0040 U	0.0040	0.050	0.075	ug/L
Methoxychlor	72-43-5	0.0060 U	0.0060	0.050	1	ug/L
Toxaphene	8001-35-2	0.67 U	0.67	1.0	1.5	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.99	1.00	99 %	27-125
DBC	NA	1.2	1.00	118 %	46-130

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8082	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Polychlorinated Biphenyls by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
PCB-1016/1242	12674-11-2/53469-:	0.34 U	0.34	1.0		ug/L
PCB-1221	11104-28-2	0.70 U	0.70	1.0	NE	ug/L
PCB-1232	11141-16-5	0.80 U	0.80	1.0	NE	ug/L
PCB-1248	12672-29-6	0.70 U	0.70	1.0	NE	ug/L
PCB-1254	11097-69-1	0.50 U	0.50	1.0	NE	ug/L
PCB-1260	11096-82-5	0.21 U	0.21	1.0	NE	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.99	1.00	99 %	27-125
DBC	NA	1.2	1.00	118 %	46-130

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ANALYTICAL REPORT

Sample ID: 3201-MW4R
Lab #: C706524-04

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**472**	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	**1.7** J	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	**2.9** J	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	**2.0** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	0.044 U	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Tin	7440-31-5	2.0 U	1	2.0	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Vanadium	7440-62-2	1.0 U	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**1.1** J	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
		Matrix:	Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Sulfide	18496-25-8	0.50 U	1	0.50	1.0	1	mg/L	EPA 376.1	NO PREP	7F07026

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/08/07 By: RB/	Unit:	ug/L
Anal. Method:	EPA 8151A	Dilution Factor:	1
Anal. Batch:	AA00987		
QC Batch:	7F04031		

Chlorinated Herbicides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
2,4,5-T	93-76-5	0.11 U	0.11	0.30	2	ug/L
2,4,5-TP (Silvex)	93-72-1	0.11 U	0.11	0.30	2	ug/L
2,4-D	94-75-7	0.12 U	0.12	0.30	2	ug/L
Dinoseb	88-85-7	0.23 U	0.23	0.30	1	ug/L
Pentachlorophenol	87-86-5	0.13 U	0.13	0.30	25.05	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4-DCAA	94-75-7	2.5	2.00	123 %	61-177

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ANALYTICAL REPORT

Sample ID:	3201-MW4R	Project:	City of Durham
Lab #:	C706524-04	Work Order #:	C706524
		Matrix:	Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Cyanide (total)	57-12-5	0.0058 U	1	0.0058	0.010	10	mg/L	EPA 335.2	NO PREP	7F04002

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ANALYTICAL REPORT

Sample ID: 3201-MW4R
Lab #: C706524-04

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Mercury	7439-97-6	0.11 U	1	0.11	0.20	0.2	ug/L	EPA 7470A	EPA 7470A	7F13013

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ANALYTICAL REPORT

Sample ID:	3201-MW5	Project:	City of Durham
Lab #:	C706524-05	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	0.90 U	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW5	Project:	City of Durham
Lab #:	C706524-05	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	43	50.0	87 %	67-125
Dibromofluoromethane	1868-53-7	42	50.0	84 %	69-111
Toluene-d8	2037-26-5	44	50.0	88 %	85-120

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ANALYTICAL REPORT

Sample ID:	3201-MW5	Project:	City of Durham
Lab #:	C706524-05	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,2,4,5-Tetrachlorobenzene	95-94-3	1.7 U	1.7	10	10	ug/L
1,3,5-Trinitrobenzene	99-35-4	1.4 U	1.4	10	10	ug/L
1,3-Dinitrobenzene	99-65-0	1.0 U	1.0	10	20	ug/L
1,4-Naphthoquinone	130-15-4	3.2 U	3.2	10	10	ug/L
1,4-Phenylenediamine	106-50-3	4.0 U	4.0	10	10	ug/L
1-Naphthylamine	134-32-7	2.5 U	2.5	10	10	ug/L
2,3,4,6-Tetrachlorophenol	58-90-2	1.0 U	1.0	10	10	ug/L
2,4,5-Trichlorophenol	95-95-4	1.1 U	1.1	10	10	ug/L
2,4,6-Trichlorophenol	88-06-2	1.4 U	1.4	10	10	ug/L
2,4-Dichlorophenol	120-83-2	1.6 U	1.6	10	10	ug/L
2,4-Dimethylphenol	105-67-9	3.0 U	3.0	10	10	ug/L
2,4-Dinitrophenol	51-28-5	1.7 U	1.7	10	50	ug/L
2,4-Dinitrotoluene	121-14-2	1.1 U	1.1	10	10	ug/L
2,6-Dichlorophenol	87-65-0	1.7 U	1.7	10	10	ug/L
2,6-Dinitrotoluene	606-20-2	1.0 U	1.0	10	10	ug/L
2-Acetylaminofluorene	53-96-3	1.3 U	1.3	10	20	ug/L
2-Chloronaphthalene	91-58-7	1.6 U	1.6	10	10	ug/L
2-Chlorophenol	95-57-8	2.0 U	2.0	10	10	ug/L
2-Methyl-4,6-dinitrophenol	534-52-1	1.2 U	1.2	10	50	ug/L
2-Methylnaphthalene	91-57-6	2.0 U	2.0	10	10	ug/L
2-Methylphenol	95-48-7	2.0 U	2.0	10	10	ug/L
2-Naphthylamine	91-59-8	4.0 U	4.0	10	10	ug/L
2-Nitroaniline	88-74-4	1.2 U	1.2	10	50	ug/L
2-Nitrophenol	88-75-5	1.8 U	1.8	10	10	ug/L
3 & 4-Methylphenol		1.9 U	1.9	20	10	ug/L
3,3'-Dichlorobenzidine	91-94-1	1.8 U	1.8	10	20	ug/L
3,3'-Dimethylbenzidine	119-93-7	3.0 U	3.0	10	10	ug/L
3-Methylcholanthrene	56-49-5	1.3 U	1.3	10	10	ug/L
3-Nitroaniline	99-09-2	0.70 U	0.70	10	50	ug/L
4-Aminobiphenyl	92-67-1	3.1 U	3.1	10	15	ug/L
4-Bromophenyl-phenylether	101-55-3	1.1 U	1.1	10	10	ug/L
4-Chloro-3-methylphenol	59-50-7	1.4 U	1.4	10	20	ug/L
4-Chloroaniline	106-47-8	1.6 U	1.6	10	20	ug/L
4-Chlorophenyl-phenylether	7005-72-3	1.2 U	1.2	10	10	ug/L
4-Nitroaniline	100-01-6	0.70 U	0.70	10	20	ug/L
4-Nitrophenol	100-02-7	1.2 U	1.2	10	50	ug/L
5-Nitro-o-toluidine	99-55-8	0.60 U	0.60	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW5	Project:	City of Durham
Lab #:	C706524-05	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
7,12-Dimethylbenz(a)anthracene	57-97-6	1.1 U	1.1	10	10	ug/L
Acenaphthene	83-32-9	1.4 U	1.4	10	10	ug/L
Acenaphthylene	208-96-8	1.4 U	1.4	10	10	ug/L
Acetophenone	98-86-2	2.0 U	2.0	10	10	ug/L
Anthracene	120-12-7	0.90 U	0.90	10	10	ug/L
Benzo(a)anthracene	56-55-3	1.0 U	1.0	10	10	ug/L
Benzo(a)pyrene	50-32-8	1.1 U	1.1	10	10	ug/L
Benzo(b)fluoranthene	205-99-2	0.70 U	0.70	10	10	ug/L
Benzo(g,h,i)perylene	191-24-2	1.3 U	1.3	10	10	ug/L
Benzo(k)fluoranthene	207-08-9	1.8 U	1.8	10	10	ug/L
Benzyl alcohol	100-51-6	2.0 U	2.0	10	20	ug/L
Bis(2-chloroethoxy)methane	111-91-1	2.0 U	2.0	10	10	ug/L
Bis(2-chloroethyl)ether	111-44-4	2.1 U	2.1	10	10	ug/L
Bis(2-chloroisopropyl)ether	108-60-1	2.2 U	2.2	10	10	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	1.0 U	1.0	10	15	ug/L
Butylbenzylphthalate	85-68-7	1.0 U	1.0	10	10	ug/L
Chlorobenzilate	510-15-6	1.2 U	1.2	10	10	ug/L
Chrysene	218-01-9	1.0 U	1.0	10	10	ug/L
Diallate	2303-16-4	1.3 U	1.3	10	10	ug/L
Dibenzo(a,h)anthracene	53-70-3	1.0 U	1.0	10	10	ug/L
Dibenzofuran	132-64-9	1.3 U	1.3	10	10	ug/L
Diethylphthalate	84-66-2	1.0 U	1.0	10	10	ug/L
Dimethoate	60-51-5	1.0 U	1.0	10	20	ug/L
Dimethylphthalate	131-11-3	1.1 U	1.1	10	10	ug/L
Di-n-butylphthalate	84-74-2	1.0 U	1.0	10	10	ug/L
Di-n-octylphthalate	117-84-0	0.90 U	0.90	10	10	ug/L
Disulfoton	298-04-4	1.0 U	1.0	10	10	ug/L
Ethyl methanesulfonate	62-50-0	2.0 U	2.0	10	20	ug/L
Famphur	52-85-7	2.0 U	2.0	10	20	ug/L
Fluoranthene	206-44-0	0.90 U	0.90	10	10	ug/L
Fluorene	86-73-7	1.1 U	1.1	10	10	ug/L
Hexachlorobenzene	118-74-1	1.1 U	1.1	10	10	ug/L
Hexachlorobutadiene	87-68-3	2.0 U	2.0	10	10	ug/L
Hexachlorocyclopentadiene	77-47-4	2.0 U	2.0	10	10	ug/L
Hexachloroethane	67-72-1	2.4 U	2.4	10	10	ug/L
Hexachloropropene	1888-71-7	1.1 U	1.1	10	10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	1.1 U	1.1	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW5	Project:	City of Durham
Lab #:	C706524-05	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Isodrin	465-73-6	1.0 U	1.0	10	20	ug/L
Isophorone	78-59-1	1.8 U	1.8	10	10	ug/L
Isosafrole	120-58-1	1.8 U	1.8	10	10	ug/L
Kepone	143-50-0	1.5 U	1.5	20	20	ug/L
Methapyrilene	91-80-5	3.8 U	3.8	10	100	ug/L
Methyl Methanesulfonate	66-27-3	2.0 U	2.0	10	10	ug/L
Methyl parathion	298-00-0	1.1 U	1.1	10	10	ug/L
Nitrobenzene	98-95-3	1.9 U	1.9	10	10	ug/L
N-Nitrosodiethylamine	55-18-5	1.9 U	1.9	10	20	ug/L
N-Nitrosodimethylamine	62-75-9	1.9 U	1.9	10	10	ug/L
N-Nitrosodi-n-butylamine	924-16-3	1.7 U	1.7	10	10	ug/L
N-Nitroso-di-n-propylamine	621-64-7	2.1 U	2.1	10	10	ug/L
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	1.1 U	1.1	10	10	ug/L
N-Nitrosomethylethylamine	10595-95-6	1.9 U	1.9	10	10	ug/L
N-Nitrosopiperidine	100-75-4	1.5 U	1.5	10	20	ug/L
N-Nitrosopyrrolidine	930-55-2	1.9 U	1.9	10	10	ug/L
O,O,O-Triethyl phosphorothioate	126-68-1	2.0 U	2.0	10	10	ug/L
o-Toluidine	95-53-4	1.5 U	1.5	10	10	ug/L
Parathion	56-38-2	1.0 U	1.0	10	10	ug/L
p-Dimethylaminoazobenzene	60-11-7	1.2 U	1.2	10	10	ug/L
Pentachlorobenzene	608-93-5	1.2 U	1.2	10	10	ug/L
Pentachloronitrobenzene	82-68-8	1.1 U	1.1	10	20	ug/L
Phenacetin	62-44-2	1.0 U	1.0	10	20	ug/L
Phenanthrene	85-01-8	0.90 U	0.90	10	10	ug/L
Phenol	108-95-2	1.5 U	1.5	10	10	ug/L
Phorate	298-02-2	4.1 U	4.1	10	10	ug/L
Pronamide	23950-58-5	1.0 U	1.0	10	10	ug/L
Pyrene	129-00-0	0.90 U	0.90	10	10	ug/L
Safrole	94-59-7	1.9 U	1.9	10	10	ug/L
Thionazin	297-97-2	1.0 U	1.0	10	20	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,6-Tribromophenol	118-79-6	80	100	80 %	55-159
2-Fluorobiphenyl	321-60-8	33	50.0	66 %	44-131
2-Fluorophenol	367-12-4	49	100	49 %	30-114
Nitrobenzene-d5	NA	33	50.0	67 %	39-131
Phenol-d5	NA	38	100	38 %	12-122
Terphenyl-d14	NA	52	50.0	105 %	47-160

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ANALYTICAL REPORT

Sample ID:	3201-MW5	Project:	City of Durham
Lab #:	C706524-05	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8081A	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Organochlorine Pesticides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
4,4'-DDD	72-54-8	0.0050 U	0.0050	0.050	0.1	ug/L
4,4'-DDE	72-55-9	0.0060 U	0.0060	0.050	0.1	ug/L
4,4'-DDT	50-29-3	0.0050 U	0.0050	0.050	0.1	ug/L
Aldrin	309-00-2	0.0030 U	0.0030	0.050	0.05	ug/L
alpha-BHC	319-84-6	0.0010 U	0.0010	0.050	0.05	ug/L
beta-BHC	319-85-7	0.0030 U	0.0030	0.050	0.05	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
delta-BHC	319-86-8	0.0020 U	0.0020	0.050	0.05	ug/L
Dieldrin	60-57-1	0.0060 U	0.0060	0.050	0.075	ug/L
Endosulfan I	959-98-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan II	33213-65-9	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan sulfate	1031-07-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin	72-20-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin aldehyde	7421-93-4	0.0040 U	0.0040	0.050	0.1	ug/L
gamma-BHC	58-89-9	0.0020 U	0.0020	0.050	0.05	ug/L
Heptachlor	76-44-8	0.0030 U	0.0030	0.050	0.05	ug/L
Heptachlor epoxide	1024-57-3	0.0040 U	0.0040	0.050	0.075	ug/L
Methoxychlor	72-43-5	0.0060 U	0.0060	0.050	1	ug/L
Toxaphene	8001-35-2	0.67 U	0.67	1.0	1.5	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.90	1.00	90 %	27-125
DBC	NA	1.2	1.00	115 %	46-130

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ANALYTICAL REPORT

Sample ID:	3201-MW5	Project:	City of Durham
Lab #:	C706524-05	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/04/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8082	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Polychlorinated Biphenyls by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
PCB-1016/1242	12674-11-2/53469-:	0.34 U	0.34	1.0		ug/L
PCB-1221	11104-28-2	0.70 U	0.70	1.0	NE	ug/L
PCB-1232	11141-16-5	0.80 U	0.80	1.0	NE	ug/L
PCB-1248	12672-29-6	0.70 U	0.70	1.0	NE	ug/L
PCB-1254	11097-69-1	0.50 U	0.50	1.0	NE	ug/L
PCB-1260	11096-82-5	0.21 U	0.21	1.0	NE	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.90	1.00	90 %	27-125
DBC	NA	1.2	1.00	115 %	46-130

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ANALYTICAL REPORT

Sample ID: 3201-MW5
Lab #: C706524-05

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	**3.4** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**1240**	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	0.6 U	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	**4.0** J	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	0.044 U	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Tin	7440-31-5	2.0 U	1	2.0	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Vanadium	7440-62-2	1.0 U	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**3.3** J	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID: 3201-MW5
Lab #: C706524-05

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Sulfide	18496-25-8	0.50 U	1	0.50	1.0	1	mg/L	EPA 376.1	NO PREP	7F07026

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ANALYTICAL REPORT

Sample ID:	3201-MW5	Project:	City of Durham
Lab #:	C706524-05	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/08/07 By: RB/	Unit:	ug/L
Anal. Method:	EPA 8151A	Dilution Factor:	1
Anal. Batch:	AA00987		
QC Batch:	7F04031		

Chlorinated Herbicides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
2,4,5-T	93-76-5	0.11 U	0.11	0.30	2	ug/L
2,4,5-TP (Silvex)	93-72-1	0.11 U	0.11	0.30	2	ug/L
2,4-D	94-75-7	0.12 U	0.12	0.30	2	ug/L
Dinoseb	88-85-7	0.23 U	0.23	0.30	1	ug/L
Pentachlorophenol	87-86-5	0.13 U	0.13	0.30	25.05	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4-DCAA	94-75-7	2.5	2.00	126 %	61-177

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ANALYTICAL REPORT

Sample ID:	3201-MW5	Project:	City of Durham
Lab #:	C706524-05	Work Order #:	C706524
		Matrix:	Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Cyanide (total)	57-12-5	0.0058 U	1	0.0058	0.010	10	mg/L	EPA 335.2	NO PREP	7F06003

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ANALYTICAL REPORT

Sample ID: 3201-MW5
Lab #: C706524-05

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Mercury	7439-97-6	0.11 U	1	0.11	0.20	0.2	ug/L	EPA 7470A	EPA 7470A	7F13013

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ANALYTICAL REPORT

Sample ID:	3201-MW6R	Project:	City of Durham
Lab #:	C706524-06	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	**3.6** J	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	**0.51** J	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	**2.0**	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	**3.4**	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	0.90 U	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	**2.6**	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	**1.6** J	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW6R	Project:	City of Durham
Lab #:	C706524-06	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	**89**	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	**0.64** J	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	**3.7** J	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	**2.6**	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	**14**	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	45	50.0	90 %	67-125
Dibromofluoromethane	1868-53-7	42	50.0	85 %	69-111
Toluene-d8	2037-26-5	43	50.0	87 %	85-120

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ANALYTICAL REPORT

Sample ID:	3201-MW6R	Project:	City of Durham
Lab #:	C706524-06	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,2,4,5-Tetrachlorobenzene	95-94-3	1.7 U	1.7	10	10	ug/L
1,3,5-Trinitrobenzene	99-35-4	1.4 U	1.4	10	10	ug/L
1,3-Dinitrobenzene	99-65-0	1.0 U	1.0	10	20	ug/L
1,4-Naphthoquinone	130-15-4	3.2 U	3.2	10	10	ug/L
1,4-Phenylenediamine	106-50-3	4.0 U	4.0	10	10	ug/L
1-Naphthylamine	134-32-7	2.5 U	2.5	10	10	ug/L
2,3,4,6-Tetrachlorophenol	58-90-2	1.0 U	1.0	10	10	ug/L
2,4,5-Trichlorophenol	95-95-4	1.1 U	1.1	10	10	ug/L
2,4,6-Trichlorophenol	88-06-2	1.4 U	1.4	10	10	ug/L
2,4-Dichlorophenol	120-83-2	1.6 U	1.6	10	10	ug/L
2,4-Dimethylphenol	105-67-9	3.0 U	3.0	10	10	ug/L
2,4-Dinitrophenol	51-28-5	1.7 U	1.7	10	50	ug/L
2,4-Dinitrotoluene	121-14-2	1.1 U	1.1	10	10	ug/L
2,6-Dichlorophenol	87-65-0	1.7 U	1.7	10	10	ug/L
2,6-Dinitrotoluene	606-20-2	1.0 U	1.0	10	10	ug/L
2-Acetylaminofluorene	53-96-3	1.3 U	1.3	10	20	ug/L
2-Chloronaphthalene	91-58-7	1.6 U	1.6	10	10	ug/L
2-Chlorophenol	95-57-8	2.0 U	2.0	10	10	ug/L
2-Methyl-4,6-dinitrophenol	534-52-1	1.2 U	1.2	10	50	ug/L
2-Methylnaphthalene	91-57-6	2.0 U	2.0	10	10	ug/L
2-Methylphenol	95-48-7	2.0 U	2.0	10	10	ug/L
2-Naphthylamine	91-59-8	4.0 U	4.0	10	10	ug/L
2-Nitroaniline	88-74-4	1.2 U	1.2	10	50	ug/L
2-Nitrophenol	88-75-5	1.8 U	1.8	10	10	ug/L
3 & 4-Methylphenol		1.9 U	1.9	20	10	ug/L
3,3'-Dichlorobenzidine	91-94-1	1.8 U	1.8	10	20	ug/L
3,3'-Dimethylbenzidine	119-93-7	3.0 U	3.0	10	10	ug/L
3-Methylcholanthrene	56-49-5	1.3 U	1.3	10	10	ug/L
3-Nitroaniline	99-09-2	0.70 U	0.70	10	50	ug/L
4-Aminobiphenyl	92-67-1	3.1 U	3.1	10	15	ug/L
4-Bromophenyl-phenylether	101-55-3	1.1 U	1.1	10	10	ug/L
4-Chloro-3-methylphenol	59-50-7	1.4 U	1.4	10	20	ug/L
4-Chloroaniline	106-47-8	1.6 U	1.6	10	20	ug/L
4-Chlorophenyl-phenylether	7005-72-3	1.2 U	1.2	10	10	ug/L
4-Nitroaniline	100-01-6	0.70 U	0.70	10	20	ug/L
4-Nitrophenol	100-02-7	1.2 U	1.2	10	50	ug/L
5-Nitro-o-toluidine	99-55-8	0.60 U	0.60	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW6R	Project:	City of Durham
Lab #:	C706524-06	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
7,12-Dimethylbenz(a)anthracene	57-97-6	1.1 U	1.1	10	10	ug/L
Acenaphthene	83-32-9	1.4 U	1.4	10	10	ug/L
Acenaphthylene	208-96-8	1.4 U	1.4	10	10	ug/L
Acetophenone	98-86-2	2.0 U	2.0	10	10	ug/L
Anthracene	120-12-7	0.90 U	0.90	10	10	ug/L
Benzo(a)anthracene	56-55-3	1.0 U	1.0	10	10	ug/L
Benzo(a)pyrene	50-32-8	1.1 U	1.1	10	10	ug/L
Benzo(b)fluoranthene	205-99-2	0.70 U	0.70	10	10	ug/L
Benzo(g,h,i)perylene	191-24-2	1.3 U	1.3	10	10	ug/L
Benzo(k)fluoranthene	207-08-9	1.8 U	1.8	10	10	ug/L
Benzyl alcohol	100-51-6	2.0 U	2.0	10	20	ug/L
Bis(2-chloroethoxy)methane	111-91-1	2.0 U	2.0	10	10	ug/L
Bis(2-chloroethyl)ether	111-44-4	2.1 U	2.1	10	10	ug/L
Bis(2-chloroisopropyl)ether	108-60-1	2.2 U	2.2	10	10	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	1.0 U	1.0	10	15	ug/L
Butylbenzylphthalate	85-68-7	1.0 U	1.0	10	10	ug/L
Chlorobenzilate	510-15-6	1.2 U	1.2	10	10	ug/L
Chrysene	218-01-9	1.0 U	1.0	10	10	ug/L
Diallate	2303-16-4	1.3 U	1.3	10	10	ug/L
Dibenzo(a,h)anthracene	53-70-3	1.0 U	1.0	10	10	ug/L
Dibenzofuran	132-64-9	1.3 U	1.3	10	10	ug/L
Diethylphthalate	84-66-2	1.0 U	1.0	10	10	ug/L
Dimethoate	60-51-5	1.0 U	1.0	10	20	ug/L
Dimethylphthalate	131-11-3	1.1 U	1.1	10	10	ug/L
Di-n-butylphthalate	84-74-2	1.0 U	1.0	10	10	ug/L
Di-n-octylphthalate	117-84-0	0.90 U	0.90	10	10	ug/L
Disulfoton	298-04-4	1.0 U	1.0	10	10	ug/L
Ethyl methanesulfonate	62-50-0	2.0 U	2.0	10	20	ug/L
Famphur	52-85-7	2.0 U	2.0	10	20	ug/L
Fluoranthene	206-44-0	0.90 U	0.90	10	10	ug/L
Fluorene	86-73-7	1.1 U	1.1	10	10	ug/L
Hexachlorobenzene	118-74-1	1.1 U	1.1	10	10	ug/L
Hexachlorobutadiene	87-68-3	2.0 U	2.0	10	10	ug/L
Hexachlorocyclopentadiene	77-47-4	2.0 U	2.0	10	10	ug/L
Hexachloroethane	67-72-1	2.4 U	2.4	10	10	ug/L
Hexachloropropene	1888-71-7	1.1 U	1.1	10	10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	1.1 U	1.1	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW6R	Project:	City of Durham
Lab #:	C706524-06	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Isodrin	465-73-6	1.0 U	1.0	10	20	ug/L
Isophorone	78-59-1	1.8 U	1.8	10	10	ug/L
Isosafrole	120-58-1	1.8 U	1.8	10	10	ug/L
Kepone	143-50-0	1.5 U	1.5	20	20	ug/L
Methapyrilene	91-80-5	3.8 U	3.8	10	100	ug/L
Methyl Methanesulfonate	66-27-3	2.0 U	2.0	10	10	ug/L
Methyl parathion	298-00-0	1.1 U	1.1	10	10	ug/L
Nitrobenzene	98-95-3	1.9 U	1.9	10	10	ug/L
N-Nitrosodiethylamine	55-18-5	1.9 U	1.9	10	20	ug/L
N-Nitrosodimethylamine	62-75-9	1.9 U	1.9	10	10	ug/L
N-Nitrosodi-n-butylamine	924-16-3	1.7 U	1.7	10	10	ug/L
N-Nitroso-di-n-propylamine	621-64-7	2.1 U	2.1	10	10	ug/L
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	1.1 U	1.1	10	10	ug/L
N-Nitrosomethylethylamine	10595-95-6	1.9 U	1.9	10	10	ug/L
N-Nitrosopiperidine	100-75-4	1.5 U	1.5	10	20	ug/L
N-Nitrosopyrrolidine	930-55-2	1.9 U	1.9	10	10	ug/L
O,O,O-Triethyl phosphorothioate	126-68-1	2.0 U	2.0	10	10	ug/L
o-Toluidine	95-53-4	1.5 U	1.5	10	10	ug/L
Parathion	56-38-2	1.0 U	1.0	10	10	ug/L
p-Dimethylaminoazobenzene	60-11-7	1.2 U	1.2	10	10	ug/L
Pentachlorobenzene	608-93-5	1.2 U	1.2	10	10	ug/L
Pentachloronitrobenzene	82-68-8	1.1 U	1.1	10	20	ug/L
Phenacetin	62-44-2	1.0 U	1.0	10	20	ug/L
Phenanthrene	85-01-8	0.90 U	0.90	10	10	ug/L
Phenol	108-95-2	1.5 U	1.5	10	10	ug/L
Phorate	298-02-2	4.1 U	4.1	10	10	ug/L
Pronamide	23950-58-5	1.0 U	1.0	10	10	ug/L
Pyrene	129-00-0	0.90 U	0.90	10	10	ug/L
Safrole	94-59-7	1.9 U	1.9	10	10	ug/L
Thionazin	297-97-2	1.0 U	1.0	10	20	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,6-Tribromophenol	118-79-6	91	100	91 %	55-159
2-Fluorobiphenyl	321-60-8	33	50.0	66 %	44-131
2-Fluorophenol	367-12-4	46	100	46 %	30-114
Nitrobenzene-d5	NA	32	50.0	63 %	39-131
Phenol-d5	NA	37	100	37 %	12-122
Terphenyl-d14	NA	52	50.0	103 %	47-160

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ANALYTICAL REPORT

Sample ID:	3201-MW6R	Project:	City of Durham
Lab #:	C706524-06	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/05/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8081A	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Organochlorine Pesticides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
4,4'-DDD	72-54-8	0.0050 U	0.0050	0.050	0.1	ug/L
4,4'-DDE	72-55-9	0.0060 U	0.0060	0.050	0.1	ug/L
4,4'-DDT	50-29-3	0.0050 U	0.0050	0.050	0.1	ug/L
Aldrin	309-00-2	0.0030 U	0.0030	0.050	0.05	ug/L
alpha-BHC	319-84-6	0.0010 U	0.0010	0.050	0.05	ug/L
beta-BHC	319-85-7	0.0030 U	0.0030	0.050	0.05	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
delta-BHC	319-86-8	0.0020 U	0.0020	0.050	0.05	ug/L
Dieldrin	60-57-1	0.0060 U	0.0060	0.050	0.075	ug/L
Endosulfan I	959-98-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan II	33213-65-9	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan sulfate	1031-07-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin	72-20-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin aldehyde	7421-93-4	0.0040 U	0.0040	0.050	0.1	ug/L
gamma-BHC	58-89-9	0.0020 U	0.0020	0.050	0.05	ug/L
Heptachlor	76-44-8	0.0030 U	0.0030	0.050	0.05	ug/L
Heptachlor epoxide	1024-57-3	0.0040 U	0.0040	0.050	0.075	ug/L
Methoxychlor	72-43-5	0.0060 U	0.0060	0.050	1	ug/L
Toxaphene	8001-35-2	0.67 U	0.67	1.0	1.5	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.82	1.00	82 %	27-125
DBC	NA	0.96	1.00	96 %	46-130

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ANALYTICAL REPORT

Sample ID:	3201-MW6R	Project:	City of Durham
Lab #:	C706524-06	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/05/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8082	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Polychlorinated Biphenyls by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
PCB-1016/1242	12674-11-2/53469-:	0.34 U	0.34	1.0		ug/L
PCB-1221	11104-28-2	0.70 U	0.70	1.0	NE	ug/L
PCB-1232	11141-16-5	0.80 U	0.80	1.0	NE	ug/L
PCB-1248	12672-29-6	0.70 U	0.70	1.0	NE	ug/L
PCB-1254	11097-69-1	0.50 U	0.50	1.0	NE	ug/L
PCB-1260	11096-82-5	0.21 U	0.21	1.0	NE	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.82	1.00	82 %	27-125
DBC	NA	0.96	1.00	96 %	46-130

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ANALYTICAL REPORT

Sample ID: 3201-MW6R
Lab #: C706524-06

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**400**	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	**1.10**	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	**10.2**	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	**1.8** J	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	**23.1** J	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	**2.8** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	**2.8** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	0.044 U	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Tin	7440-31-5	2.0 U	1	2.0	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Vanadium	7440-62-2	1.0 U	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**6.8** J	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID: 3201-MW6R
Lab #: C706524-06

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Sulfide	18496-25-8	0.50 U	1	0.50	1.0	1	mg/L	EPA 376.1	NO PREP	7F07026

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ANALYTICAL REPORT

Sample ID:	3201-MW6R	Project:	City of Durham
Lab #:	C706524-06	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/08/07 By: RB/	Unit:	ug/L
Anal. Method:	EPA 8151A	Dilution Factor:	1
Anal. Batch:	AA00987		
QC Batch:	7F04031		

Chlorinated Herbicides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
2,4,5-T	93-76-5	0.11 U	0.11	0.30	2	ug/L
2,4,5-TP (Silvex)	93-72-1	0.11 U	0.11	0.30	2	ug/L
2,4-D	94-75-7	0.12 U	0.12	0.30	2	ug/L
Dinoseb	88-85-7	0.23 U	0.23	0.30	1	ug/L
Pentachlorophenol	87-86-5	0.13 U	0.13	0.30	25.05	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4-DCAA	94-75-7	2.8	2.00	138 %	61-177

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ANALYTICAL REPORT

Sample ID: 3201-MW6R
Lab #: C706524-06

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Cyanide (total)	57-12-5	0.0058 U	1	0.0058	0.010	10	mg/L	EPA 335.2	NO PREP	7F06003

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ANALYTICAL REPORT

Sample ID: 3201-MW6R
Lab #: C706524-06

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Mercury	7439-97-6	**0.20**	1	0.11	0.20	0.2	ug/L	EPA 7470A	EPA 7470A	7F13013

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ANALYTICAL REPORT

Sample ID:	3201-MW7R	Project:	City of Durham
Lab #:	C706524-07	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	0.90 U	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW7R	Project:	City of Durham
Lab #:	C706524-07	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	46	50.0	92 %	67-125
Dibromofluoromethane	1868-53-7	42	50.0	85 %	69-111
Toluene-d8	2037-26-5	43	50.0	87 %	85-120

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ANALYTICAL REPORT

Sample ID:	3201-MW7R	Project:	City of Durham
Lab #:	C706524-07	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,2,4,5-Tetrachlorobenzene	95-94-3	1.7 U	1.7	10	10	ug/L
1,3,5-Trinitrobenzene	99-35-4	1.4 U	1.4	10	10	ug/L
1,3-Dinitrobenzene	99-65-0	1.0 U	1.0	10	20	ug/L
1,4-Naphthoquinone	130-15-4	3.2 U	3.2	10	10	ug/L
1,4-Phenylenediamine	106-50-3	4.0 U	4.0	10	10	ug/L
1-Naphthylamine	134-32-7	2.5 U	2.5	10	10	ug/L
2,3,4,6-Tetrachlorophenol	58-90-2	1.0 U	1.0	10	10	ug/L
2,4,5-Trichlorophenol	95-95-4	1.1 U	1.1	10	10	ug/L
2,4,6-Trichlorophenol	88-06-2	1.4 U	1.4	10	10	ug/L
2,4-Dichlorophenol	120-83-2	1.6 U	1.6	10	10	ug/L
2,4-Dimethylphenol	105-67-9	3.0 U	3.0	10	10	ug/L
2,4-Dinitrophenol	51-28-5	1.7 U	1.7	10	50	ug/L
2,4-Dinitrotoluene	121-14-2	1.1 U	1.1	10	10	ug/L
2,6-Dichlorophenol	87-65-0	1.7 U	1.7	10	10	ug/L
2,6-Dinitrotoluene	606-20-2	1.0 U	1.0	10	10	ug/L
2-Acetylaminofluorene	53-96-3	1.3 U	1.3	10	20	ug/L
2-Chloronaphthalene	91-58-7	1.6 U	1.6	10	10	ug/L
2-Chlorophenol	95-57-8	2.0 U	2.0	10	10	ug/L
2-Methyl-4,6-dinitrophenol	534-52-1	1.2 U	1.2	10	50	ug/L
2-Methylnaphthalene	91-57-6	2.0 U	2.0	10	10	ug/L
2-Methylphenol	95-48-7	2.0 U	2.0	10	10	ug/L
2-Naphthylamine	91-59-8	4.0 U	4.0	10	10	ug/L
2-Nitroaniline	88-74-4	1.2 U	1.2	10	50	ug/L
2-Nitrophenol	88-75-5	1.8 U	1.8	10	10	ug/L
3 & 4-Methylphenol		1.9 U	1.9	20	10	ug/L
3,3'-Dichlorobenzidine	91-94-1	1.8 U	1.8	10	20	ug/L
3,3'-Dimethylbenzidine	119-93-7	3.0 U	3.0	10	10	ug/L
3-Methylcholanthrene	56-49-5	1.3 U	1.3	10	10	ug/L
3-Nitroaniline	99-09-2	0.70 U	0.70	10	50	ug/L
4-Aminobiphenyl	92-67-1	3.1 U	3.1	10	15	ug/L
4-Bromophenyl-phenylether	101-55-3	1.1 U	1.1	10	10	ug/L
4-Chloro-3-methylphenol	59-50-7	1.4 U	1.4	10	20	ug/L
4-Chloroaniline	106-47-8	1.6 U	1.6	10	20	ug/L
4-Chlorophenyl-phenylether	7005-72-3	1.2 U	1.2	10	10	ug/L
4-Nitroaniline	100-01-6	0.70 U	0.70	10	20	ug/L
4-Nitrophenol	100-02-7	1.2 U	1.2	10	50	ug/L
5-Nitro-o-toluidine	99-55-8	0.60 U	0.60	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW7R	Project:	City of Durham
Lab #:	C706524-07	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
7,12-Dimethylbenz(a)anthracene	57-97-6	1.1 U	1.1	10	10	ug/L
Acenaphthene	83-32-9	1.4 U	1.4	10	10	ug/L
Acenaphthylene	208-96-8	1.4 U	1.4	10	10	ug/L
Acetophenone	98-86-2	2.0 U	2.0	10	10	ug/L
Anthracene	120-12-7	0.90 U	0.90	10	10	ug/L
Benzo(a)anthracene	56-55-3	1.0 U	1.0	10	10	ug/L
Benzo(a)pyrene	50-32-8	1.1 U	1.1	10	10	ug/L
Benzo(b)fluoranthene	205-99-2	0.70 U	0.70	10	10	ug/L
Benzo(g,h,i)perylene	191-24-2	1.3 U	1.3	10	10	ug/L
Benzo(k)fluoranthene	207-08-9	1.8 U	1.8	10	10	ug/L
Benzyl alcohol	100-51-6	2.0 U	2.0	10	20	ug/L
Bis(2-chloroethoxy)methane	111-91-1	2.0 U	2.0	10	10	ug/L
Bis(2-chloroethyl)ether	111-44-4	2.1 U	2.1	10	10	ug/L
Bis(2-chloroisopropyl)ether	108-60-1	2.2 U	2.2	10	10	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	1.0 U	1.0	10	15	ug/L
Butylbenzylphthalate	85-68-7	1.0 U	1.0	10	10	ug/L
Chlorobenzilate	510-15-6	1.2 U	1.2	10	10	ug/L
Chrysene	218-01-9	1.0 U	1.0	10	10	ug/L
Diallate	2303-16-4	1.3 U	1.3	10	10	ug/L
Dibenzo(a,h)anthracene	53-70-3	1.0 U	1.0	10	10	ug/L
Dibenzofuran	132-64-9	1.3 U	1.3	10	10	ug/L
Diethylphthalate	84-66-2	1.0 U	1.0	10	10	ug/L
Dimethoate	60-51-5	1.0 U	1.0	10	20	ug/L
Dimethylphthalate	131-11-3	1.1 U	1.1	10	10	ug/L
Di-n-butylphthalate	84-74-2	1.0 U	1.0	10	10	ug/L
Di-n-octylphthalate	117-84-0	0.90 U	0.90	10	10	ug/L
Disulfoton	298-04-4	1.0 U	1.0	10	10	ug/L
Ethyl methanesulfonate	62-50-0	2.0 U	2.0	10	20	ug/L
Famphur	52-85-7	2.0 U	2.0	10	20	ug/L
Fluoranthene	206-44-0	0.90 U	0.90	10	10	ug/L
Fluorene	86-73-7	1.1 U	1.1	10	10	ug/L
Hexachlorobenzene	118-74-1	1.1 U	1.1	10	10	ug/L
Hexachlorobutadiene	87-68-3	2.0 U	2.0	10	10	ug/L
Hexachlorocyclopentadiene	77-47-4	2.0 U	2.0	10	10	ug/L
Hexachloroethane	67-72-1	2.4 U	2.4	10	10	ug/L
Hexachloropropene	1888-71-7	1.1 U	1.1	10	10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	1.1 U	1.1	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW7R	Project:	City of Durham
Lab #:	C706524-07	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Isodrin	465-73-6	1.0 U	1.0	10	20	ug/L
Isophorone	78-59-1	1.8 U	1.8	10	10	ug/L
Isosafrole	120-58-1	1.8 U	1.8	10	10	ug/L
Kepone	143-50-0	1.5 U	1.5	20	20	ug/L
Methapyrilene	91-80-5	3.8 U	3.8	10	100	ug/L
Methyl Methanesulfonate	66-27-3	2.0 U	2.0	10	10	ug/L
Methyl parathion	298-00-0	1.1 U	1.1	10	10	ug/L
Nitrobenzene	98-95-3	1.9 U	1.9	10	10	ug/L
N-Nitrosodiethylamine	55-18-5	1.9 U	1.9	10	20	ug/L
N-Nitrosodimethylamine	62-75-9	1.9 U	1.9	10	10	ug/L
N-Nitrosodi-n-butylamine	924-16-3	1.7 U	1.7	10	10	ug/L
N-Nitroso-di-n-propylamine	621-64-7	2.1 U	2.1	10	10	ug/L
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	1.1 U	1.1	10	10	ug/L
N-Nitrosomethylethylamine	10595-95-6	1.9 U	1.9	10	10	ug/L
N-Nitrosopiperidine	100-75-4	1.5 U	1.5	10	20	ug/L
N-Nitrosopyrrolidine	930-55-2	1.9 U	1.9	10	10	ug/L
O,O,O-Triethyl phosphorothioate	126-68-1	2.0 U	2.0	10	10	ug/L
o-Toluidine	95-53-4	1.5 U	1.5	10	10	ug/L
Parathion	56-38-2	1.0 U	1.0	10	10	ug/L
p-Dimethylaminoazobenzene	60-11-7	1.2 U	1.2	10	10	ug/L
Pentachlorobenzene	608-93-5	1.2 U	1.2	10	10	ug/L
Pentachloronitrobenzene	82-68-8	1.1 U	1.1	10	20	ug/L
Phenacetin	62-44-2	1.0 U	1.0	10	20	ug/L
Phenanthrene	85-01-8	0.90 U	0.90	10	10	ug/L
Phenol	108-95-2	1.5 U	1.5	10	10	ug/L
Phorate	298-02-2	4.1 U	4.1	10	10	ug/L
Pronamide	23950-58-5	1.0 U	1.0	10	10	ug/L
Pyrene	129-00-0	0.90 U	0.90	10	10	ug/L
Safrole	94-59-7	1.9 U	1.9	10	10	ug/L
Thionazin	297-97-2	1.0 U	1.0	10	20	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,6-Tribromophenol	118-79-6	79	100	79 %	55-159
2-Fluorobiphenyl	321-60-8	34	50.0	67 %	44-131
2-Fluorophenol	367-12-4	51	100	51 %	30-114
Nitrobenzene-d5	NA	34	50.0	69 %	39-131
Phenol-d5	NA	39	100	39 %	12-122
Terphenyl-d14	NA	55	50.0	110 %	47-160

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ANALYTICAL REPORT

Sample ID:	3201-MW7R	Project:	City of Durham
Lab #:	C706524-07	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/05/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8081A	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Organochlorine Pesticides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
4,4'-DDD	72-54-8	0.0050 U	0.0050	0.050	0.1	ug/L
4,4'-DDE	72-55-9	0.0060 U	0.0060	0.050	0.1	ug/L
4,4'-DDT	50-29-3	0.0050 U	0.0050	0.050	0.1	ug/L
Aldrin	309-00-2	0.0030 U	0.0030	0.050	0.05	ug/L
alpha-BHC	319-84-6	0.0010 U	0.0010	0.050	0.05	ug/L
beta-BHC	319-85-7	0.0030 U	0.0030	0.050	0.05	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
delta-BHC	319-86-8	0.0020 U	0.0020	0.050	0.05	ug/L
Dieldrin	60-57-1	0.0060 U	0.0060	0.050	0.075	ug/L
Endosulfan I	959-98-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan II	33213-65-9	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan sulfate	1031-07-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin	72-20-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin aldehyde	7421-93-4	0.0040 U	0.0040	0.050	0.1	ug/L
gamma-BHC	58-89-9	0.0020 U	0.0020	0.050	0.05	ug/L
Heptachlor	76-44-8	0.0030 U	0.0030	0.050	0.05	ug/L
Heptachlor epoxide	1024-57-3	0.0040 U	0.0040	0.050	0.075	ug/L
Methoxychlor	72-43-5	0.0060 U	0.0060	0.050	1	ug/L
Toxaphene	8001-35-2	0.67 U	0.67	1.0	1.5	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.81	1.00	81 %	27-125
DBC	NA	0.96	1.00	96 %	46-130

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ANALYTICAL REPORT

Sample ID:	3201-MW7R	Project:	City of Durham
Lab #:	C706524-07	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/05/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8082	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Polychlorinated Biphenyls by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
PCB-1016/1242	12674-11-2/53469-:	0.34 U	0.34	1.0		ug/L
PCB-1221	11104-28-2	0.70 U	0.70	1.0	NE	ug/L
PCB-1232	11141-16-5	0.80 U	0.80	1.0	NE	ug/L
PCB-1248	12672-29-6	0.70 U	0.70	1.0	NE	ug/L
PCB-1254	11097-69-1	0.50 U	0.50	1.0	NE	ug/L
PCB-1260	11096-82-5	0.21 U	0.21	1.0	NE	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.81	1.00	81 %	27-125
DBC	NA	0.96	1.00	96 %	46-130

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ANALYTICAL REPORT

Sample ID: 3201-MW7R
Lab #: C706524-07

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	**2.0** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**622**	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	**0.6** J	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	2.0 U	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	0.044 U	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Tin	7440-31-5	2.0 U	1	2.0	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Vanadium	7440-62-2	1.0 U	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**12.3**	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID: 3201-MW7R
Lab #: C706524-07

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Sulfide	18496-25-8	0.50 U	1	0.50	1.0	1	mg/L	EPA 376.1	NO PREP	7F07026

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ANALYTICAL REPORT

Sample ID:	3201-MW7R	Project:	City of Durham
Lab #:	C706524-07	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/08/07 By: RB/	Unit:	ug/L
Anal. Method:	EPA 8151A	Dilution Factor:	1
Anal. Batch:	AA00987		
QC Batch:	7F04031		

Chlorinated Herbicides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
2,4,5-T	93-76-5	0.11 U	0.11	0.30	2	ug/L
2,4,5-TP (Silvex)	93-72-1	0.11 U	0.11	0.30	2	ug/L
2,4-D	94-75-7	0.12 U	0.12	0.30	2	ug/L
Dinoseb	88-85-7	0.23 U	0.23	0.30	1	ug/L
Pentachlorophenol	87-86-5	0.13 U	0.13	0.30	25.05	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4-DCAA	94-75-7	2.3	2.00	116 %	61-177

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ANALYTICAL REPORT

Sample ID: 3201-MW7R
Lab #: C706524-07

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Cyanide (total)	57-12-5	0.0058 U	1	0.0058	0.010	10	mg/L	EPA 335.2	NO PREP	7F04002

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ANALYTICAL REPORT

Sample ID: 3201-MW7R
Lab #: C706524-07

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Mercury	7439-97-6	0.11 U	1	0.11	0.20	0.2	ug/L	EPA 7470A	EPA 7470A	7F13013

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ANALYTICAL REPORT

Sample ID:	3201-MW8	Project:	City of Durham
Lab #:	C706524-08	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	**1.7** J	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW8	Project:	City of Durham
Lab #:	C706524-08	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	45	50.0	90 %	67-125
Dibromofluoromethane	1868-53-7	44	50.0	87 %	69-111
Toluene-d8	2037-26-5	43	50.0	86 %	85-120

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ANALYTICAL REPORT

Sample ID:	3201-MW8	Project:	City of Durham
Lab #:	C706524-08	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,2,4,5-Tetrachlorobenzene	95-94-3	1.7 U	1.7	10	10	ug/L
1,3,5-Trinitrobenzene	99-35-4	1.4 U	1.4	10	10	ug/L
1,3-Dinitrobenzene	99-65-0	1.0 U	1.0	10	20	ug/L
1,4-Naphthoquinone	130-15-4	3.2 U	3.2	10	10	ug/L
1,4-Phenylenediamine	106-50-3	4.0 U	4.0	10	10	ug/L
1-Naphthylamine	134-32-7	2.5 U	2.5	10	10	ug/L
2,3,4,6-Tetrachlorophenol	58-90-2	1.0 U	1.0	10	10	ug/L
2,4,5-Trichlorophenol	95-95-4	1.1 U	1.1	10	10	ug/L
2,4,6-Trichlorophenol	88-06-2	1.4 U	1.4	10	10	ug/L
2,4-Dichlorophenol	120-83-2	1.6 U	1.6	10	10	ug/L
2,4-Dimethylphenol	105-67-9	3.0 U	3.0	10	10	ug/L
2,4-Dinitrophenol	51-28-5	1.7 U	1.7	10	50	ug/L
2,4-Dinitrotoluene	121-14-2	1.1 U	1.1	10	10	ug/L
2,6-Dichlorophenol	87-65-0	1.7 U	1.7	10	10	ug/L
2,6-Dinitrotoluene	606-20-2	1.0 U	1.0	10	10	ug/L
2-Acetylaminofluorene	53-96-3	1.3 U	1.3	10	20	ug/L
2-Chloronaphthalene	91-58-7	1.6 U	1.6	10	10	ug/L
2-Chlorophenol	95-57-8	2.0 U	2.0	10	10	ug/L
2-Methyl-4,6-dinitrophenol	534-52-1	1.2 U	1.2	10	50	ug/L
2-Methylnaphthalene	91-57-6	2.0 U	2.0	10	10	ug/L
2-Methylphenol	95-48-7	2.0 U	2.0	10	10	ug/L
2-Naphthylamine	91-59-8	4.0 U	4.0	10	10	ug/L
2-Nitroaniline	88-74-4	1.2 U	1.2	10	50	ug/L
2-Nitrophenol	88-75-5	1.8 U	1.8	10	10	ug/L
3 & 4-Methylphenol		1.9 U	1.9	20	10	ug/L
3,3'-Dichlorobenzidine	91-94-1	1.8 U	1.8	10	20	ug/L
3,3'-Dimethylbenzidine	119-93-7	3.0 U	3.0	10	10	ug/L
3-Methylcholanthrene	56-49-5	1.3 U	1.3	10	10	ug/L
3-Nitroaniline	99-09-2	0.70 U	0.70	10	50	ug/L
4-Aminobiphenyl	92-67-1	3.1 U	3.1	10	15	ug/L
4-Bromophenyl-phenylether	101-55-3	1.1 U	1.1	10	10	ug/L
4-Chloro-3-methylphenol	59-50-7	1.4 U	1.4	10	20	ug/L
4-Chloroaniline	106-47-8	1.6 U	1.6	10	20	ug/L
4-Chlorophenyl-phenylether	7005-72-3	1.2 U	1.2	10	10	ug/L
4-Nitroaniline	100-01-6	0.70 U	0.70	10	20	ug/L
4-Nitrophenol	100-02-7	1.2 U	1.2	10	50	ug/L
5-Nitro-o-toluidine	99-55-8	0.60 U	0.60	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW8	Project:	City of Durham
Lab #:	C706524-08	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
7,12-Dimethylbenz(a)anthracene	57-97-6	1.1 U	1.1	10	10	ug/L
Acenaphthene	83-32-9	1.4 U	1.4	10	10	ug/L
Acenaphthylene	208-96-8	1.4 U	1.4	10	10	ug/L
Acetophenone	98-86-2	2.0 U	2.0	10	10	ug/L
Anthracene	120-12-7	0.90 U	0.90	10	10	ug/L
Benzo(a)anthracene	56-55-3	1.0 U	1.0	10	10	ug/L
Benzo(a)pyrene	50-32-8	1.1 U	1.1	10	10	ug/L
Benzo(b)fluoranthene	205-99-2	0.70 U	0.70	10	10	ug/L
Benzo(g,h,i)perylene	191-24-2	1.3 U	1.3	10	10	ug/L
Benzo(k)fluoranthene	207-08-9	1.8 U	1.8	10	10	ug/L
Benzyl alcohol	100-51-6	2.0 U	2.0	10	20	ug/L
Bis(2-chloroethoxy)methane	111-91-1	2.0 U	2.0	10	10	ug/L
Bis(2-chloroethyl)ether	111-44-4	2.1 U	2.1	10	10	ug/L
Bis(2-chloroisopropyl)ether	108-60-1	2.2 U	2.2	10	10	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	1.0 U	1.0	10	15	ug/L
Butylbenzylphthalate	85-68-7	1.0 U	1.0	10	10	ug/L
Chlorobenzilate	510-15-6	1.2 U	1.2	10	10	ug/L
Chrysene	218-01-9	1.0 U	1.0	10	10	ug/L
Diallate	2303-16-4	1.3 U	1.3	10	10	ug/L
Dibenzo(a,h)anthracene	53-70-3	1.0 U	1.0	10	10	ug/L
Dibenzofuran	132-64-9	1.3 U	1.3	10	10	ug/L
Diethylphthalate	84-66-2	1.0 U	1.0	10	10	ug/L
Dimethoate	60-51-5	1.0 U	1.0	10	20	ug/L
Dimethylphthalate	131-11-3	1.1 U	1.1	10	10	ug/L
Di-n-butylphthalate	84-74-2	1.0 U	1.0	10	10	ug/L
Di-n-octylphthalate	117-84-0	0.90 U	0.90	10	10	ug/L
Disulfoton	298-04-4	1.0 U	1.0	10	10	ug/L
Ethyl methanesulfonate	62-50-0	2.0 U	2.0	10	20	ug/L
Famphur	52-85-7	2.0 U	2.0	10	20	ug/L
Fluoranthene	206-44-0	0.90 U	0.90	10	10	ug/L
Fluorene	86-73-7	1.1 U	1.1	10	10	ug/L
Hexachlorobenzene	118-74-1	1.1 U	1.1	10	10	ug/L
Hexachlorobutadiene	87-68-3	2.0 U	2.0	10	10	ug/L
Hexachlorocyclopentadiene	77-47-4	2.0 U	2.0	10	10	ug/L
Hexachloroethane	67-72-1	2.4 U	2.4	10	10	ug/L
Hexachloropropene	1888-71-7	1.1 U	1.1	10	10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	1.1 U	1.1	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-MW8	Project:	City of Durham
Lab #:	C706524-08	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Isodrin	465-73-6	1.0 U	1.0	10	20	ug/L
Isophorone	78-59-1	1.8 U	1.8	10	10	ug/L
Isosafrole	120-58-1	1.8 U	1.8	10	10	ug/L
Kepone	143-50-0	1.5 U	1.5	20	20	ug/L
Methapyrilene	91-80-5	3.8 U	3.8	10	100	ug/L
Methyl Methanesulfonate	66-27-3	2.0 U	2.0	10	10	ug/L
Methyl parathion	298-00-0	1.1 U	1.1	10	10	ug/L
Nitrobenzene	98-95-3	1.9 U	1.9	10	10	ug/L
N-Nitrosodiethylamine	55-18-5	1.9 U	1.9	10	20	ug/L
N-Nitrosodimethylamine	62-75-9	1.9 U	1.9	10	10	ug/L
N-Nitrosodi-n-butylamine	924-16-3	1.7 U	1.7	10	10	ug/L
N-Nitroso-di-n-propylamine	621-64-7	2.1 U	2.1	10	10	ug/L
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	1.1 U	1.1	10	10	ug/L
N-Nitrosomethylethylamine	10595-95-6	1.9 U	1.9	10	10	ug/L
N-Nitrosopiperidine	100-75-4	1.5 U	1.5	10	20	ug/L
N-Nitrosopyrrolidine	930-55-2	1.9 U	1.9	10	10	ug/L
O,O,O-Triethyl phosphorothioate	126-68-1	2.0 U	2.0	10	10	ug/L
o-Toluidine	95-53-4	1.5 U	1.5	10	10	ug/L
Parathion	56-38-2	1.0 U	1.0	10	10	ug/L
p-Dimethylaminoazobenzene	60-11-7	1.2 U	1.2	10	10	ug/L
Pentachlorobenzene	608-93-5	1.2 U	1.2	10	10	ug/L
Pentachloronitrobenzene	82-68-8	1.1 U	1.1	10	20	ug/L
Phenacetin	62-44-2	1.0 U	1.0	10	20	ug/L
Phenanthrene	85-01-8	0.90 U	0.90	10	10	ug/L
Phenol	108-95-2	1.5 U	1.5	10	10	ug/L
Phorate	298-02-2	4.1 U	4.1	10	10	ug/L
Pronamide	23950-58-5	1.0 U	1.0	10	10	ug/L
Pyrene	129-00-0	0.90 U	0.90	10	10	ug/L
Safrole	94-59-7	1.9 U	1.9	10	10	ug/L
Thionazin	297-97-2	1.0 U	1.0	10	20	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,6-Tribromophenol	118-79-6	87	100	87 %	55-159
2-Fluorobiphenyl	321-60-8	35	50.0	70 %	44-131
2-Fluorophenol	367-12-4	57	100	57 %	30-114
Nitrobenzene-d5	NA	37	50.0	74 %	39-131
Phenol-d5	NA	44	100	44 %	12-122
Terphenyl-d14	NA	55	50.0	109 %	47-160

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ANALYTICAL REPORT

Sample ID:	3201-MW8	Project:	City of Durham
Lab #:	C706524-08	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/05/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8081A	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Organochlorine Pesticides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
4,4'-DDD	72-54-8	0.0050 U	0.0050	0.050	0.1	ug/L
4,4'-DDE	72-55-9	0.0060 U	0.0060	0.050	0.1	ug/L
4,4'-DDT	50-29-3	0.0050 U	0.0050	0.050	0.1	ug/L
Aldrin	309-00-2	0.0030 U	0.0030	0.050	0.05	ug/L
alpha-BHC	319-84-6	0.0010 U	0.0010	0.050	0.05	ug/L
beta-BHC	319-85-7	0.0030 U	0.0030	0.050	0.05	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
delta-BHC	319-86-8	0.0020 U	0.0020	0.050	0.05	ug/L
Dieldrin	60-57-1	0.0060 U	0.0060	0.050	0.075	ug/L
Endosulfan I	959-98-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan II	33213-65-9	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan sulfate	1031-07-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin	72-20-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin aldehyde	7421-93-4	0.0040 U	0.0040	0.050	0.1	ug/L
gamma-BHC	58-89-9	0.0020 U	0.0020	0.050	0.05	ug/L
Heptachlor	76-44-8	0.0030 U	0.0030	0.050	0.05	ug/L
Heptachlor epoxide	1024-57-3	0.0040 U	0.0040	0.050	0.075	ug/L
Methoxychlor	72-43-5	0.0060 U	0.0060	0.050	1	ug/L
Toxaphene	8001-35-2	0.67 U	0.67	1.0	1.5	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.85	1.00	85 %	27-125
DBC	NA	1.0	1.00	103 %	46-130

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ANALYTICAL REPORT

Sample ID:	3201-MW8	Project:	City of Durham
Lab #:	C706524-08	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/05/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8082	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Polychlorinated Biphenyls by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
PCB-1016/1242	12674-11-2/53469-:	0.34 U	0.34	1.0		ug/L
PCB-1221	11104-28-2	0.70 U	0.70	1.0	NE	ug/L
PCB-1232	11141-16-5	0.80 U	0.80	1.0	NE	ug/L
PCB-1248	12672-29-6	0.70 U	0.70	1.0	NE	ug/L
PCB-1254	11097-69-1	0.50 U	0.50	1.0	NE	ug/L
PCB-1260	11096-82-5	0.21 U	0.21	1.0	NE	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.85	1.00	85 %	27-125
DBC	NA	1.0	1.00	103 %	46-130

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ANALYTICAL REPORT

Sample ID: 3201-MW8
Lab #: C706524-08

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	**3.1** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**69.0** J	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	**11.2**	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	0.6 U	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	**2.9** J	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	**3.2** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	0.044 U	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Tin	7440-31-5	2.0 U	1	2.0	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Vanadium	7440-62-2	1.0 U	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**4.4** J	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID: 3201-MW8
Lab #: C706524-08

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Sulfide	18496-25-8	0.50 U	1	0.50	1.0	1	mg/L	EPA 376.1	NO PREP	7F07026

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ANALYTICAL REPORT

Sample ID:	3201-MW8	Project:	City of Durham
Lab #:	C706524-08	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/08/07 By: RB/	Unit:	ug/L
Anal. Method:	EPA 8151A	Dilution Factor:	1
Anal. Batch:	AA00987		
QC Batch:	7F04031		

Chlorinated Herbicides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
2,4,5-T	93-76-5	0.11 U	0.11	0.30	2	ug/L
2,4,5-TP (Silvex)	93-72-1	0.11 U	0.11	0.30	2	ug/L
2,4-D	94-75-7	0.12 U	0.12	0.30	2	ug/L
Dinoseb	88-85-7	0.23 U	0.23	0.30	1	ug/L
Pentachlorophenol	87-86-5	0.13 U	0.13	0.30	25.05	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4-DCAA	94-75-7	2.5	2.00	124 %	61-177

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ANALYTICAL REPORT

Sample ID: 3201-MW8
Lab #: C706524-08

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Cyanide (total)	57-12-5	0.0058 U	1	0.0058	0.010	10	mg/L	EPA 335.2	NO PREP	7F04002

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ANALYTICAL REPORT

Sample ID:	3201-MW8	Project:	City of Durham
Lab #:	C706524-08	Work Order #:	C706524
		Matrix:	Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Mercury	7439-97-6	0.11 U	1	0.11	0.20	0.2	ug/L	EPA 7470A	EPA 7470A	7F13013

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ANALYTICAL REPORT

Sample ID:	3201-S3	Project:	City of Durham
Lab #:	C706524-11	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	**5.4** J	0.90	5.0	100	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	**0.55** J	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-S3	Project:	City of Durham
Lab #:	C706524-11	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	45	50.0	90 %	67-125
Dibromofluoromethane	1868-53-7	44	50.0	87 %	69-111
Toluene-d8	2037-26-5	43	50.0	87 %	85-120

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ANALYTICAL REPORT

Sample ID: 3201-S3
Lab #: C706524-11

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**7.6** J	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	**0.8** J	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	**2.7** J	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	**2.3** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	0.044 U	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Vanadium	7440-62-2	**1.2** J	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**52.5**	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID:	3201-S4	Project:	City of Durham
Lab #:	C706524-12	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	0.90 U	0.90	5.0	100	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	**0.60** J	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-S4	Project:	City of Durham
Lab #:	C706524-12	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	46	50.0	92 %	67-125
Dibromofluoromethane	1868-53-7	45	50.0	89 %	69-111
Toluene-d8	2037-26-5	45	50.0	89 %	85-120

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ANALYTICAL REPORT

Sample ID: 3201-S4
Lab #: C706524-12

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	**8.1** J	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	**1.3** J	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	**2.7** J	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	**2.9** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	0.044 U	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Vanadium	7440-62-2	1.0 U	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**51.9**	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID:	3201-Field Blank	Project:	City of Durham
Lab #:	C706524-13	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	**3.8** J	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-Field Blank	Project:	City of Durham
Lab #:	C706524-13	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Ground Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	0.15 U	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	44	50.0	88 %	67-125
Dibromofluoromethane	1868-53-7	41	50.0	83 %	69-111
Toluene-d8	2037-26-5	44	50.0	88 %	85-120

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ANALYTICAL REPORT

Sample ID:	3201-Field Blank	Project:	City of Durham
Lab #:	C706524-13	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,2,4,5-Tetrachlorobenzene	95-94-3	1.7 U	1.7	10	10	ug/L
1,3,5-Trinitrobenzene	99-35-4	1.4 U	1.4	10	10	ug/L
1,3-Dinitrobenzene	99-65-0	1.0 U	1.0	10	20	ug/L
1,4-Naphthoquinone	130-15-4	3.2 U	3.2	10	10	ug/L
1,4-Phenylenediamine	106-50-3	4.0 U	4.0	10	10	ug/L
1-Naphthylamine	134-32-7	2.5 U	2.5	10	10	ug/L
2,3,4,6-Tetrachlorophenol	58-90-2	1.0 U	1.0	10	10	ug/L
2,4,5-Trichlorophenol	95-95-4	1.1 U	1.1	10	10	ug/L
2,4,6-Trichlorophenol	88-06-2	1.4 U	1.4	10	10	ug/L
2,4-Dichlorophenol	120-83-2	1.6 U	1.6	10	10	ug/L
2,4-Dimethylphenol	105-67-9	3.0 U	3.0	10	10	ug/L
2,4-Dinitrophenol	51-28-5	1.7 U	1.7	10	50	ug/L
2,4-Dinitrotoluene	121-14-2	1.1 U	1.1	10	10	ug/L
2,6-Dichlorophenol	87-65-0	1.7 U	1.7	10	10	ug/L
2,6-Dinitrotoluene	606-20-2	1.0 U	1.0	10	10	ug/L
2-Acetylaminofluorene	53-96-3	1.3 U	1.3	10	20	ug/L
2-Chloronaphthalene	91-58-7	1.6 U	1.6	10	10	ug/L
2-Chlorophenol	95-57-8	2.0 U	2.0	10	10	ug/L
2-Methyl-4,6-dinitrophenol	534-52-1	1.2 U	1.2	10	50	ug/L
2-Methylnaphthalene	91-57-6	2.0 U	2.0	10	10	ug/L
2-Methylphenol	95-48-7	2.0 U	2.0	10	10	ug/L
2-Naphthylamine	91-59-8	4.0 U	4.0	10	10	ug/L
2-Nitroaniline	88-74-4	1.2 U	1.2	10	50	ug/L
2-Nitrophenol	88-75-5	1.8 U	1.8	10	10	ug/L
3 & 4-Methylphenol		1.9 U	1.9	20	10	ug/L
3,3'-Dichlorobenzidine	91-94-1	1.8 U	1.8	10	20	ug/L
3,3'-Dimethylbenzidine	119-93-7	3.0 U	3.0	10	10	ug/L
3-Methylcholanthrene	56-49-5	1.3 U	1.3	10	10	ug/L
3-Nitroaniline	99-09-2	0.70 U	0.70	10	50	ug/L
4-Aminobiphenyl	92-67-1	3.1 U	3.1	10	15	ug/L
4-Bromophenyl-phenylether	101-55-3	1.1 U	1.1	10	10	ug/L
4-Chloro-3-methylphenol	59-50-7	1.4 U	1.4	10	20	ug/L
4-Chloroaniline	106-47-8	1.6 U	1.6	10	20	ug/L
4-Chlorophenyl-phenylether	7005-72-3	1.2 U	1.2	10	10	ug/L
4-Nitroaniline	100-01-6	0.70 U	0.70	10	20	ug/L
4-Nitrophenol	100-02-7	1.2 U	1.2	10	50	ug/L
5-Nitro-o-toluidine	99-55-8	0.60 U	0.60	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-Field Blank	Project:	City of Durham
Lab #:	C706524-13	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
7,12-Dimethylbenz(a)anthracene	57-97-6	1.1 U	1.1	10	10	ug/L
Acenaphthene	83-32-9	1.4 U	1.4	10	10	ug/L
Acenaphthylene	208-96-8	1.4 U	1.4	10	10	ug/L
Acetophenone	98-86-2	2.0 U	2.0	10	10	ug/L
Anthracene	120-12-7	0.90 U	0.90	10	10	ug/L
Benzo(a)anthracene	56-55-3	1.0 U	1.0	10	10	ug/L
Benzo(a)pyrene	50-32-8	1.1 U	1.1	10	10	ug/L
Benzo(b)fluoranthene	205-99-2	0.70 U	0.70	10	10	ug/L
Benzo(g,h,i)perylene	191-24-2	1.3 U	1.3	10	10	ug/L
Benzo(k)fluoranthene	207-08-9	1.8 U	1.8	10	10	ug/L
Benzyl alcohol	100-51-6	2.0 U	2.0	10	20	ug/L
Bis(2-chloroethoxy)methane	111-91-1	2.0 U	2.0	10	10	ug/L
Bis(2-chloroethyl)ether	111-44-4	2.1 U	2.1	10	10	ug/L
Bis(2-chloroisopropyl)ether	108-60-1	2.2 U	2.2	10	10	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	1.0 U	1.0	10	15	ug/L
Butylbenzylphthalate	85-68-7	1.0 U	1.0	10	10	ug/L
Chlorobenzilate	510-15-6	1.2 U	1.2	10	10	ug/L
Chrysene	218-01-9	1.0 U	1.0	10	10	ug/L
Diallate	2303-16-4	1.3 U	1.3	10	10	ug/L
Dibenzo(a,h)anthracene	53-70-3	1.0 U	1.0	10	10	ug/L
Dibenzofuran	132-64-9	1.3 U	1.3	10	10	ug/L
Diethylphthalate	84-66-2	1.0 U	1.0	10	10	ug/L
Dimethoate	60-51-5	1.0 U	1.0	10	20	ug/L
Dimethylphthalate	131-11-3	1.1 U	1.1	10	10	ug/L
Di-n-butylphthalate	84-74-2	1.0 U	1.0	10	10	ug/L
Di-n-octylphthalate	117-84-0	0.90 U	0.90	10	10	ug/L
Disulfoton	298-04-4	1.0 U	1.0	10	10	ug/L
Ethyl methanesulfonate	62-50-0	2.0 U	2.0	10	20	ug/L
Famphur	52-85-7	2.0 U	2.0	10	20	ug/L
Fluoranthene	206-44-0	0.90 U	0.90	10	10	ug/L
Fluorene	86-73-7	1.1 U	1.1	10	10	ug/L
Hexachlorobenzene	118-74-1	1.1 U	1.1	10	10	ug/L
Hexachlorobutadiene	87-68-3	2.0 U	2.0	10	10	ug/L
Hexachlorocyclopentadiene	77-47-4	2.0 U	2.0	10	10	ug/L
Hexachloroethane	67-72-1	2.4 U	2.4	10	10	ug/L
Hexachloropropene	1888-71-7	1.1 U	1.1	10	10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	1.1 U	1.1	10	10	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-Field Blank	Project:	City of Durham
Lab #:	C706524-13	Work Order #:	C706524
Prep. Method:	EPA 3510C_MS	Matrix:	Ground Water
Analyzed:	06/09/07 By: DFM	Unit:	ug/L
Anal. Method:	EPA 8270C	Dilution Factor:	1
Anal. Batch:	CA00782		
QC Batch:	7F05003		

Semivolatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Isodrin	465-73-6	1.0 U	1.0	10	20	ug/L
Isophorone	78-59-1	1.8 U	1.8	10	10	ug/L
Isosafrole	120-58-1	1.8 U	1.8	10	10	ug/L
Kepone	143-50-0	1.5 U	1.5	20	20	ug/L
Methapyrilene	91-80-5	3.8 U	3.8	10	100	ug/L
Methyl Methanesulfonate	66-27-3	2.0 U	2.0	10	10	ug/L
Methyl parathion	298-00-0	1.1 U	1.1	10	10	ug/L
Nitrobenzene	98-95-3	1.9 U	1.9	10	10	ug/L
N-Nitrosodiethylamine	55-18-5	1.9 U	1.9	10	20	ug/L
N-Nitrosodimethylamine	62-75-9	1.9 U	1.9	10	10	ug/L
N-Nitrosodi-n-butylamine	924-16-3	1.7 U	1.7	10	10	ug/L
N-Nitroso-di-n-propylamine	621-64-7	2.1 U	2.1	10	10	ug/L
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	1.1 U	1.1	10	10	ug/L
N-Nitrosomethylethylamine	10595-95-6	1.9 U	1.9	10	10	ug/L
N-Nitrosopiperidine	100-75-4	1.5 U	1.5	10	20	ug/L
N-Nitrosopyrrolidine	930-55-2	1.9 U	1.9	10	10	ug/L
O,O,O-Triethyl phosphorothioate	126-68-1	2.0 U	2.0	10	10	ug/L
o-Toluidine	95-53-4	1.5 U	1.5	10	10	ug/L
Parathion	56-38-2	1.0 U	1.0	10	10	ug/L
p-Dimethylaminoazobenzene	60-11-7	1.2 U	1.2	10	10	ug/L
Pentachlorobenzene	608-93-5	1.2 U	1.2	10	10	ug/L
Pentachloronitrobenzene	82-68-8	1.1 U	1.1	10	20	ug/L
Phenacetin	62-44-2	1.0 U	1.0	10	20	ug/L
Phenanthrene	85-01-8	0.90 U	0.90	10	10	ug/L
Phenol	108-95-2	1.5 U	1.5	10	10	ug/L
Phorate	298-02-2	4.1 U	4.1	10	10	ug/L
Pronamide	23950-58-5	1.0 U	1.0	10	10	ug/L
Pyrene	129-00-0	0.90 U	0.90	10	10	ug/L
Safrole	94-59-7	1.9 U	1.9	10	10	ug/L
Thionazin	297-97-2	1.0 U	1.0	10	20	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,6-Tribromophenol	118-79-6	81	100	81 %	55-159
2-Fluorobiphenyl	321-60-8	37	50.0	74 %	44-131
2-Fluorophenol	367-12-4	57	100	57 %	30-114
Nitrobenzene-d5	NA	40	50.0	79 %	39-131
Phenol-d5	NA	45	100	45 %	12-122
Terphenyl-d14	NA	56	50.0	113 %	47-160

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ANALYTICAL REPORT

Sample ID:	3201-Field Blank	Project:	City of Durham
Lab #:	C706524-13	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/05/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8081A	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Organochlorine Pesticides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
4,4'-DDD	72-54-8	0.0050 U	0.0050	0.050	0.1	ug/L
4,4'-DDE	72-55-9	0.0060 U	0.0060	0.050	0.1	ug/L
4,4'-DDT	50-29-3	0.0050 U	0.0050	0.050	0.1	ug/L
Aldrin	309-00-2	0.0030 U	0.0030	0.050	0.05	ug/L
alpha-BHC	319-84-6	0.0010 U	0.0010	0.050	0.05	ug/L
beta-BHC	319-85-7	0.0030 U	0.0030	0.050	0.05	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
Chlordane-gamma	NA	0.0050 U	0.0050	0.050	NE	ug/L
delta-BHC	319-86-8	0.0020 U	0.0020	0.050	0.05	ug/L
Dieldrin	60-57-1	0.0060 U	0.0060	0.050	0.075	ug/L
Endosulfan I	959-98-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan II	33213-65-9	0.0040 U	0.0040	0.050	0.1	ug/L
Endosulfan sulfate	1031-07-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin	72-20-8	0.0040 U	0.0040	0.050	0.1	ug/L
Endrin aldehyde	7421-93-4	0.0040 U	0.0040	0.050	0.1	ug/L
gamma-BHC	58-89-9	0.0020 U	0.0020	0.050	0.05	ug/L
Heptachlor	76-44-8	0.0030 U	0.0030	0.050	0.05	ug/L
Heptachlor epoxide	1024-57-3	0.0040 U	0.0040	0.050	0.075	ug/L
Methoxychlor	72-43-5	0.0060 U	0.0060	0.050	1	ug/L
Toxaphene	8001-35-2	0.67 U	0.67	1.0	1.5	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.89	1.00	89 %	27-125
DBC	NA	1.1	1.00	107 %	46-130

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ANALYTICAL REPORT

Sample ID:	3201-Field Blank	Project:	City of Durham
Lab #:	C706524-13	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/05/07 By: JHH	Unit:	ug/L
Anal. Method:	EPA 8082	Dilution Factor:	1
Anal. Batch:	CA00766		
QC Batch:	7F04012		

Polychlorinated Biphenyls by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
PCB-1016/1242	12674-11-2/53469-:	0.34 U	0.34	1.0		ug/L
PCB-1221	11104-28-2	0.70 U	0.70	1.0	NE	ug/L
PCB-1232	11141-16-5	0.80 U	0.80	1.0	NE	ug/L
PCB-1248	12672-29-6	0.70 U	0.70	1.0	NE	ug/L
PCB-1254	11097-69-1	0.50 U	0.50	1.0	NE	ug/L
PCB-1260	11096-82-5	0.21 U	0.21	1.0	NE	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4,5,6-TCMX	877-09-8	0.89	1.00	89 %	27-125
DBC	NA	1.1	1.00	107 %	46-130

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ANALYTICAL REPORT

Sample ID: 3201-Field Blank
Lab #: C706524-13

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Antimony	7440-36-0	0.58 U	1	0.58	2.00	6	ug/L	EPA 6020	EPA 3005A	7F08020
Arsenic	7440-38-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Barium	7440-39-3	0.2 U	1	0.2	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Beryllium	7440-41-7	0.70 U	1	0.70	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Cadmium	7440-43-9	0.50 U	1	0.50	1.00	1	ug/L	EPA 6010B	EPA 3005A	7F06010
Chromium	7440-47-3	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Cobalt	7440-48-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Copper	7440-50-8	0.6 U	1	0.6	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Lead	7439-92-1	**3.1** J	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Nickel	7440-02-0	2.0 U	1	2.0	10.0	50	ug/L	EPA 6010B	EPA 3005A	7F06010
Selenium	7782-49-2	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Silver	7440-22-4	2.0 U	1	2.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010
Thallium	7440-28-0	0.044 U	1	0.044	0.050	5.5	ug/L	EPA 6020	EPA 3005A	7F08020
Tin	7440-31-5	**3.6** J	1	2.0	10.0	100	ug/L	EPA 6010B	EPA 3005A	7F06010
Vanadium	7440-62-2	1.0 U	1	1.0	10.0	25	ug/L	EPA 6010B	EPA 3005A	7F06010
Zinc	7440-66-6	**2.4** J	1	1.0	10.0	10	ug/L	EPA 6010B	EPA 3005A	7F06010

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ANALYTICAL REPORT

Sample ID: 3201-Field Blank
Lab #: C706524-13

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Sulfide	18496-25-8	0.50 U	1	0.50	1.0	1	mg/L	EPA 376.1	NO PREP	7F07026

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ANALYTICAL REPORT

Sample ID:	3201-Field Blank	Project:	City of Durham
Lab #:	C706524-13	Work Order #:	C706524
Prep. Method:	EPA 3510C	Matrix:	Ground Water
Analyzed:	06/08/07 By: RB/	Unit:	ug/L
Anal. Method:	EPA 8151A	Dilution Factor:	1
Anal. Batch:	AA00987		
QC Batch:	7F04031		

Chlorinated Herbicides by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
2,4,5-T	93-76-5	0.11 U	0.11	0.30	2	ug/L
2,4,5-TP (Silvex)	93-72-1	0.11 U	0.11	0.30	2	ug/L
2,4-D	94-75-7	0.12 U	0.12	0.30	2	ug/L
Dinoseb	88-85-7	0.23 U	0.23	0.30	1	ug/L
Pentachlorophenol	87-86-5	0.13 U	0.13	0.30	25.05	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
2,4-DCAA	94-75-7	2.1	2.00	106 %	61-177

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ANALYTICAL REPORT

Sample ID: 3201-Field Blank
Lab #: C706524-13

Project: City of Durham
Work Order #: C706524
Matrix: Ground Water

Classical Chemistry Parameters

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Cyanide (total)	57-12-5	0.0058 U	1	0.0058	0.010	10	mg/L	EPA 335.2	NO PREP	7F06003

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ANALYTICAL REPORT

Sample ID:	3201-Field Blank	Project:	City of Durham
Lab #:	C706524-13	Work Order #:	C706524
		Matrix:	Ground Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	DF	MDL	MRL	NC SWSL	Units	Analysis Method	Prep Method	Analytical Batch
Mercury	7439-97-6	0.11 U	1	0.11	0.20	0.2	ug/L	EPA 7470A	EPA 7470A	7F13013

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ANALYTICAL REPORT

Sample ID:	3201-Trip Blank	Project:	City of Durham
Lab #:	C706524-14	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.16 U	0.16	1.0	5	ug/L
1,1,1-Trichloroethane	71-55-6	0.24 U	0.24	1.0	1	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.27 U	0.27	1.0	1	ug/L
1,1,2-Trichloroethane	79-00-5	0.24 U	0.24	1.0	5	ug/L
1,1-Dichloroethane	75-34-3	0.090 U	0.090	1.0	5	ug/L
1,1-Dichloroethene	75-35-4	0.14 U	0.14	1.0	5	ug/L
1,1-Dichloropropene	563-58-6	0.13 U	0.13	1.0	5	ug/L
1,2,3-Trichloropropane	96-18-4	0.32 U	0.32	1.0	1	ug/L
1,2,4-Trichlorobenzene	120-82-1	0.14 U	0.14	1.0	10	ug/L
1,2-Dibromo-3-chloropropane	96-12-8	0.19 U	0.19	1.0	1	ug/L
1,2-Dibromoethane	106-93-4	0.19 U	0.19	1.0	1	ug/L
1,2-Dichlorobenzene	95-50-1	0.17 U	0.17	1.0	5	ug/L
1,2-Dichloroethane	107-06-2	0.36 U	0.36	1.0	1	ug/L
1,2-Dichloropropane	78-87-5	0.18 U	0.18	1.0	1	ug/L
1,3-Dichlorobenzene	541-73-1	0.15 U	0.15	1.0	5	ug/L
1,3-Dichloropropane	142-28-9	0.18 U	0.18	1.0	1	ug/L
1,4-Dichlorobenzene	106-46-7	0.15 U	0.15	1.0	1	ug/L
2,2-Dichloropropane	594-20-7	0.16 U	0.16	1.0	15	ug/L
2-Butanone	78-93-3	0.56 U	0.56	5.0	100	ug/L
2-Hexanone	591-78-6	0.24 U	0.24	5.0	50	ug/L
3-Chloropropene	107-05-1	0.20 U	0.20	1.0	10	ug/L
4-Methyl-2-pentanone	108-10-1	0.36 U	0.36	5.0	100	ug/L
Acetone	67-64-1	**3.2** J	0.90	5.0	100	ug/L
Acetonitrile	75-05-8	1.8 U	1.8	10	55	ug/L
Acrolein	107-02-8	2.1 U	2.1	10	52.5	ug/L
Acrylonitrile	107-13-1	2.0 U	2.0	5.0	200	ug/L
Benzene	71-43-2	0.12 U	0.12	1.0	1	ug/L
Bromochloromethane	74-97-5	0.19 U	0.19	1.0	3	ug/L
Bromodichloromethane	75-27-4	0.19 U	0.19	0.40	1	ug/L
Bromoform	75-25-2	0.36 U	0.36	1.0	3	ug/L
Bromomethane	74-83-9	0.21 U	0.21	1.0	10	ug/L
Carbon disulfide	75-15-0	0.12 U	0.12	5.0	100	ug/L
Carbon tetrachloride	56-23-5	0.38 U	0.38	1.0	1	ug/L
Chlorobenzene	108-90-7	0.16 U	0.16	1.0	3	ug/L
Chloroethane	75-00-3	0.40 U	0.40	1.0	10	ug/L
Chloroform	67-66-3	0.16 U	0.16	1.0	5	ug/L
Chloromethane	74-87-3	0.18 U	0.18	1.0	1	ug/L

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ANALYTICAL REPORT

Sample ID:	3201-Trip Blank	Project:	City of Durham
Lab #:	C706524-14	Work Order #:	C706524
Prep. Method:	EPA 5030B_MS	Matrix:	Water
Analyzed:	06/08/07 By: ref	Unit:	ug/L
Anal. Method:	EPA 8260B	Dilution Factor:	1
Anal. Batch:			
QC Batch:	7F08026		

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	NC SWSL	Units
Chloroprene	126-99-8	0.19 U	0.19	1.0	20	ug/L
cis-1,2-Dichloroethene	156-59-2	0.14 U	0.14	1.0	5	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.16 U	0.16	0.20	1	ug/L
Dibromochloromethane	124-48-1	0.18 U	0.18	1.0	1	ug/L
Dibromomethane	74-95-3	0.14 U	0.14	1.0	10	ug/L
Dichlorodifluoromethane	75-71-8	0.14 U	0.14	1.0	5	ug/L
Ethyl Methacrylate	97-63-2	0.17 U	0.17	2.0	10	ug/L
Ethylbenzene	100-41-4	0.17 U	0.17	1.0	1	ug/L
Iodomethane	74-88-4	0.23 U	0.23	2.0	10	ug/L
Isobutyl alcohol	78-83-1	8.4 U	8.4	20	100	ug/L
Methacrylonitrile	126-98-7	0.69 U	0.69	10	100	ug/L
Methyl Methacrylate	80-62-6	0.38 U	0.38	1.0	30	ug/L
Methylene chloride	75-09-2	0.088 U	0.088	1.0	1	ug/L
Naphthalene	91-20-3	0.25 U	0.25	1.0	10	ug/L
Propionitrile	107-12-0	1.6 U	1.6	10	150	ug/L
Styrene	100-42-5	0.12 U	0.12	1.0	1	ug/L
Tetrachloroethene	127-18-4	0.25 U	0.25	1.0	1	ug/L
Toluene	108-88-3	**0.33** J	0.15	1.0	1	ug/L
trans-1,2-Dichloroethene	156-60-5	0.10 U	0.10	1.0	5	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.18 U	0.18	0.20	1	ug/L
trans-1,4-Dichloro-2-butene	110-57-6	0.60 U	0.60	1.0	100	ug/L
Trichloroethene	79-01-6	0.23 U	0.23	1.0	1	ug/L
Trichlorofluoromethane	75-69-4	0.16 U	0.16	1.0	1	ug/L
Vinyl acetate	108-05-4	0.19 U	0.19	2.0	50	ug/L
Vinyl chloride	75-01-4	0.15 U	0.15	1.0	1	ug/L
Xylenes (Total)	1330-20-7	0.21 U	0.21	1.0	4	ug/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	45	50.0	89 %	67-125
Dibromofluoromethane	1868-53-7	42	50.0	85 %	69-111
Toluene-d8	2037-26-5	42	50.0	85 %	85-120

QUALITY CONTROL

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

Volatile Organic Compounds by GCMS - Quality Control

Batch 7F08026 - EPA 5030B_MS

Blank (7F08026-BLK1) Prepared: 06/08/2007 12:00 Analyzed: 06/08/2007 12:10

Dichlorodifluoromethane	0.14 U	1.0	ug/L
Chloromethane	0.18 U	1.0	ug/L
Vinyl chloride	0.15 U	1.0	ug/L
Bromomethane	0.21 U	1.0	ug/L
Chloroethane	0.40 U	1.0	ug/L
Trichlorofluoromethane	0.16 U	1.0	ug/L
Acrolein	2.1 U	10	ug/L
1,1-Dichloroethene	0.14 U	1.0	ug/L
Acetone	1.2 J	5.0	ug/L
Iodomethane	0.23 U	2.0	ug/L
Carbon disulfide	0.12 U	5.0	ug/L
Acetonitrile	1.8 U	10	ug/L
3-Chloropropene	0.20 U	1.0	ug/L
Methylene chloride	0.088 U	1.0	ug/L
Acrylonitrile	2.0 U	5.0	ug/L
trans-1,2-Dichloroethene	0.10 U	1.0	ug/L
1,1-Dichloroethane	0.090 U	1.0	ug/L
Vinyl acetate	0.19 U	2.0	ug/L
Chloroprene	0.19 U	1.0	ug/L
2-Butanone	0.56 U	5.0	ug/L
cis-1,2-Dichloroethene	0.14 U	1.0	ug/L
2,2-Dichloropropane	0.16 U	1.0	ug/L
Propionitrile	1.6 U	10	ug/L
Methacrylonitrile	0.69 U	10	ug/L
Bromochloromethane	0.19 U	1.0	ug/L
Chloroform	0.16 U	1.0	ug/L
1,1,1-Trichloroethane	0.24 U	1.0	ug/L
1,1-Dichloropropene	0.13 U	1.0	ug/L
Isobutyl alcohol	8.4 U	20	ug/L
Carbon tetrachloride	0.38 U	1.0	ug/L
1,2-Dichloroethane	0.36 U	1.0	ug/L
Benzene	0.12 U	1.0	ug/L
Trichloroethene	0.23 U	1.0	ug/L
1,2-Dichloropropane	0.18 U	1.0	ug/L
Methyl Methacrylate	0.38 U	1.0	ug/L
Dibromomethane	0.14 U	1.0	ug/L
Bromodichloromethane	0.19 U	0.40	ug/L
cis-1,3-Dichloropropene	0.16 U	0.20	ug/L
4-Methyl-2-pentanone	0.36 U	5.0	ug/L
Toluene	0.15 U	1.0	ug/L
trans-1,3-Dichloropropene	0.18 U	0.20	ug/L
Ethyl Methacrylate	0.17 U	2.0	ug/L
1,1,2-Trichloroethane	0.24 U	1.0	ug/L
1,3-Dichloropropane	0.18 U	1.0	ug/L
Tetrachloroethene	0.25 U	1.0	ug/L

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Volatile Organic Compounds by GCMS - Quality Control										
Batch 7F08026 - EPA 5030B_MS										
Blank (7F08026-BLK1) Continued				Prepared: 06/08/2007 12:00 Analyzed: 06/08/2007 12:10						
2-Hexanone	0.24 U	5.0	ug/L							
Dibromochloromethane	0.18 U	1.0	ug/L							
1,2-Dibromoethane	0.19 U	1.0	ug/L							
Chlorobenzene	0.16 U	1.0	ug/L							
1,1,1,2-Tetrachloroethane	0.16 U	1.0	ug/L							
Ethylbenzene	0.17 U	1.0	ug/L							
Styrene	0.12 U	1.0	ug/L							
Bromoform	0.36 U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.27 U	1.0	ug/L							
1,2,3-Trichloropropane	0.32 U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.60 U	1.0	ug/L							
1,3-Dichlorobenzene	0.15 U	1.0	ug/L							
1,4-Dichlorobenzene	0.15 U	1.0	ug/L							
1,2-Dichlorobenzene	0.17 U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.19 U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14 U	1.0	ug/L							
Naphthalene	0.25 U	1.0	ug/L							
Xylenes (Total)	0.21 U	1.0	ug/L							
Surrogate: Dibromofluoromethane	*43*		*ug/L*	*50.0*		*86*	*69-111*			
Surrogate: Toluene-d8	*45*		*ug/L*	*50.0*		*90*	*85-120*			
Surrogate: 4-Bromofluorobenzene	*44*		*ug/L*	*50.0*		*89*	*67-125*			
LCS (7F08026-BS1)				Prepared: 06/08/2007 12:00 Analyzed: 06/08/2007 12:37						
1,1-Dichloroethene	17	1.0	ug/L	20.0		86	57-141			
Benzene	18	1.0	ug/L	20.0		89	76-116			
Trichloroethene	21	1.0	ug/L	20.0		104	81-118			
Toluene	18	1.0	ug/L	20.0		92	77-120			
Chlorobenzene	19	1.0	ug/L	20.0		94	75-115			
Matrix Spike (7F08026-MS1)		**Source: C706524-03**		Prepared: 06/08/2007 12:00 Analyzed: 06/08/2007 13:04						
1,1-Dichloroethene	16	1.0	ug/L	20.0	0.14 U	78	57-141			
Benzene	17	1.0	ug/L	20.0	0.47	83	76-116			
Trichloroethene	19	1.0	ug/L	20.0	0.23 U	96	81-118			
Toluene	16	1.0	ug/L	20.0	0.15 U	80	77-120			
Chlorobenzene	18	1.0	ug/L	20.0	0.16 U	90	75-115			
Matrix Spike Dup (7F08026-MSD1)		**Source: C706524-03**		Prepared: 06/08/2007 12:00 Analyzed: 06/08/2007 13:30						
1,1-Dichloroethene	15	1.0	ug/L	20.0	0.14 U	73	57-141	6	12	
Benzene	15 QM-05	1.0	ug/L	20.0	0.47	73	76-116	12	14	QM-05
Trichloroethene	17	1.0	ug/L	20.0	0.23 U	87	81-118	10	11	
Toluene	15 QM-05	1.0	ug/L	20.0	0.15 U	74	77-120	8	17	QM-05
Chlorobenzene	17	1.0	ug/L	20.0	0.16 U	85	75-115	6	12	
Semivolatile Organic Compounds by GCMS - Quality Control										
Batch 7F05003 - EPA 3510C_MS										
Blank (7F05003-BLK1)				Prepared: 06/05/2007 08:28 Analyzed: 06/09/2007 05:09						
1,2,4,5-Tetrachlorobenzene	1.7 U	10	ug/L							

QUALITY CONTROL

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

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 7F05003 - EPA 3510C_MS

Blank (7F05003-BLK1) Continued Prepared: 06/05/2007 08:28 Analyzed: 06/09/2007 05:09

1,3-Dinitrobenzene	1.0 U	10	ug/L
1,3,5-Trinitrobenzene	1.4 U	10	ug/L
1,4-Naphthoquinone	3.2 U	10	ug/L
1,4-Phenylenediamine	4.0 U	10	ug/L
1-Naphthylamine	2.5 U	10	ug/L
2,3,4,6-Tetrachlorophenol	1.0 U	10	ug/L
2,4,5-Trichlorophenol	1.1 U	10	ug/L
2,4,6-Trichlorophenol	1.4 U	10	ug/L
2,4-Dichlorophenol	1.6 U	10	ug/L
2,4-Dimethylphenol	3.0 U	10	ug/L
2,4-Dinitrophenol	1.7 U	10	ug/L
2,4-Dinitrotoluene	1.1 U	10	ug/L
2,6-Dichlorophenol	1.7 U	10	ug/L
2,6-Dinitrotoluene	1.0 U	10	ug/L
2-Acetylaminofluorene	1.3 U	10	ug/L
2-Chloronaphthalene	1.6 U	10	ug/L
2-Chlorophenol	2.0 U	10	ug/L
2-Methylnaphthalene	2.0 U	10	ug/L
2-Methylphenol	2.0 U	10	ug/L
2-Naphthylamine	4.0 U	10	ug/L
2-Nitroaniline	1.2 U	10	ug/L
2-Nitrophenol	1.8 U	10	ug/L
3,3'-Dimethylbenzidine	3.0 U	10	ug/L
3,3'-Dichlorobenzidine	1.8 U	10	ug/L
3 & 4-Methylphenol	1.9 U	20	ug/L
3-Methylcholanthrene	1.3 U	10	ug/L
3-Nitroaniline	0.70 U	10	ug/L
2-Methyl-4,6-dinitrophenol	1.2 U	10	ug/L
4-Aminobiphenyl	3.1 U	10	ug/L
4-Bromophenyl-phenylether	1.1 U	10	ug/L
4-Chloro-3-methylphenol	1.4 U	10	ug/L
4-Chloroaniline	1.6 U	10	ug/L
4-Chlorophenyl-phenylether	1.2 U	10	ug/L
4-Nitroaniline	0.70 U	10	ug/L
4-Nitrophenol	1.2 U	10	ug/L
5-Nitro-o-toluidine	0.60 U	10	ug/L
7,12-Dimethylbenz(a)anthracene	1.1 U	10	ug/L
Acenaphthene	1.4 U	10	ug/L
Acenaphthylene	1.4 U	10	ug/L
Acetophenone	2.0 U	10	ug/L
Anthracene	0.90 U	10	ug/L
Benzo(a)anthracene	1.0 U	10	ug/L
Benzo(a)pyrene	1.1 U	10	ug/L
Benzo(b)fluoranthene	0.70 U	10	ug/L
Benzo(g,h,i)perylene	1.3 U	10	ug/L

QUALITY CONTROL

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

Semivolatile Organic Compounds by GCMS - Quality Control

Batch 7F05003 - EPA 3510C_MS

Blank (7F05003-BLK1) Continued Prepared: 06/05/2007 08:28 Analyzed: 06/09/2007 05:09

Benzo(k)fluoranthene	1.8 U	10	ug/L
Benzyl alcohol	2.0 U	10	ug/L
Bis(2-chloroethoxy)methane	2.0 U	10	ug/L
Bis(2-chloroethyl)ether	2.1 U	10	ug/L
Bis(2-chloroisopropyl)ether	2.2 U	10	ug/L
Bis(2-ethylhexyl)phthalate	1.0 U	10	ug/L
Butylbenzylphthalate	1.0 U	10	ug/L
Chlorobenzilate	1.2 U	10	ug/L
Chrysene	1.0 U	10	ug/L
Diallate	1.3 U	10	ug/L
Dibenzo(a,h)anthracene	1.0 U	10	ug/L
Dibenzofuran	1.3 U	10	ug/L
Diethylphthalate	1.0 U	10	ug/L
Dimethoate	1.0 U	10	ug/L
Dimethylphthalate	1.1 U	10	ug/L
Di-n-butylphthalate	1.0 U	10	ug/L
Di-n-octylphthalate	0.90 U	10	ug/L
Disulfoton	1.0 U	10	ug/L
Ethyl methanesulfonate	2.0 U	10	ug/L
Famphur	2.0 U	10	ug/L
Fluoranthene	0.90 U	10	ug/L
Fluorene	1.1 U	10	ug/L
Hexachlorobenzene	1.1 U	10	ug/L
Hexachlorobutadiene	2.0 U	10	ug/L
Hexachlorocyclopentadiene	2.0 U	10	ug/L
Hexachloroethane	2.4 U	10	ug/L
Hexachloropropene	1.1 U	10	ug/L
Indeno(1,2,3-cd)pyrene	1.1 U	10	ug/L
Isodrin	1.0 U	10	ug/L
Isophorone	1.8 U	10	ug/L
Isosafrole	1.8 U	10	ug/L
Kepone	1.5 U	20	ug/L
Methapyrilene	3.8 U	10	ug/L
Methyl Methanesulfonate	2.0 U	10	ug/L
Methyl parathion	1.1 U	10	ug/L
Nitrobenzene	1.9 U	10	ug/L
N-Nitrosodiethylamine	1.9 U	10	ug/L
N-Nitrosodimethylamine	1.9 U	10	ug/L
N-Nitrosodi-n-butylamine	1.7 U	10	ug/L
N-Nitroso-di-n-propylamine	2.1 U	10	ug/L
N-Nitrosomethylethylamine	1.9 U	10	ug/L
N-Nitrosopiperidine	1.5 U	10	ug/L
N-Nitrosopyrrolidine	1.9 U	10	ug/L
O,O,O-Triethyl phosphorothioate	2.0 U	10	ug/L
o-Toluidine	1.5 U	10	ug/L

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Semivolatile Organic Compounds by GCMS - Quality Control										
Batch 7F05003 - EPA 3510C_MS										
Blank (7F05003-BLK1) Continued				Prepared: 06/05/2007 08:28 Analyzed: 06/09/2007 05:09						
Parathion	1.0 U	10	ug/L							
p-Dimethylaminoazobenzene	1.2 U	10	ug/L							
Pentachlorobenzene	1.2 U	10	ug/L							
Pentachloronitrobenzene	1.1 U	10	ug/L							
Phenacetin	1.0 U	10	ug/L							
Phenanthrene	0.90 U	10	ug/L							
Phenol	1.5 U	10	ug/L							
Phorate	4.1 U	10	ug/L							
Pronamide	1.0 U	10	ug/L							
Pyrene	0.90 U	10	ug/L							
Safrole	1.9 U	10	ug/L							
Thionazin	1.0 U	10	ug/L							
N-Nitrosodiphenylamine/Diphenylamine	1.1 U	10	ug/L							
LCS (7F05003-BS1)				Prepared: 06/05/2007 08:28 Analyzed: 06/09/2007 05:37						
2,4-Dinitrotoluene	44	10	ug/L	50.0		88	23-128			
2-Chlorophenol	37	10	ug/L	50.0		74	14-102			
4-Chloro-3-methylphenol	42	10	ug/L	50.0		83	10-126			
4-Nitrophenol	32	10	ug/L	50.0		64	10-131			
Acenaphthene	38	10	ug/L	50.0		76	22-115			
N-Nitroso-di-n-propylamine	39	10	ug/L	50.0		78	19-122			
Phenol	25	10	ug/L	50.0		49	11-87			
Pyrene	53	10	ug/L	50.0		106	45-123			
Matrix Spike (7F05003-MS1)		**Source: C706959-03**		Prepared: 06/05/2007 08:28 Analyzed: 06/09/2007 06:34						
2,4-Dinitrotoluene	46	10	ug/L	50.0	1.1 U	92	28-116			
2-Chlorophenol	38	10	ug/L	50.0	2.0 U	76	22-99			
4-Chloro-3-methylphenol	47	10	ug/L	50.0	1.4 U	95	37-109			
4-Nitrophenol	32	10	ug/L	50.0	1.2 U	64	10-140			
Acenaphthene	42	10	ug/L	50.0	1.4 U	84	23-119			
N-Nitroso-di-n-propylamine	39	10	ug/L	50.0	2.1 U	78	22-115			
Phenol	25	10	ug/L	50.0	1.5 U	50	10-92			
Pyrene	42	10	ug/L	50.0	0.90 U	84	43-123			
Matrix Spike Dup (7F05003-MSD1)		**Source: C706959-03**		Prepared: 06/05/2007 08:28 Analyzed: 06/09/2007 07:02						
2,4-Dinitrotoluene	47	10	ug/L	50.0	1.1 U	94	28-116	2	21	
2-Chlorophenol	37	10	ug/L	50.0	2.0 U	74	22-99	3	41	
4-Chloro-3-methylphenol	48	10	ug/L	50.0	1.4 U	96	37-109	2	22	
4-Nitrophenol	31	10	ug/L	50.0	1.2 U	63	10-140	1	52	
Acenaphthene	42	10	ug/L	50.0	1.4 U	84	23-119	0	28	
N-Nitroso-di-n-propylamine	38	10	ug/L	50.0	2.1 U	75	22-115	3	22	
Phenol	24	10	ug/L	50.0	1.5 U	48	10-92	4	44	
Pyrene	42	10	ug/L	50.0	0.90 U	84	43-123	0.3	32	

Organochlorine Pesticides by GC - Quality Control

Batch 7F04012 - EPA 3510C

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Organochlorine Pesticides by GC - Quality Control										
Batch 7F04012 - EPA 3510C										
Blank (7F04012-BLK1)				Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 17:55						
4,4'-DDD	0.0050 U	0.050	ug/L							
4,4'-DDE	0.0060 U	0.050	ug/L							
4,4'-DDT	0.0050 U	0.050	ug/L							
Aldrin	0.0030 U	0.050	ug/L							
alpha-BHC	0.0010 U	0.050	ug/L							
beta-BHC	0.0030 U	0.050	ug/L							
Chlordane-gamma	0.0050 U	0.050	ug/L							
delta-BHC	0.0020 U	0.050	ug/L							
Dieldrin	0.0060 U	0.050	ug/L							
Endosulfan I	0.0040 U	0.050	ug/L							
Endosulfan II	0.0040 U	0.050	ug/L							
Endosulfan sulfate	0.0040 U	0.050	ug/L							
Endrin	0.0040 U	0.050	ug/L							
Endrin aldehyde	0.0040 U	0.050	ug/L							
gamma-BHC	0.0020 U	0.050	ug/L							
Heptachlor	0.0030 U	0.050	ug/L							
Heptachlor epoxide	0.0040 U	0.050	ug/L							
Methoxychlor	0.0060 U	0.050	ug/L							
Toxaphene	0.67 U	1.0	ug/L							
LCS (7F04012-BS1)				Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 18:19						
4,4'-DDT	0.0050 U	0.050	ug/L				43-162			
Aldrin	0.0030 U	0.050	ug/L				51-126			
Dieldrin	0.0060 U	0.050	ug/L				57-140			
Endrin	0.0040 U	0.050	ug/L				61-140			
gamma-BHC	0.0020 U	0.050	ug/L				47-136			
Heptachlor	0.0030 U	0.050	ug/L				49-145			
LCS (7F04012-BS2)				Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 19:30						
4,4'-DDT	1.1	0.050	ug/L	1.00		111	43-162			
Aldrin	0.93	0.050	ug/L	1.00		93	51-126			
Dieldrin	1.1	0.050	ug/L	1.00		110	57-140			
Endrin	1.1	0.050	ug/L	1.00		106	61-140			
gamma-BHC	1.1	0.050	ug/L	1.00		106	47-136			
Heptachlor	1.0	0.050	ug/L	1.00		104	49-145			
Matrix Spike (7F04012-MS1)		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 18:43						
4,4'-DDT	0.0050 U	0.050	ug/L		0.0050 U		48-163			
Aldrin	0.0030 U	0.050	ug/L		0.0030 U		31-159			
Dieldrin	0.0060 U	0.050	ug/L		0.0060 U		41-157			
Endrin	0.0040 U	0.050	ug/L		0.0040 U		41-157			
gamma-BHC	0.0020 U	0.050	ug/L		0.0020 U		41-133			
Heptachlor	0.0030 U	0.050	ug/L		0.0030 U		34-169			
Matrix Spike (7F04012-MS2)		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 19:54						
4,4'-DDT	1.4	0.050	ug/L	1.00	0.0050 U	141	48-163			
Aldrin	0.90	0.050	ug/L	1.00	0.0030 U	90	31-159			
Dieldrin	1.0	0.050	ug/L	1.00	0.0060 U	100	41-157			

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Organochlorine Pesticides by GC - Quality Control										
Batch 7F04012 - EPA 3510C										
Matrix Spike (7F04012-MS2) Continued		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 19:54						
Endrin	0.96	0.050	ug/L	1.00	0.0040 U	96	41-157			
gamma-BHC	0.96	0.050	ug/L	1.00	0.0020 U	96	41-133			
Heptachlor	1.0	0.050	ug/L	1.00	0.0030 U	102	34-169			
Matrix Spike Dup (7F04012-MSD1)		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 19:07						
4,4'-DDT	0.0050 U	0.050	ug/L		0.0050 U		48-163		31	
Aldrin	0.0030 U	0.050	ug/L		0.0030 U		31-159		27	
Dieldrin	0.0060 U	0.050	ug/L		0.0060 U		41-157		28	
Endrin	0.0040 U	0.050	ug/L		0.0040 U		41-157		28	
gamma-BHC	0.0020 U	0.050	ug/L		0.0020 U		41-133		24	
Heptachlor	0.0030 U	0.050	ug/L		0.0030 U		34-169		27	
Matrix Spike Dup (7F04012-MSD2)		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 20:18						
4,4'-DDT	1.4	0.050	ug/L	1.00	0.0050 U	137	48-163	3	31	
Aldrin	0.86	0.050	ug/L	1.00	0.0030 U	86	31-159	4	27	
Dieldrin	0.97	0.050	ug/L	1.00	0.0060 U	97	41-157	3	28	
Endrin	0.94	0.050	ug/L	1.00	0.0040 U	94	41-157	3	28	
gamma-BHC	0.94	0.050	ug/L	1.00	0.0020 U	94	41-133	2	24	
Heptachlor	0.98	0.050	ug/L	1.00	0.0030 U	98	34-169	4	27	
Polychlorinated Biphenyls by GC - Quality Control										
Batch 7F04012 - EPA 3510C										
Blank (7F04012-BLK1)				Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 17:55						
PCB-1016/1242	0.34 U	1.0	ug/L							
PCB-1221	0.70 U	1.0	ug/L							
PCB-1232	0.80 U	1.0	ug/L							
PCB-1248	0.70 U	1.0	ug/L							
PCB-1254	0.50 U	1.0	ug/L							
PCB-1260	0.21 U	1.0	ug/L							
Surrogate: 2,4,5,6-TCMX	*0.93*		*ug/L*	*1.00*		*93*	*27-125*			
Surrogate: DBC	*1.2*		*ug/L*	*1.00*		*115*	*46-130*			
LCS (7F04012-BS1)				Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 18:19						
PCB-1016/1242	7.2	1.0	ug/L	10.0		72	50-150			
PCB-1260	9.6	1.0	ug/L	10.0		96	50-150			
Surrogate: 2,4,5,6-TCMX	*0.97*		*ug/L*	*1.00*		*97*	*27-125*			
Surrogate: DBC	*2.0*		*ug/L*	*1.00*		*198*	*46-130*			
LCS (7F04012-BS2)				Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 19:30						
PCB-1016/1242	0.34 U	1.0	ug/L				50-150			
PCB-1260	0.21 U	1.0	ug/L				50-150			
Surrogate: 2,4,5,6-TCMX	*0.92*		*ug/L*	*1.00*		*92*	*27-125*			
Surrogate: DBC	*1.1*		*ug/L*	*1.00*		*109*	*46-130*			
Matrix Spike (7F04012-MS1)		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 18:43						
PCB-1016/1242	6.9	1.0	ug/L	10.0	0.34 U	69	54-136			
PCB-1260	9.4	1.0	ug/L	10.0	0.21 U	94	48-145			

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Polychlorinated Biphenyls by GC - Quality Control										
Batch 7F04012 - EPA 3510C										
Matrix Spike (7F04012-MS1) Continued		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 18:43						
Surrogate: 2,4,5,6-TCMX	*0.88*		*ug/L*	*1.00*		*88*	*27-125*			
Surrogate: DBC	*1.9*		*ug/L*	*1.00*		*187*	*46-130*			
Matrix Spike (7F04012-MS2)		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 19:54						
PCB-1016/1242	0.34 U	1.0	ug/L		0.34 U		54-136			
PCB-1260	0.21 U	1.0	ug/L		0.21 U		48-145			
Surrogate: 2,4,5,6-TCMX	*0.89*		*ug/L*	*1.00*		*89*	*27-125*			
Surrogate: DBC	*1.1*		*ug/L*	*1.00*		*113*	*46-130*			
Matrix Spike Dup (7F04012-MSD1)		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 19:07						
PCB-1016/1242	6.8	1.0	ug/L	10.0	0.34 U	68	54-136	3	35	
PCB-1260	9.1	1.0	ug/L	10.0	0.21 U	91	48-145	3	30	
Surrogate: 2,4,5,6-TCMX	*0.87*		*ug/L*	*1.00*		*87*	*27-125*			
Surrogate: DBC	*1.8*		*ug/L*	*1.00*		*182*	*46-130*			
Matrix Spike Dup (7F04012-MSD2)		**Source: C706524-03**		Prepared: 06/04/2007 08:58 Analyzed: 06/04/2007 20:18						
PCB-1016/1242	0.34 U	1.0	ug/L		0.34 U		54-136		35	
PCB-1260	0.21 U	1.0	ug/L		0.21 U		48-145		30	
Surrogate: 2,4,5,6-TCMX	*0.85*		*ug/L*	*1.00*		*85*	*27-125*			
Surrogate: DBC	*1.1*		*ug/L*	*1.00*		*111*	*46-130*			
Metals by EPA 6000/7000 Series Methods - Quality Control										
Batch 7F06010 - EPA 3005A										
Blank (7F06010-BLK1)				Prepared: 06/06/2007 08:59 Analyzed: 06/07/2007 12:25						
Arsenic	2.7 J	10.0	ug/L							
Barium	0.2 U	10.0	ug/L							
Beryllium	0.70 U	1.00	ug/L							
Cadmium	0.50 U	1.00	ug/L							
Chromium	2.0 U	10.0	ug/L							
Cobalt	2.0 U	10.0	ug/L							
Copper	0.7 J	10.0	ug/L							
Lead	2.0 U	10.0	ug/L							
Nickel	2.0 U	10.0	ug/L							
Selenium	5.7 J	10.0	ug/L							
Silver	2.0 U	10.0	ug/L							
Tin	2.7 J	10.0	ug/L							
Vanadium	1.0 U	10.0	ug/L							
Zinc	1.0 U	10.0	ug/L							
LCS (7F06010-BS1)				Prepared: 06/06/2007 08:59 Analyzed: 06/07/2007 12:32						
Arsenic	1050	10.0	ug/L	1000		105	82-117			
Barium	1170	10.0	ug/L	1000		117	72-125			
Beryllium	540	1.00	ug/L	500		108	75-121			
Cadmium	532	1.00	ug/L	500		106	72-120			
Chromium	1040	10.0	ug/L	1000		104	78-119			
Cobalt	1050	10.0	ug/L	1000		105	76-117			
Copper	519	10.0	ug/L	500		104	80-117			

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Metals by EPA 6000/7000 Series Methods - Quality Control										
Batch 7F06010 - EPA 3005A										
LCS (7F06010-BS1) Continued				Prepared: 06/06/2007 08:59 Analyzed: 06/07/2007 12:32						
Lead	1050	10.0	ug/L	1000		105	72-121			
Nickel	1070	10.0	ug/L	1000		107	78-116			
Selenium	1070	10.0	ug/L	1000		107	82-127			
Silver	107	10.0	ug/L	100		107	80-128			
Tin	1040	10.0	ug/L	1000		104	83-117			
Vanadium	513	10.0	ug/L	500		103	78-117			
Zinc	1050	10.0	ug/L	1000		105	80-120			
Matrix Spike (7F06010-MS1)		**Source: C706524-03**		Prepared: 06/06/2007 08:59 Analyzed: 06/07/2007 12:50						
Arsenic	1080	10.0	ug/L	1000	2.0 U	108	64-126			
Barium	2680	10.0	ug/L	1000	1490	119	74-119			
Beryllium	554	1.00	ug/L	500	0.70 U	111	70-131			
Cadmium	525	1.00	ug/L	500	0.50 U	105	68-121			
Chromium	1040	10.0	ug/L	1000	2.0 U	104	73-120			
Cobalt	1050	10.0	ug/L	1000	4.3	104	76-120			
Copper	529	10.0	ug/L	500	0.6 U	106	75-123			
Lead	1050	10.0	ug/L	1000	2.0 U	105	68-126			
Nickel	1050	10.0	ug/L	1000	2.5	105	64-126			
Selenium	1090	10.0	ug/L	1000	2.0 U	109	65-129			
Silver	111	10.0	ug/L	100	2.0 U	111	69-121			
Tin	1040	10.0	ug/L	1000	2.0 U	104	81-124			
Vanadium	506	10.0	ug/L	500	1.0 U	101	71-130			
Zinc	1030	10.0	ug/L	1000	1.0 U	103	63-131			
Matrix Spike Dup (7F06010-MSD1)		**Source: C706524-03**		Prepared: 06/06/2007 08:59 Analyzed: 06/07/2007 12:57						
Arsenic	1050	10.0	ug/L	1000	2.0 U	105	64-126	3	12	
Barium	2590	10.0	ug/L	1000	1490	110	74-119	3	11	
Beryllium	536	1.00	ug/L	500	0.70 U	107	70-131	3	21	
Cadmium	508	1.00	ug/L	500	0.50 U	102	68-121	3	12	
Chromium	999	10.0	ug/L	1000	2.0 U	100	73-120	4	10	
Cobalt	1010	10.0	ug/L	1000	4.3	101	76-120	4	17	
Copper	511	10.0	ug/L	500	0.6 U	102	75-123	3	16	
Lead	1010	10.0	ug/L	1000	2.0 U	101	68-126	4	19	
Nickel	1020	10.0	ug/L	1000	2.5	102	64-126	3	12	
Selenium	1050	10.0	ug/L	1000	2.0 U	105	65-129	3	10	
Silver	107	10.0	ug/L	100	2.0 U	107	69-121	3	12	
Tin	1000	10.0	ug/L	1000	2.0 U	100	81-124	4	18	
Vanadium	488	10.0	ug/L	500	1.0 U	98	71-130	4	16	
Zinc	1000	10.0	ug/L	1000	1.0 U	100	63-131	3	24	
Batch 7F08020 - EPA 3005A										
Blank (7F08020-BLK1)				Prepared: 06/08/2007 10:36 Analyzed: 06/11/2007 12:52						
Antimony	0.58 U	2.00	ug/L							
Thallium	0.044 U	0.050	ug/L							
LCS (7F08020-BS1)				Prepared: 06/08/2007 10:36 Analyzed: 06/11/2007 12:58						
Antimony	54.9 E	2.00	ug/L	50.0		110	85-115			E
Thallium	52.0 E	0.050	ug/L	50.0		104	85-115			E

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Metals by EPA 6000/7000 Series Methods - Quality Control										
Batch 7F08020 - EPA 3005A										
Matrix Spike (7F08020-MS1)		**Source: C706524-03**		Prepared: 06/08/2007 10:36 Analyzed: 06/11/2007 13:03						
Antimony	56.8 E	2.00	ug/L	50.0	0.58 U	114	85-115			E
Thallium	48.6	0.050	ug/L	50.0	0.0860	97	85-115			
Matrix Spike Dup (7F08020-MSD1)		**Source: C706524-03**		Prepared: 06/08/2007 10:36 Analyzed: 06/11/2007 13:05						
Antimony	55.9 E	2.00	ug/L	50.0	0.58 U	112	85-115	2	20	E
Thallium	47.7	0.050	ug/L	50.0	0.0860	95	85-115	2	20	
Classical Chemistry Parameters - Quality Control										
Batch 7F07026 - NO PREP										
Blank (7F07026-BLK1)				Prepared: 06/06/2007 08:00 Analyzed: 06/06/2007 09:30						
Sulfide	0.50 U	1.0	mg/L							
LCS (7F07026-BS1)				Prepared: 06/06/2007 08:00 Analyzed: 06/06/2007 09:30						
Sulfide	3.5	1.0	mg/L	4.01		87	80-120			
Matrix Spike (7F07026-MS1)		**Source: C706524-03**		Prepared: 06/06/2007 08:00 Analyzed: 06/06/2007 09:30						
Sulfide	3.5	1.0	mg/L	4.01	0.01	87	80-120			
Matrix Spike Dup (7F07026-MSD1)		**Source: C706524-03**		Prepared: 06/06/2007 08:00 Analyzed: 06/06/2007 09:30						
Sulfide	3.5	1.0	mg/L	4.01	0.01	87	80-120	0	25	

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Metals by EPA 6000/7000 Series Methods - Quality Control										
Batch 7F13013 - EPA 7470A										
Blank (7F13013-BLK1)				Prepared: 06/13/2007 11:07 Analyzed: 06/14/2007 12:52						
Mercury	0.11 U	0.20	ug/L							
LCS (7F13013-BS1)				Prepared: 06/13/2007 11:07 Analyzed: 06/14/2007 12:55						
Mercury	5.03	0.20	ug/L	5.00		101	85-115			
Matrix Spike (7F13013-MS1)		**Source: C706524-03**		Prepared: 06/13/2007 11:07 Analyzed: 06/14/2007 12:57						
Mercury	2.92 QM-05	0.20	ug/L	5.00	0.11 U	58	75-125			QM-05
Matrix Spike Dup (7F13013-MSD1)		**Source: C706524-03**		Prepared: 06/13/2007 11:07 Analyzed: 06/14/2007 13:00						
Mercury	2.92 QM-05	0.20	ug/L	5.00	0.11 U	58	75-125	0.2	20	QM-05

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Chlorinated Herbicides by GC - Quality Control										
Batch 7F04031 - EPA 3510C										
Blank (7F04031-BLK1)				Prepared: 06/04/2007 16:36 Analyzed: 06/08/2007 06:30						
2,4-D	0.12 U	0.30	ug/L							
Pentachlorophenol	0.13 U	0.30	ug/L							
2,4,5-TP (Silvex)	0.11 U	0.30	ug/L							
2,4,5-T	0.11 U	0.30	ug/L							

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Chlorinated Herbicides by GC - Quality Control										
Batch 7F04031 - EPA 3510C										
Blank (7F04031-BLK1) Continued				Prepared: 06/04/2007 16:36 Analyzed: 06/08/2007 06:30						
Dinoseb	0.23 U	0.30	ug/L							
Surrogate: 2,4-DCAA	*2.6*		*ug/L*	*2.00*		*131*	*61-177*			
LCS (7F04031-BS1)				Prepared: 06/04/2007 16:36 Analyzed: 06/08/2007 07:02						
2,4-D	2.1	0.30	ug/L	2.00		105	32-179			
2,4,5-TP (Silvex)	2.3	0.30	ug/L	2.00		117	42-187			
Surrogate: 2,4-DCAA	*2.3*		*ug/L*	*2.00*		*117*	*61-177*			
Matrix Spike (7F04031-MS1)		**Source: C706524-03**		Prepared: 06/04/2007 16:36 Analyzed: 06/08/2007 07:35						
2,4-D	2.1 D	1.5	ug/L	2.00	0.60 U	104	32-179			D
2,4,5-TP (Silvex)	2.5 D	1.5	ug/L	2.00	0.55 U	125	42-187			D
Surrogate: 2,4-DCAA	*2.2*		*ug/L*	*2.00*		*112*	*61-177*			
Matrix Spike Dup (7F04031-MSD1)		**Source: C706524-03**		Prepared: 06/04/2007 16:36 Analyzed: 06/08/2007 08:07						
2,4-D	2.3 D	1.5	ug/L	2.00	0.60 U	116	32-179	11	21	D
2,4,5-TP (Silvex)	2.6 D	1.5	ug/L	2.00	0.55 U	131	42-187	5	12	D
Surrogate: 2,4-DCAA	*2.6*		*ug/L*	*2.00*		*130*	*61-177*			
Classical Chemistry Parameters - Quality Control										
Batch 7F04002 - NO PREP										
Blank (7F04002-BLK1)				Prepared: 06/04/2007 15:13 Analyzed: 06/04/2007 22:26						
Cyanide (total)	0.0058 U	0.010	mg/L							
Blank (7F04002-BLK2)				Prepared: 06/05/2007 10:45 Analyzed: 06/05/2007 19:02						
Cyanide (total)	0.0058 U	0.010	mg/L							
LCS (7F04002-BS1)				Prepared: 06/04/2007 15:13 Analyzed: 06/04/2007 22:26						
Cyanide (total)	0.18	0.010	mg/L	0.200		92	83.7-110			
LCS (7F04002-BS2)				Prepared: 06/05/2007 10:45 Analyzed: 06/05/2007 19:02						
Cyanide (total)	0.18	0.010	mg/L	0.200		89	83.7-110			
Matrix Spike (7F04002-MS1)		**Source: A702764-01**		Prepared: 06/04/2007 15:13 Analyzed: 06/04/2007 22:26						
Cyanide (total)	0.18	0.010	mg/L	0.200	0.0058 U	90	83.7-110			
Matrix Spike Dup (7F04002-MSD1)		**Source: A702764-01**		Prepared: 06/04/2007 15:13 Analyzed: 06/04/2007 22:26						
Cyanide (total)	0.18	0.010	mg/L	0.200	0.0058 U	92	83.7-110	3	20	
Batch 7F06003 - NO PREP										
Blank (7F06003-BLK1)				Prepared: 06/06/2007 07:07 Analyzed: 06/06/2007 21:30						
Cyanide (total)	0.0058 U	0.010	mg/L							
Blank (7F06003-BLK2)				Prepared: 06/06/2007 10:04 Analyzed: 06/06/2007 21:30						
Cyanide (total)	0.0058 U	0.010	mg/L							
Blank (7F06003-BLK3)				Prepared: 06/06/2007 07:07 Analyzed: 06/06/2007 21:30						
Cyanide (total)	0.0058 U	0.010	mg/L							
LCS (7F06003-BS1)				Prepared: 06/06/2007 07:07 Analyzed: 06/06/2007 21:30						
Cyanide (total)	0.18	0.010	mg/L	0.200		90	83.7-110			
LCS (7F06003-BS2)				Prepared: 06/06/2007 10:04 Analyzed: 06/06/2007 21:30						
Cyanide (total)	0.18	0.010	mg/L	0.200		90	83.7-110			

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sanple Notes
Classical Chemistry Parameters - Quality Control										
Batch 7F06003 - NO PREP										
LCS (7F06003-BS3)				Prepared: 06/06/2007 07:07 Analyzed: 06/06/2007 21:30						
Cyanide (total)	0.18	0.010	mg/L	0.200		88	83.7-110			
Matrix Spike (7F06003-MS1)		**Source: A703032-01**		Prepared: 06/06/2007 07:07 Analyzed: 06/06/2007 21:30						
Cyanide (total)	0.19	0.010	mg/L	0.200	0.0058 U	96	83.7-110			
Matrix Spike Dup (7F06003-MSD1)		**Source: A703032-01**		Prepared: 06/06/2007 07:07 Analyzed: 06/06/2007 21:30						
Cyanide (total)	0.19	0.010	mg/L	0.200	0.0058 U	96	83.7-110	0.5	20	

NOTES AND DEFINITIONS

D	Data reported from a dilution
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
U	Analyte included in the analysis, but not detected

LABORATORY CERTIFICATION SUMMARY

Analysis	Matrix	Cert ID	Cert Number
8081A Appendix 2	Water	NC	591
8082 Appendix 2	Water	NC	591
8260B Appendix 1	Water	NC	591
8260B Appendix 2	Water	NC	591
8270C Appendix 2	Water	NC	591
Antimony Total EPA 6020	Water	NC	591
Arsenic Total EPA 6010B	Water	NC	591
Barium Total EPA 6010B	Water	NC	591
Beryllium Total EPA 6010B	Water	NC	591
Cadmium Total EPA 6010B	Water	NC	591
Chromium Total EPA 6010B	Water	NC	591
Cobalt Total EPA 6010B	Water	NC	591
Copper Total EPA 6010B	Water	NC	591
Lead Total EPA 6010B	Water	NC	591
Nickel Total EPA 6010B	Water	NC	591
Selenium Total EPA 6010B	Water	NC	591
Silver Total EPA 6010B	Water	NC	591
Sulfide 376.1	Water	NC	591
Thallium Total EPA 6020	Water	NC	591
Tin Total EPA 6010B	Water	NC	591
Vanadium Total EPA 6010B	Water	NC	591
Zinc Total EPA 6010B	Water	NC	591
Mercury Total EPA 7470A	Water	NC	442
8151A Appendix 2	Water	NC	424
Cyanide Total 335.2	Water	NC	424

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 211
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

1015 Passport Way
Cary, NC 27513
(919) 677-1669 Fax (919) 677-9846

Client Name: Golder Associates, Inc. (GO007)	Project Number: [none]
Address: The Wingate Building 4900 Koger Blvd., Suite 140	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: Rachel Kirkman
Sampler(s) Name, Affiliation (Print): B. DRAPER / W. Jeppe	Billing Contact: Accounts Payable
Sampler(s) Signature:	Facility # (if required): 32-01

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C706524

Requested Analyses / Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8081A Appendix 2,8082 Appendix 2,8151A Appendix 2,8270C Appendix 2	8260B Appendix 1	8260B Appendix 2	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Hg,Ni,Pb,Sb,Se,Sn,Tl,V,Zn	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	Cyanide Total 335.2	Sulfide 376.1				Sample Comments
	3201-P6	5-30-2007	12:44	G	Water	10	X		X	X		X	X				NC Appendix II
	3201-MW2	5-31-2007	9:50	G	Water	10	X		X	X		X	X				
	3201-MW3 MS/MSD	5-31-2007	11:45	G	Water	19	X		X	X		X	X				
	3201-MW4R	5-30-2007	16:50	G	Water	10	X		X	X		X	X				
	3201-MW5	5-31-2007	14:45	G	Water	10	X		X	X		X	X				
	3201-MW6R	5-31-2007	8:49	G	Water	10	X		X	X		X	X				
	3201-MW7R	5-31-2007	10:45	G	Water	10	X		X	X		X	X				
	3201-MW8	5-30-2007	14:30	G	Water	10	X		X	X		X	X				
	3201-S1	DRY	NO	SAMPLE	Water	4		X			X						DRY NO SAMPLE
	3201-S2	DRY	NO	SAMPLE	Water	4		X			X						DRY NO SAMPLE
	3201-S3	5-31-2007	12:45	G	Water	4		X			X						NC App. I
	3201-S4	5-31-2007	12:15	G	Water	4		X			X						

<-- Total # of Containers

Sample Kit Prepared By: CARY	Date/Time: 5/15/07	Relinquished By:	Date/Time: 5-31-2007/17:00	Received By:	Date/Time: 6-1-07 1700
Comments: -Estimated Fee = $5,760 -Fee per ENCO 2007 unit price list -Chain covers 6 coolers		Relinquished By:	Date/Time:	Received By:	Date/Time:
		Relinquished By:	Date/Time:	Received By:	Date/Time:
		Cooler #'s & Temps on Receipt: 4.0°C		Condition Upon Receipt: ___ Acceptable ___ Unacceptable	

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

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

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

COA per Rachel Kirkman Approved By:

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 211
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1015 Passport Way
Cary, NC 27513
(919) 677-1669 Fax (919) 677-9846

Client Name: Golder Associates, Inc. (GO007)	Project Number: [none]
Address: The Wingate Building 4900 Koger Blvd., Suite 140	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: Rachel Kirkman
Sampler(s) Name, Affiliation (Print): B. Draper / W. Jappe	Billing Contact: Accounts Payable
Sampler(s) Signature:	Facility # (if required): 32-01

Requested Analyses

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C706524

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8081A Appendix 2, 8082 Appendix 2, 8151A Appendix 2, 8270C Appendix 2	8260B Appendix 1	8260B Appendix 2	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Hg,Ni,Pb,Sb,Se,Sn,Tl,V,Zn	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	Cyanide Total 335.2	Sulfide 376.1				Sample Comments
	3201-Field Blank	5-31-2007	15:15	G	Water	10	X		X	X		X	X				NC App. II
	3201-Trip Blank	—	—	G	Water	3			X								NC App II VOC Only
	~~Extra~~				~~Water~~	~~10~~	~~X~~		~~X~~	~~X~~		~~X~~	~~X~~				

Preservation (See Codes) (Combine as necessary)

<-- Total # of Containers

Sample Kit Prepared By: CARY	Date/Time: 5/15/07	Relinquished By:	Date/Time: 5-31-2007/17:00	Received By:	Date/Time: 6-1-07 1710
Comments: - Estimated Fee = 5,760 - Fee per ENCO 2007 Unit Price List - Chain Covers 6 Coolers		Relinquished By:	Date/Time:	Received By:	Date/Time:
		Relinquished By:	Date/Time:	Received By:	Date/Time:
		Cooler #'s & Temps on Receipt		Condition Upon Receipt: ___ Acceptable	Unacceptable

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

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

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

LOA per Rachel Kirkman Approved By:

WORK ORDER

Printed: 6/25/2007 4:28:50PM

C706524

ENCO Cary

Sample Receipt Conditions

Client: Golder Associates, Inc. (GO007)
Project: City of Durham
PO #:

Lab Project Mgr: Chuck Smith
Project Number: [none]

Report To:
Golder Associates, Inc. (GO007)
Rachel Kirkman
The Wingate Building 4900 Koger Blvd., Suite 140
Greensboro, NC 27407
Phone: (336) 852-4903
Fax: (336) 852-4904

Invoice To:
Golder Associates, Inc. (GO007)
Accounts Payable
The Wingate Building 4900 Koger Blvd., Suite 140
Greensboro, NC 27407
Phone :(804) 358-7900
Fax: 804-358-2900

Received By: Jenny R Smith
Logged In By: Jenny R Smith

Date Received: 01-Jun-07 17:00
Date Logged In: 01-Jun-07 17:00

Workorder Comments:

C-119 received at 4.0°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		

C-120 received at 4.0°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		

C-122 received at 4.0°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		

C-125 received at 4.0°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		

C-126 received at 4.0°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		

C-127 received at 4.0°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		

Default Cooler received at 4.0°C

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

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

Project Name: City of Durham Closed Landfill

Project Reference Number: 073-96042.100

Sampling Event Date: May 30-31, 2007

Review Date: July 9, 2007 *Initials:* JAD

Review Date: August 6, 2007 *Initials:* BSD

Report #: C706524

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/C & D List

___ NC Appendix I

___ NC Appendix I + Detects

X NC Appendix II

___ NC Subtitle D Leachate List

Other: _____

1.0 CHAIN OF CUSTODY (COC) REVIEW

JD BD COC was properly signed by all parties.

JD BD Correct project name and number are on the form.

- ***Project # was not included on the COC and should be 073-96042.100***

JD BD Sample receipt condition at laboratory was acceptable.

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

Notes: _____

2.0 SAMPLE HOLDING TIMES

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

Notes: _____

Review Criteria		
Method	**Analytes**	**Holding Time**
SW-846 Method 8260	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
EPA Method 335.2	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

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

JD BD Laboratory blank is interference-free.

- ***Acetone was detected in a method blank (7F08026-BLK1) at an estimated concentration of 1.2 µg/L. Arsenic, copper, selenium and tin were detected in a method blank (7F06010-BLK1) at estimated concentrations of 2.7 µg/L, 0.7 µg/L, 5.7 µg/L and 2.7 µg/L, respectively.***

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

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

- ***Surrogate recovery for Toluene-d8 was outside of control limits for sample 3201-P-6, 3201-MW-3. The data was accepted based on valid recovery of the remaining surrogate (flagged with S-GC).***
- ***The surrogate recovery for DBC was outside of control limits for sample LCS (7F04012-BS-1). The data was accepted based on valid recovery of the remaining surrogate.***

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

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

- ***The spike recoveries for benzene and toluene in MSD sample 7F08026-MSD1 were outside acceptable limits for the MSD due to matrix interference. The LCS was within acceptable limits showing that the laboratory is in control and the data is acceptable (flagged with QM-05).***

- ***The spike recovery for mercury in MS and MSD samples 7F13013-MS1 and 7F13013-MSD1 were outside acceptable limits for the MS and MSD due to matrix interference. The LCS was within acceptable limits showing that the laboratory is in control and the data is acceptable (flagged with QM-05).***

- ***For the LCS samples 7F08020-BS1, MS sample 7F08020-MS1 and MSD sample 7F08020-MSD1 for antimony, the concentrations indicated for the analyte are an estimated value above the calibration range of the instrument. The value is considered an estimate (CLP E-flag).***

- ***For the LCS sample 7F08020-BS1 for thallium, the concentration indicated for the analyte is an estimated value above the calibration range of the instrument. The value is considered an estimate (CLP E-flag).***

4.0 ANALYTE LISTS/METHODS

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

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

Notes: _____

5.0 DATA REPORTING

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

- ***The analysis of Total Mercury (EPA 7470A) was performed by Lab Certification NC 442.***
- ***The analysis of PCBs (Method 8151A Appendix 2) and Total Cyanide (EPA 335.2) were performed by Lab Certification NC 424.***

JD BD 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.

Field Blank:

- ***Acetone was detected at an estimated concentration of 3.8 µg/L and was also detected at concentrations less than 10x the blank concentration for MW-8 and S-3 and require B-flags.***

- ***Lead was detected at an estimated concentration of 3.1 µg/L and was also detected in sample P-6 at an estimated concentration within 5x the blank concentration and therefore would require a B-flag.***

- ***Tin was detected at an estimated concentration of 3.6 µg/L and was not detected in any other samples.***

- ***Zinc was detected at an estimated concentration of 2.4 µg/L and was detected at concentrations less than 5x the blank concentration in sample MW-4R, MW-5, MW-6R, and MW-8 and therefore require B-flags.***

Trip Blank:

- ***Acetone was detected at an estimated concentration of 3.2 µg/L. Acetone was also detected in samples MW-8 and S-3 at concentrations less than 10x the blank concentration and therefore require B-flags.***

- ***Toluene was detected at an estimated concentration of 0.33 µg/L and was not detected in any other samples.***

Method Blanks:

- ***Acetone was detected in a method blank (7F08026-BLK1) at an estimated concentration of 1.2 µg/L and was also detected at concentrations less than 10x the blank concentration for MW-8 and S-3 and require B-flags.***

- ***Arsenic was detected in a method blank (7F06010-BLK1) at an estimated concentration of 2.7 µg/L and was also detected at concentrations less than 5x the blank concentration in sample MW-5, MW-7R, and MW-8 and require B-flags.***

- ***Copper was detected in a method blank (7F06010-BLK1) at an estimated concentration of 0.7 µg/L and was also detected at concentrations less than 5x the blank concentration in samples MW-2, MW-4R, MW-6R, MW-7R, S-3, and S-4 and require B-flags.***

- ***Selenium was detected in a method blank (7F06010-BLK1) at an estimated concentration of 5.7 µg/L and was also detected at concentrations less than 5x the blank concentration in samples MW-6R, MW-8, S-3, and S-4 and require B-flags.***

- ***Tin was detected in a method blank (7F06010-BLK1) at an estimated concentration***

of 2.7 µg/L and was not detected in any other samples.

JD BD 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.

- ***Method 8151 for MW-3 was diluted 5:1.***
- ***MS/MSD for Chlorinated Herbicides (Blank 7F04031-MS1 &MSD1) were reported from a dilution.***

JD BD The report provides the reporting limit for each constituent.

JD BD The results were reported at or below their proper reporting limits (e.g., NC Solid Waste Section approved QLs). 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.

JD BD No inorganic and organic constituents were reported above their respective NC 2L Drinking Water Standards in wells, surface points, or field/equipment/trip blanks.

- ***1,4-dichlorobenzene was detected in MW-6R at a concentration of 3.4 µg/L (2L=1.4 µg/L)***
- ***Cis-1,2-dichloroethene was detected in MW-6R at a concentration of 89 µg/L (2L=70 µg/L)***
- ***1,2-dichloropropane was detected in MW-6R at a concentration of 2 µg/L (2L=0.51 µg/L)***
- ***Vinyl chloride was detected in MW-6R at a concentration of 14 µg/L (2L=0.015 µg/L)***
- ***Benzene was detected in MW-6R at a concentration of 2.6 µg/L (2L=1 µg/L)***

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

- ***Mercury detected in MW-6R for first time at 0.2 µg/L (first time sampling for mercury.***
- ***Selenium detected for first time in MW-6R at an estimated concentration of 2.8 µg/L and in MW-8 at an estimated concentration of 3.2 µg/L.***
- ***Cadmium was detected in MW-6R for the first time at 1.1 µg/L.***
- ***Thallium detected for first time in MW-3 at an estimated concentration of 0.086 µg/L.***

- ***1,2-dichlorobenzene detected for first time in MW-6R at an estimated concentration of 0.51 µg/L.***
- ***Bis(2-ethylhexyl)phthalate detected for first time in PZ-6, MW-2, MW-3 and MW-4R at estimated concentrations of 3, 1.2, 1.1, and 1.2 µg/L, respectively.***
- ***Di-n-octylphthalate detected for first time in PZ-6 and MW-4R at estimated concentrations of 3.5 µg/L and 1.1 µg/L, respectively.***

JD BD Other report issues/Communications with laboratory/etc.:

Notes: _____

APPENDIX III

STATISTICAL EVALUATION WORKSHEETS

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Analyte: Barium

Sample No.	Sample Date	Location	Concentration (ug/L)	Quantitation Limit (ug/L)
1	9/19/1994	P-6	1834	--
2	12/2/1994	P-6	760	--
3	2/7/1995	P-6	2648	--
4	3/13/1995	P-6	524	--
5	11/1/1995	P-6	970	--
6	6/10/1996	P-6	891	--
7	11/12/1996	P-6	1555	--
8	3/18/1997	P-6	850	--
9	10/2/1997	P-6	840	--
10	5/26/1998	P-6	779	--
11	12/1/1998	P-6	2390	--
12	6/7/1999	P-6	1850	--
13	12/15/1999	P-6	944	--
14	6/6/2000	P-6	2488	--
15	12/27/2000	P-6	1826	--
16	6/4/2001	P-6	2804	--
17	12/3/2001	P-6	965	--
18	6/10/2002	P-6	849	--
19	12/16/2002	P-6	620	--
20	6/9/2003	P-6	432	--
21	12/8/2003	P-6	2881	--
22	6/29/2004	P-6	5664	--
23	12/20/2004	P-6	578	--
24	6/5/2005	P-6	952	--
25	12/5/2005	P-6	435	--
26	6/5/2006	P-6	575	--
27	12/5/2006	P-6	635	--
28	5/30/2007	P-6	619	100

Number of Data	28
Number of Truncated Data	0
Percentage of Truncated Data	0%

Antilog UPL **3530** ug/L

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

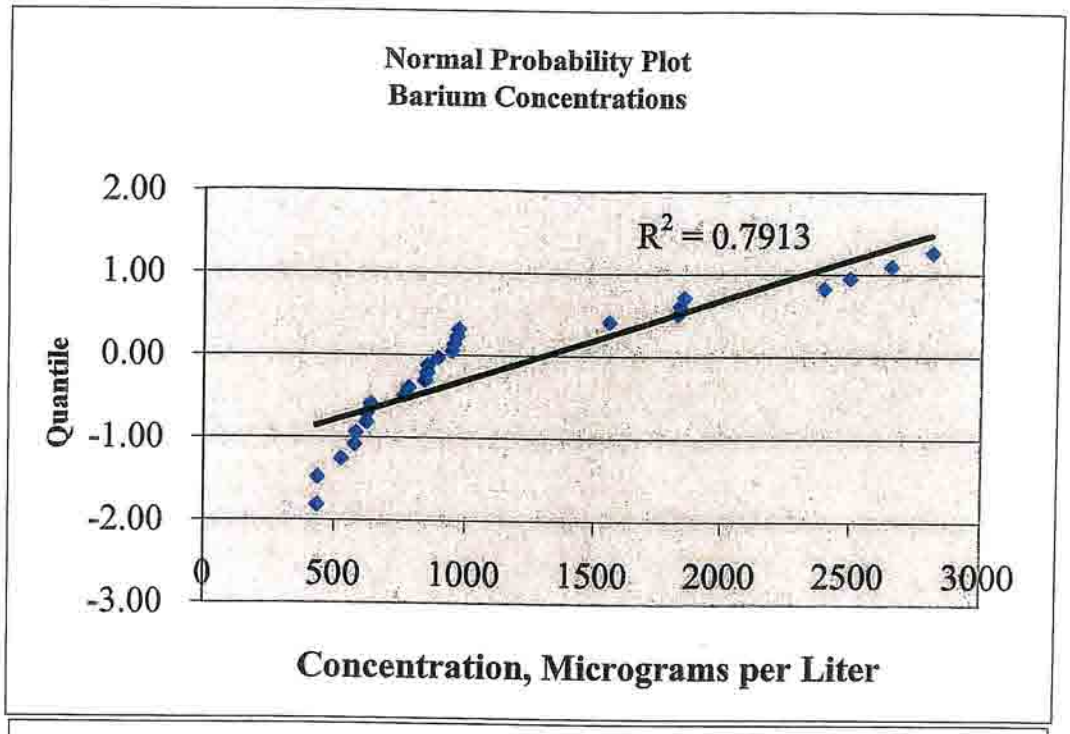
Probability Plots to determine the distribution of Barium

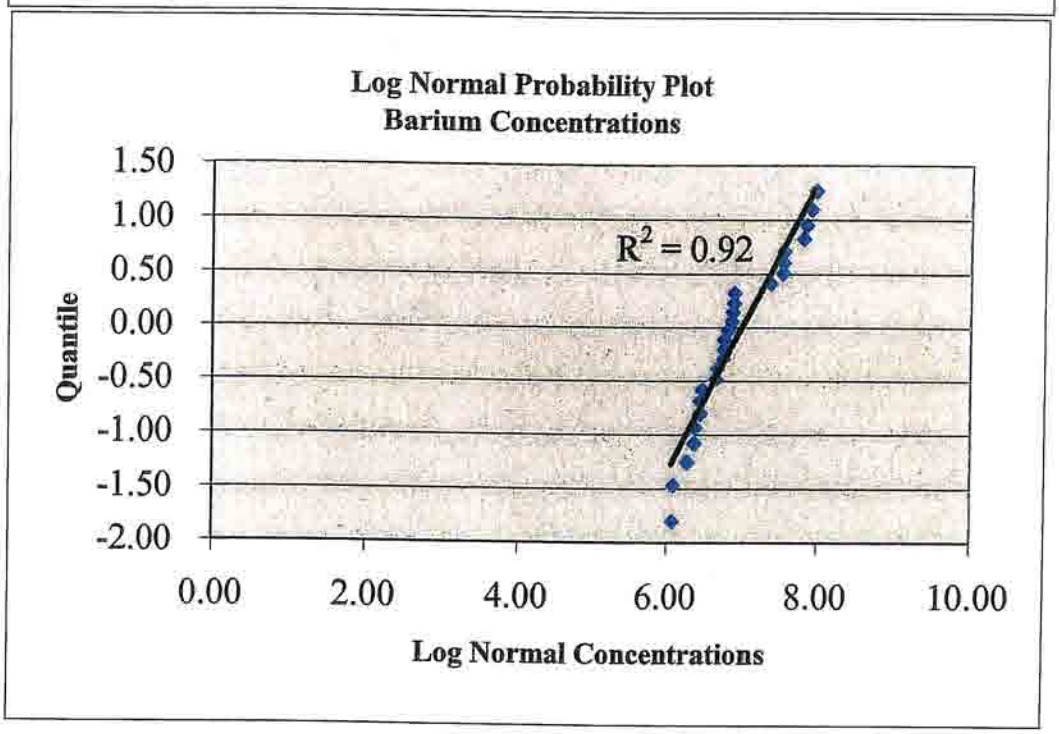
Complete the following table where:

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
LN[X(i)] = Natural Log Value of sample concentrations arranged from smallest to largest
[i/(n+1)] = Cumulative probability
n = number of samples = 28

X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
432	6.07	1	1	0.034	-1.82
435	6.08	2	2	0.069	-1.48
524	6.26	3	3	0.103	-1.26
575	6.35	4	4	0.138	-1.09
578	6.36	5	5	0.172	-0.94
619	6.43	6	6	0.207	-0.82
620	6.43	7	7	0.241	-0.70
635	6.45	8	8	0.276	-0.60
760	6.63	9	9	0.310	-0.49
779	6.66	10	10	0.345	-0.40
840	6.73	11	11	0.379	-0.31
849	6.74	12	12	0.414	-0.22
850	6.75	13	13	0.448	-0.13
891	6.79	14	14	0.483	-0.04
944	6.85	15	15	0.517	0.04
952	6.86	16	16	0.552	0.13
965	6.87	17	17	0.586	0.22
970	6.88	18	18	0.621	0.31
1555	7.35	19	19	0.655	0.40
1826	7.51	20	20	0.690	0.49
1834	7.51	21	21	0.724	0.60
1850	7.52	22	22	0.759	0.70
2390	7.78	23	23	0.793	0.82
2488	7.82	24	24	0.828	0.94
2648	7.88	25	25	0.862	1.09
2804	7.94	26	26	0.897	1.26
2881	7.97	27	27	0.931	1.48
5664	8.64	28	28	0.966	1.82

Probability Plots to determine the distribution of Barium





The plot appears to be Log Normal.

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Determination of reported background value as an outlier

Analyte: Barium

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	09/19/94	P-6	1834	--
2	12/02/94	P-6	760	--
3	02/07/95	P-6	2648	--
4	03/13/95	P-6	524	--
5	11/01/95	P-6	970	--
6	06/10/96	P-6	891	--
7	11/12/96	P-6	1555	--
8	03/18/97	P-6	850	--
9	10/02/97	P-6	840	--
10	05/26/98	P-6	779	--
11	12/01/98	P-6	2390	--
12	06/07/99	P-6	1850	--
13	12/15/99	P-6	944	--
14	06/06/00	P-6	2488	--
15	12/27/00	P-6	1826	--
16	06/04/01	P-6	2804	--
17	12/03/01	P-6	965	--
18	06/10/02	P-6	849	--
19	12/16/02	P-6	620	--
20	06/09/03	P-6	432	--
21	12/08/03	P-6	2881	--
22	06/29/04	P-6	5664	--
23	12/20/04	P-6	578	--
24	06/05/05	P-6	952	--
25	12/05/05	P-6	435	--
26	06/05/06	P-6	575	--
27	12/05/06	P-6	635	--
28	05/30/07	P-6	619	100

mean = 1398.500
STD = 1142.062

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

$$Tn = (Xn - mean) / STD$$

where:

	Xn =	largest observed sample value
	mean =	mean of the background values
	STD =	standard deviation of the background values

For	Xn =	5664.000
	mean =	1398.500
	STD =	1142.062
	Tn =	**3.735**

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples =	28
Tc =	**2.714**

Since Tc<Tn, the sample result is considered to be an outlier

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Determination of reported background value as an outlier

Analyte: Barium

Background Data

Sample No.	Sample Date	Location	ln(Concentration) (ug/l)	Quantitation Limit (ug/l)
1	09/19/94	P-6	7.514	--
2	12/02/94	P-6	6.633	--
3	02/07/95	P-6	7.882	--
4	03/13/95	P-6	6.261	--
5	11/01/95	P-6	6.877	--
6	06/10/96	P-6	6.792	--
7	11/12/96	P-6	7.349	--
8	03/18/97	P-6	6.745	--
9	10/02/97	P-6	6.733	--
10	05/26/98	P-6	6.658	--
11	12/01/98	P-6	7.779	--
12	06/07/99	P-6	7.523	--
13	12/15/99	P-6	6.850	--
14	06/06/00	P-6	7.819	--
15	12/27/00	P-6	7.510	--
16	06/04/01	P-6	7.939	--
17	12/03/01	P-6	6.872	--
18	06/10/02	P-6	6.744	--
19	12/16/02	P-6	6.430	--
20	06/09/03	P-6	6.068	--
21	12/08/03	P-6	7.966	--
22	06/29/04	P-6	8.642	--
23	12/20/04	P-6	6.360	--
24	06/05/05	P-6	6.859	--
25	12/05/05	P-6	6.075	--
26	06/05/06	P-6	6.354	--
27	12/05/06	P-6	6.454	--
28	05/30/07	P-6	6.428	100
		mean =	7.004	
		STD =	0.669	

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

$$Tn = (Xn - mean) / STD$$

where:

Xn =	largest observed sample value
mean =	mean of the background values
STD =	standard deviation of the background values

For

Xn =	8.642
mean =	7.004
STD =	0.669
Tn =	**2.446**

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples =	28
Tc =	**2.714**

Since Tc>Tn, the sample result is not considered to be an outlier

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Shapiro Wilk Test Statistic (W) for 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
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	432	5664	5232	0.4328	2264.41
2	435	2881	2446	0.2992	731.84
3	524	2804	2280	0.251	572.28
4	575	2648	2073	0.2151	445.90
5	578	2488	1910	0.1857	354.69
6	619	2390	1771	0.1601	283.54
7	620	1850	1230	0.1372	168.76
8	635	1834	1199	0.1162	139.32
9	760	1826	1066	0.0965	102.87
10	779	1555	776	0.0778	60.37
11	840	970	130	0.0598	7.77
12	849	965	116	0.0424	4.92
13	850	952	102	0.0253	2.58
14	891	944	53	0.0084	0.45
15	944	891			
16	952	850			
17	965	849			
18	970	840			
19	1555	779			
20	1826	760			
21	1834	635			
22	1850	620			
23	2390	619			
24	2488	578			
25	2648	575			
26	2804	524			

27	2881	435
28	5664	432

The test statistic W can be found using:

W = SQR[B/(SD x SQRT(n-1))]

where:	B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	5139.70
	SD =	standard deviation of the data group	=	1142.06
	n =	number of samples	=	28

W = 0.750

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) = 0.924
and the calculated W = 0.750

Therefore the data is Non Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Shapiro Wilk Test Statistic (W) for log normality of 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
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	6.07	8.64	2.5735	0.4328	1.1138
2	6.08	7.97	1.8905	0.2992	0.5657
3	6.26	7.94	1.6773	0.2510	0.4210
4	6.35	7.88	1.5272	0.2151	0.3285
5	6.36	7.82	1.4597	0.1857	0.2711
6	6.43	7.78	1.3509	0.1601	0.2163
7	6.43	7.52	1.0932	0.1372	0.1500
8	6.45	7.51	1.0606	0.1162	0.1232
9	6.63	7.51	0.8766	0.0965	0.0846
10	6.66	7.35	0.6912	0.0778	0.0538
11	6.73	6.88	0.1439	0.0598	0.0086
12	6.74	6.87	0.1281	0.0424	0.0054
13	6.75	6.86	0.1133	0.0253	0.0029
14	6.79	6.85	0.0578	0.0084	0.0005
15	6.85	6.79			
16	6.86	6.75			
17	6.87	6.74			
18	6.88	6.73			
19	7.35	6.66			
20	7.51	6.63			
21	7.51	6.45			
22	7.52	6.43			
23	7.78	6.43			
24	7.82	6.36			
25	7.88	6.35			
26	7.94	6.26			

27	7.97	6.08
28	8.64	6.07

The test statistic W can be found using:

W = SQR((B/SD x SQRT(n-1))

where:	B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	3.3453
	SD =	standard deviation of the data group	=	0.6695
	n =	number of samples	=	28

W = 0.9248

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) = 0.924
and the calculated W = 0.925

Therefore the data set is Log Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Parametric Prediction Interval for log normally distributed data

Analyte: Barium

Background Data: Note use of log(concentration)

Sample No.	Sample Date	Location	Concentration (ug/l)	Natural Log Concentration
1	09/19/94	P-6	1834	7.514
2	12/02/94	P-6	760	6.633
3	02/07/95	P-6	2648	7.882
4	03/13/95	P-6	524	6.261
5	11/01/95	P-6	970	6.877
6	06/10/96	P-6	891	6.792
7	11/12/96	P-6	1555	7.349
8	03/18/97	P-6	850	6.745
9	10/02/97	P-6	840	6.733
10	05/26/98	P-6	779	6.658
11	12/01/98	P-6	2390	7.779
12	06/07/99	P-6	1850	7.523
13	12/15/99	P-6	944	6.850
14	06/06/00	P-6	2488	7.819
15	12/27/00	P-6	1826	7.510
16	06/04/01	P-6	2804	7.939
17	12/03/01	P-6	965	6.872
18	06/10/02	P-6	849	6.744
19	12/16/02	P-6	620	6.430
20	06/09/03	P-6	432	6.068
21	12/08/03	P-6	2881	7.966
22	06/29/04	P-6	5664	8.642
23	12/20/04	P-6	578	6.360
24	06/05/05	P-6	952	6.859
25	12/05/05	P-6	435	6.075
26	06/05/06	P-6	575	6.354
27	12/05/06	P-6	635	6.454
28	05/30/07	P-6	619	6.428

Note: All sample concentrations are micrograms per liter

Using the background data, the upper Prediction Limit can be determined using:

Upper Prediction Limit = antilog((Mean Conc) + t(n-1,k,.95) x (Std Dev) x SQRT(1/m+1/n))

where:	Mean Conc =	mean concentration background samples
	t(n-1k,.95) =	Bonferroni t-statistic with
	n-1 =	degrees of freedom (number of samples - 1)
	k =	number of downgradient samples per event
	.95 =	confidence interval
	Std Dev =	standard deviation of background samples
	m =	number independent samples from each sampling point
	n =	number of background samples

For:	Mean Conc =	7.004
	Std Dev =	0.669
	t(n-1,k,.95)*sqrt(1/m+1/n) =	1.740
	k =	8
	m =	1
	n =	28

Antilog UPL = 3530.03 ug/L

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Parametric Tolerance Interval for log normally distributed data

Analyte: Barium

Background Data: Note use of log(concentration)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)	Natural Log Concentration
1	09/19/94	P-6	1834	--	7.514
2	12/02/94	P-6	760	--	6.633
3	02/07/95	P-6	2648	--	7.882
4	03/13/95	P-6	524	--	6.261
5	11/01/95	P-6	970	--	6.877
6	06/10/96	P-6	891	--	6.792
7	11/12/96	P-6	1555	--	7.349
8	03/18/97	P-6	850	--	6.745
9	10/02/97	P-6	840	--	6.733
10	05/26/98	P-6	779	--	6.658
11	12/01/98	P-6	2390	--	7.779
12	06/07/99	P-6	1850	--	7.523
13	12/15/99	P-6	944	--	6.850
14	06/06/00	P-6	2488	--	7.819
15	12/27/00	P-6	1826	--	7.510
16	06/04/01	P-6	2804	--	7.939
17	12/03/01	P-6	965	--	6.872
18	06/10/02	P-6	849	--	6.744
19	12/16/02	P-6	620	--	6.430
20	06/09/03	P-6	432	--	6.068
21	12/08/03	P-6	2881	--	7.966
22	06/29/04	P-6	5664	--	8.642
23	12/20/04	P-6	578	--	6.360
24	06/05/05	P-6	952	--	6.859
25	12/05/05	P-6	435	--	6.075
26	06/05/06	P-6	575	--	6.354
27	12/05/06	P-6	635	--	6.454
28	05/30/07	P-6	619	100	6.428

Note: All sample concentrations are micrograms per liter

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

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

where:

Mean Conc =	mean concentration background samples
K =	factor for constructing one sided normal tolerance limit taken from table 4-2, page 87, Statistical Methods for Groundwater Monitoring, Gibbons, 1994
STDS =	Standard Deviation Samples
n =	number of background samples

For:

n =	28
K =	2.249
Mean Conc =	7.004
STDS =	0.669
UTL =	**4963.23**

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Analyte: Cadmium

Sample No.	Sample Date	Location	Concentration (ug/L)	Quantitation Limit (ug/L)
1	9/19/94	P-6	ND, QL = 1	1
2	12/2/94	P-6	ND, QL = 1	1
3	2/7/95	P-6	2.2	1
4	3/13/95	P-6	ND, QL = 1	1
5	11/1/95	P-6	ND, QL = 1	1
6	6/10/96	P-6	ND, QL = 1	1
7	11/12/96	P-6	ND, QL = 1	1
8	3/18/97	P-6	ND, QL = 1	1
9	10/2/97	P-6	ND, QL = 1	1
10	5/26/98	P-6	ND, QL = 1	1
11	12/1/98	P-6	ND, QL = 1	1
12	6/7/99	P-6	ND, QL = 1	1
13	12/15/99	P-6	ND, QL = 1	1
14	6/6/00	P-6	ND, QL = 1	1
15	12/27/00	P-6	ND, QL = 1	1
16	6/4/01	P-6	ND, QL = 1	1
17	12/3/01	P-6	ND, QL = 1	1
18	6/10/02	P-6	ND, QL = 1	1
19	12/16/02	P-6	ND, QL = 1	1
20	6/9/03	P-6	ND, QL = 1	1
21	12/8/03	P-6	ND, QL = 1	1
22	6/29/04	P-6	1.0	1
23	12/20/04	P-6	1.0	1
24	6/5/05	P-6	ND, QL = 1	1
25	12/5/05	P-6	ND, QL = 1	1
26	6/5/06	P-6	ND, QL = 1	1
27	12/5/06	P-6	ND, QL = 1	1
28	5/30/07	P-6	ND, QL = 1	1

Number of Data	28
Number of Truncated Data	25
Percentage of Truncated Data	89%

Nonparametric Prediction Interval: **2.20**

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Analyte: Cobalt

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	12/2/1994	P-6	ND, QL = NA		--
2	2/7/1995	P-6	30		--
3	11/1/1995	P-6	12		10
4	6/10/1996	P-6	ND, QL = 10		10
5	11/12/1996	P-6	34		10
6	3/18/1997	P-6	16		10
7	10/2/1997	P-6	20.6		10
8	5/26/1998	P-6	45		10
9	12/1/1998	P-6	ND, QL = 10		25
10	6/7/1999	P-6	34		10
11	12/15/1999	P-6	16		10
12	6/6/2000	P-6	32		10
13	12/27/2000	P-6	ND, QL = 10		10
14	6/4/2001	P-6	50		10
15	12/3/2001	P-6	33		10
16	6/10/2002	P-6	16		10
17	12/16/2002	P-6	14		10
18	6/9/2003	P-6	ND, QL = 10		10
19	12/8/2003	P-6	87		10
20	6/29/2004	P-6	91		10
21	12/20/2004	P-6	7.4		5
22	5/30/2007	P-6	3.2	J	10

Number of Data	22
Number of Truncated Data	5
Percentage of Truncated Data	23%

UPL = **70** ug/L

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Probability Plots to determine the distribution of Cobalt

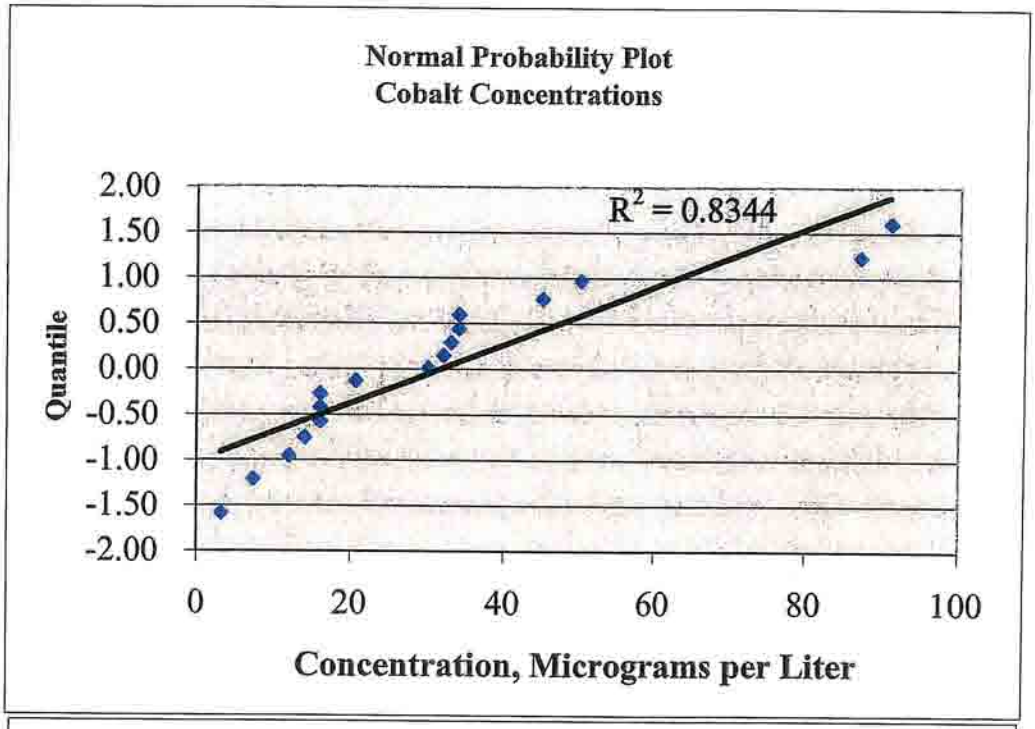
Complete the following table where:

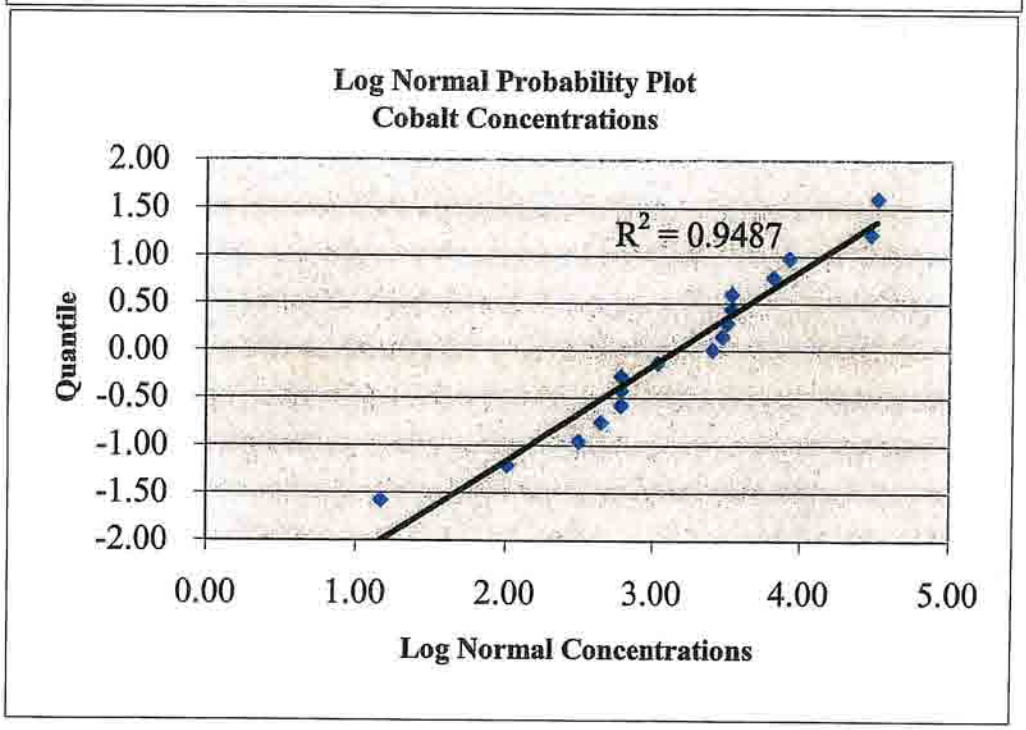
i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
LN[X(i)] = Natural Log Value of sample concentrations arranged from smallest to largest
[i/(n+1)] = Cumulative probability
n = number of samples = 17

X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
3.2	1.16	1	1	0.056	-1.59
7.4	2.00	2	2	0.111	-1.22
12	2.48	3	3	0.167	-0.97
14	2.64	4	4	0.222	-0.76
16	2.77	5	5	0.278	-0.59
16	2.77	6	6	0.333	-0.43
16	2.77	7	7	0.389	-0.28
20.6	3.03	8	8	0.444	-0.14
30	3.40	9	9	0.500	0.00
32	3.47	10	10	0.556	0.14
33	3.50	11	11	0.611	0.28
34	3.53	12	12	0.667	0.43
34	3.53	13	13	0.722	0.59
45	3.81	14	14	0.778	0.76
50	3.91	15	15	0.833	0.97
87	4.47	16	16	0.889	1.22
91	4.51	17	17	0.944	1.59

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 08/16/07

Probability Plots to determine the distribution of Cobalt





The data appears to be Log-Normal.

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Determination of reported background value as an outlier

Analyte: Cobalt

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	12/02/94	P-6	ND, QL = NA	--
2	02/07/95	P-6	30.0	--
3	11/01/95	P-6	12.0	10
4	06/10/96	P-6	ND, QL = 10	10
5	11/12/96	P-6	34.0	10
6	03/18/97	P-6	16.0	10
7	10/02/97	P-6	20.6	10
8	05/26/98	P-6	45.0	10
9	12/01/98	P-6	ND, QL = 10	25
10	06/07/99	P-6	34.0	10
11	12/15/99	P-6	16.0	10
12	06/06/00	P-6	32.0	10
13	12/27/00	P-6	ND, QL = 10	10
14	06/04/01	P-6	50.0	10
15	12/03/01	P-6	33.0	10
16	06/10/02	P-6	16.0	10
17	12/16/02	P-6	14.0	10
18	06/09/03	P-6	ND, QL = 10	10
19	12/08/03	P-6	87.0	10
20	06/29/04	P-6	91.0	10
21	12/20/04	P-6	7.4	5
22	05/30/07	P-6	3.2	10
		mean =	31.835	
		STD =	25.085	

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

$$Tn = (Xn - mean) / STD$$

where:
Xn = largest observed sample value
mean = mean of the background values
STD = standard deviation of the background values

For	Xn =	91.000
	mean =	31.835
	STD =	25.085
	Tn =	**2.359**

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples =	22
Tc =	**2.603**

Since Tc>Tn, the sample result is not considered to be an outlier

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Determination of reported background value as an outlier

Analyte: Cobalt

Background Data

Sample No.	Sample Date	Location	ln(Concentration) (ug/l)	Quantitation Limit (ug/l)
1	12/02/94	P-6	ND, QL = NA	--
2	02/07/95	P-6	30	--
3	11/01/95	P-6	12	10
4	06/10/96	P-6	ND, QL = 10	10
5	11/12/96	P-6	34	10
6	03/18/97	P-6	16	10
7	10/02/97	P-6	21	10
8	05/26/98	P-6	45	10
9	12/01/98	P-6	ND, QL = 10	25
10	06/07/99	P-6	34	10
11	12/15/99	P-6	16	10
12	06/06/00	P-6	32	10
13	12/27/00	P-6	ND, QL = 10	10
14	06/04/01	P-6	50	10
15	12/03/01	P-6	33	10
16	06/10/02	P-6	16	10
17	12/16/02	P-6	14	10
18	06/09/03	P-6	ND, QL = 10	10
19	12/08/03	P-6	87	10
20	06/29/04	P-6	91	10
21	12/20/04	P-6	7	5
22	05/30/07	P-6	3	10

mean = 31.835
STD = 25.085

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

$$Tn = (Xn - mean) / STD$$

where:
Xn = largest observed sample value
mean = mean of the background values
STD = standard deviation of the background values

For	Xn =	91.000
	mean =	31.835
	STD =	25.085
	Tn =	**2.359**

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples =	22
Tc =	**2.603**

Since Tc>Tn, the sample result is not considered to be an outlier

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Shapiro Wilk Test Statistic (W) for normality of total Cobalt

Complete the following table where

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	3.20	91.00	87.8	0.4968	43.62
2	7.40	87.00	79.6	0.3273	26.05
3	12.00	50.00	38.0	0.2540	9.65
4	14.00	45.00	31.0	0.1988	6.16
5	16.00	34.00	18.0	0.1524	2.74
6	16.00	34.00	18.0	0.1109	2.00
7	16.00	33.00	17.0	0.0725	1.23
8	20.60	32.00	11.4	0.3590	4.09
9	30.00	30.00	0	0.0000	0.00
10	32.00	20.60			
11	33.00	16.00			
12	34.00	16.00			
13	34.00	16.00			
14	45.00	14.00			
15	50.00	12.00			
16	87.00	7.40			
17	91.00	3.20			

The test statistic W can be found using:

W = SQR[B/(SD x SQRT(n-1))]

where:

B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	95.55
SD =	standard deviation of the data group	=	25.08
n =	number of samples	=	17

W = 0.907

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) = 0.892
and the calculated W = 0.907

Therefore the data set is Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Shapiro Wilk Test Statistic (W) for log normality of Cobalt

Complete the following table where

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	1.16	4.51	3.3477	0.4968	1.6631
2	2.00	4.47	2.4644	0.3273	0.8066
3	2.48	3.91	1.4271	0.2540	0.3625
4	2.64	3.81	1.1676	0.1988	0.2321
5	2.77	3.53	0.7538	0.1524	0.1149
6	2.77	3.53	0.7538	0.1109	0.0836
7	2.77	3.50	0.7239	0.0725	0.0525
8	3.03	3.47	0.4404	0.3590	0.1581
9	3.40	3.40	0.0000	0.0000	0.0000
10	3.47	3.03			
11	3.50	2.77			
12	3.53	2.77			
13	3.53	2.77			
14	3.81	2.64			
15	3.91	2.48			
16	4.47	2.00			
17	4.51	1.16			

The test statistic W can be found using:

W = SQR((B/SD x SQRT(n-1))

where:

B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	3.4734
SD =	standard deviation of the data group	=	0.8505
n =	number of samples	=	17

W = 1.0425

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) = 0.892
and the calculated W = 1.043

Therefore the data set is Non Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Aitchison's Adjustment for Cobalt

Background Values (positive detects only)

Sample No.	Sample Date	Location	Concentration (ug/l)
2	02/07/95	P-6	30
3	11/01/95	P-6	12
5	11/12/96	P-6	34
6	03/18/97	P-6	16
7	10/02/97	P-6	20.6
8	05/26/98	P-6	45
10	06/07/99	P-6	34
11	12/15/99	P-6	16
12	06/06/00	P-6	32
14	06/04/01	P-6	50
15	12/03/01	P-6	33
16	06/10/02	P-6	16
17	12/16/02	P-6	14
19	12/08/03	P-6	87
20	06/29/04	P-6	91
21	12/20/04	P-6	7.4
22	05/30/07	P-6	3.2

Mean of detected values = 31.84
Standard Deviation of detected values = 25.08

The adjusted mean can be found using

$$M(a) = (1-d/n) \times M$$

where:

d =	number non- detected values	=	5
n =	total number samples	=	22
M =	mean detected values	=	31.84

M(a) = 24.60

The adjusted standard deviation squared may be found using

$$STD(a) = (n-(d+1)S)/n-1) + d(n-d)MM/n(n-1)$$

where:	n =	total number samples	=	22
	d =	number non-detected values	=	5
	S =	std deviation of detected values squared	=	629.26
	MM =	mean of detected values squared	=	1013.49
		STD(a)	=	665.90

and the adjusted standard deviation is then

S(a) = SQRT(STD(a)) = 25.80

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Parametric Prediction Interval for Aitchison's adjusted data

Analyte: Cobalt

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	12/02/94	P-6	ND, QL = NA	--
2	02/07/95	P-6	30.00	--
3	11/01/95	P-6	12.00	10.00
4	06/10/96	P-6	ND, QL = 10	10.00
5	11/12/96	P-6	34.00	10.00
6	03/18/97	P-6	16.00	10.00
7	10/02/97	P-6	20.60	10.00
8	05/26/98	P-6	45.00	10.00
9	12/01/98	P-6	ND, QL = 10	25.00
10	06/07/99	P-6	34.00	10.00
11	12/15/99	P-6	16.00	10.00
12	06/06/00	P-6	32.00	10.00
13	12/27/00	P-6	ND, QL = 10	10.00
14	06/04/01	P-6	50.00	10.00
15	12/03/01	P-6	33.00	10.00
16	06/10/02	P-6	16.00	10.00
17	12/16/02	P-6	14.00	10.00
18	06/09/03	P-6	ND, QL = 10	10.00
19	12/08/03	P-6	87.00	10.00
20	06/29/04	P-6	91.00	10.00
21	12/20/04	P-6	7.40	5.00
22	05/30/07	P-6	3.20	10.00

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 adjusted mean and standard deviation are

adjusted mean = 24.60

adjusted standard deviation = 25.80

Using the background data, the upper Prediction Limit can be determined using:

Upper Prediction Limit = (Mean Conc) + t(n-1,k,.95) x (Std Dev) x SQRT(1/m+1/n)

where:	Mean Conc =	mean concentration background samples
	t(n-1k,.95) =	Bonferroni t-statistic from table 1, with
	n-1 =	degrees of freedom (number of samples - 1)
	k =	number of downgradient samples per event
	.95 =	confidence interval
	Std Dev =	standard deviation of background samples
	m =	number independent samples from each sampling point
	n =	number of background samples

For:	Mean Conc =	24.600	
	Std Dev =	25.805	
	t(n-1,k,.95)*sqrt(1/m+1/n) =	1.770	
	k =	7	
	m =	1	
	n =	22	
	UPL =	**70**	ug/L

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/16/07

Parametric Tolerance Interval for Aitchison's adjusted data

Analyte: Cobalt

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	12/02/94	P-6	ND, QL = NA	--
2	02/07/95	P-6	30.00	--
3	11/01/95	P-6	12.00	10.00
4	06/10/96	P-6	ND, QL = 10	10.00
5	11/12/96	P-6	34.00	10.00
6	03/18/97	P-6	16.00	10.00
7	10/02/97	P-6	20.60	10.00
8	05/26/98	P-6	45.00	10.00
9	12/01/98	P-6	ND, QL = 10	25.00
10	06/07/99	P-6	34.00	10.00
11	12/15/99	P-6	16.00	10.00
12	06/06/00	P-6	32.00	10.00
13	12/27/00	P-6	ND, QL = 10	10.00
14	06/04/01	P-6	50.00	10.00
15	12/03/01	P-6	33.00	10.00
16	06/10/02	P-6	16.00	10.00
17	12/16/02	P-6	14.00	10.00
18	06/09/03	P-6	ND, QL = 10	10.00
19	12/08/03	P-6	87.00	10.00
20	06/29/04	P-6	91.00	10.00
21	12/20/04	P-6	7.40	5.00
22	05/30/07	P-6	3.20	10.00

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 adjusted mean and standard deviation are

adjusted mean = 24.60

adjusted standard deviation = 25.80

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 = 2.35

n = 22

UTL = 85

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Analyte: Mercury

Sample No.	Sample Date	Location	Concentration (ug/L)	Quantitation Limit (ug/L)
1	12/1/1998	P-6	0.2	0.2
2	6/7/1999	P-6	0.2	0.2
3	12/15/1999	P-6	14	5
4	6/6/2000	P-6	37	5
5	12/22/2000	P-6	20	5
6	12/30/2000	P-6	1.3	0.2
7	6/4/2001	P-6	35	5
8	12/3/2001	P-6	23	5
9	6/10/2002	P-6	6.0	5
10	12/16/2002	P-6	ND, QL = 5	5
11	6/9/2003	P-6	ND, QL = 5	5
12	12/8/2003	P-6	35	5
13	6/28/2004	P-6	83	5
14	12/20/2004	P-6	ND, QL = 5	5
15	6/5/2005	P-6	13	5
16	12/7/2005	P-6	ND, QL = 5	5
17	6/5/2006	P-6	ND, QL = 5	5
18	12/5/2006	P-6	ND, QL = 5	5
19	5/30/2007	P-6	ND, QL = 5	5

Number of Data	19
Number of Truncated Data	7
Percentage of Truncated Data	37%

Nonparametric Prediction Interval: **83.00**

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Probability Plots to determine the distribution of Mercury

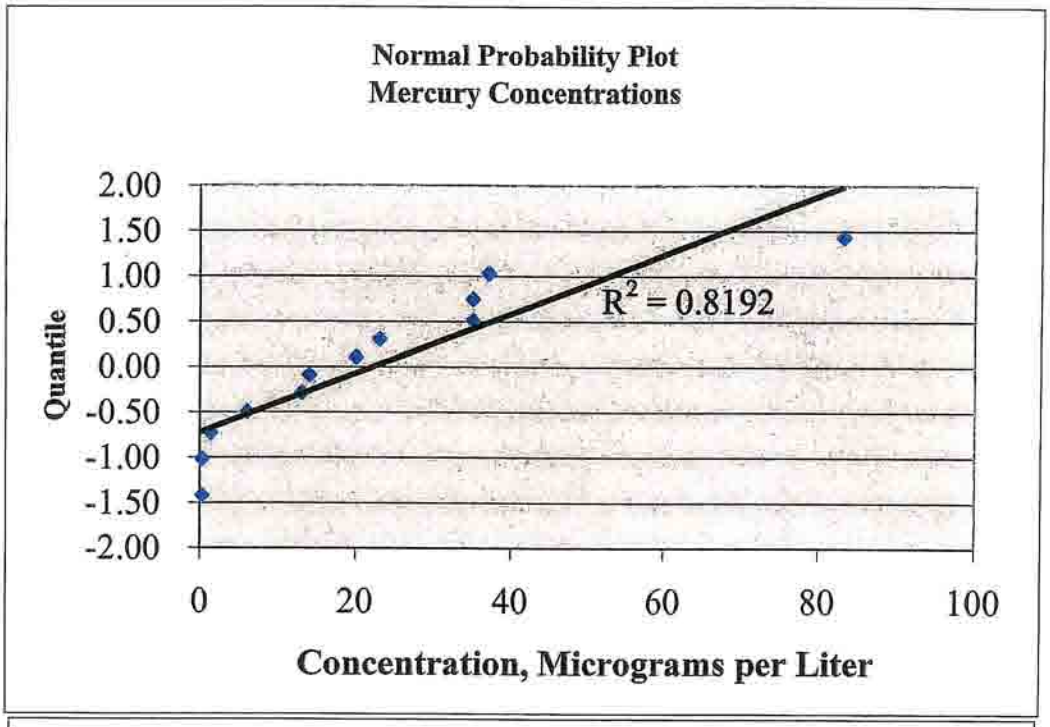
Complete the following table where:

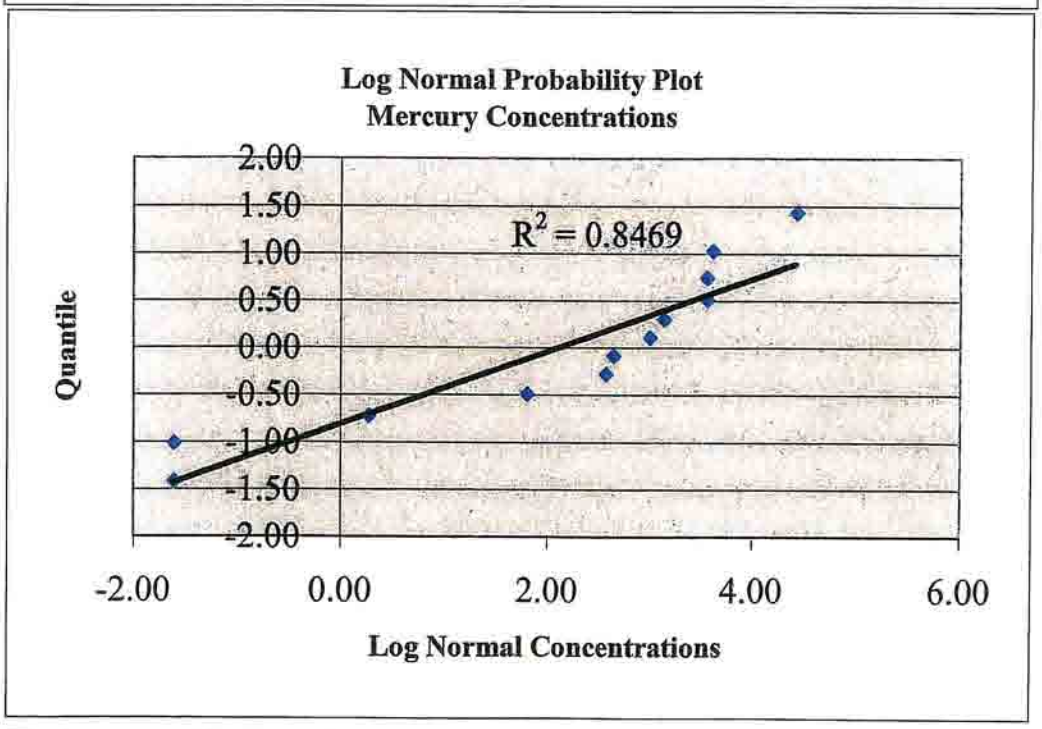
i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
LN[X(i)] = Natural Log Value of sample concentrations arranged from smallest to largest
[i/(n+1)] = Cumulative probability
n = number of samples = 12

X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
0.2	-1.61	1	1	0.077	-1.43
0.2	-1.61	2	2	0.154	-1.02
1.301029996	0.26	3	3	0.231	-0.74
6	1.79	4	4	0.308	-0.50
13	2.56	5	5	0.385	-0.29
14	2.64	6	6	0.462	-0.10
20	3.00	7	7	0.538	0.10
23	3.14	8	8	0.615	0.29
35	3.56	9	9	0.692	0.50
35	3.56	10	10	0.769	0.74
37	3.61	11	11	0.846	1.02
83	4.42	12	12	0.923	1.43

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 08/17/07

Probability Plots to determine the distribution of Mercury





The data appears Non Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Determination of reported background value as an outlier

Analyte: Mercury

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	12/01/98	P-6	0.2	0.2
2	06/07/99	P-6	0.2	0.2
3	12/15/99	P-6	14.0	5
4	06/06/00	P-6	37.0	5
5	12/22/00	P-6	20.0	5
6	12/30/00	P-6	1.3	0.2
7	06/04/01	P-6	35.0	5
8	12/03/01	P-6	23.0	5
9	06/10/02	P-6	6.0	5
10	12/16/02	P-6	ND, QL = 5	5
11	06/09/03	P-6	ND, QL = 5	5
12	12/08/03	P-6	35.0	5
13	06/28/04	P-6	83.0	5
14	12/20/04	P-6	ND, QL = 5	5
15	06/05/05	P-6	13.0	5
16	12/07/05	P-6	ND, QL = 5	5
17	06/05/06	P-6	ND, QL = 5	5
18	12/05/06	P-6	ND, QL = 5	5
19	05/30/07	P-6	ND, QL = 5	5

mean = 22.308
STD = 23.487

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

$$Tn = (Xn - mean) / STD$$

where:
Xn = largest observed sample value
mean = mean of the background values
STD = standard deviation of the background values

For	Xn =	83.000
	mean =	22.308
	STD =	23.487
	Tn =	**2.584**

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples =	19
Tc =	**2.532**

Since Tc<Tn, the sample result is considered to be an outlier

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Determination of reported background value as an outlier

Analyte: Mercury

Background Data

Sample No.	Sample Date	Location	ln(Concentration) (ug/l)	Quantitation Limit (ug/l)
1	12/01/98	P-6	-1.609	0.2
2	06/07/99	P-6	-1.609	0.2
3	12/15/99	P-6	2.639	5
4	06/06/00	P-6	3.611	5
5	12/22/00	P-6	2.996	5
6	12/30/00	P-6	0.263	0.2
7	06/04/01	P-6	3.555	5
8	12/03/01	P-6	3.135	5
9	06/10/02	P-6	1.792	5
10	12/16/02	P-6	ND	5
11	06/09/03	P-6	ND	5
12	12/08/03	P-6	3.555	5
13	06/28/04	P-6	4.419	5
14	12/20/04	P-6	ND	5
15	06/05/05	P-6	2.565	5
16	12/07/05	P-6	ND	5
17	06/05/06	P-6	ND	5
18	12/05/06	P-6	ND	5
19	05/30/07	P-6	ND	5
		mean =	2.109	
		STD =	2.029	

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

$$Tn = (Xn - mean) / STD$$

where:
Xn = largest observed sample value
mean = mean of the background values
STD = standard deviation of the background values

For	Xn =	4.419
	mean =	2.109
	STD =	2.029
	Tn =	**1.139**

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples =	19
Tc =	**2.532**

Since Tc>Tn, the sample result is not considered to be an outlier

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Shapiro Wilk Test Statistic (W) for normality of total Mercury

Complete the following table where

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	0.20	83.00	82.8	0.5475	45.33
2	0.20	37.00	36.8	0.3325	12.24
3	1.30	35.00	33.69897	0.2347	7.91
4	6.00	35.00	29	0.1586	4.60
5	13.00	23.00	10	0.0922	0.92
6	14.00	20.00	6	0.0303	0.18
7	20.00	14.00			
8	23.00	13.00			
9	35.00	6.00			
10	35.00	1.30			
11	37.00	0.20			
12	83.00	0.20			

The test statistic W can be found using:

W = SQR[B/(SD x SQRT(n-1))]

where:

B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	71.18
SD =	standard deviation of the data group	=	23.49
n =	number of samples	=	12

W = 0.835

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) = 0.859
and the calculated W = 0.835

Therefore the data is Non Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Shapiro Wilk Test Statistic (W) for log normality of Mercury

Complete the following table where

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	-1.61	4.42	6.0283	0.5475	3.3005
2	-1.61	3.61	5.2204	0.3325	1.7358
3	0.26	3.56	3.2922	0.2347	0.7727
4	1.79	3.56	1.7636	0.1586	0.2797
5	2.56	3.14	0.5705	0.0922	0.0526
6	2.64	3.00	0.3567	0.0303	0.0108
7	3.00	2.64			
8	3.14	2.56			
9	3.56	1.79			
10	3.56	0.26			
11	3.61	-1.61			
12	4.42	-1.61			

The test statistic W can be found using:

W = SQR((B/SD x SQRT(n-1))

where:

B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	6.1520
SD =	standard deviation of the data group	=	2.0285
n =	number of samples	=	12

W = 0.8361

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) =	0.859
and the calculated W =	0.836

Therefore the data is Non Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Analyte: Zinc

Sample No.	Sample Date	Location	Concentration (ug/L)	Quantitation Limit (ug/L)
1	9/19/1994	P-6	303	10
2	12/2/1994	P-6	106	10
3	2/7/1995	P-6	477	10
4	3/13/1995	P-6	291	10
5	11/1/1995	P-6	65	10
6	6/10/1996	P-6	125	10
7	11/12/1996	P-6	134	10
8	3/18/1997	P-6	ND, QL = 10	10
9	10/2/1997	P-6	96	10
10	5/26/1998	P-6	20	10
11	12/1/1998	P-6	121	10
12	6/7/1999	P-6	77	10
13	12/15/1999	P-6	100	10
14	6/6/2000	P-6	267	10
15	12/27/2000	P-6	100	10
16	6/4/2001	P-6	80	10
17	12/3/2001	P-6	73	10
18	6/10/2002	P-6	41	10
19	12/16/2002	P-6	27	10
20	6/9/2003	P-6	12	10
21	12/8/2003	P-6	261	10
22	6/29/2004	P-6	369	10
23	12/20/2004	P-6	17	10
24	6/5/2005	P-6	56	10
25	12/5/2005	P-6	ND, QL = 10	10
26	6/5/2006	P-6	14	10
27	12/5/2006	P-6	ND, QL = 10	10
28	5/30/2007	P-6	18.4	10

Number of Data	28
Number of Truncated Data	3
Percentage of Truncated Data	11%

Antilog UPL = **611** ug/L

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Probability Plots to determine the distribution of Zinc

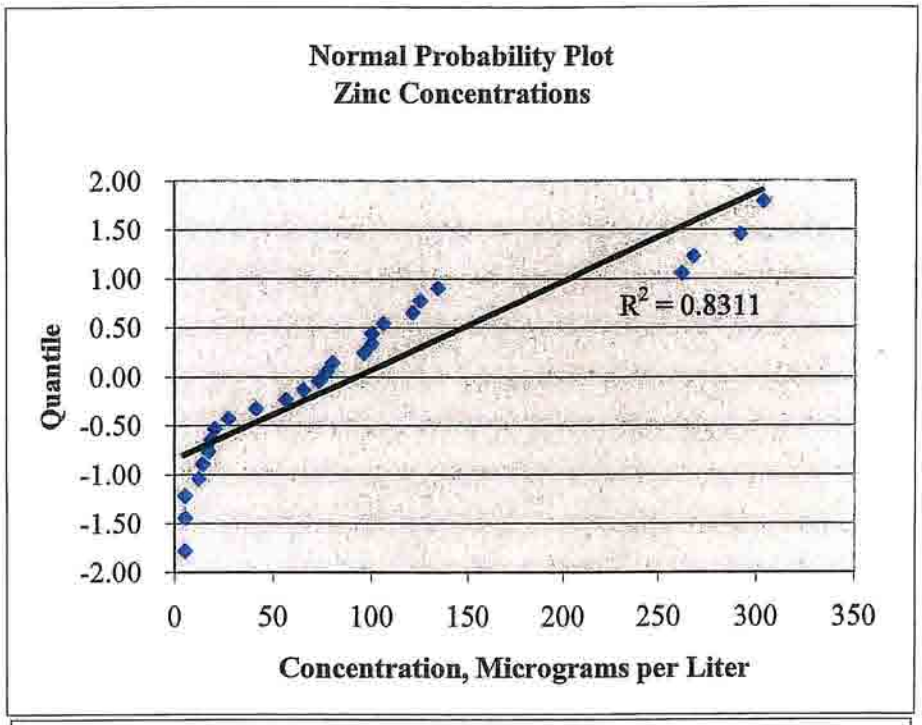
Complete the following table where:

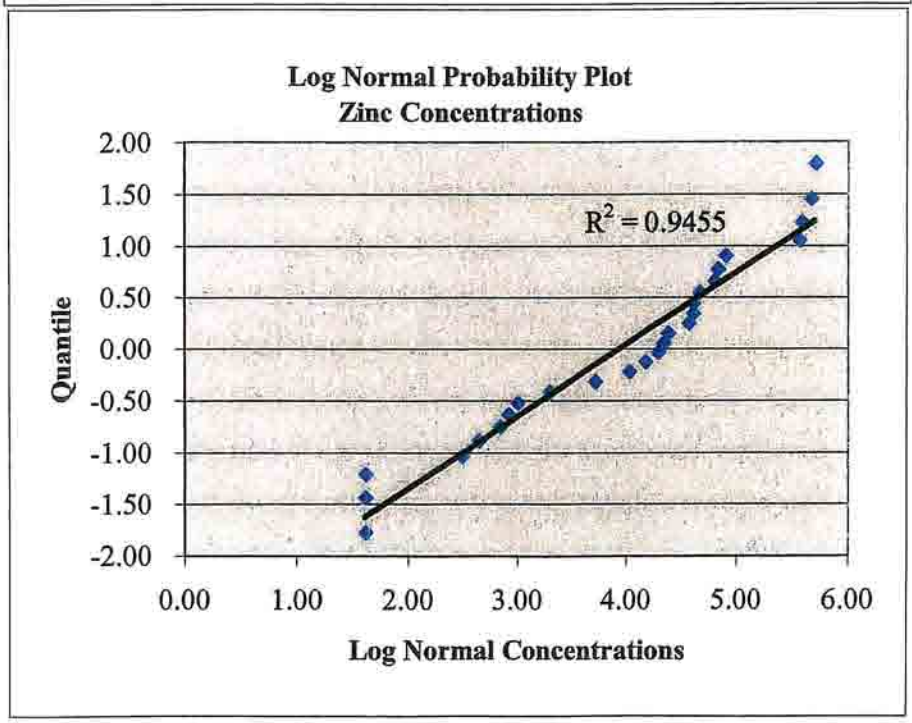
i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
LN[X(i)] = Natural Log Value of sample concentrations arranged from smallest to largest
[i/(n+1)] = Cumulative probability
n = number of samples = 26

X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
5	1.61	1	1	0.037	-1.79
5	1.61	2	2	0.074	-1.45
5	1.61	3	3	0.111	-1.22
12	2.48	4	4	0.148	-1.04
14	2.64	5	5	0.185	-0.90
17	2.83	6	6	0.222	-0.76
18.4	2.91	7	7	0.259	-0.65
20	3.00	8	8	0.296	-0.54
27	3.30	9	9	0.333	-0.43
41	3.71	10	10	0.370	-0.33
56	4.03	11	11	0.407	-0.23
65	4.17	12	12	0.444	-0.14
73	4.29	13	13	0.481	-0.05
77	4.34	14	14	0.519	0.05
80	4.38	15	15	0.556	0.14
96	4.56	16	16	0.593	0.23
100	4.61	17	17	0.630	0.33
100	4.61	18	18	0.667	0.43
106	4.66	19	19	0.704	0.54
121	4.80	20	20	0.741	0.65
125	4.83	21	21	0.778	0.76
134	4.90	22	22	0.815	0.90
261	5.56	23	23	0.852	1.04
267	5.59	24	24	0.889	1.22
291	5.67	25	25	0.926	1.45
303	5.71	26	26	0.963	1.79

X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
369	5.91	27	27	1.000	#NUM!
477	6.17	28	28	1.037	#NUM!

Probability Plots to determine the distribution of Zinc





The data appears to be Log Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Determination of reported background value as an outlier

Analyte: Zinc

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	09/19/94	P-6	303	10
2	12/02/94	P-6	106	10
3	02/07/95	P-6	477	10
4	03/13/95	P-6	291	10
5	11/01/95	P-6	65	10
6	06/10/96	P-6	125	10
7	11/12/96	P-6	134	10
8	03/18/97	P-6	5	10
9	10/02/97	P-6	96	10
10	05/26/98	P-6	20	10
11	12/01/98	P-6	121	10
12	06/07/99	P-6	77	10
13	12/15/99	P-6	100	10
14	06/06/00	P-6	267	10
15	12/27/00	P-6	100	10
16	06/04/01	P-6	80	10
17	12/03/01	P-6	73	10
18	06/10/02	P-6	41	10
19	12/16/02	P-6	27	10
20	06/09/03	P-6	12	10
21	12/08/03	P-6	261	10
22	06/29/04	P-6	369	10
23	12/20/04	P-6	17	10
24	06/05/05	P-6	56	10
25	12/05/05	P-6	5	10
26	06/05/06	P-6	14	10
27	12/05/06	P-6	5	10
28	05/30/07	P-6	18	10

mean = 116.621
STD = 124.174

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

$$Tn = (Xn - mean) / STD$$

where:

	Xn =	largest observed sample value
	mean =	mean of the background values
	STD =	standard deviation of the background values

For	Xn =	477.000
	mean =	116.621
	STD =	124.174
	Tn =	**2.902**

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples =	28
Tc =	**2.714**

Since Tc<Tn, the sample result is considered to be an outlier

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Determination of reported background value as an outlier

Analyte: Zinc

Background Data

Sample No.	Sample Date	Location	ln(Concentration) (ug/l)	Quantitation Limit (ug/l)
1	09/19/94	P-6	5.714	10
2	12/02/94	P-6	4.663	10
3	02/07/95	P-6	6.168	10
4	03/13/95	P-6	5.673	10
5	11/01/95	P-6	4.174	10
6	06/10/96	P-6	4.828	10
7	11/12/96	P-6	4.898	10
8	03/18/97	P-6	1.609	10
9	10/02/97	P-6	4.564	10
10	05/26/98	P-6	2.996	10
11	12/01/98	P-6	4.796	10
12	06/07/99	P-6	4.344	10
13	12/15/99	P-6	4.605	10
14	06/06/00	P-6	5.587	10
15	12/27/00	P-6	4.605	10
16	06/04/01	P-6	4.382	10
17	12/03/01	P-6	4.290	10
18	06/10/02	P-6	3.714	10
19	12/16/02	P-6	3.296	10
20	06/09/03	P-6	2.485	10
21	12/08/03	P-6	5.565	10
22	06/29/04	P-6	5.911	10
23	12/20/04	P-6	2.833	10
24	06/05/05	P-6	4.025	10
25	12/05/05	P-6	1.609	10
26	06/05/06	P-6	2.639	10
27	12/05/06	P-6	1.609	10
28	05/30/07	P-6	2.912	10
		mean =	4.089	
		STD =	1.337	

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

$$Tn = (Xn - mean) / STD$$

where:

	Xn =	largest observed sample value
	mean =	mean of the background values
	STD =	standard deviation of the background values

For	Xn =	6.168
	mean =	4.089
	STD =	1.337
	Tn =	**1.555**

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples =	28
Tc =	**2.714**

Since Tc>Tn, the sample result is not considered to be an outlier

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Shapiro Wilk Test Statistic (W) for normality of total Zinc

Complete the following table where

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	5.00	477.00	472	0.4328	204.28
2	5.00	369.00	364	0.2992	108.91
3	5.00	303.00	298	0.251	74.80
4	12.00	291.00	279	0.2151	60.01
5	14.00	267.00	253	0.1857	46.98
6	17.00	261.00	244	0.1601	39.06
7	18.40	134.00	115.6	0.1372	15.86
8	20.00	125.00	105	0.1162	12.20
9	27.00	121.00	94	0.0965	9.07
10	41.00	106.00	65	0.0778	5.06
11	56.00	100.00	44	0.0598	2.63
12	65.00	100.00	35	0.0424	1.48
13	73.00	96.00	23	0.0253	0.58
14	77.00	80.00	3	0.0084	0.03
15	80.00	77.00			
16	96.00	73.00			
17	100.00	65.00			
18	100.00	56.00			
19	106.00	41.00			
20	121.00	27.00			
21	125.00	20.00			
22	134.00	18.40			
23	261.00	17.00			
24	267.00	14.00			
25	291.00	12.00			
26	303.00	5.00			

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
27	369.00	5.00			
28	477.00	5.00			

The test statistic W can be found using:

W = SQR[B/(SD x SQRT(n-1))]

where:	B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	580.96
	SD =	standard deviation of the data group	=	124.17
	n =	number of samples	=	28
			W =	0.811

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) = 0.924
and the calculated W = 0.811

Therefore the data is Non Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Shapiro Wilk Test Statistic (W) for log normality of Zinc

Complete the following table where

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	1.61	6.17	4.5581	0.4328	1.9727
2	1.61	5.91	4.3014	0.2992	1.2870
3	1.61	5.71	4.1043	0.2510	1.0302
4	2.48	5.67	3.1884	0.2151	0.6858
5	2.64	5.59	2.9482	0.1857	0.5475
6	2.83	5.56	2.7313	0.1601	0.4373
7	2.91	4.90	1.9855	0.1372	0.2724
8	3.00	4.83	1.8326	0.1162	0.2129
9	3.30	4.80	1.5000	0.0965	0.1447
10	3.71	4.66	0.9499	0.0778	0.0739
11	4.03	4.61	0.5798	0.0598	0.0347
12	4.17	4.61	0.4308	0.0424	0.0183
13	4.29	4.56	0.2739	0.0253	0.0069
14	4.34	4.38	0.0382	0.0084	0.0003
15	4.38	4.34			
16	4.56	4.29			
17	4.61	4.17			
18	4.61	4.03			
19	4.66	3.71			
20	4.80	3.30			
21	4.83	3.00			
22	4.90	2.91			
23	5.56	2.83			
24	5.59	2.64			
25	5.67	2.48			
26	5.71	1.61			

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
27	5.91	1.61			
28	6.17	1.61			

The test statistic W can be found using:

W = SQR((B/SD x SQRT(n-1))

where:	B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	6.7247
	SD =	standard deviation of the data group	=	1.3368
	n =	number of samples	=	28
			W =	0.9372

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) = 0.924
and the calculated W = 0.937

Therefore the data set is Log Normal

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Parametric Prediction Interval for log normally distributed data

Analyte: Zinc

Background Data: Note use of log(concentration)

Sample No.	Sample Date	Location	Concentration (ug/l)	Natural Log Concentration
1	09/19/94	P-6	303	5.714
2	12/02/94	P-6	106	4.663
3	02/07/95	P-6	477	6.168
4	03/13/95	P-6	291	5.673
5	11/01/95	P-6	65	4.174
6	06/10/96	P-6	125	4.828
7	11/12/96	P-6	134	4.898
8	03/18/97	P-6	5	1.609
9	10/02/97	P-6	96	4.564
10	05/26/98	P-6	20	2.996
11	12/01/98	P-6	121	4.796
12	06/07/99	P-6	77	4.344
13	12/15/99	P-6	100	4.605
14	06/06/00	P-6	267	5.587
15	12/27/00	P-6	100	4.605
16	06/04/01	P-6	80	4.382
17	12/03/01	P-6	73	4.290
18	06/10/02	P-6	41	3.714
19	12/16/02	P-6	27	3.296
20	06/09/03	P-6	12	2.485
21	12/08/03	P-6	261	5.565
22	06/29/04	P-6	369	5.911
23	12/20/04	P-6	17	2.833
24	06/05/05	P-6	56	4.025
25	12/05/05	P-6	5	1.609
26	06/05/06	P-6	14	2.639
27	12/05/06	P-6	5	1.609
28	05/30/07	P-6	18.4	2.912

Note: All sample concentrations are micrograms per liter

Using the background data, the upper Prediction Limit can be determined using:

Upper Prediction Limit = antilog((Mean Conc) + t(n-1,k,.95) x (Std Dev) x SQRT(1/m+1/n))

where:	Mean Conc =	mean concentration background samples
	t(n-1k,.95) =	Bonferroni t-statistic with
	n-1 =	degrees of freedom (number of samples - 1)
	k =	number of downgradient samples per event
	.95 =	confidence interval
	Std Dev =	standard deviation of background samples
	m =	number independent samples from each sampling point
	n =	number of background samples

For:	Mean Conc =	4.089	
	Std Dev =	1.337	
	t(n-1,k,.95)*sqrt(1/m+1/n) =	1.740	
	k =	7	
	m =	1	
	n =	28	
	Antilog UPL =	**611**	ug/L

Project Name: City of Durham - Closed Landfill
Project No: 073-96042.100
Date: 8/17/07

Parametric Tolerance Interval for log normally distributed data

Analyte: Zinc

Background Data: Note use of log(concentration)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)	Natural Log Concentration
1	09/19/94	P-6	303	10	5.714
2	12/02/94	P-6	106	10	4.663
3	02/07/95	P-6	477	10	6.168
4	03/13/95	P-6	291	10	5.673
5	11/01/95	P-6	65	10	4.174
6	06/10/96	P-6	125	10	4.828
7	11/12/96	P-6	134	10	4.898
8	03/18/97	P-6	5	10	1.609
9	10/02/97	P-6	96	10	4.564
10	05/26/98	P-6	20	10	2.996
11	12/01/98	P-6	121	10	4.796
12	06/07/99	P-6	77	10	4.344
13	12/15/99	P-6	100	10	4.605
14	06/06/00	P-6	267	10	5.587
15	12/27/00	P-6	100	10	4.605
16	06/04/01	P-6	80	10	4.382
17	12/03/01	P-6	73	10	4.290
18	06/10/02	P-6	41	10	3.714
19	12/16/02	P-6	27	10	3.296
20	06/09/03	P-6	12	10	2.485
21	12/08/03	P-6	261	10	5.565
22	06/29/04	P-6	369	10	5.911
23	12/20/04	P-6	17	10	2.833
24	06/05/05	P-6	56	10	4.025
25	12/05/05	P-6	5	10	1.609
26	06/05/06	P-6	14	10	2.639
27	12/05/06	P-6	5	10	1.609
28	05/30/07	P-6	18	10	2.912

Note: All sample concentrations are micrograms per liter

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

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

where:

Mean Conc =	mean concentration background samples
K =	factor for constructing one sided normal tolerance limit taken from table 4-2, page 87, Statistical Methods for Groundwater Monitoring, Gibbons, 1994
STDS =	Standard Deviation Samples
n =	number of background samples

For:

n =	28
K =	2.249
Mean Conc =	4.089
STDS =	1.337
UTL =	**1207**