REPUBLIC SERVICES OF NC, LLC GDS

February 25, 2011

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. Ervin Lane
Hydrogeologist

Re: Water Quality Monitoring Report, First Semi-Annual 2011 Sampling Event
East Carolina Environmental Landfill, Permit No. 08-03
Bertie County, North Carolina

Dear Mr. Lane,

Republic Services of North Carolina, LLC (Republic) is submitting the enclosed *Water Quality Monitoring Report,* which documents the results of the January 4-5, 2011, compliance monitoring event at the above-referenced facility. Based on these results, Republic intends to continue monitoring the uppermost aquifer beneath this facility in accordance with the requirements of the Detection Monitoring Program as outlined in Title 15A NCAC 13B.1633. If you have any questions, please contact Dusty Reedy with Golder Associates NC, Inc. at 336-852-4903 or myself at 828-464-2414.

Sincerely,
REPUBLIC SERVICES OF NC, LLC

Mr. Christopher Gustin
Environmental Manager

Enclosure

C: East Carolina Environmental, 1922 Republican Road, Aulander, NC, 27805. 252-348-3322.
Rachel P. Kirkman, P.G., Senior Project Geologist, 4900 Koger Boulevard, Suite 140, Greensboro, North Carolina, 27407. rkirkman@golder.com. 336-852-4903.

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

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

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

Instructions:

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

Solid Waste Monitoring Data Submittal Information

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

Golder Associates NC, Inc. on behalf of Republic Services of NC, LLC

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

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

E-mail: dreedy@golder.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
East Carolina Environmental	1922 Republican Road Aulander, NC 27805	08-03	.1600	January 4-5, 2011

Environmental Status: (Check all that apply)

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

Type of data submitted: (Check all that apply)

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

Notification attached?

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

Certification

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

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

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

Signature 2-25-11 Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1963 GEOLOGIST DAVID YATES REEDY, II 2-25-11

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

Facility Representative Address

C-2862

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

Revised 6/2009

WATER QUALITY MONITORING REPORT

FIRST SEMI-ANNUAL 2011 SAMPLING EVENT

East Carolina Regional Landfill, Permit No. 08-03

Bertie County, North Carolina

Submitted To: East Carolina Environmental
Subsidiary of Republic Services of North Carolina, LLC
1922 Republican Road
Aulander, North Carolina 27805

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

February 2011 **0536-620011.100**

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February 25, 2011 0536-620011.100

Mr. Chris Gustin, Environmental Manager
Republic Services of NC, LLC
1220 Commerce Street
Conover, North Carolina 28613
828-464-2414

RE: WATER QUALITY MONITORING REPORT, FIRST SEMI-ANNUAL 2011 SAMPLING EVENT EAST CAROLINA REGIONAL LANDFILL, PERMIT NO. 08-07 BERTIE COUNTY, NORTH CAROLINA

Dear Chris:

Golder Associates NC, Inc. (Golder) is submitting this *Water Quality Monitoring Report,* which documents the results of the January 4-5, 2011, compliance monitoring event at the above referenced facility.

Four NC Appendix I inorganic constituents (barium, beryllium, cobalt, and zinc) were detected above their respective Solid Waste Section Limits (SWSLs) in samples from one or more downgradient compliance monitoring wells during the January 2011 sampling event. None of the detections were determined to be statistically significant over background concentrations. As a result of the recent lowering of the Solid Waste Section Groundwater Protection Standard (GWPS) for cobalt from 70 micrograms per liter (ug/L) to 1 ug/L, cobalt was detected above the SWSL and GWPS in the sample from downgradient well MW-7. Cobalt was detected at estimated concentrations above the GWPS, but below its SWSL, in samples from the upgradient well and seven of the eight remaining downgradient wells. The concentrations of cobalt are consistent with historical concentrations. Vanadium was also detected at estimated concentrations below its SWSL, but above its GWPS, in samples from downgradient wells, as it has been during previous events. Golder recommends no further action based on these results.

No NC Appendix I organic constituents were detected above the SWSLs in monitoring wells or surface water points during this event. Zinc was detected above the SWSL and applicable surface water standard in the sample from downstream surface water monitoring point SW-4. Zinc has historically been detected above its SWSL and surface water standard in the upstream and downstream surface water points. No additional NC Appendix I inorganic constituents were detected in surface water points. No flowing water was observed in downstream surface water point SW-2; therefore, no sample was collected. Copper and zinc were detected above the SWSL in the sample from the site water supply well, which is consistent with previous events and are attributed to the well casing materials. Constituent concentrations reported for the leachate sample collected during the January 2011 sampling event are typical for this facility.

Based on these results, Republic will continue monitoring the uppermost aquifer beneath this facility in accordance with the requirements of the Detection Monitoring Program as outlined in Title 15A NCAC 13B.1633. If you have any questions, please contact the undersigned at 336-852-4903.

GOLDER ASSOCIATES NC, INC.

for

Jeremy A. DeVore
Staff Geologist

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

C: East Carolina Environmental, 1922 Republican Road, Aulander, NC, 27805. 252-348-3322.

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1.0 INTRODUCTION

This report summarizes the monitoring results from the January 4-5, 2011, groundwater, surface water, water supply well, and leachate sampling and analysis event at the East Carolina Regional Landfill in Bertie County, North Carolina (NC) in accordance with Title 15A of the North Carolina Administrative Code (NCAC) Subchapter 13B.1632. The East Carolina Regional Landfill, a municipal solid waste landfill, is owned and operated by Republic Services of North Carolina, LLC (Republic) under Permit No. 08-03 issued by the NC Department of Environment and Natural Resources (DENR).

1.1 Site Description and Background

The East Carolina Regional Landfill is an active Subtitle D municipal solid waste landfill that began operating in 1993. As of January 2011, cells 3 through 12 have been constructed. The location of the facility is shown on the inlay on Drawing 1. As presented, the East Carolina Regional Landfill is located approximately 7.5 miles northwest of Windsor, NC at the intersection of State Routes 1221 and 1225. The facility is bounded to the north and east by undeveloped property and the Connaritsa Swamp, to the west by State Route 1225 and undeveloped and agricultural property, and to the south by State Route 1221, wooded property, and undeveloped bottomlands associated with the easterly flowing Cashie River.

Topographic elevations at the facility range from approximately 30 to 70 feet above mean sea level. Along the northern and eastern portions of the facility, surface drainage from the facility and surrounding areas is routed by drainage channels and storm water control structures to tributaries of the southerly flowing Connaritsa Swamp, a tributary system of the Cashie River. Along the western and southern portions of the facility, surface drainage from the facility and surrounding areas is routed by drainage channels and storm water control structures to tributaries of the southeasterly flowing Cashie River. The Cashie River discharges to the greater Roanoke River south of the Town of Windsor.

1.2 Compliance Monitoring History

Groundwater monitoring at the facility was initiated in January 1995 under the Detection Monitoring Program for municipal solid waste landfills. The facility's monitoring network has historically consisted of 14 monitoring wells (GW-1 through GW-14), which monitored the uppermost Yorktown Formation (GW-2, GW-3, GW-5, GW-7 through GW-11, GW-13, and GW-14), and the lower Black Creek Formation (GW-1, GW-4, GW-6, and GW-12). Monitoring wells GW-1 and GW-2 are located upgradient of the landfill, and the remaining wells are located sidegradient or downgradient of the landfill.

In accordance with the facility's permit, the current monitoring network monitors the Yorktown formation and is composed of GW-2, GW-7, GW-8, GW-9, GW-10, GW-11, GW-13, GW-15, GW-16R, and GW-17, with the remaining monitoring wells used for static water level observation. Per the June 2005 revision to the Water Monitoring Procedures (BLE, 2005), the groundwater wells screened in the Black Creek Formation are no longer sampled. Well GW-16 was decommissioned following the January 2007 sampling event during the construction of Cell 12. Bunnell Lammons Engineering, Inc. (BLE) installed

monitoring well GW-16R as a replacement well prior to the January 2008 monitoring event. BLE installed GW-17 following the January 2008 sampling event as an additional downgradient monitoring well during the construction of Cell 12. Monitoring well GW-14 was decommissioned and GW-18 was installed prior to the January 2009 water quality monitoring event in order to construct Cell 13. Piezometer PZ-110 was renamed GW-21 prior to the January 2009 water quality monitoring event. A background sampling event for GW-18 and GW-21 was performed during the January 2009 monitoring event. Wells GW-18 and GW-21 will become part of the compliance network once Cell 13 begins receiving waste. Based on the results of the laboratory and statistical analyses, Republic will continue to maintain a Detection Monitoring Program at this facility.

In addition to the routine groundwater monitoring points, the facility's monitoring network includes one upstream surface water monitoring point (SW-1), and three downstream surface water sampling points (SW-2, SW-3, and SW-4), which are sampled in conjunction with the groundwater monitoring wells. Water supply well PW-1 is sampled during each routine monitoring event. The leachate is also sampled semi-annually per the Solid Waste Section requirements.

1.3 Hydrogeologic Setting

Geologically, the facility is located within the Carolina Coastal Plain Physiographic Province of NC (NCGS 1985). The Coastal Plain Province is generally described as being composed of easterly dipping strata that thicken towards the east. Based on hydrogeologic characteristics, these strata are generally classified as aquifer systems separated by aquitard units. The strata underlying the facility include the Tertiary Yorktown Formation and the Cretaceous Black Creek Formation, both of which are classified as aquifers. The Yorktown Formation is unconfined at this location, and the lower Black Creek Formation, which is separated from the overlying Yorktown Formation by a low permeability unit, is confined.

The uppermost groundwater beneath the facility is present in the shallow, unconfined Yorktown Aquifer. Depending on topographic elevation, the depth to water in the Yorktown Formation ranges from approximately 5 feet below grade along the southwestern perimeter of the facility to approximately 25 feet below grade near the central and northeastern portion of the facility. In the lower Black Creek Formation, the depth to water ranges from 10 to 20 feet below grade in the monitoring wells screened in this unit. Historical static water level data are presented on Tables 1 and 2.

As presented on Table 1, the hydraulic head level in the uppermost Yorktown aquifer beneath the facility is fairly consistent, with temporal variation from the long-term average limited to approximately 6 feet (plus or minus) in the upgradient well and somewhat less in the downgradient wells. Similarly, as presented in Table 2, the fluctuation in the Black Creek aquifer is limited to approximately 4 feet (plus or minus). As expected, the range in fluctuation appears to be greater in the upgradient wells, as these wells are more centrally located to the regional groundwater recharge area. The range in fluctuation in the downgradient

compliance wells, which are generally located near groundwater discharge areas, is less likely due to the stabilizing effect of hydraulic discharge boundaries.

Static water level measurements obtained during the January 4-5, 2011, sampling event were used to prepare the groundwater surface contours presented on Drawing 1. In the upper Yorktown Formation, groundwater flow across most of the site is toward the south-southwest. An apparent groundwater divide is located near the northern cell boundary, and groundwater flow north of the landfill waste boundary is toward the northeast. This is consistent with previously submitted interpretations for this facility. Previous maps of the Black Creek Formation show an apparent flow direction towards the southeast.

Based on the January 4, 2011, groundwater surface contour map for the Yorktown Formation, 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 flowing to the south was calculated to be approximately 0.0023 ft/ft. The hydraulic gradient for groundwater flowing to the north was calculated to be approximately 0.0024 ft/ft. The permeability of the aquifer portion of the Yorktown Formation is estimated to average 3.3E-04 centimeters per second (BLE, 2004). The effective porosity of the shallow aquifer is estimated at 0.27 (BLE, 2004). This information is shown on Table 3.

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 per year), K = hydraulic conductivity (feet per year), i = horizontal hydraulic gradient, and n_e = effective porosity.

The average estimated linear groundwater flow velocity under the waste management unit is approximately 2.92 feet per year generally to the south-southwest, which is consistent with previous estimates (Table 3).

2.0 FIELD PROGRAM, MONITORING RESULTS, AND DISCUSSION

Field activities conducted as part of the January 2011 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 by sampling crews at the East Carolina Regional 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. No physical indicators were observed in the vicinity of the waste management areas during the January 2011 event.

2.2 Well Network and Groundwater Elevation Measurements

The network of groundwater monitoring wells at the East Carolina Regional Landfill consists of GW-2, GW-7, GW-8, GW-9, GW-10, GW-11, GW-13, GW-15, GW-16R, and GW-17, which are screened within the upper Yorktown Formation. Wells GW-18 and GW-21 have been installed, but have not been included as part of the monitoring network at his time. The remaining monitoring wells are used as observation wells to monitor the depth to groundwater. Monitoring well construction information is summarized in Table 4 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 GW-2 is the facility's background well and is located hydraulically upgradient of the waste disposal area. Monitoring wells GW-7, GW-8, GW-9, GW-10, GW-11, GW-13, GW-15, GW-16R, and GW-17 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 water level elevations for this event are presented in Tables 1 and 2.

2.3 January 2011 Groundwater Monitoring Event

Personnel from Golder visited the facility on January 4-5, 2011, to purge and sample monitoring wells GW-2, GW-7, GW-8, GW-9, GW-10, GW-11, GW-13, GW-15, GW-16R, and GW-17. In addition to the groundwater samples from the monitoring wells, a groundwater sample was collected from the on-site water supply well and a leachate sample was collected from the facility's holding tank (Tank B). Additional depth-to-water measurements were obtained from GW-1, GW-3, GW-4, GW-5, GW-6, GW-12, GW-18, and GW-21. Surface water samples were collected from upstream monitoring point SW-1 and downstream monitoring points SW-3 and SW-4. No flowing water was observed at downstream point SW-2; therefore no sample was collected.

Monitoring wells GW-2, GW-7, GW-8, GW-9, GW-10, GW-11, GW-13, GW-15, GW-16R, and GW-17 were purged and sampled using dedicated bladder pumps and micropurge procedures. Measurements of pH, specific conductivity, dissolved oxygen, oxidation-reduction potential, temperature, and turbidity were recorded on approximately 3-minute intervals during the purge, depending on the purge rate. In general, the purge rate for each well was matched to the yield of the monitoring well, as determined by continuously monitoring the depth to water, up to a maximum purge rate of 500 milliliters per minute. Purging was continued until stabilization was indicated by the field parameters. In general, stabilization was deemed to be complete once the range in measured values for the required field parameters was less than 10% per parameter over three monitoring intervals.

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 dedicated bladder pump discharge lines in the labeled, laboratory-supplied, pre-preserved sample containers after purging was completed based on stabilization of all field parameters. After collection, the samples were placed in a cooler on ice, under chain-of-custody control. Copies of the sampling logs are presented in Appendix A. Included in each log is a description of the sampling location, sampling equipment, sampling method, field observations, and field parameters.

The leachate sample was collected directly from the leachate piping manifold that serves the leachate holding tank (Tank B). Measurements of pH, specific conductivity, and temperature were recorded during the collection of the leachate sample.

2.4 Laboratory Analysis Program

The January 2011 groundwater and leachate samples were received by Environmental Conservation Laboratories, Inc. (ENCO) of Cary, NC on January 5, 2011, under chain-of-custody control for analysis of the NC Appendix I constituents. The leachate sample was also analyzed for the required list of additional parameters.

2.5 January 2011 Sampling Results

Analytical results for the January 2011 groundwater, surface water, and leachate samples are summarized in Tables 5, 6, and 7 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 B.

As presented in Table 5, four inorganic constituents were detected at concentrations above their respective Solid Waste Section Reporting Limits (SWSLs) in one or more downgradient wells during the January 2011 sampling event. Barium was reported at or above its SWSL in samples from GW-7, GW-8, GW-9, GW-13, GW-15, and GW-17. Beryllium and cobalt were reported above their respective SWSL in the sample collected from GW-7. Zinc was detected above its SWSL in the sample from GW-9. No NC Appendix I organic constituents were reported above the SWSLs during the January 2011 event.

As presented in Table 6, zinc was reported above its SWSL in the sample from downstream surface water point SW-4 during the January 2011 event. The detection may be biased high due to entrained sediment in the sample as indicated by relatively high turbidity of the sample. No NC Appendix I organic constituents were detected in surface water points above their respective SWSLs during the event.

Copper and zinc were detected above their SWSLs in the on-site water supply well (PW-1) during the January 2011 event, as they have been during previous events. Zinc is commonly found in water supply

wells with galvanized casings, such as PW-1. Constituent concentrations reported for the leachate sample collected during the January 2011 sampling event are typical for leachate at this facility.

3.0 LABORATORY AND FIELD QA/QC

A field blank was collected by Golder personnel as part of the January 2011 monitoring event. In addition to the field blank, a laboratory-prepared trip blank accompanied the NC Appendix I volatile organic compound 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. Also, at least one method blank was analyzed by the laboratory for each method used to analyze groundwater, surface water, and leachate samples. A review of the laboratory data was performed by Golder personnel and is included in Appendix B. Barium was detected in the field blank at an estimated concentration. Based on Golder's review, no data qualification was necessary.

4.0 DATA EVALUATION

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

4.1 Statistical Evaluations

Barium, beryllium, cobalt, and zinc were detected in one or more downgradient monitoring wells above the SWSLs during the January 2011 event. 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 respective facility background concentrations. The statistical worksheets for barium, beryllium, cobalt, and zinc are presented in Appendix C, including a summary table of the statistical results. As presented, the concentrations of barium, beryllium, cobalt, and zinc were determined to be below their statistical limits and are not considered statistically significant increases over background.

4.2 North Carolina Groundwater and Surface Water Quality Standard Comparisons

As a result of the recent lowering of the Solid Waste Section Groundwater Protection Standard (GWPS) for cobalt from 70 micrograms per liter (ug/L) to 1 ug/L, cobalt exceeded the SWSL and GWPS in the sample from GW-7. Cobalt was detected at estimated concentrations below the SWSL, but above the GWPS, in upgradient well GW-2 and downgradient wells GW-8, GW-9, GW-11, GW-13, GW-15, GW-16R, and GW-17. The concentrations of cobalt are consistent with historical concentrations. Vanadium was also detected at estimated concentrations below the SWSL, but above the GWPS, in downgradient wells GW-7, GW-9, and GW-17.

Zinc was detected above the applicable surface water standard in downstream surface water monitoring point SW-4. Zinc has historically been detected above its surface water standard in samples from upstream and downstream surface water points. No NC Appendix I organic constituents were detected in

samples from surface water points above applicable surface water standards. No flowing water was observed in downstream surface water point SW-2; therefore, no sample was collected.

5.0 CONCLUSIONS

Based on the results summarized herein, Republic will continue monitoring the uppermost aquifer beneath this facility in accordance with the requirements of the Detection Monitoring Program as outlined in Title 15A NCAC 13B.1633. The next compliance monitoring event for this facility is tentatively scheduled for July 2011.

6.0 REFERENCES

BLE (Bunnell-Lammons Engineering, Inc.), December 2004. *Report of Ground Water Quality Results & Statistical Analysis, Second Semi-Annual Sampling Event of 2004 (N27) East Carolina Regional MSW Landfill, Bertie County, North Carolina.* 5 pp.

BLE (Bunnell-Lammons Engineering, Inc.), 2005. *Water Monitoring Procedures*, *June 2005 Revision.*

Law Engineering, August 1996. Design Hydrogeologic Report Phase II (Cells 7 and 8). 15 pp.

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

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TABLES

TABLE 1

Summary of Historical Static Water Level Data for Yorktown Formation
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

	GW-2	GW-3	GW-5	GW-7	GW-8	GW-9	GW-10	GW-11	GW-13	GW-14	GW-15	GW-16	GW-16R	GW-17	GW-18	GW-21
TOC Elevation (ft AMSL)	66.36	66.23	62.60	58.79	60.04	51.94	53.22	72.42	74.76	78.74	78.23	63.02	66.12	85.68	62.00	62.07
Date	**Static Water Elevation (ft AMSL)**															
01/01/95	51.79	54.53	48.45	47.12	46.43	47.89	-	-	-	-	-	-	-	-	-	-
07/01/95	55.85	51.80	50.42	53.84	48.12	48.13	-	-	-	-	-	-	-	-	-	-
01/01/96	58.36	53.73	51.42	49.89	49.09	49.43	-	-	-	-	-	-	-	-	-	-
10/01/96	59.92	55.53	53.05	49.87	49.14	50.32	50.32	-	-	-	-	-	-	-	-	-
04/01/97	57.00	51.96	50.85	47.77	47.50	49.15	49.67	50.20	-	-	-	-	-	-	-	-
10/01/97	50.20	48.05	46.74	44.79	44.41	45.61	45.41	43.67	-	-	-	-	-	-	-	-
04/01/98	55.12	51.65	50.52	47.78	47.26	48.01	47.00	44.22	-	-	-	-	-	-	-	-
10/01/98	51.35	49.25	48.24	46.30	45.58	47.82	45.43	DRY	-	-	-	-	-	-	-	-
04/07/99	53.54	51.25	50.01	48.15	47.50	47.45	45.85	DRY	-	-	-	-	-	-	-	-
10/20/99	57.26	52.67	51.25	48.79	52.38	49.12	47.80	45.82	-	-	-	-	-	-	-	-
04/26/00	54.03	50.93	49.56	48.02	47.52	47.46	45.75	DRY	-	-	-	-	-	-	-	-
10/18/00	52.71	49.70	48.56	46.80	46.23	45.57	43.40	DRY	-	-	-	-	-	-	-	-
04/18/01	53.54	50.36	48.94	47.37	46.85	46.32	43.93	DRY	48.31	-	-	-	-	-	-	-
10/24/01	50.78	47.97	47.00	45.50	44.75	44.84	44.48	43.99	47.95	-	-	-	-	-	-	-
04/22/02	51.64	49.10	47.94	46.92	46.38	45.67	46.46	46.07	49.30	-	-	-	-	-	-	-
10/21/02	50.06	47.73	46.41	45.70	45.30	46.22	47.07	46.61	48.82	-	-	-	-	-	-	-
04/01/03	56.58	51.55	50.37	48.69	48.07	48.30	49.81	48.94	53.08	-	-	-	-	-	-	-
10/27/03	54.61	50.14	48.86	46.99	46.42	47.81	48.57	48.63	51.91	53.64	-	-	-	-	-	-
04/26/04	55.24	50.59	49.25	47.69	47.10	48.45	48.82	48.74	52.02	54.55	-	-	-	-	-	-
10/26/04	53.01	48.53	47.38	45.91	45.49	46.99	48.20	48.27	50.79	52.11	-	-	-	-	-	-
03/15/05	54.56	49.40	47.93	46.88	46.57	47.72	48.48	48.42	51.96	54.34	-	-	-	-	-	-
07/12/05	53.25	48.88	47.74	46.35	45.86	47.22	47.98	48.34	51.00	52.71	-	-	-	-	-	-
01/19/06	55.12	49.82	48.23	46.81	46.60	48.28	48.74	48.40	51.66	53.92	53.10	-	-	-	-	-
07/11/06	54.89	49.63	48.44	47.28	46.79	47.78	48.06	48.25	51.46	53.16	52.90	51.00	-	-	-	-
01/17/07	56.09	51.21	47.81	48.67	48.00	49.68	48.67	48.28	52.23	54.74	53.59	53.11	-	-	-	-
07/09/07	52.58	48.30	47.41	45.21	44.69	46.44	46.82	46.11	50.50	50.84	51.42	49.53	-	-	-	-
01/14/08	50.15	46.67	45.64	44.76	44.95	46.45	<32.68	47.54	49.43	49.93	49.75	-	47.23	-	-	-
04/30/08	-	-	-	-	-	-	-	-	-	-	-	-	-	52.99	-	-
07/14/08	51.58	47.34	46.60	46.22	46.11	46.67	<32.68	47.91	50.00	50.19	50.60	-	47.40	49.54	-	-
10/02/08	-	-	-	-	-	-	-	-	-	-	-	-	-	48.44	-	-
01/19-20/09	50.24	46.83	45.93	46.51	47.00	47.80	48.69	48.28	49.63	49.29	49.88	-	46.92	48.96	-	-
07/20-21/09	51.00	47.38	46.39	46.22	46.00	46.29	47.49	47.70	49.64	-	50.16	-	48.33	49.60	46.67	48.69
01/25/10	53.27	48.91	47.84	49.17	49.39	49.15	50.01	48.70	51.24	-	51.83	-	54.40	56.38	49.24	53.82
07/06/10	52.53	48.86	47.87	47.67	47.09	47.01	47.06	47.86	50.61	-	51.38	-	50.97	51.49	49.85	50.68
01/04/11	51.80	48.72	47.50	48.04	47.81	48.06	48.58	48.17	50.60	-	51.08	-	53.27	53.50	52.30	50.32
MEAN	*53.63*	*49.97*	*48.50*	*47.38*	*46.92*	*47.55*	*47.45*	*47.46*	*50.58*	*52.45*	*51.43*	*51.21*	*49.79*	*51.36*	*49.52*	*50.88*
MAXIMUM	*59.92*	*55.53*	*53.05*	*53.84*	*52.38*	*50.32*	*50.32*	*50.20*	*53.08*	*54.74*	*53.59*	*53.11*	*54.40*	*56.38*	*52.30*	*53.82*
MINIMUM	*59.92*	*55.53*	*53.05*	*53.84*	*52.38*	*50.32*	*50.32*	*50.20*	*53.08*	*54.74*	*53.59*	*53.11*	*54.40*	*56.38*	*52.30*	*53.82*

Notes:
ft AMSL = feet above mean sea level
TOC = top of casing
- = not measured
*MW-16 was decommissioned after the installation of MW-16R.

TABLE 2

Summary of Historical Static Water Level Data for Black Creek Formation
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

	Monitoring Well			
	GW-1	**GW-4**	**GW-6**	**GW-12**
TOC Elevation (ft AMSL)	65.87	62.53	58.95	66.13
Date	**Static Water Elevation (ft AMSL)**			
01/01/95	48.13	47.31	47.78	51.62
07/01/95	51.12	49.35	49.95	49.51
01/01/96	51.98	49.68	50.10	49.89
10/01/96	53.44	51.38	51.85	51.70
04/01/97	53.46	51.00	51.60	51.38
10/01/97	47.00	46.10	46.44	46.24
04/01/98	52.44	50.03	50.33	50.29
10/01/98	48.24	48.23	48.00	47.70
04/07/99	51.94	49.27	49.64	49.50
10/20/99	52.13	49.56	49.45	49.83
04/26/00	52.15	49.13	49.60	49.37
10/18/00	51.04	48.09	48.49	48.36
04/18/01	52.14	48.40	48.81	48.64
10/24/01	48.58	46.29	46.73	48.20
04/22/02	50.40	47.41	47.85	49.45
10/21/02	48.08	45.93	46.37	45.93
04/01/03	53.40	49.65	50.18	49.75
10/27/03	52.07	48.91	49.32	49.03
04/26/04	52.83	49.05	49.66	49.16
10/26/04	50.57	47.45	48.00	47.54
03/15/05	53.10	48.31	48.96	48.47
07/12/05	50.96	47.51	48.29	47.82
01/19/06	52.27	48.24	48.85	48.40
07/11/06	50.95	47.82	48.30	47.92
01/17/07	52.62	48.11	49.95	49.14
07/09/07	49.96	46.83	47.34	46.80
01/14/08	47.41	45.14	45.64	45.02
07/14/08	48.65	45.92	46.46	45.90
01/19-20/09	48.13	45.31	45.92	45.35
07/20/09	48.79	45.78	46.27	45.78
01/25/10	51.98	47.45	48.15	47.56
07/06/10	50.61	47.22	47.77	47.37
01/04/11	50.35	46.98	47.53	47.16
MEAN	*50.82*	*47.96*	*48.47*	*48.36*
MAXIMUM	*53.46*	*51.38*	*51.85*	*51.70*
MINIMUM	*47.00*	*45.14*	*45.64*	*45.02*

Notes: ft AMSL = feet above mean sea level.
TOC = top of casing

TABLE 3

Summary of Estimated Horizontal Flow Velocities
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Yorktown Formation - January 2011							
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	SSW	1176	52 / 49	0.0026	0.27	3.30E-04	3.23
i_2	SSW	1950	52 / 48	0.0021	0.27	3.30E-04	2.59
i_3	SSE	912	51 / 49	0.0022	0.27	3.30E-04	2.77
i_4	NE	409	53 / 52	0.0024	0.27	3.30E-04	3.10

Notes: Horizontal velocities based on the modified Darcy equation $V_{gw} = Ki/n_e$.
Values for K and n_e were taken from BLE's 2004 report referenced in the text.

TABLE 4

Summary of Well Construction Information

East Carolina Regional Landfill, Permit No. 08-03

Bertie County, North Carolina

Well Identification	Construction Date	Ground Surface Elevation (ft AMSL)	Measuring Point Elevation (ft AMSL)	Well Depth (feet)	Well Diameter (inches)	Screened Interval (ft AMSL)	Screened Geologic Formation
GW-1	1993	63.7	65.87	62	2	11.7 to 1.7	Black Creek Formation
GW-2	1993	64.00	66.36	26	2	48.0 to 38.0	Yorktown Formation
GW-3	1993	63.7	66.23	26	2	47.7 to 37.7	Yorktown Formation
GW-4	1993	60.7	62.53	59	2	11.7 to 1.7	Black Creek Formation
GW-5	1993	60.9	62.6	24	2	46.9 to 36.9	Yorktown Formation
GW-6	1993	57.5	58.95	63	2	4.5 to -5.5	Black Creek Formation
GW-7	1993	57.4	58.79	18	2	49.4 to 39.4	Yorktown Formation
GW-8	1993	58.6	60.04	18	2	50.6 to 40.6	Yorktown Formation
GW-9	1993	50.1	51.94	13	2	47.1 to 37.1	Yorktown Formation
GW-10	1996	50.4	53.22	22	2	38.4 to 28.4	Yorktown Formation
GW-11	1997	68.6	72.42	28	2	55.6 to 40.6	Yorktown Formation
GW-12	1993	63.7	66.13	54	2	19.7 to 9.7	Black Creek Formation
GW-13	2001	72.2	74.76	41.3	2	45.9 to 30.9	Yorktown Formation
GW-15	2005	75.23	78.23	42.62	2	39.2 to 24.2	Yorktown Formation
GW-16R	2007	63.02	66.12	24.2	2	24.2 to 9.2	Yorktown Formation
GW-17	2008	82.92	85.68	41.53	2	41.3 to 31.3	Yorktown Formation
GW-18	2009	59.20	62.07	29.41	2	44.8 to 29.8	Yorktown Formation
GW-21	2006	59.50	62.00	28.00	2	46.5 to 31.5	Yorktown Formation

Note: ft AMSL = feet above mean sea level

TABLE 5

Summary of Groundwater Monitoring Results

Detected Constituents

East Carolina Regional Landfill, Permit No. 08-03

Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Yorktown Formation																				Blanks	
				Upgradient		Downgradient																			
				GW-2		GW-7		GW-8		GW-9		GW-10		GW-11		GW-13		GW-15		GW-16R		GW-17			
Arsenic	ug/L	07/12/05	10	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
NC 2L = 10 ug/L	ug/L	01/19/06	10	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	06/28/06	10	--		--		--		--		--		--		--		--		--		--		ND	
	ug/L	07/11/06	10	ND		ND		ND		ND		ND		ND		ND		ND		--		--		ND	
	ug/L	10/31/06	10	--		--		--		--		--		--		--		ND		--		--		ND	
	ug/L	01/17/07	10	2.1	B	ND		2.1	B	ND		ND		2.1	B	ND		ND		--		--		3.4	J
	ug/L	07/09/07	10	ND		ND		2.1	J	ND		ND		ND		ND		ND		--		--		ND	
	ug/L	01/14/08	10	ND		ND		2.1	J	2.7	J	ND		2.3	J	ND		ND		ND		--		ND	
	ug/L	04/30/08	10	--		--		--		--		--		--		--		--		--		ND		2.2	J
	ug/L	07/14/08	10	ND		ND		ND		ND		ND		ND		ND		2.9	J	ND		3.5	J	ND	
	ug/L	10/03/08	10	--		--		--		--		--		--		--		--		--		ND		ND	
	ug/L	01/19/09	10	3.8	B	ND		2.8	B	5.2	B	3.7	B	3.9	B	4.4	B	4.5	B	4.1	B	ND		3.6	J
	ug/L	07/20/09	10	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	ug/L	01/25/10	10	ND		4.61	J	3.57	J	5.19	J	ND		ND		4.10	J	4.24	J	ND		ND		ND	
	ug/L	07/06/10	10	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	ug/L	01/04/11	10	3.06	J	5.85	J	ND		6.00	J	ND		ND		ND		8.04	J	ND		ND		ND	
Barium	ug/L	10/28/98	500	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
NC 2L = 700 ug/L	ug/L	04/07/99	500	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
	ug/L	12/08/99	500	ND		ND		ND		ND		ND		ND		--		--		--		--		ND	
	ug/L	04/27/00	500	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
	ug/L	10/18/00	500	ND		ND		ND		ND		ND		Dry		ND		--		--		--		ND	
	ug/L	11/28/00	500	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	01/03/01	500	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	02/08/01	500	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	04/19/01	500	ND		ND		ND		--		ND		Dry		ND		--		--		--		ND	
	ug/L	12/24/01	500	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/23/02	500	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	10/23/02	500	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/01/03	500	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	09/02/03	500	--		--		--		--		--		--		--		--		--		--		--	
	ug/L	10/28/03	500	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/27/04	500	500		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	10/26/04	500	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	03/15/05	500	500		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	07/12/05	500	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	01/12/06	30	--		--		--		--		--		--		--		ND		--		--		ND	
	ug/L	01/19/06	500	523		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	06/28/06	500	--		--		--		--		--		--		--		--		--		--		ND	
	ug/L	07/11/06	500	517		ND		ND		ND		ND		ND		ND		ND		--		--		ND	
	ug/L	10/31/06	500	--		--		--		--		--		--		--		ND		--		--		ND	
	ug/L	01/17/07	100	516		122		137		82.1		95.7		17.8		273		98.3		--		--		0.30	J
	ug/L	07/09/07	100	448		162		121		93.5	J	89.3	J	20.8	J	259		114		--		--		0.80	J
	ug/L	01/14/08	100	405		129		127		59.0	J	94.6	J	18.5	J	291		117		38.0	J	--		0.30	J
	ug/L	04/30/08	100	--		--		--		--		--		--		--		--		--		106		0.50	J
	ug/L	07/14/08	100	500		130		123		76.0	J	103		18.7	J	317		94.7	J	32.2	J	127		ND	
	ug/L	10/03/08	100	--		--		--		--		--		--		--		--		--		116		ND	
	ug/L	01/19/09	100	534		135		148		62.9	J	88.4	J	20.1	J	357		116		41.2	J	138		ND	
	ug/L	07/20/09	100	534		96.4	J	145		89.2	J	88.6	J	20.0	J	332		112		39.3	J	168		ND	
	ug/L	01/25/10	100	545		116		0.681	B	67.6	J	91.3	J	22.0	J	312		117		32.9	J	143		0.434	J
	ug/L	07/06/10	100	419		49.1	J	103		89.2	J	73.5	J	18.1	J	245		92.7	J	32.5	J	117		ND	
	ug/L	01/04/11	100	409		100		120		207		92.8	J	21.8	J	261		105		37.8	J	156		1.11	J
Beryllium	ug/L	10/28/98	2	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
GPS = 4 ug/L	ug/L	04/07/99	2	ND		2		ND		ND		ND		Dry		--		--		--		--		ND	
	ug/L	12/08/99	2	ND		ND		ND		ND		ND		ND		--		--		--		--		ND	
	ug/L	04/27/00	2	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
	ug/L	10/18/00	2	ND		ND		ND		ND		ND		Dry		ND		--		--		--		ND	
	ug/L	11/28/00	2	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	01/03/01	2	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	02/08/01	2	--		--		--		--		--		--		4		--		--		--		--	
	ug/L	04/19/01	2	ND		ND		ND		--		ND		Dry		ND		--		--		--		ND	
	ug/L	12/24/01	2	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/23/02	2	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	10/23/02	2	ND		3		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/01/03	2	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	09/02/03	2	--		--		--		--		--		--		--		--		--		--		--	
	ug/L	10/28/03	2	ND		3		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/27/04	2	ND		3		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	10/26/04	2	ND		3		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	03/15/05	2	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	07/12/05	2	ND		2.2		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	01/12/06	2	--		--		--		--		--		--		--		ND		--		--		ND	
	ug/L	01/19/06	2	ND		2		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	06/28/06	2	--		--		--		--		--		--		--		--		--		--		ND	
	ug/L	07/11/06	2	ND		ND		ND		ND		ND		ND		ND		ND		--		--		ND	
	ug/L	10/31/06	2	--		--		--		--		--		--		--		ND		--		--		ND	
	ug/L	01/17/07	1	1.00		1.90		ND		ND		ND		ND		ND		ND		--		--		ND	
	ug/L	07/09/07	1	0.70	J	1.90		ND		ND		ND		ND		ND		ND		--		--		ND	
	ug/L	01/14/08	1	ND		1.50		ND		ND		ND		ND		ND		ND		ND		--		ND	
	ug/L	04/30/08	1	--		--		--		--		--		--		--		--		--		ND		ND	
	ug/L	07/14/08	1	0.80	J	1.60		ND		ND		ND		ND		0.10	J	ND		ND		0.10	J	ND	
	ug/L	10/03/08	1	--		--		--		--		--		--		--		--		--		0.20	J	ND	
	ug/L	01/19/09	1	0.90	J	1.30		ND		ND		ND		ND		0.30	J	ND		ND		0.10	J	ND	
	ug/L	07/20/09	1	1.26		2.11		0.802	J	0.485	J	0.252	B	0.390	J	0.600	J	0.311	B	0.121	B	0.593	J	0.0779	J
	ug/L	01/25/10	1	1.34		2.11		1.52		0.460	J	0.256	J	0.453	J	0.614	J	0.352	J	0.150	J	0.349	J	ND	
	ug/L	07/06/10	1	0.873	J	1.98		0.465	J	0.448	J	0.164	J	0.249	J	0.373	J	0.232	J	ND		0.212	J	ND	
	ug/L	01/04/11	1	1.08		2.38		0.799	J	0.574	J	0.296	J	0.427	J	0.506	J	0.284	J	0.152	J	0.420	J	ND	
Cadmium	ug/L	10/28/98	1	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
NC 2L = 2 ug/L	ug/L	04/07/99	1	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
	ug/L	12/08/99	1	ND		ND		ND		ND		ND		ND		--		--		--		--		ND	
	ug/L	04/27/00	1	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
	ug/L	10/18/00	1	ND		ND		ND		ND		ND		Dry		ND		--		--		--		ND	
	ug/L	11/28/00	1	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	01/03/01	1	--		--		--		--		--		--		5		--		--		--		--	
	ug/L	02/08/01	1	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	04/19/01	1	ND		ND		ND		--		ND		Dry		ND		--		--		--		ND	
	ug/L	12/24/01	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/23/02	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	10/23/02	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/01/03	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	09/02/03	1	--		--		--		--		--		--		--		--		--		--		--	
	ug/L	10/28/03	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/27/04	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	10/26/04	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	03/15/05	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	07/12/05	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	01/12/06	1	--		--		--		--		--		--		--		ND		--		--		ND	
	ug/L	01/19/06	1	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	06/28/06	1	--		--		--		--		--		--		--		--		--		--		ND	
	ug/L	07/11/06	1	ND		ND		ND		ND		ND		ND		ND		ND		--		--		ND	
	ug/L	10/31/06	1	--		--		--		--		--		--		--		ND		--		--		ND	
	ug/L	01/17/07	1	ND		ND		ND		ND		ND		ND		ND		ND		--		--		ND	
	ug/L	07/09/07	1	ND		ND		ND		ND		ND		ND		ND		ND		--		--		ND	
	ug/L	01/14/08	1	ND		ND		ND		ND		ND		ND		ND		ND		ND		--		ND	
	ug/L	04/30/08	1	--		--		--		--		--		--		--		--		--		ND		ND	
	ug/L	07/14/08	1	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	ug/L	10/03/08	1	--		--		--		--		--		--		--		--		--		ND		ND	
	ug/L	01/19/09	1	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	ug/L	07/20/09	1	0.144	B	0.261	B	0.106	B	ND		0.159	B	0.0999	B	ND		ND		0.179	B	0.0940	B	0.112	J
	ug/L	01/25/10	1	0.388	B	0.351	B	1.59		0.876	B	0.357	B	0.257	B	0.332	B	0.391	B	0.359	B	0.429	B	0.277	J
	ug/L	07/06/10	1	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
	ug/L	01/04/11	1	0.434	J	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Chromium	ug/L	10/28/98	10	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
NC 2L = 10 ug/L	ug/L	04/07/99	10	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
	ug/L	12/08/99	10	ND		ND		ND		ND		ND		ND		--		--		--		--		ND	
	ug/L	04/27/00	10	ND		ND		ND		ND		ND		Dry		--		--		--		--		ND	
	ug/L	10/18/00	10	ND		ND		ND		ND		ND		Dry		ND		--		--		--		ND	
	ug/L	11/28/00	10	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	01/03/01	10	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	02/08/01	10	--		--		--		--		--		--		ND		--		--		--		--	
	ug/L	04/19/01	10	ND		ND		ND		--		ND		Dry		ND		--		--		--		ND	
	ug/L	12/24/01	10	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/23/02	10	ND		ND		10		ND		ND		ND		ND		--		--		--		ND	
	ug/L	10/23/02	10	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/01/03	10	ND		ND		10		ND		ND		ND		ND		--		--		--		ND	
	ug/L	09/02/03	10	--		--		--		--		--		--		--		--		--		--		--	
	ug/L	10/28/03	10	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	04/27/04	10	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	10/26/04	10	ND		ND		10		ND		ND		ND		ND		--		--		--		ND	
	ug/L	03/15/05	10	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	07/12/05	10	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	01/12/06	10	--		--		--		--		--		--		--		ND		--		--		ND	
	ug/L	01/19/06	10	ND		ND		ND		ND		ND		ND		ND		--		--		--		ND	
	ug/L	06/28/06	10	--		--		--		--		--		--		--		--		--		--		ND	
	ug/L	07/11/06	10	ND		ND		ND		ND		ND		ND		ND		ND		--		--		ND	
	ug/L	10/31/06	10	--		--		--		--		--		--		--		ND		--		--		ND	
	ug/L	01/17/07	10	ND		ND		ND		ND		ND		4.3	J	ND		ND		--		--		ND	
	ug/L	07/09/07	10	ND		ND		ND		ND		ND		2.5	J	ND		ND		--		--		ND	
	ug/L	01/14/08	10	2.6	J	ND		ND		ND		ND		5.9	J	3.8	J	ND		ND		--		ND	
	ug/L	04/30/08	10	--		--		--		--		--		--		--		--		--		8.8	J	ND	
	ug/L	07/14/08	10	ND		ND		ND		ND		ND		2.8	J	ND		ND		1.4	J	2.0	J	ND	
	ug/L	10/03/08	10	--		--		--		--		--		--		--		--		--		1.6	J	ND	
	ug/L	01/19/09	10	3.7	J	ND		ND		1.2	J	ND		4.6	J	ND		ND		3.0	J	1.6	J	ND	
	ug/L	07/20/09	10	0.941	J	0.782	J	0.801	J	ND		ND		4.17	J	ND		1.56	J	0.998	J	7.39	J	ND	
	ug/L	01/25/10	10	ND		ND		ND		ND		ND		5.97	J	ND		ND		ND		ND		ND	
	ug/L	07/06/10	10	10.4		2.17	J	1.15	J	ND		ND		3.08	J	ND		ND		ND		1.58	J	ND	
	ug/L	01/04/11	10	1.46	J	4.26	J	1.42	J	4.41	J	ND		4.82	J	ND		1.23	J	ND		5.21	J	ND	

TABLE 5

Summary of Groundwater Monitoring Results

Detected Constituents

East Carolina Regional Landfill, Permit No. 08-03

Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Yorktown Formation										Blanks
				Upgradient	Downgradient									
				GW-2	GW-7	GW-8	GW-9	GW-10	GW-11	GW-13	GW-15	GW-16R	GW-17	
Cobalt	ug/L	10/28/98	10	ND	30	ND	ND	ND	Dry	--	--	--	--	ND
GPS = 1 ug/L	ug/L	04/07/99	10	ND	20	ND	ND	ND	Dry	--	--	--	--	ND
	ug/L	12/08/99	10	10	20	ND	ND	ND	ND	--	--	--	--	ND
	ug/L	04/27/00	10	ND	30	ND	ND	ND	Dry	--	--	--	--	ND
	ug/L	10/18/00	10	ND	30	ND	ND	ND	Dry	30	--	--	--	ND
	ug/L	11/28/00	10	--	--	--	--	--	--	10	--	--	--	--
	ug/L	01/03/01	10	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	02/08/01	10	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	04/19/01	10	ND	30	ND	--	ND	Dry	ND	--	--	--	ND
	ug/L	12/24/01	10	ND	30	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/23/02	10	ND	30	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	10/23/02	10	ND	50	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/01/03	10	10	40	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	09/02/03	10	--	--	--	--	--	--	--	--	--	--	--
	ug/L	10/28/03	10	ND	50	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/27/04	10	ND	30	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	10/26/04	10	ND	40	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	03/15/05	10	10	36	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	07/12/05	10	ND	40	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	01/12/06	10	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/19/06	10	11.9	30	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	10	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	10	12.5	31.6	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	10	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	10	10.3	34.9	3.9 J	ND	ND	ND	3.0 J	2.9 J	--	--	ND
	ug/L	07/09/07	10	10.0	37.5	2.9 J	ND	ND	ND	ND	2.6 J	--	--	ND
	ug/L	01/14/08	10	11.3	35.1	4.2 J	3.2 J	3.8 J	2.0 J	3.3 J	3.4 J	2.6 J	--	ND
	ug/L	04/30/08	10	--	--	--	--	--	--	--	--	--	20.5	ND
	ug/L	07/14/08	10	10.1	37.3	2.6 J	ND	ND	ND	2.7 J	2.1 J	1.2 J	4.5 J	ND
	ug/L	10/03/08	10	--	--	--	--	--	--	--	--	--	6.3 J	ND
	ug/L	01/19/09	10	12.0	23.7	3.7 J	3.0 J	4.6 J	ND	1.8 J	1.7 J	1.8 J	5.2 J	ND
	ug/L	07/20/09	10	11.4	35.4	3.93 J	1.47 J	2.91 J	0.586 J	2.00 J	2.67 J	0.772 J	3.93 J	ND
	ug/L	01/25/10	10	12.6	21.5	1.97 B	2.46 J	0.858 B	1.58 B	2.71 J	3.62 J	1.57 B	3.02 B	0.485 J
	ug/L	07/06/10	10	8.59 J	26.6	2.62 J	1.15 J	ND	ND	1.66 J	2.07 J	1.89 J	2.14 J	ND
	ug/L	01/04/11	10	9.65 J	29.8	3.63 J	3.19 J	ND	1.19 J	2.24 J	2.60 J	1.77 J	5.07 J	ND
Copper	ug/L	07/12/05	200	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
NC 2L = 1000 ug/L	ug/L	01/19/06	200	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	200	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	200	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	200	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	10	ND	0.80 J	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	07/09/07	10	ND	5.40 J	ND	ND	1.00 J	ND	ND	ND	--	--	ND
	ug/L	01/14/08	10	4.70 J	1.60 B	1.30 B	1.30 B	ND	1.00 B	0.80 B	0.80 B	1.10 B	--	0.70 J
	ug/L	04/30/08	10	--	--	--	--	--	--	--	--	--	2.60 B	1.40 J
	ug/L	07/14/08	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	10/03/08	10	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	01/19/09	10	ND	ND	1.70 J	ND	ND	ND	ND	ND	2.00 J	ND	ND
	ug/L	07/20/09	10	ND	ND	0.868 B	ND	ND	ND	ND	ND	ND	2.19 B	1.25 J
	ug/L	01/25/10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	07/06/10	10	ND	ND	ND	2.56 J	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/04/11	10	2.30 J	2.16 J	ND	3.09 J	1.80 J	4.68 J	ND	ND	ND	3.49 J	ND
Lead	ug/L	10/28/98	10	ND	ND	ND	ND	ND	Dry	--	--	--	--	ND
NC 2L = 15 ug/L	ug/L	04/07/99	10	ND	ND	ND	ND	ND	Dry	--	--	--	--	ND
	ug/L	12/08/99	10	ND	ND	ND	ND	ND	ND	--	--	--	--	ND
	ug/L	04/27/00	10	ND	ND	ND	ND	ND	Dry	--	--	--	--	ND
	ug/L	10/18/00	10	ND	ND	ND	ND	ND	Dry	ND	--	--	--	ND
	ug/L	11/28/00	10	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	01/03/01	10	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	02/08/01	10	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	04/19/01	10	ND	ND	ND	--	ND	Dry	ND	--	--	--	ND
	ug/L	12/24/01	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/23/02	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	10/23/02	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/01/03	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	09/02/03	10	--	--	--	--	--	--	--	--	--	--	--
	ug/L	10/28/03	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/27/04	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	10/26/04	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	03/15/05	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	07/12/05	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	01/12/06	10	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/19/06	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	10	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	10	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	10	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	10	ND	2.3 J	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	07/09/07	10	2.3 J	2.9 J	2.9 J	ND	ND	2.0 J	ND	2.2 J	--	--	ND
	ug/L	01/14/08	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	04/30/08	10	--	--	--	--	--	--	--	--	--	4.3 J	ND
	ug/L	07/14/08	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1 J	ND
	ug/L	10/03/08	10	--	--	--	--	--	--	--	--	--	2.2 J	ND
	ug/L	01/19/09	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	07/20/09	10	2.82 B	2.21 B	ND	1.71 B	2.73 B	ND	ND	ND	2.68 B	6.81 B	2.16 J
	ug/L	01/25/10	10	ND	1.70 J	7.56 J	1.55 J	ND	ND	ND	ND	ND	2.06 J	ND
	ug/L	07/06/10	10	ND	2.40 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/04/11	10	ND	3.03 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	ug/L	10/28/98	50	ND	ND	ND	ND	ND	Dry	--	--	--	--	ND
NC 2L = 100 ug/L	ug/L	04/07/99	50	ND	ND	ND	ND	ND	Dry	--	--	--	--	ND
	ug/L	12/08/99	50	ND	ND	ND	ND	ND	ND	--	--	--	--	ND
	ug/L	04/27/00	50	ND	ND	ND	ND	ND	Dry	--	--	--	--	ND
	ug/L	10/18/00	50	ND	ND	ND	ND	ND	Dry	ND	--	--	--	ND
	ug/L	11/28/00	50	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	01/03/01	50	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	02/08/01	50	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	04/19/01	50	ND	ND	ND	--	ND	Dry	ND	--	--	--	ND
	ug/L	12/24/01	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/23/02	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	10/23/02	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/01/03	50	ND	ND	20	ND	ND	ND	ND	--	--	--	ND
	ug/L	09/02/03	50	--	--	--	--	--	--	--	--	--	--	--
	ug/L	10/28/03	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/27/04	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	10/26/04	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	03/15/05	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	07/12/05	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	01/12/06	50	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/19/06	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	50	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	50	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	50	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	50	7.4 J	10.4 J	3.7 J	4.1 J	ND	ND	3.0 J	3.6 J	--	--	ND
	ug/L	07/09/07	50	6.0 J	9.1 J	3.8 J	2.0 J	ND	ND	2.3 J	2.5 J	--	--	ND
	ug/L	01/14/08	50	11.0 J	8.0 J	5.8 J	3.7 J	2.0 J	3.2 J	4.7 J	3.8 J	ND	--	ND
	ug/L	04/30/08	50	--	--	--	--	--	--	--	--	--	4.1 J	ND
	ug/L	07/14/08	50	3.9 J	7.1 J	2.4 J	2.0 J	ND	ND	2.5 J	ND	ND	ND	ND
	ug/L	10/03/08	50	--	--	--	--	--	--	--	--	--	2.4 J	ND
	ug/L	01/19/09	50	7.8 B	7.1 B	3.4 B	4.1 B	3.1 B	2.4 B	4.4 B	5.2 B	ND	ND	2.2 J
	ug/L	07/20/09	50	6.08 J	9.00 J	3.27 J	3.03 J	1.07 J	0.716 J	2.48 J	2.59 J	ND	2.56 J	ND
	ug/L	01/25/10	50	4.55 J	6.31 J	ND	ND	ND	ND	ND	1.75 J	ND	ND	ND
	ug/L	07/06/10	50	5.31 J	10.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/04/11	50	6.42 J	9.32 J	2.17 J	4.60 J	ND	ND	2.50 J	2.92 J	ND	2.54 J	ND
Selenium	ug/L	07/12/05	20	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
NC 2L = 20 ug/L	ug/L	01/19/06	20	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	20	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	20	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	20	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	10	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	07/09/07	10	ND	ND	ND	ND	2.0 J	ND	ND	ND	--	--	ND
	ug/L	01/14/08	10	2.3 J	ND	2.0 J	ND	ND	ND	ND	2.3 J	ND	--	ND
	ug/L	04/30/08	10	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	07/14/08	10	ND	3.3 J	ND	ND	ND	ND	2.9 J	ND	2.7 J	ND	ND
	ug/L	10/03/08	10	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	01/19/09	10	5.6 J	ND	4.4 J	2.9 J	ND	ND	ND	ND	ND	ND	ND
	ug/L	07/20/09	10	ND	4.33 B	3.90 B	ND	5.08 B	ND	ND	ND	ND	4.21 B	3.58 J
	ug/L	01/25/10	10	ND	1.62 J	1.08 J	1.86 J	1.32 J	ND	ND	0.918 J	0.878 J	0.855 J	ND
	ug/L	07/06/10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/04/11	10	ND	ND	ND	1.89 J	ND	ND	ND	ND	ND	ND	ND
Silver	ug/L	07/12/05	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
NC 2L = 20 ug/L	ug/L	01/19/06	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	10	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	10	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	10	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	10	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	07/09/07	10	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	01/14/08	10	2.1 J	ND	ND	3.1 J	ND	ND	ND	2.1 J	ND	--	ND
	ug/L	04/30/08	10	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	07/14/08	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	10/03/08	10	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	01/19/09	10	ND	ND	ND	ND	ND	ND	ND	ND	3.6 J	ND	ND
	ug/L	07/20/09	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.05 J	ND
	ug/L	01/25/10	10	1.59 B	1.20 B	6.82 J	1.68 B	1.76 B	1.55 B	1.79 B	1.74 B	2.07 B	2.55 B	1.25 J
	ug/L	07/06/10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/04/11	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 5

Summary of Groundwater Monitoring Results

Detected Constituents

East Carolina Regional Landfill, Permit No. 08-03

Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Yorktown Formation										Blanks
				Upgradient	Downgradient									
				GW-2	GW-7	GW-8	GW-9	GW-10	GW-11	GW-13	GW-15	GW-16R	GW-17	
Thallium	ug/L	07/12/05	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
GPS = 0.2 ug/L	ug/L	01/19/06	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	10	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	10	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	10	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	5.5	0.070 J	0.049 J	ND	ND	ND	ND	0.045 J	ND	--	--	ND
	ug/L	07/09/07	5.5	0.065 J	0.050 J	0.058 J	0.054 J	ND	ND	0.060 J	ND	--	--	ND
	ug/L	01/14/08	5.5	0.077 J	0.069 J	ND	ND	ND	ND	0.063 J	ND	ND	--	ND
	ug/L	04/30/08	5.5	--	--	--	--	--	--	--	--	--	0.136 J	ND
	ug/L	07/14/08	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	10/03/08	5.5	--	--	--	--	--	--	--	--	--	0.158 J	ND
	ug/L	01/19/09	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	07/20/09	5.5	0.0400 J	0.0520 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/25/10	5.5	0.117 J	0.146 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	07/06/10	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/04/11	6	ND	0.122 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	ug/L	07/12/05	40	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
GPS = 0.3 ug/L	ug/L	01/19/06	40	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	40	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	40	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	40	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	25	ND	ND	ND	ND	ND	ND	1.0 J	1.1 J	--	--	ND
	ug/L	07/09/07	25	ND	ND	ND	1.5 B	ND	ND	ND	ND	--	--	1.0 J
	ug/L	01/14/08	25	1.6 B	ND	1.1 B	2.7 B	ND	2.0 B	ND	1.0 B	ND	--	1.0 J
	ug/L	04/30/08	25	--	--	--	--	--	--	--	--	--	13.7 J	1.3 J
	ug/L	07/14/08	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0 J	ND
	ug/L	10/03/08	25	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	01/19/09	25	ND	ND	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND
	ug/L	07/20/09	25	1.55 B	0.778 B	ND	1.63 B	ND	ND	0.746 B	0.856 B	0.886 B	10.4 J	0.803 J
	ug/L	01/25/10	25	ND	ND	3.64 J	ND	ND	1.83 J	ND	ND	ND	0.508 J	ND
	ug/L	07/06/10	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/04/11	25	ND	6.03 J	ND	10.5 J	ND	ND	ND	ND	ND	8.25 J	ND
Zinc	ug/L	10/28/98	50	ND	ND	ND	ND	ND	Dry	--	--	--	--	ND
NC 2L = 1000 ug/L	ug/L	04/07/99	50	50	40	30	ND	ND	Dry	--	--	--	--	30
	ug/L	12/08/99	50	ND	40	80	ND	60	30	--	--	--	--	ND
	ug/L	04/27/00	50	90	70	ND	150	ND	Dry	--	--	--	--	ND
	ug/L	10/18/00	50	ND	ND	ND	ND	ND	Dry	ND	--	--	--	ND
	ug/L	11/28/00	50	--	--	--	--	--	--	60	--	--	--	--
	ug/L	01/03/01	50	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	02/08/01	50	--	--	--	--	--	--	ND	--	--	--	--
	ug/L	04/19/01	50	ND	ND	ND	--	ND	Dry	ND	--	--	--	ND
	ug/L	12/24/01	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/23/02	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	10/23/02	50	ND	ND	ND	90	ND	ND	ND	--	--	--	ND
	ug/L	04/01/03	50	110	120	50	90	50	70	40	--	--	--	30
	ug/L	09/02/03	50	--	--	--	--	--	--	--	--	--	--	--
	ug/L	10/28/03	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	04/27/04	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	10/26/04	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	03/15/05	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	07/12/05	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	01/12/06	50	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/19/06	50	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	50	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	50	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	50	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	10	18.8 B	23.3 B	12.2 B	12.7 B	5.9 B	10.4 B	15.6 B	7.7 B	--	--	5.5 J
	ug/L	07/09/07	10	8.3 J	21.5	3.9 J	4.8 J	4.4 J	ND	3.9 J	5.2 J	--	--	ND
	ug/L	01/14/08	10	13.3	5.7 B	4.1 B	6.0 B	2.9 B	5.2 B	4.8 B	3.7 B	13.6	--	1.3 J
	ug/L	04/30/08	10	--	--	--	--	--	--	--	--	--	18.8	ND
	ug/L	07/14/08	10	10.2 B	7.4 B	4.9 B	6.1 B	ND	ND	4.4 B	5.9 B	ND	6.7 B	5.0 J
	ug/L	10/03/08	10	--	--	--	--	--	--	--	--	--	8.7 J	ND
	ug/L	01/19/09	10	10.9	4.1 J	4.1 J	10.6	ND	ND	4.3 J	ND	ND	ND	ND
	ug/L	07/20/09	10	10.3	28.0	9.27 J	12.2	ND	ND	7.25 J	5.40 J	8.07 J	17.6	ND
	ug/L	01/25/10	10	13.0	6.56 J	ND	15.3	6.86 J	2.89 J	6.92 J	4.45 J	6.07 J	4.26 J	ND
	ug/L	07/06/10	10	12.0	5.01 J	ND	9.64 J	ND	4.54 J	5.00 J	ND	6.07 J	ND	ND
	ug/L	01/04/11	10	9.70 J	7.51 J	ND	14.0	ND	ND	ND	ND	ND	8.51 J	ND
Chloroform	ug/L	07/12/05	5	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
NC 2L = 70 ug/L	ug/L	01/19/06	5	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	5	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	5	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	5	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	5	ND	ND	ND	ND	ND	0.63 J	ND	ND	--	--	ND
	ug/L	07/09/07	5	ND	ND	ND	ND	ND	0.37 J	ND	ND	--	--	ND
	ug/L	01/14/08	5	ND	ND	ND	ND	ND	0.62 J	ND	ND	0.54 J	--	ND
	ug/L	04/30/08	5	--	--	--	--	--	--	--	--	--	1.0 J	ND
	ug/L	07/14/08	5	ND	ND	ND	ND	ND	0.66 J	ND	ND	1.1 J	2.0 J	ND
	ug/L	10/03/08	5	--	--	--	--	--	--	--	--	--	2.7 J	ND
	ug/L	01/19/09	5	ND	ND	ND	ND	ND	0.58 J	ND	ND	0.52 J	2.6 J	ND
	ug/L	07/20/09	5	ND	ND	ND	ND	ND	0.52 J	ND	ND	0.65 J	1.5 J	ND
	ug/L	01/25/10	5	ND	ND	ND	ND	ND	0.68 J	ND	ND	1.1 J	3.2 J	ND
	ug/L	07/06/10	5	ND	ND	ND	ND	ND	0.55 J	ND	ND	ND	1.3 J	ND
	ug/L	01/04/11	5	ND	ND	ND	ND	ND	0.44 J	ND	ND	ND	2.3 J	ND
Chloromethane	ug/L	07/12/05	10	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
NC 2L = 3 ug/L	ug/L	01/19/06	5	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	10	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	10	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	10	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	5.5	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	07/09/07	1	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	01/14/08	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	04/30/08	1	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	07/14/08	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	10/03/08	1	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	01/19/09	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	07/20/09	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/25/10	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	07/06/10	1	ND	ND	ND	ND	ND	ND	ND	ND	0.43 J	ND	ND
	ug/L	01/04/11	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/L	07/12/05	5	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
NC 2L = 3 ug/L	ug/L	01/19/06	5	ND	ND	ND	ND	ND	ND	ND	--	--	--	ND
	ug/L	06/28/06	5	--	--	--	--	--	--	--	--	--	--	ND
	ug/L	07/11/06	5	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	10/31/06	5	--	--	--	--	--	--	--	ND	--	--	ND
	ug/L	01/17/07	3	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND
	ug/L	07/09/07	1	0.47 J	ND	0.35 J	ND	ND	ND	ND	ND	--	--	ND
	ug/L	01/14/08	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
	ug/L	04/30/08	1	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	07/14/08	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	10/03/08	1	--	--	--	--	--	--	--	--	--	ND	ND
	ug/L	01/19/09	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	07/20/09	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/25/10	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	07/06/10	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	ug/L	01/04/11	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (Field)	S.U.	10/28/98	--	5.38	4.61	5.58	5.76	6.63	Dry	--	--	--	--	--
	S.U.	04/07/99	--	5.14	4.6	5.38	5.66	6.32	Dry	--	--	--	--	--
	S.U.	12/08/99	--	5.11	6.31	5.2	5.30	6.02	7.5	--	--	--	--	--
	S.U.	04/27/00	--	5.06	4.5	5.28	5.64	5.84	Dry	--	--	--	--	--
	S.U.	10/18/00	--	4.93	4.19	5.04	5.41	6.04	Dry	6.00	--	--	--	--
	S.U.	11/28/00	--	--	--	--	--	--	--	4.24	--	--	--	--
	S.U.	01/03/01	--	--	--	--	--	--	--	5.83	--	--	--	--
	S.U.	02/08/01	--	--	--	--	--	--	--	5.94	--	--	--	--
	S.U.	04/19/01	--	4.98	4.26	5.07	--	6.27	Dry	5.76	--	--	--	--
	S.U.	12/24/01	--	5.13	4.27	5.03	5.57	6.41	5.46	5.19	--	--	--	--
	S.U.	04/23/02	--	4.97	4.24	4.91	5.40	6.50	5.05	4.89	--	--	--	--
	S.U.	10/23/02	--	4.62	4.02	4.67	5.03	6.05	4.9	5.00	--	--	--	--
	S.U.	04/01/03	--	4.92	4.26	4.99	5.46	6.25	5.41	5.28	--	--	--	--
	S.U.	09/02/03	--	--	--	--	--	--	--	--	--	--	--	--
	S.U.	10/28/03	--	4.74	4.13	5.01	5.31	6.29	5.13	4.97	--	--	--	--
	S.U.	04/27/04	--	4.70	4.19	4.70	5.08	6.03	5.16	4.59	--	--	--	--
	S.U.	10/26/04	--	4.45	3.97	4.49	5.05	5.73	4.74	4.55	--	--	--	--
	S.U.	03/15/05	--	4.70	4.21	5.04	5.32	6.03	5.26	4.78	--	--	--	--
	S.U.	07/12/05	--	4.15	4.17	4.88	4.73	5.60	4.85	4.33	--	--	--	--
	S.U.	01/19/06	--	2.69	2.38	5.05	4.68	6.58	3.56	5.76	--	--	--	--
	S.U.	06/28/06	--	--	--	--	--	--	--	--	--	--	--	--
	S.U.	07/11/06	--	4.64	4.23	4.94	5.17	5.67	5.17	4.81	5.13	--	--	--
	S.U.	10/31/06	--	--	--	--	--	--	--	--	4.67	--	--	--
	S.U.	01/17/07	--	4.01	4.10	4.72	5.14	6.04	5.18	4.67	4.89	--	--	--
	S.U.	07/09/07	--	4.31	4.18	5.00	5.20	6.08	4.98	4.65	4.84	--	--	--
	S.U.	01/14/08	--	4.34	4.25	4.88	5.42	5.77	5.27	4.99	5.18	5.08	--	--
	S.U.	04/30/08	--	--	--	--	--	--	--	--	--	--	4.51	--
	S.U.	07/14/08	--	4.47	4.13	4.82	5.22	5.70	5.10	4.72	4.99	5.02	4.68	--
	S.U.	10/03/08	--	--	--	--	--	--	--	--	--	--	4.33	--
	S.U.	01/19/09	--	4.63	4.06	4.85	4.72	5.08	4.75	4.75	4.95	4.50	4.23	--
	S.U.	07/20/09	--	4.79	4.29	4.80	5.34	5.55	4.16	3.83	4.46	4.74	4.39	--
	S.U.	01/25/10	--	4.30	4.01	4.63	4.94	5.51	5.02	4.62	4.89	4.51	4.36	--
	S.U.	07/06/10	--	4.17	4.08	4.70	5.09	5.49	4.66	4.73	4.17	4.48	4.41	--
	S.U.	01/04/11	--	4.55	4.07	4.71	5.73	5.73	5.00	4.72	4.86	4.46	4.48	--

TABLE 5

Summary of Groundwater Monitoring Results

Detected Constituents

East Carolina Regional Landfill, Permit No. 08-03

Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Yorktown Formation										Blanks
				Upgradient	Downgradient									
				GW-2	GW-7	GW-8	GW-9	GW-10	GW-11	GW-13	GW-15	GW-16R	GW-17	
Specific Conductance (Field)	uS/cm	10/28/98	--	83	257	98	78	115	Dry	--	--	--	--	--
	uS/cm	04/07/99	--	69.41	173	75.21	52.07	67.89	Dry	--	--	--	--	--
	uS/cm	12/08/99	--	61	306	52	89	48	41	--	--	--	--	--
	uS/cm	04/27/00	--	78	210	87	57	57	Dry	--	--	--	--	--
	uS/cm	10/18/00	--	110	317	130	76	108	Dry	--	--	--	--	--
	uS/cm	11/28/00	--	--	--	--	--	--	--	191	--	--	--	--
	uS/cm	01/03/01	--	--	--	--	--	--	--	7.3	--	--	--	--
	uS/cm	02/08/01	--	--	--	--	--	--	--	75	--	--	--	--
	uS/cm	04/19/01	--	106	284	130	--	125	Dry	5.77	--	--	--	--
	uS/cm	12/24/01	--	85	224	105	71	104	46	80	--	--	--	--
	uS/cm	04/23/02	--	112	282	136	84	131	62	156	--	--	--	--
	uS/cm	10/23/02	--	62	161	77	49	75	37	41	--	--	--	--
	uS/cm	04/01/03	--	71	131	86	54	72	43	83	--	--	--	--
	uS/cm	09/02/03	--	--	--	--	--	--	--	--	--	--	--	--
	uS/cm	10/28/03	--	84	221	89	64	85	38	93	--	--	--	--
	uS/cm	04/27/04	--	99	227	108	82	102	53	118	--	--	--	--
	uS/cm	10/26/04	--	110	259	115	95	122	51	97	--	--	--	--
	uS/cm	03/15/05	--	108	223	94	79	97	47	91	--	--	--	--
	uS/cm	07/12/05	--	106	231	98	84	88	49	91	--	--	--	--
	uS/cm	01/19/06	--	103	214	100	66	98	47	89	--	--	--	--
	uS/cm	06/28/06	--	--	--	--	--	--	--	--	--	--	--	--
	uS/cm	07/11/06	--	147	307	146	121	129	70	126	106	--	--	--
	uS/cm	10/31/06	--	--	--	--	--	--	--	--	90	--	--	--
	uS/cm	01/17/07	--	136	291	164	112	132	52	98	92	--	--	--
	uS/cm	07/09/07	--	134	268	133	115	109	54	89	92	--	--	--
	uS/cm	01/14/08	--	212	442	208	128	279	120	252	248	53	--	--
	uS/cm	04/30/08	--	--	--	--	--	--	--	--	--	--	77	--
	uS/cm	07/14/08	--	146	301	155	113	127	69	118	107	39	82	--
	uS/cm	10/03/08	--	--	--	--	--	--	--	--	--	--	79	--
	uS/cm	01/19/09	--	138	264	164	84	108	64	113	100	38	86	--
	uS/cm	07/20/09	--	138	266	161	122	119	67	113	100	33	77	--
	uS/cm	01/25/10	--	139	260	149	90	127	61	108	100	33	76	--
	uS/cm	07/06/10	--	134	233	145	138	123	61	97	134	33	76	--
	uS/cm	01/04/11	--	140	269	148	342	135	62	101	100	32	82	--
Temperature (Field)	°C	10/28/98	--	15.3	19	19.7	18.6	15.9	Dry	--	--	--	--	--
	°C	04/07/99	--	16.7	17.3	17.3	15.6	17.6	Dry	--	--	--	--	--
	°C	12/08/99	--	15.1	17	25	17.1	16.7	17	--	--	--	--	--
	°C	04/27/00	--	15.6	13.1	14.4	13.7	12.9	Dry	--	--	--	--	--
	°C	10/18/00	--	16.7	19.1	19.3	20.4	16.6	Dry	--	--	--	--	--
	°C	11/28/00	--	--	--	--	--	--	--	15.6	--	--	--	--
	°C	01/03/01	--	--	--	--	--	--	--	14.5	--	--	--	--
	°C	02/08/01	--	--	--	--	--	--	--	16.9	--	--	--	--
	°C	04/19/01	--	14.9	31	14.7	--	13.7	Dry	17.1	--	--	--	--
	°C	12/24/01	--	17.9	20.2	20.7	20.8	17.7	20.1	21.6	--	--	--	--
	°C	04/23/02	--	15.9	16	15.7	15.6	14.5	18.4	17.1	--	--	--	--
	°C	10/23/02	--	15.8	19.1	19.4	20.3	17	17.8	15.7	--	--	--	--
	°C	04/01/03	--	16.9	16.4	17	14.4	15.7	18.5	17.3	--	--	--	--
	°C	09/02/03	--	--	--	--	--	--	--	--	--	--	--	--
	°C	10/28/03	--	16.5	19.1	18	18.1	15.9	16.6	18.3	--	--	--	--
	°C	04/27/04	--	16	17	15.5	14	15	17.3	19.4	--	--	--	--
	°C	10/26/04	--	16.8	18.8	19.1	19.7	17	18	15.9	--	--	--	--
	°C	03/15/05	--	16.18	15.79	15.8	12.86	14.6	17.44	16.39	--	--	--	--
	°C	07/12/05	--	16.32	16.8	16.56	18.09	15.97	17.78	17.92	--	--	--	--
	°C	01/19/06	--	16.61	17.5	17.51	15.06	15.39	17.88	17.19	--	--	--	--
	°C	06/28/06	--	--	--	--	--	--	--	--	--	--	--	--
	°C	07/11/06	--	16.1	16.8	17	18.2	15.7	17.7	17.3	19.9	--	--	--
	°C	10/31/06	--	--	--	--	--	--	--	--	17.6	--	--	--
	°C	01/17/07	--	15.6	15.6	15.8	14.5	15	16.6	16	14.9	--	--	--
	°C	07/09/07	--	17.09	17.81	17.53	18.9	17.00	17.75	17.80	18.61	--	--	--
	°C	01/14/08	--	16.26	17.88	15.93	15.44	14.32	16.65	17.53	16.65	16.64	--	--
	°C	04/30/08	--	--	--	--	--	--	--	--	--	--	15.09	--
	°C	07/14/08	--	17.17	19.03	18.84	20.55	18.13	19.59	18.67	18.44	18.38	16.22	--
	°C	10/03/08	--	--	--	--	--	--	--	--	--	--	16.30	--
	°C	01/19/09	--	15.32	14.69	15.59	13.80	13.94	16.71	15.22	15.18	13.25	12.81	--
	°C	07/20/09	--	17.08	19.47	18.99	19.25	16.87	19.62	18.99	19.18	17.43	18.09	--
	°C	01/25/10	--	16.60	16.99	16.89	14.08	14.52	18.16	17.10	16.50	15.94	15.68	--
	°C	07/06/10	--	17.58	20.10	18.72	21.41	16.37	19.71	25.56	17.58	17.78	18.99	--
	°C	01/04/11	--	16.52	17.09	16.38	14.22	14.69	17.54	16.54	15.50	15.51	15.44	--
Turbidity (Field)	NTU	10/28/98	--	80	65	19	13	17	Dry	--	--	--	--	--
	NTU	04/07/99	--	20	1.51	3.13	2.61	2.96	Dry	--	--	--	--	--
	NTU	12/08/99	--	20	9.46	5.04	2.24	26	19	--	--	--	--	--
	NTU	04/27/00	--	32	18	14	7.07	1.76	Dry	--	--	--	--	--
	NTU	10/18/00	--	20.4	38.1	9.2	6.39	1.6	Dry	15.9	--	--	--	--
	NTU	11/28/00	--	--	--	--	--	--	--	11.4	--	--	--	--
	NTU	01/03/01	--	--	--	--	--	--	--	11	--	--	--	--
	NTU	02/08/01	--	--	--	--	--	--	--	18	--	--	--	--
	NTU	04/19/01	--	169	31	11	--	11	Dry	16	--	--	--	--
	NTU	12/24/01	--	28	60	5.31	33	2.45	61	29	--	--	--	--
	NTU	04/23/02	--	27	26	2.08	290	450	11	4.28	--	--	--	--
	NTU	10/23/02	--	6.54	5.77	1.84	3.97	1.35	71	6.58	--	--	--	--
	NTU	04/01/03	--	44	23	2.63	15	91	44	10	--	--	--	--
	NTU	09/02/03	--	--	--	--	--	--	--	--	--	--	--	--
	NTU	10/28/03	--	34	25	1.8	25	7.99	20	13	--	--	--	--
	NTU	04/27/04	--	32	13	0.85	33	34	20	2.37	--	--	--	--
	NTU	10/26/04	--	10	10	0.89	38	5.89	29	44	--	--	--	--
	NTU	03/15/05	--	68.6	17.9	15.4	43.5	45.1	50.3	26.3	--	--	--	--
	NTU	07/12/05	--	78.0	29.7	30.3	37.3	30.3	45.2	36.3	--	--	--	--
	NTU	01/19/06	--	39.2	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--	--
	NTU	06/28/06	--	--	--	--	--	--	--	--	--	--	--	--
	NTU	07/11/06	--	33.6	3.4	1.7	25.4	31.0	34.5	15.0	78.2	--	--	--
	NTU	10/31/06	--	--	--	--	--	--	--	--	193	--	--	--
	NTU	01/17/07	--	13.0	0.0	9.5	23.7	97.20	6.9	8.8	8.3	--	--	--
	NTU	07/09/07	--	0.0	0.0	0.0	0.0	65.8	0.0	0.0	0.0	--	--	--
	NTU	01/14/08	--	7.31	5.39	1.19	37.5	24.0	1.29	0.68	9.48	4.08	--	--
	NTU	04/30/08	--	--	--	--	--	--	--	--	--	--	>1000	--
	NTU	07/14/08	--	10.6	1.10	1.46	29.5	50.6	2.61	0.40	2.03	8.77	33.1	--
	NTU	10/03/08	--	--	--	--	--	--	--	--	--	--	9.54	--
	NTU	01/19/09	--	13.8	1.81	0.41	20.9	5.82	2.99	0.39	1.76	3.04	2.45	--
	NTU	07/20/09	--	8.53	1.50	21.0	36.2	7.84	2.22	1.45	1.67	6.42	45.9	--
	NTU	01/25/10	--	4.45	3.91	1.46	57.0	29.0	20.9	3.56	2.75	8.83	14.3	--
	NTU	07/06/10	--	7.74	2.34	0.87	34.9	40.0	3.37	1.26	7.74	11.3	1.73	--
	NTU	01/04/11	--	9.95	14.3	5.51	42.2	29.8	8.01	1.41	0.78	0.67	82.2	--
Oxidation Reduction Potential (Field)	mV	03/15/05	--	363	411	236	121	14	270	319	--	--	--	--
	mV	07/12/05	--	407	412	234	173	5	279	375	--	--	--	--
	mV	01/19/06	--	361	370	222	174	16	283	339	--	--	--	--
	mV	06/28/06	--	--	--	--	--	--	--	--	--	--	--	--
	mV	07/11/06	--	382	309	312	216	115	317	363	290	--	--	--
	mV	10/31/06	--	--	--	--	--	--	--	--	343	--	--	--
	mV	01/17/07	--	347	391	306	153	32	290	318	305	--	--	--
	mV	07/09/07	--	371	431	309	204	81	290	352	328	--	--	--
	mV	01/14/08	--	363	403	342	166	147	317	336	317	308	--	--
	mV	07/14/08	--	314	365	248	114	6	247	274	257	243	291	--
	mV	10/03/08	--	--	--	--	--	--	--	--	--	--	260	--
	mV	01/19/09	--	203.8	260.9	254.4	152.1	193.3	159.2	238.9	213.8	216.4	179.8	--
	mV	07/20/09	--	302.4	289.1	245.3	122.3	110.0	238.0	223.1	202.5	253.0	285.4	--
	mV	01/25/10	--	255.6	310.6	243.0	185.9	144.4	245.0	264.1	244.5	285.2	300.7	--
	mV	07/06/10	--	76.9	101.1	48.2	151.4	-26.2	57.2	93.5	76.9	224.2	94.6	--
	mV	01/04/11	--	163.4	274.2	211.4	-5.9	85.4	138.1	160.0	151.7	219.2	243.4	--
Dissolved Oxygen (Field)	mg/L	03/15/05	--	4.65	2.69	1.61	1.23	1.39	2.10	5.55	--	--	--	--
	mg/L	07/12/05	--	6.22	3.06	0.53	1.83	1.12	2.48	6.90	--	--	--	--
	mg/L	01/19/06	--	3.34	0.00	0.00	0.00	0.00	0.21	3.71	--	--	--	--
	mg/L	06/28/06	--	--	--	--	--	--	--	--	--	--	--	--
	mg/L	07/11/06	--	9.31	5.50	3.00	3.32	1.60	3.52	7.88	8.05	--	--	--
	mg/L	10/31/06	--	--	--	--	--	--	--	--	6.30	--	--	--
	mg/L	01/17/07	--	8.80	3.90	1.70	2.70	2.10	4.60	7.80	7.90	--	--	--
	mg/L	07/09/07	--	6.30	3.20	0.90	1.60	2.30	2.70	6.80	7.00	--	--	--
	mg/L	01/14/08	--	8.12	4.09	4.87	2.56	3.44	3.96	8.25	8.66	6.37	--	--
	mg/L	07/14/08	--	7.46	3.42	1.49	2.37	0.86	2.29	6.24	6.53	4.27	4.21	--
	mg/L	10/03/08	--	--	--	--	--	--	--	--	--	--	5.07	--
	mg/L	01/19/09	--	8.53	3.27	1.79	1.62	1.26	3.01	6.69	7.15	7.23	6.07	--
	mg/L	07/20/09	--	7.63	4.89	3.50	2.99	0.99	2.63	6.76	6.81	3.93	4.76	--
	mg/L	01/25/10	--	7.95	4.55	3.54	4.67	1.29	4.89	7.10	7.27	4.40	3.95	--
	mg/L	07/06/10	--	7.26	4.86	3.50	0.30	4.04	5.37	5.72	7.26	2.66	3.33	--
	mg/L	01/04/11	--	8.43	4.15	4.46	2.30	1.84	6.24	7.95	7.07	1.00	4.04	--

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
uS/cm = microsiemens per centimeter
mV = Millivolts
J = Estimated Value
B = Blank-Qualified Value
-- = no data
Blanks = field, trip and method blanks
Shaded = Concentrations above the Groundwater Protection Standards have been shaded
Standards = NC 2L Groundwater Standards or North Carolina Solid Waste Section Groundwater Protection Standards
SWS Reporting Limit = NCPQL prior to 2007 and NCSWSL starting in 01/18/07

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
Antimony	ug/L	07/12/05	30	ND	ND	ND	ND	ND
(No SW Standard)	ug/L	01/19/06	30	ND	ND	ND	ND	ND
	ug/L	07/12/06	30	ND	ND	ND	ND	ND
	ug/L	01/17/07	6	ND	ND	ND	ND	ND
	ug/L	01/15/08	6	ND	ND	dry	ND	ND
	ug/L	07/14/08	6	ND	dry	ND	dry	ND
	ug/L	01/19/09	6	ND	dry	ND	ND	ND
	ug/L	07/20/09	6	dry	dry	ND	ND	ND
	ug/L	01/26/10	6	ND	0.440 J	0.0790 J	ND	ND
	ug/L	07/06/10	6	dry	dry	dry	dry	ND
	ug/L	01/04/11	6	ND	dry	ND	ND	ND
Arsenic	ug/L	07/12/05	10	ND	ND	ND	ND	ND
SW Standard = 50 ug/L	ug/L	01/19/06	10	ND	ND	ND	ND	ND
	ug/L	07/12/06	10	ND	ND	ND	ND	ND
	ug/L	01/17/07	10	ND	ND	ND	ND	3.4 J
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	10	ND	ND	dry	2.6 J	ND
	ug/L	07/14/08	10	ND	dry	ND	dry	ND
	ug/L	01/19/09	10	7.9 B	dry	ND	ND	3.6 J
	ug/L	07/20/09	10	dry	dry	ND	6.32 J	ND
	ug/L	01/26/10	10	ND	6.48 J	ND	7.95 J	ND
	ug/L	07/06/10	10	dry	dry	dry	dry	ND
	ug/L	01/04/11	10	5.15 J	dry	ND	ND	ND
Barium	ug/L	09/16/93	--	100	60	90	dry	--
(No SW Standard)	ug/L	09/20/93	--	80	50	120	dry	--
	ug/L	09/22/93	--	50	60	140	dry	--
	ug/L	09/24/93	--	210	50	230	dry	--
	ug/L	10/04/93	--	40	70	70	dry	--
	ug/L	01/20/94	--	50	130	60	40	--
	ug/L	07/28/94	--	40	dry	60	50	--
	ug/L	01/26/95	--	80	80	100	10	--
	ug/L	07/26/95	--	ND	ND	ND	dry	--
	ug/L	01/23/96	--	ND	ND	ND	dry	--
	ug/L	10/10/96	--	ND	ND	ND	dry	--
	ug/L	04/15/97	--	ND	ND	ND	dry	--
	ug/L	10/23/97	--	ND	ND	ND	dry	--
	ug/L	04/28/98	--	ND	ND	ND	ND	--
	ug/L	03/15/05	500	ND	ND	ND	ND	--
	ug/L	07/12/05	500	ND	ND	ND	ND	ND
	ug/L	01/19/06	500	ND	ND	ND	ND	ND
	ug/L	07/12/06	500	ND	ND	ND	ND	ND
	ug/L	01/17/07	100	35.5	44.8	51.9	34.9	0.3 J
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	100	81.3 J	92.1 J	dry	24.1 J	0.3 J
	ug/L	07/14/08	100	60.5 J	dry	78.8 J	dry	ND
	ug/L	01/19/09	100	82.3 J	dry	65.2 J	72.2 J	ND
	ug/L	07/20/09	100	dry	dry	112	159	ND
	ug/L	01/26/10	100	63.1 J	79.7 J	58.8 J	63.4 J	0.434 J
	ug/L	07/06/10	100	dry	dry	dry	dry	ND
	ug/L	01/04/11	100	56.9 J	dry	59.6 J	87.6 J	1.11 J
Beryllium	ug/L	07/12/05	2	ND	ND	ND	ND	ND
SW Standard = 6.5 ug/L	ug/L	01/19/06	2	ND	ND	ND	ND	ND
	ug/L	07/12/06	2	ND	ND	ND	ND	ND
	ug/L	01/17/07	1	ND	ND	ND	ND	ND
	ug/L	01/15/08	1	ND	ND	dry	ND	ND
	ug/L	07/14/08	1	ND	dry	ND	dry	ND
	ug/L	01/19/09	1	0.1 J	dry	ND	ND	ND
	ug/L	07/20/09	1	dry	dry	ND	0.950	0.0779 J
	ug/L	01/26/10	1	0.260 J	0.332 J	0.206 J	0.389 J	ND
	ug/L	07/06/10	1	dry	dry	dry	dry	ND
	ug/L	01/04/11	1	0.212 J	dry	0.178 J	0.174 J	ND

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
Cadmium	ug/L	09/16/93	--	ND	ND	1	dry	--
SW Standard = 2 ug/L (N)	ug/L	09/20/93	--	1	ND	ND	dry	--
	ug/L	09/22/93	--	ND	ND	ND	dry	--
	ug/L	09/24/93	--	ND	ND	ND	dry	--
	ug/L	10/04/93	--	ND	ND	ND	dry	--
	ug/L	01/20/94	--	ND	ND	ND	ND	--
	ug/L	07/28/94	--	5	dry	ND	ND	--
	ug/L	01/26/95	--	ND	--	ND	ND	--
	ug/L	07/26/95	--	ND	ND	ND	dry	--
	ug/L	01/23/96	--	ND	ND	ND	dry	--
	ug/L	10/10/96	--	ND	ND	ND	dry	--
	ug/L	04/15/97	--	ND	ND	ND	dry	--
	ug/L	10/23/97	--	ND	ND	ND	dry	--
	ug/L	04/28/98	--	1.3	ND	ND	ND	--
	ug/L	03/15/05	1	ND	ND	ND	ND	--
	ug/L	07/12/05	1	ND	ND	ND	ND	ND
	ug/L	01/19/06	1	ND	ND	ND	ND	ND
	ug/L	07/12/06	1	ND	ND	ND	ND	ND
	ug/L	01/17/07	1	ND	ND	ND	ND	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	1	ND	ND	dry	ND	ND
	ug/L	07/14/08	1	ND	dry	ND	dry	ND
	ug/L	01/19/09	1	0.40 J	dry	ND	ND	ND
	ug/L	07/20/09	1	dry	dry	ND	0.266 B	0.112 J
	ug/L	01/26/10	1	0.347 B	0.411 B	0.243 B	0.690 B	0.277 J
	ug/L	07/06/10	1	dry	dry	dry	dry	ND
	ug/L	01/04/11	1	ND	dry	ND	ND	ND
Chromium	ug/L	09/16/93	--	ND	ND	10	dry	--
SW Standard = 50 ug/L	ug/L	09/20/93	--	ND	ND	ND	dry	--
	ug/L	09/22/93	--	ND	ND	10	dry	--
	ug/L	09/24/93	--	70	ND	70	dry	--
	ug/L	10/04/93	--	1	ND	ND	dry	--
	ug/L	01/20/94	--	ND	ND	ND	ND	--
	ug/L	07/28/94	--	ND	dry	ND	ND	--
	ug/L	01/26/95	--	ND	ND	ND	ND	--
	ug/L	07/26/95	--	ND	ND	ND	dry	--
	ug/L	01/23/96	--	ND	ND	ND	dry	--
	ug/L	10/10/96	--	ND	ND	ND	dry	--
	ug/L	04/15/97	--	ND	ND	ND	dry	--
	ug/L	10/23/97	--	ND	ND	ND	dry	--
	ug/L	04/28/98	--	ND	ND	ND	ND	--
	ug/L	10/28/98	10	ND	ND	dry	dry	--
	ug/L	04/07/99	10	ND	ND	ND	ND	--
	ug/L	12/08/99	10	ND	dry	ND	ND	--
	ug/L	04/27/00	10	ND	ND	ND	ND	--
	ug/L	10/18/00	10	ND	dry	ND	dry	--
	ug/L	04/18/01	10	ND	ND	ND	ND	--
	ug/L	10/24/01	10	ND	ND	ND	ND	--
	ug/L	04/23/02	10	ND	ND	ND	ND	--
	ug/L	10/23/02	10	ND	ND	ND	ND	--
	ug/L	04/01/03	10	ND	ND	ND	ND	--
	ug/L	10/27/03	10	ND	40	ND	dry	--
	ug/L	04/27/04	10	ND	40	ND	ND	--
	ug/L	10/26/04	10	ND	ND	ND	ND	--
	ug/L	03/15/05	10	ND	ND	ND	ND	ND
	ug/L	07/12/05	10	ND	ND	ND	ND	ND
	ug/L	01/19/06	10	ND	ND	ND	ND	ND
	ug/L	07/12/06	10	ND	ND	ND	ND	ND
	ug/L	01/17/07	10	ND	3.3 J	ND	ND	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	10	ND	ND	dry	ND	ND
	ug/L	07/14/08	10	1.6 J	dry	ND	dry	ND
	ug/L	01/19/09	10	2.9 J	dry	ND	3.4 J	ND
	ug/L	07/20/09	10	dry	dry	ND	38.3	ND
	ug/L	01/26/10	10	ND	12.1	2.12 J	13.1	ND
	ug/L	07/06/10	10	dry	dry	dry	dry	ND
	ug/L	01/04/11	10	1.10 J	dry	1.40 J	5.21 J	ND

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
Cobalt	ug/L	09/16/93	--	ND	ND	ND	dry	--
(No SW Standard)	ug/L	09/20/93	--	ND	ND	ND	dry	--
	ug/L	09/22/93	--	ND	ND	ND	dry	--
	ug/L	09/24/93	--	ND	ND	ND	dry	--
	ug/L	10/04/93	--	ND	ND	ND	dry	--
	ug/L	01/20/94	--	ND	ND	ND	ND	--
	ug/L	07/28/94	--	ND	dry	ND	ND	--
	ug/L	01/26/95	--	ND	10	ND	ND	--
	ug/L	07/26/95	--	ND	ND	ND	dry	--
	ug/L	01/23/96	--	ND	ND	ND	dry	--
	ug/L	10/10/96	--	ND	ND	ND	dry	--
	ug/L	04/15/97	--	ND	ND	ND	dry	--
	ug/L	10/23/97	--	ND	ND	ND	dry	--
	ug/L	04/28/98	--	ND	ND	ND	ND	--
	ug/L	10/28/98	10	ND	ND	dry	dry	--
	ug/L	04/07/99	10	ND	ND	ND	ND	--
	ug/L	12/08/99	10	ND	dry	ND	ND	--
	ug/L	04/27/00	10	ND	ND	ND	ND	--
	ug/L	10/18/00	10	ND	dry	ND	dry	--
	ug/L	04/18/01	10	ND	ND	ND	ND	--
	ug/L	10/24/01	10	ND	ND	ND	ND	--
	ug/L	04/23/02	10	ND	ND	ND	ND	--
	ug/L	10/23/02	10	ND	ND	ND	ND	--
	ug/L	04/01/03	10	ND	ND	ND	ND	--
	ug/L	10/27/03	10	ND	10	ND	dry	--
	ug/L	04/27/04	10	ND	ND	ND	ND	--
	ug/L	10/26/04	10	ND	ND	ND	ND	--
	ug/L	03/15/05	10	ND	ND	ND	ND	ND
	ug/L	07/12/05	10	ND	ND	ND	ND	ND
	ug/L	01/19/06	10	ND	ND	ND	ND	ND
	ug/L	07/12/06	10	ND	ND	ND	ND	ND
	ug/L	01/17/07	10	ND	ND	ND	ND	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	10	ND	2.9 J	dry	ND	ND
	ug/L	07/14/08	10	ND	dry	ND	dry	ND
	ug/L	01/19/09	10	4.4 J	dry	ND	1.5 J	ND
	ug/L	07/20/09	10	dry	dry	0.968 J	5.81 J	ND
	ug/L	01/26/10	10	2.14 B	2.85 J	1.29 B	2.70 J	0.485 J
	ug/L	07/06/10	10	dry	dry	dry	dry	ND
	ug/L	01/04/11	10	1.51 J	dry	ND	3.01 J	ND
Copper	ug/L	09/16/93	--	ND	ND	ND	dry	--
SW Standard = 7 ug/L (AL)	ug/L	09/20/93	--	ND	ND	30	dry	--
	ug/L	09/22/93	--	ND	ND	30	dry	--
	ug/L	09/24/93	--	20	ND	30	dry	--
	ug/L	10/04/93	--	ND	ND	ND	dry	--
	ug/L	01/20/94	--	ND	ND	ND	ND	--
	ug/L	07/28/94	--	ND	dry	ND	ND	--
	ug/L	01/26/95	--	ND	ND	ND	ND	--
	ug/L	07/26/95	--	ND	ND	ND	dry	--
	ug/L	01/23/96	--	ND	ND	ND	dry	--
	ug/L	10/10/96	--	ND	ND	ND	dry	--
	ug/L	04/15/97	--	ND	ND	ND	dry	--
	ug/L	10/23/97	--	ND	50	ND	dry	--
	ug/L	04/28/98	--	ND	ND	ND	ND	--
	ug/L	03/15/05	200	ND	ND	ND	ND	ND
	ug/L	07/12/05	200	ND	ND	ND	ND	ND
	ug/L	01/19/06	200	ND	ND	ND	ND	ND
	ug/L	07/12/06	200	ND	ND	ND	ND	ND
	ug/L	01/17/07	10	ND	4.5 J	ND	ND	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	10	ND	ND	dry	ND	0.7 J
	ug/L	07/14/08	10	ND	dry	ND	dry	ND
	ug/L	01/19/09	10	3.20 J	dry	ND	ND	ND
	ug/L	07/20/09	10	dry	dry	ND	6.67 J	1.25 J
	ug/L	01/26/10	10	ND	3.19 J	ND	4.25 J	ND
	ug/L	07/06/10	10	dry	dry	dry	dry	ND
	ug/L	01/04/11	10	ND	dry	1.67 J	2.02 J	ND

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
Lead	ug/L	09/16/93	--	ND	ND	31	dry	--
SW Standard = 25 ug/L (N)	ug/L	09/20/93	--	16	9	19	dry	--
	ug/L	09/22/93	--	7	ND	33	dry	--
	ug/L	09/24/93	--	36	ND	44	dry	--
	ug/L	10/04/93	--	9	ND	ND	dry	--
	ug/L	01/20/94	--	ND	ND	ND	ND	--
	ug/L	07/28/94	--	ND	dry	ND	ND	--
	ug/L	01/26/95	--	ND	ND	ND	ND	--
	ug/L	07/26/95	--	ND	ND	ND	dry	--
	ug/L	01/23/96	--	ND	ND	ND	dry	--
	ug/L	10/10/96	--	ND	ND	ND	dry	--
	ug/L	04/15/97	--	ND	ND	ND	dry	--
	ug/L	10/23/97	--	ND	ND	ND	dry	--
	ug/L	04/28/98	--	ND	ND	ND	ND	--
	ug/L	10/28/98	10	ND	ND	dry	dry	--
	ug/L	04/07/99	10	ND	ND	ND	ND	--
	ug/L	12/08/99	10	ND	dry	ND	ND	--
	ug/L	04/27/00	10	ND	ND	ND	ND	--
	ug/L	10/18/00	10	ND	dry	ND	dry	--
	ug/L	04/18/01	10	ND	ND	ND	ND	--
	ug/L	10/24/01	10	ND	ND	ND	ND	--
	ug/L	04/23/02	10	ND	ND	ND	ND	--
	ug/L	10/23/02	10	ND	ND	ND	ND	--
	ug/L	04/01/03	10	ND	ND	ND	ND	--
	ug/L	10/27/03	10	ND	30	ND	dry	--
	ug/L	04/27/04	10	ND	20	ND	ND	--
	ug/L	10/26/04	10	ND	ND	ND	ND	--
	ug/L	03/15/05	10	ND	ND	ND	ND	ND
	ug/L	07/12/05	10	ND	ND	ND	ND	ND
	ug/L	01/19/06	10	ND	ND	ND	ND	ND
	ug/L	07/12/06	10	ND	ND	ND	ND	ND
	ug/L	01/17/07	10	ND	ND	2.7 J	ND	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	10	ND	ND	dry	ND	ND
	ug/L	07/14/08	10	2.4 J	dry	ND	dry	ND
	ug/L	01/19/09	10	ND	dry	ND	ND	ND
	ug/L	07/20/09	10	dry	dry	1.65 B	18.4	2.16 J
	ug/L	01/26/10	10	ND	7.63 J	1.42 J	9.38 J	ND
	ug/L	07/06/10	10	dry	dry	dry	dry	ND
	ug/L	01/04/11	10	ND	dry	ND	ND	ND

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
Nickel	ug/L	09/16/93	--	ND	ND	ND	dry	--
SW Standard = 88 ug/L (N)	ug/L	09/20/93	--	ND	ND	ND	dry	--
	ug/L	09/22/93	--	ND	ND	ND	dry	--
	ug/L	09/24/93	--	ND	ND	ND	dry	--
	ug/L	10/04/93	--	30	ND	ND	dry	--
	ug/L	01/20/94	--	ND	ND	ND	ND	--
	ug/L	07/28/94	--	ND	dry	ND	ND	--
	ug/L	01/26/95	--	ND	ND	ND	ND	--
	ug/L	07/26/95	--	ND	ND	ND	dry	--
	ug/L	01/23/96	--	ND	ND	ND	dry	--
	ug/L	10/10/96	--	ND	ND	ND	dry	--
	ug/L	04/15/97	--	ND	ND	ND	dry	--
	ug/L	10/23/97	--	ND	ND	ND	dry	--
	ug/L	04/28/98	--	ND	ND	ND	ND	--
	ug/L	10/28/98	50	ND	ND	dry	dry	--
	ug/L	04/07/99	50	ND	ND	ND	ND	--
	ug/L	12/08/99	50	50	dry	ND	ND	--
	ug/L	04/27/00	50	ND	ND	ND	ND	--
	ug/L	10/18/00	50	ND	dry	ND	dry	--
	ug/L	04/18/01	50	ND	ND	ND	ND	--
	ug/L	10/24/01	50	ND	ND	ND	ND	--
	ug/L	04/23/02	50	ND	ND	ND	ND	--
	ug/L	10/23/02	50	ND	ND	ND	ND	--
	ug/L	04/01/03	50	ND	ND	ND	ND	--
	ug/L	10/27/03	50	ND	ND	ND	dry	--
	ug/L	04/27/04	50	ND	ND	ND	ND	--
	ug/L	10/26/04	50	ND	ND	ND	ND	--
	ug/L	03/15/05	50	ND	ND	ND	ND	ND
	ug/L	07/12/05	50	ND	ND	ND	ND	ND
	ug/L	01/19/06	50	ND	ND	ND	ND	ND
	ug/L	07/12/06	50	ND	ND	ND	ND	ND
	ug/L	01/17/07	50	ND	3.8 J	2.8 J	3 J	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	50	ND	2.4 J	dry	ND	ND
	ug/L	07/14/08	50	ND	dry	ND	dry	ND
	ug/L	01/19/09	50	ND	dry	2.1 B	4.0 B	2.2 J
	ug/L	07/20/09	50	dry	dry	1.72 J	11.4 J	ND
	ug/L	01/26/10	50	ND	2.83 J	ND	2.43 J	ND
	ug/L	07/06/10	50	dry	dry	dry	dry	ND
	ug/L	01/04/11	50	ND	dry	ND	3.41 J	ND
Selenium	ug/L	07/12/05	20	ND	ND	ND	ND	ND
SW Standard = 5 ug/L	ug/L	01/19/06	20	ND	ND	ND	ND	ND
	ug/L	07/12/06	20	ND	ND	ND	ND	ND
	ug/L	01/17/07	10	ND	ND	3.4 J	ND	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	10	ND	ND	dry	ND	ND
	ug/L	07/14/08	10	ND	dry	ND	dry	ND
	ug/L	01/19/09	10	ND	dry	ND	ND	ND
	ug/L	07/20/09	10	dry	dry	ND	6.20 B	3.58 J
	ug/L	01/26/10	10	ND	1.74 J	0.937 J	ND	ND
	ug/L	07/06/10	10	dry	dry	dry	dry	ND
	ug/L	01/04/11	10	ND	dry	ND	ND	ND

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
Silver	ug/L	09/16/93	--	ND	ND	ND	dry	--
SW Standard = 0.06 ug/L (AL)	ug/L	09/20/93	--	ND	ND	ND	dry	--
	ug/L	09/22/93	--	ND	10	ND	dry	--
	ug/L	09/24/93	--	ND	ND	ND	dry	--
	ug/L	10/04/93	--	ND	ND	ND	dry	--
	ug/L	01/20/94	--	ND	ND	ND	ND	--
	ug/L	07/28/94	--	ND	dry	ND	ND	--
	ug/L	01/26/95	--	ND	ND	ND	ND	--
	ug/L	07/26/95	--	ND	ND	ND	dry	--
	ug/L	01/23/96	--	ND	ND	ND	dry	--
	ug/L	10/10/96	--	ND	ND	ND	dry	--
	ug/L	03/15/05	10	ND	ND	ND	ND	ND
	ug/L	07/12/05	10	ND	ND	ND	ND	ND
	ug/L	01/19/06	10	ND	ND	ND	ND	ND
	ug/L	07/12/06	10	ND	ND	ND	ND	ND
	ug/L	01/17/07	10	ND	ND	ND	ND	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	10	ND	ND	dry	ND	ND
	ug/L	07/14/08	10	ND	dry	ND	dry	ND
	ug/L	01/19/09	10	2.4 J	dry	ND	ND	ND
	ug/L	07/20/09	10	dry	dry	ND	ND	ND
	ug/L	01/26/10	10	1.93 B	2.43 B	1.68 B	2.19 B	1.25 J
	ug/L	07/06/10	10	dry	dry	dry	dry	ND
	ug/L	01/04/11	10	ND	dry	ND	ND	ND
Thallium	ug/L	07/12/05	10	ND	ND	ND	ND	ND
(No SW Standard)	ug/L	01/19/06	10	ND	ND	ND	ND	ND
	ug/L	07/12/06	10	ND	ND	ND	ND	ND
	ug/L	01/17/07	5.5	ND	ND	ND	ND	ND
	ug/L	01/15/08	5.5	0.039 J	0.056 J	dry	ND	ND
	ug/L	07/14/08	5.5	ND	dry	ND	dry	ND
	ug/L	01/19/09	5.5	ND	dry	ND	ND	ND
	ug/L	07/20/09	5.5	dry	dry	ND	0.0510 J	ND
	ug/L	01/26/10	5.5	ND	ND	ND	ND	ND
	ug/L	07/06/10	5.5	dry	dry	dry	dry	ND
	ug/L	01/04/11	6	ND	dry	ND	ND	ND

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1		Downstream SW-2		Downstream SW-3		Downstream SW-4		Blanks	
Vanadium	ug/L	09/16/93	--	ND		ND		40		dry		--	
(No SW Standard)	ug/L	09/20/93	--	ND		ND		70		dry		--	
	ug/L	09/22/93	--	30		ND		100		dry		--	
	ug/L	09/24/93	--	280		ND		200		dry		--	
	ug/L	10/04/93	--	ND		ND		ND		dry		--	
	ug/L	01/20/94	--	ND		ND		ND		ND		--	
	ug/L	07/28/94	--	ND		dry		ND		ND		--	
	ug/L	01/26/95	--	ND		ND		ND		ND		--	
	ug/L	07/26/95	--	ND		ND		ND		dry		--	
	ug/L	01/23/96	--	ND		ND		ND		dry		--	
	ug/L	10/10/96	--	ND		ND		ND		dry		--	
	ug/L	04/15/97	--	ND		ND		ND		dry		--	
	ug/L	10/23/97	--	ND		ND		ND		dry		--	
	ug/L	04/28/98	--	ND		ND		ND		ND		--	
	ug/L	10/28/98	40	ND		ND		dry		dry		--	
	ug/L	04/07/99	40	ND		ND		ND		ND		--	
	ug/L	12/08/99	40	ND		dry		ND		ND		--	
	ug/L	04/27/00	40	ND		ND		ND		ND		--	
	ug/L	10/18/00	40	ND		dry		ND		dry		--	
	ug/L	04/18/01	40	ND		ND		ND		ND		--	
	ug/L	10/24/01	40	ND		ND		ND		ND		--	
	ug/L	04/23/02	40	ND		ND		ND		ND		--	
	ug/L	10/23/02	40	ND		ND		ND		ND		--	
	ug/L	04/01/03	40	ND		ND		ND		ND		--	
	ug/L	10/27/03	40	ND		60		ND		dry		--	
	ug/L	04/27/04	40	ND		60		ND		ND		--	
	ug/L	10/26/04	40	ND		ND		ND		ND		--	
	ug/L	03/15/05	40	ND		ND		ND		ND		ND	
	ug/L	07/12/05	40	ND		ND		ND		ND		ND	
	ug/L	01/19/06	40	ND		ND		ND		ND		ND	
	ug/L	07/12/06	40	ND		ND		ND		ND		ND	
	ug/L	01/17/07	25	2.2	J	2.8	J	2.3	J	2.2	J	ND	
	ug/L	07/09/07	--	dry		dry		dry		dry		--	
	ug/L	01/15/08	25	4.1	J	ND		dry		1	B	1	J
	ug/L	07/14/08	25	6.3	J	dry		ND		dry		ND	
	ug/L	01/19/09	25	2.3	J	dry		ND		5.7	J	ND	
	ug/L	07/20/09	25	dry		dry		2.11	B	69.0		0.803	J
	ug/L	01/26/10	25	1.01	J	23.8	J	4.21	J	23.8	J	ND	
	ug/L	07/06/10	25	dry		dry		dry		dry		ND	
	ug/L	01/04/11	25	1.51	J	dry		2.02	J	10.0	J	ND	

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1		Downstream SW-2		Downstream SW-3		Downstream SW-4		Blanks	
Zinc	ug/L	09/16/93	--	30		20		60		dry		--	
SW Standard = 50 ug/L (AL)	ug/L	09/20/93	--	130		40		120		dry		--	
	ug/L	09/22/93	--	100		60		340		dry		--	
	ug/L	09/24/93	--	240		70		420		dry		--	
	ug/L	10/04/93	--	1000		190		70		dry		--	
	ug/L	01/20/94	--	60		200		70		70		--	
	ug/L	07/28/94	--	120		dry		ND		30		--	
	ug/L	01/26/95	--	ND		30		60		60		--	
	ug/L	07/26/95	--	ND		ND		ND		dry		--	
	ug/L	01/23/96	--	ND		ND		ND		dry		--	
	ug/L	10/10/96	--	ND		ND		ND		dry		--	
	ug/L	04/15/97	--	80		60		60		dry		--	
	ug/L	10/23/97	--	100		60		30		dry		--	
	ug/L	04/28/98	--	50		ND		ND		ND		--	
	ug/L	10/28/98	50	ND		ND		dry		dry		--	
	ug/L	04/07/99	50	30		40		30		40		--	
	ug/L	12/08/99	50	60		dry		50		60		--	
	ug/L	04/27/00	50	ND		70		60		ND		--	
	ug/L	10/18/00	50	50		dry		70		dry		--	
	ug/L	04/18/01	50	ND		ND		ND		ND		--	
	ug/L	10/24/01	50	ND		ND		ND		ND		--	
	ug/L	04/23/02	50	ND		50		ND		ND		--	
	ug/L	10/23/02	50	ND		60		ND		ND		--	
	ug/L	04/01/03	50	60		30		50		70		--	
	ug/L	10/27/03	50	ND		130		70		dry		--	
	ug/L	04/27/04	50	ND		60		ND		ND		--	
	ug/L	10/26/04	50	ND		ND		ND		ND		--	
	ug/L	03/15/05	50	ND		ND		ND		ND		ND	
	ug/L	07/12/05	50	100		ND		ND		ND		ND	
	ug/L	01/19/06	50	ND		ND		79		ND		ND	
	ug/L	07/12/06	50	ND		ND		ND		ND		ND	
	ug/L	01/17/07	10	15.8	B	9.2	B	16.9	B	11.6	B	5.5	J
	ug/L	07/09/07	--	dry		dry		dry		dry		--	
	ug/L	01/15/08	10	8.7	J	13.6		dry		5.7	B	1.3	J
	ug/L	07/14/08	10	17.3	B	dry		7.8	B	dry		5	J
	ug/L	01/19/09	10	17.0		dry		14.0		33.2		ND	
	ug/L	07/20/09	10	dry		dry		6.05	J	55.6		ND	
	ug/L	01/26/10	10	8.13	J	17.4		9.78	J	35.2		ND	
	ug/L	07/06/10	10	dry		dry		dry		dry		ND	
	ug/L	01/04/11	10	5.84	J	dry		8.05	J	64.0		ND	
Acetone	ug/L	07/12/05	100	ND		ND		ND		ND		ND	
SW Standard = 2000 ug/L*	ug/L	01/19/06	100	ND		ND		ND		ND		ND	
	ug/L	07/12/06	100	ND		ND		ND		ND		ND	
	ug/L	01/17/07	100	ND		ND		ND		ND		ND	
	ug/L	01/15/08	100	ND		ND		dry		ND		ND	
	ug/L	07/14/08	100	ND		dry		8.9	J	dry		ND	
	ug/L	01/19/09	100	ND		dry		ND		ND		ND	
	ug/L	07/20/09	100	dry		dry		5.7	J	ND		ND	
	ug/L	01/26/10	100	ND		ND		ND		ND		ND	
	ug/L	07/06/10	100	dry		dry		dry		dry		ND	
	ug/L	01/04/11	100	ND		dry		ND		ND		ND	

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
Toluene	ug/L	10/23/97	--	ND	ND	20	dry	--
SW Standard = 11 ug/L	ug/L	10/28/98	5	ND	ND	dry	dry	--
	ug/L	04/07/99	5	ND	ND	ND	ND	--
	ug/L	12/08/99	5	ND	dry	ND	ND	--
	ug/L	04/27/00	5	ND	ND	ND	ND	--
	ug/L	10/18/00	5	ND	dry	ND	dry	--
	ug/L	04/18/01	5	ND	ND	ND	ND	--
	ug/L	10/24/01	5	ND	ND	ND	ND	--
	ug/L	04/23/02	5	ND	ND	ND	ND	--
	ug/L	10/23/02	5	ND	ND	ND	ND	--
	ug/L	04/01/03	5	ND	ND	ND	ND	--
	ug/L	10/27/03	5	ND	ND	ND	dry	--
	ug/L	04/27/04	5	ND	ND	ND	ND	--
	ug/L	10/26/04	5	ND	ND	ND	ND	--
	ug/L	03/15/05	5	ND	ND	ND	ND	ND
	ug/L	07/12/05	5	ND	ND	ND	ND	ND
	ug/L	01/19/06	5	ND	ND	ND	ND	ND
	ug/L	07/12/06	5	ND	ND	ND	ND	ND
	ug/L	01/17/07	5	ND	ND	ND	ND	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	1	ND	ND	dry	ND	ND
	ug/L	07/14/08	1	ND	dry	ND	dry	ND
	ug/L	01/19/09	1	ND	dry	ND	ND	ND
	ug/L	07/20/09	1	dry	dry	ND	ND	0.44 J
	ug/L	01/26/10	1	ND	ND	ND	ND	ND
	ug/L	07/06/10	1	dry	dry	dry	dry	ND
	ug/L	01/04/11	1	ND	dry	ND	ND	ND
Xylenes (total)	ug/L	10/23/97	--	ND	ND	10	dry	--
(No SW Standard)	ug/L	10/28/98	5	ND	ND	dry	dry	--
	ug/L	04/07/99	5	ND	ND	ND	ND	--
	ug/L	12/08/99	5	ND	dry	ND	ND	--
	ug/L	04/27/00	5	ND	ND	ND	ND	--
	ug/L	10/18/00	5	ND	dry	ND	dry	--
	ug/L	04/18/01	5	ND	ND	ND	ND	--
	ug/L	10/24/01	5	ND	ND	ND	ND	--
	ug/L	04/23/02	5	ND	ND	ND	ND	--
	ug/L	10/23/02	5	ND	ND	ND	ND	--
	ug/L	04/01/03	5	ND	ND	ND	ND	--
	ug/L	10/27/03	5	ND	ND	ND	dry	--
	ug/L	04/27/04	5	ND	ND	ND	ND	--
	ug/L	10/26/04	5	ND	ND	ND	ND	--
	ug/L	03/15/05	5	ND	ND	ND	ND	ND
	ug/L	07/12/05	5	ND	ND	ND	ND	ND
	ug/L	01/19/06	5	ND	ND	ND	ND	ND
	ug/L	07/12/06	5	ND	ND	ND	ND	ND
	ug/L	01/17/07	5	ND	ND	ND	ND	ND
	ug/L	07/09/07	--	dry	dry	dry	dry	--
	ug/L	01/15/08	5	ND	ND	dry	ND	ND
	ug/L	07/14/08	5	ND	dry	ND	dry	ND
	ug/L	01/19/09	5	ND	dry	ND	ND	ND
	ug/L	07/20/09	5	dry	dry	ND	ND	ND
	ug/L	01/26/10	5	ND	ND	ND	ND	ND
	ug/L	07/06/10	5	dry	dry	dry	dry	ND
	ug/L	01/04/11	5	ND	dry	ND	ND	ND

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
pH (Field)	S.U.	10/28/98	--	7.05	5.47	dry	dry	--
	S.U.	04/07/99	--	5.26	7.18	6.22	6.74	--
	S.U.	12/08/99	--	5.04	dry	5.56	5.24	--
	S.U.	04/27/00	--	5.15	6.47	6.02	5.8	--
	S.U.	10/18/00	--	8.28	dry	6.07	dry	--
	S.U.	04/18/01	--	5.67	7.75	5.96	6.29	--
	S.U.	10/24/01	--	6.64	6.27	6.39	6.02	--
	S.U.	04/23/02	--	5.7	6.07	8.16	7.71	--
	S.U.	10/23/02	--	4.03	6.31	4.78	5.19	--
	S.U.	04/01/03	--	4.67	8.23	5.8	5.73	--
	S.U.	10/27/03	--	4.57	5.2	5.55	dry	--
	S.U.	04/27/04	--	4.88	6.12	5.77	6.62	--
	S.U.	10/26/04	--	5.82	6.04	5.62	5.57	--
	S.U.	03/15/05	--	4.51	5.96	5.63	5.67	--
	S.U.	07/13/05	--	5.55	6.18	5.83	5.38	--
	S.U.	01/19/06	--	3.54	7.25	5.49	4.51	--
	S.U.	07/12/06	--	7.1	6.07	5.88	5.65	--
	S.U.	01/17/07	--	4.57	4.2	5.36	5.26	--
	S.U.	07/09/07	--	dry	dry	dry	dry	--
	S.U.	01/15/08	--	5.63	5.42	dry	5.56	--
	S.U.	07/14/08	--	6.17	dry	6.05	dry	--
	S.U.	01/19/09	--	5.46	dry	4.38	4.42	--
	S.U.	07/20/09	--	dry	dry	5.92	5.31	--
	S.U.	01/26/10	--	3.67	6.56	6.49	7.01	--
	S.U.	07/06/10	--	dry	dry	dry	dry	--
	S.U.	01/04/11	--	4.24	dry	5.51	4.30	--
Specific Conductance (Field)	uS/cm	10/28/98	--	50	109	dry	dry	--
	uS/cm	04/07/99	--	31.89	88.29	67	55.32	--
	uS/cm	12/08/99	--	29	dry	32	24	--
	uS/cm	04/27/00	--	26	143	48	31	--
	uS/cm	10/18/00	--	72	dry	136	dry	--
	uS/cm	04/18/01	--	21	75	48	28	--
	uS/cm	10/24/01	--	41	99	72	51	--
	uS/cm	04/23/02	--	64	79	80	43	--
	uS/cm	10/23/02	--	39	87	50	26	--
	uS/cm	04/01/03	--	35	121	42	45	--
	uS/cm	10/27/03	--	31	48	50	dry	--
	uS/cm	04/27/04	--	58	399	74	72	--
	uS/cm	10/26/04	--	62	190	88	40	--
	uS/cm	03/15/05	--	32	46	51	38	--
	uS/cm	07/13/05	--	64	155	141	76	--
	uS/cm	01/19/06	--	31	50	52	43	--
	uS/cm	07/12/06	--	50	200	97	101	--
	uS/cm	01/17/07	--	14	103	81	51	--
	uS/cm	07/09/07	--	dry	dry	dry	dry	--
	uS/cm	01/15/08	--	108	353	dry	65	--
	uS/cm	01/19/09	--	49	dry	121	72	--
	uS/cm	07/20/09	--	dry	dry	149	85	--
	uS/cm	01/26/10	--	40	427	87	45	--
	uS/cm	07/06/10	--	dry	dry	dry	dry	--
	uS/cm	01/04/11	--	34	dry	126	87	--

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
Temperature (Field)	°C	10/28/98	--	13	20.3	dry	dry	--
	°C	04/07/99	--	18.1	25.1	29.3	23.9	--
	°C	12/08/99	--	8.5	dry	11.5	10.6	--
	°C	04/27/00	--	13.1	14	13.6	12.6	--
	°C	10/18/00	--	18.1	dry	20.1	dry	--
	°C	04/18/01	--	9.2	7.3	8	9.1	--
	°C	10/24/01	--	19.3	23.8	25.9	24.9	--
	°C	04/23/02	--	18.7	16.3	26.2	25.4	--
	°C	10/23/02	--	13.5	12.2	12	12	--
	°C	04/01/03	--	15.4	21.6	26	24.2	--
	°C	10/27/03	--	18.6	20.1	20.8	dry	--
	°C	04/27/04	--	16.7	21.9	20.6	22.9	--
	°C	10/26/04	--	15.6	17.4	18.1	17.6	--
	°C	03/15/05	--	12.09	14.65	15.57	10.8	--
	°C	07/13/05	--	25.58	25.31	26.4	24.82	--
	°C	01/19/06	--	8.41	6.76	9.79	9.97	--
	°C	07/12/06	--	24.5	29.7	27.4	25.5	--
	°C	01/17/07	--	11.7	11.8	11.7	11.7	--
	°C	07/09/07	--	dry	dry	dry	dry	--
	°C	07/17/08	--	23.97	dry	27.12	dry	--
	°C	01/19/09	--	5.40	dry	2.95	3.76	--
	°C	07/20/09	--	dry	dry	24.00	21.65	--
	°C	01/26/10	--	8.51	8.97	11.07	8.78	--
	°C	07/06/10	--	dry	dry	dry	dry	--
	°C	01/04/11	--	4.82	dry	6.06	6.16	--
Turbidity (Field)	NTU	10/28/98	--	93	99	dry	dry	--
	NTU	04/07/99	--	4.37	16	58	20	--
	NTU	12/08/99	--	13	dry	50	143	--
	NTU	04/27/00	--	25	202	148	80	--
	NTU	10/18/00	--	20	dry	58	dry	--
	NTU	04/18/01	--	16.1	183	23	192	--
	NTU	10/24/01	--	38	44	78	94	--
	NTU	04/23/02	--	20	38	34	9.28	--
	NTU	10/23/02	--	23	292	75	179	--
	NTU	04/01/03	--	3.01	75	16	153	--
	NTU	10/27/03	--	37	780	2.33	dry	--
	NTU	04/27/04	--	18	750	16	11	--
	NTU	10/26/04	--	73	74	37	79	--
	NTU	03/15/05	--	24.8	64.3	41.7	274	--
	NTU	07/13/05	--	141	401	150	546	--
	NTU	01/19/06	--	62.5	33.2	0	242	--
	NTU	07/12/06	--	16.1	116	17.8	71.3	--
	NTU	01/17/07	--	1.5	32.8	28	121	--
	NTU	01/15/08	--	177	182	dry	205	--
	NTU	07/17/08	--	264	dry	13.3	dry	--
	NTU	01/19/09	--	2.89	dry	24.7	111	--
	NTU	07/20/09	--	dry	dry	25.4	465	--
	NTU	01/26/10	--	7.07	297	65.1	308	--
	NTU	07/06/10	--	dry	dry	dry	dry	--
	NTU	01/04/11	--	1.53	dry	12.9	40.4	--
Oxidation Reduction Potential (Field)	mV	03/15/05	--	345	139	160	152	--
	mV	07/13/05	--	148	22	73	32	--
	mV	01/19/06	--	338	107	122	186	--
	mV	07/12/06	--	196	203	193	196	--
	mV	07/09/07	--	dry	dry	dry	dry	--
	mV	01/15/08	--	186	163	dry	218	--
	mV	07/17/08	--	160	dry	79	dry	--
	mV	01/19/09	--	360.3	dry	196.3	131.0	--
	mV	07/20/09	--	dry	dry	129.9	234.3	--
	mV	01/26/10	--	322.8	203.4	203.6	205.7	--
	mV	07/06/10	--	dry	dry	dry	dry	--
	mV	01/04/11	--	211.1	dry	288.5	281.2	--

TABLE 6

Summary of Surface Water Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream SW-1	Downstream SW-2	Downstream SW-3	Downstream SW-4	Blanks
Dissolved Oxygen (Field)	mg/L	03/15/05	--	6.86	6.92	6.11	7.4	--
	mg/L	07/13/05	--	5.04	7.5	8.08	5.75	--
	mg/L	01/19/06	--	5.14	5.86	5.15	6.32	--
	mg/L	01/17/07	--	5.4	5.4	4.7	6.2	--
	mg/L	07/09/07	--	dry	dry	dry	dry	--
	mg/L	01/15/08	--	11.27	5.95	dry	13.53	--
	mg/L	07/17/08	--	8.0	dry	5.79	dry	--
	mg/L	01/19/09	--	10.01	dry	13.13	12.74	--
	mg/L	07/20/09	--	dry	dry	6.44	7.11	--
	mg/L	01/26/10	--	8.74	10.77	9.52	10.49	--
	mg/L	07/06/10	--	dry	dry	dry	dry	--
	mg/L	01/04/11	--	8.08	dry	10.95	10.59	--

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
uS/cm= microsiemens per centimeter
mV = Millivolts
J = Estimated Value
B = Blank-Qualified Value
-- = no data
Blanks = field, trip and method blanks
Shaded = Concentrations above the SW Standards have been shaded
SW Standards= NC Freshwater Aquatic Life Standards as defined in 15A NCAC 2B
SWS Reporting Limit = NCPQL prior to 2007 and NCSWSL starting in 01/18/07
(AL) = SW Standard is an Action Level
(N) = SW Standard is a Narrative Standard
* = EPA National Criteria Standard

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks	
Antimony	ug/L	07/13/05	30	ND		ND	
	ug/L	01/20/06	30	ND		ND	
	ug/L	07/12/06	30	ND		ND	
	ug/L	01/18/07	6	5.08		ND	
	ug/L	07/10/07	6	3.07	J	ND	
	ug/L	01/15/08	6	9.02		ND	
	ug/L	07/15/08	6	4.20	J	ND	
	ug/L	01/20/09	6	4.21	J	ND	
	ug/L	07/21/09	6	4.05	J	ND	
	ug/L	01/26/10	6	5.00	J	ND	
	ug/L	07/07/10	6	12.4	J	ND	
	ug/L	01/05/11	6	20.0		ND	
Arsenic	ug/L	04/07/99	10	ND		--	
	ug/L	12/08/99	10	10		--	
	ug/L	04/27/00	10	10		--	
	ug/L	10/18/00	10	--		--	
	ug/L	11/28/00	10	--		--	
	ug/L	01/03/01	10	--		--	
	ug/L	02/08/01	10	--		--	
	ug/L	04/19/01	10	--		--	
	ug/L	12/24/01	10	--		--	
	ug/L	04/23/02	10	--		--	
	ug/L	10/23/02	10	--		--	
	ug/L	04/01/03	10	--		--	
	ug/L	09/02/03	10	--		--	
	ug/L	10/28/03	10	--		--	
	ug/L	04/27/04	10	--		--	
	ug/L	10/26/04	10	--		--	
	ug/L	03/15/05	10	21		ND	
	ug/L	07/13/05	10	34		ND	
	ug/L	01/20/06	10	24		ND	
	ug/L	07/12/06	10	18.4		ND	
	ug/L	01/18/07	10	ND		ND	
	ug/L	07/10/07	10	ND		ND	
	ug/L	01/15/08	10	21.8		ND	
	ug/L	07/15/08	10	26.2		ND	
	ug/L	01/20/09	10	5.7	B	3.6	J
	ug/L	07/21/09	10	43.4		ND	
	ug/L	01/26/10	10	38.6		--	
	ug/L	07/07/10	10	92.6		ND	
	ug/L	01/05/11	10	72.7		ND	

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
Barium	ug/L	04/07/99	500	ND	--
	ug/L	12/08/99	500	ND	--
	ug/L	04/27/00	500	ND	--
	ug/L	10/18/00	500	--	--
	ug/L	11/28/00	500	--	--
	ug/L	01/03/01	500	--	--
	ug/L	02/08/01	500	--	--
	ug/L	04/19/01	500	--	--
	ug/L	12/24/01	500	--	--
	ug/L	04/23/02	500	--	--
	ug/L	10/23/02	500	--	--
	ug/L	04/01/03	500	--	--
	ug/L	09/02/03	500	--	--
	ug/L	10/28/03	500	--	--
	ug/L	04/27/04	500	--	--
	ug/L	10/26/04	500	--	--
	ug/L	03/15/05	500	630	ND
	ug/L	07/13/05	500	510	ND
	ug/L	01/20/06	500	883	ND
	ug/L	07/12/06	500	678	ND
	ug/L	01/18/07	100	624	ND
	ug/L	07/10/07	100	547	ND
	ug/L	01/15/08	100	645	0.3 J
	ug/L	07/15/08	100	303	ND
	ug/L	01/20/09	100	347	ND
	ug/L	07/21/09	100	100	ND
	ug/L	01/26/10	100	273	ND
	ug/L	07/07/10	100	392	ND
	ug/L	01/05/11	100	426	ND
Cadmium	ug/L	07/13/05	1	ND	ND
	ug/L	01/20/06	1	ND	ND
	ug/L	07/12/06	1	ND	ND
	ug/L	01/18/07	1	ND	ND
	ug/L	07/10/07	1	ND	ND
	ug/L	01/15/08	1	ND	ND
	ug/L	07/15/08	1	ND	ND
	ug/L	01/20/09	1	ND	ND
	ug/L	07/21/09	1	0.126 J	ND
	ug/L	01/26/10	1	0.347 B	0.226 J
	ug/L	07/07/10	1	ND	ND
	ug/L	01/05/11	1	ND	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
Chromium	ug/L	07/13/05	10	ND	ND
	ug/L	01/20/06	10	ND	ND
	ug/L	07/12/06	10	ND	ND
	ug/L	01/18/07	10	ND	ND
	ug/L	07/10/07	10	ND	ND
	ug/L	01/15/08	10	ND	ND
	ug/L	07/15/08	10	ND	ND
	ug/L	01/20/09	10	ND	ND
	ug/L	07/21/09	10	57.7	ND
	ug/L	01/26/10	10	40.8	ND
	ug/L	07/07/10	10	70.5	ND
	ug/L	01/05/11	10	59.7	ND
Cobalt	ug/L	04/07/99	10	10	--
	ug/L	12/08/99	10	60	--
	ug/L	04/27/00	10	10	--
	ug/L	10/18/00	10	--	--
	ug/L	11/28/00	10	--	--
	ug/L	01/03/01	10	--	--
	ug/L	02/08/01	10	--	--
	ug/L	04/19/01	10	--	--
	ug/L	12/24/01	10	--	--
	ug/L	04/23/02	10	--	--
	ug/L	10/23/02	10	--	--
	ug/L	04/01/03	10	--	--
	ug/L	09/02/03	10	--	--
	ug/L	10/28/03	10	--	--
	ug/L	04/27/04	10	--	--
	ug/L	10/26/04	10	--	--
	ug/L	03/15/05	10	43	ND
	ug/L	07/13/05	10	40	ND
	ug/L	01/20/06	10	60	ND
	ug/L	07/12/06	10	63.5	ND
	ug/L	01/18/07	10	16.1	ND
	ug/L	07/10/07	10	18.3	ND
	ug/L	01/15/08	10	23.0	ND
	ug/L	07/15/08	10	17.1	ND
	ug/L	01/20/09	10	13.3	1.1 J
	ug/L	07/21/09	10	19.9	ND
	ug/L	01/26/10	10	14.8	0.468 J
	ug/L	07/07/10	10	20.2	ND
	ug/L	01/05/11	10	19.8	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks	
Copper	ug/L	07/13/05	200	ND		ND	
	ug/L	01/20/06	200	ND		ND	
	ug/L	07/12/06	200	ND		ND	
	ug/L	01/18/07	10	ND		ND	
	ug/L	07/10/07	10	ND		ND	
	ug/L	01/15/08	10	ND		ND	
	ug/L	07/15/08	10	8.20	J	ND	
	ug/L	01/20/09	10	ND		ND	
	ug/L	07/21/09	10	ND		1.25	J
	ug/L	01/26/10	10	ND		ND	
	ug/L	07/07/10	10	ND		ND	
	ug/L	01/05/11	10	2.57	J	ND	
Lead	ug/L	10/18/00	10	--		--	
	ug/L	11/28/00	10	--		--	
	ug/L	01/03/01	10	--		--	
	ug/L	02/08/01	10	--		--	
	ug/L	04/19/01	10	--		--	
	ug/L	12/24/01	10	--		--	
	ug/L	04/23/02	10	--		--	
	ug/L	10/23/02	10	--		--	
	ug/L	04/01/03	10	--		--	
	ug/L	09/02/03	10	--		--	
	ug/L	10/28/03	10	--		--	
	ug/L	04/27/04	10	--		--	
	ug/L	07/13/05	10	ND		ND	
	ug/L	01/20/06	10	ND		ND	
	ug/L	03/15/06	10	ND		ND	
	ug/L	07/12/06	10	13.0		ND	
	ug/L	10/26/06	10	--		--	
	ug/L	01/18/07	10	ND		ND	
	ug/L	07/10/07	10	ND		ND	
	ug/L	01/15/08	10	ND		ND	
	ug/L	07/15/08	10	2.3	J	ND	
	ug/L	01/20/09	10	ND		2.0	J
	ug/L	07/21/09	10	5.28	B	2.16	J
	ug/L	01/26/10	10	5.68	B	1.84	J
	ug/L	07/07/10	10	3.84	J	ND	
	ug/L	01/05/11	10	ND		ND	

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
Nickel	ug/L	04/07/99	50	ND	--
	ug/L	12/08/99	50	30	--
	ug/L	04/27/00	50	50	--
	ug/L	10/18/00	50	--	--
	ug/L	11/28/00	50	--	--
	ug/L	01/03/01	50	--	--
	ug/L	02/08/01	50	--	--
	ug/L	04/19/01	50	--	--
	ug/L	12/24/01	50	--	--
	ug/L	04/23/02	50	--	--
	ug/L	10/23/02	50	--	--
	ug/L	04/01/03	50	--	--
	ug/L	09/02/03	50	--	--
	ug/L	10/28/03	50	--	--
	ug/L	04/27/04	50	--	--
	ug/L	10/26/04	50	--	--
	ug/L	03/15/05	50	85	ND
	ug/L	07/13/05	50	86	ND
	ug/L	01/20/06	50	74	ND
	ug/L	07/12/06	50	ND	ND
	ug/L	01/18/07	50	72.2	ND
	ug/L	07/10/07	50	75.8	ND
	ug/L	01/15/08	50	91.6	ND
	ug/L	07/15/08	50	55.6	ND
	ug/L	01/20/09	50	41.1 J	ND
	ug/L	07/21/09	50	84.2	ND
	ug/L	01/26/10	50	61.1	ND
	ug/L	07/07/10	50	89.0	ND
	ug/L	01/05/11	50	86.3	ND
Selenium	ug/L	07/13/05	20	ND	ND
	ug/L	01/20/06	20	ND	ND
	ug/L	07/12/06	20	ND	ND
	ug/L	01/18/07	10	ND	ND
	ug/L	07/10/07	10	ND	ND
	ug/L	01/15/08	10	3.2 J	ND
	ug/L	07/15/08	10	ND	ND
	ug/L	01/20/09	10	ND	ND
	ug/L	07/21/09	10	5.82 B	3.58 J
	ug/L	01/26/10	10	ND	ND
	ug/L	07/07/10	10	ND	ND
	ug/L	01/05/11	10	ND	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks	
Silver	ug/L	07/13/05	10	ND		ND	
	ug/L	01/20/06	10	ND		ND	
	ug/L	07/12/06	10	ND		ND	
	ug/L	01/18/07	10	ND		ND	
	ug/L	07/10/07	10	ND		ND	
	ug/L	01/15/08	10	ND		ND	
	ug/L	07/15/08	10	ND		ND	
	ug/L	01/20/09	10	ND		ND	
	ug/L	07/21/09	10	1.69	J	ND	
	ug/L	01/26/10	10	2.33	B	1.36	J
	ug/L	07/07/10	10	ND		ND	
	ug/L	01/05/11	10	ND		ND	
Thallium	ug/L	10/18/00	10	--		--	
	ug/L	11/28/00	10	--		--	
	ug/L	01/03/01	10	--		--	
	ug/L	02/08/01	10	--		--	
	ug/L	04/19/01	10	--		--	
	ug/L	12/24/01	10	--		--	
	ug/L	04/23/02	10	--		--	
	ug/L	10/23/02	10	--		--	
	ug/L	04/01/03	10	--		--	
	ug/L	09/02/03	10	--		--	
	ug/L	10/28/03	10	--		--	
	ug/L	04/27/04	10	--		--	
	ug/L	07/13/05	10	ND		ND	
	ug/L	01/20/06	10	16		ND	
	ug/L	03/15/06	10	ND		ND	
	ug/L	07/12/06	10	22		ND	
	ug/L	10/26/06	10	--		--	
	ug/L	01/18/07	5.5	0.046	J	ND	
	ug/L	07/10/07	5.5	ND		ND	
	ug/L	01/15/08	5.5	ND		ND	
	ug/L	07/15/08	5.5	ND		ND	
	ug/L	01/20/09	5.5	ND		ND	
	ug/L	07/21/09	5.5	ND		ND	
	ug/L	01/26/10	5.5	ND		ND	
	ug/L	07/07/10	5.5	ND		ND	
	ug/L	01/05/11	5.5	ND		ND	

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks	
Vanadium	ug/L	07/13/05	40	ND		ND	
	ug/L	01/20/06	40	ND		ND	
	ug/L	07/12/06	40	ND		ND	
	ug/L	01/18/07	25	24.6		ND	
	ug/L	07/10/07	25	39.7		ND	
	ug/L	01/15/08	25	55.4		ND	
	ug/L	07/15/08	25	23.7	J	ND	
	ug/L	01/20/09	25	ND		ND	
	ug/L	07/21/09	25	638		0.803	J
	ug/L	01/26/10	25	102		ND	
	ug/L	07/07/10	25	189		ND	
	ug/L	01/05/11	25	110		ND	
Zinc	ug/L	04/07/99	50	50		--	
	ug/L	12/08/99	50	160		--	
	ug/L	04/27/00	50	30		--	
	ug/L	10/18/00	50	--		--	
	ug/L	11/28/00	50	--		--	
	ug/L	01/03/01	50	--		--	
	ug/L	02/08/01	50	--		--	
	ug/L	04/19/01	50	--		--	
	ug/L	12/24/01	50	--		--	
	ug/L	04/23/02	50	--		--	
	ug/L	10/23/02	50	--		--	
	ug/L	04/01/03	50	--		--	
	ug/L	09/02/03	50	--		--	
	ug/L	10/28/03	50	--		--	
	ug/L	04/27/04	50	--		--	
	ug/L	10/26/04	50	--		--	
	ug/L	03/15/05	50	120		ND	
	ug/L	07/13/05	50	100		ND	
	ug/L	01/20/06	50	63		ND	
	ug/L	07/12/06	50	99.6		ND	
	ug/L	01/18/07	10	22.1		4.8	J
	ug/L	07/10/07	10	37.5		ND	
	ug/L	01/15/08	10	15.2		1.3	J
	ug/L	07/15/08	10	80.9		5.0	J
	ug/L	01/20/09	10	17.7		ND	
	ug/L	07/21/09	10	21.0		ND	
	ug/L	01/26/10	10	14.5		ND	
	ug/L	07/07/10	10	64.2		ND	
	ug/L	01/05/11	10	34.9		ND	

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
Acetone	ug/L	04/07/99	100	830	--
	ug/L	12/08/99	100	4300	--
	ug/L	04/27/00	100	2000	--
	ug/L	10/18/00	100	--	--
	ug/L	11/28/00	100	--	--
	ug/L	01/03/01	100	--	--
	ug/L	02/08/01	100	--	--
	ug/L	04/19/01	100	--	--
	ug/L	12/24/01	100	--	--
	ug/L	04/23/02	100	--	--
	ug/L	10/23/02	100	--	--
	ug/L	04/01/03	100	--	--
	ug/L	09/02/03	100	--	--
	ug/L	10/28/03	100	--	--
	ug/L	04/27/04	100	--	--
	ug/L	10/26/04	100	--	--
	ug/L	03/15/05	100	28000	ND
	ug/L	07/13/05	100	2000	ND
	ug/L	01/20/06	11000	11200	ND
	ug/L	07/12/06	100	4810	ND
	ug/L	01/18/07	100	13000	ND
	ug/L	07/10/07	100	27 J	ND
	ug/L	01/15/08	100	6700	ND
	ug/L	07/15/08	100	980	ND
	ug/L	01/20/09	100	4900	ND
	ug/L	07/21/09	100	580	ND
	ug/L	01/26/10	100	3300	ND
	ug/L	07/07/10	100	2800	ND
	ug/L	01/05/11	100	3600	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
Benzene	ug/L	04/07/99	5	ND	--
	ug/L	12/08/99	5	5	--
	ug/L	04/27/00	5	ND	--
	ug/L	10/18/00	5	--	--
	ug/L	11/28/00	5	--	--
	ug/L	01/03/01	5	--	--
	ug/L	02/08/01	5	--	--
	ug/L	04/19/01	5	--	--
	ug/L	12/24/01	5	--	--
	ug/L	04/23/02	5	--	--
	ug/L	10/23/02	5	--	--
	ug/L	04/01/03	5	--	--
	ug/L	09/02/03	5	--	--
	ug/L	10/28/03	5	--	--
	ug/L	04/27/04	5	--	--
	ug/L	10/26/04	5	--	--
	ug/L	03/15/05	500	ND	ND
	ug/L	07/13/05	5	ND	ND
	ug/L	01/20/06	550	ND	ND
	ug/L	07/12/06	5	ND	ND
	ug/L	01/18/07	3	ND	ND
	ug/L	07/10/07	1	2.0 J	ND
	ug/L	01/15/08	1	ND	ND
	ug/L	07/15/08	1	ND	ND
	ug/L	01/20/09	1	ND	ND
	ug/L	07/21/09	1	ND	ND
	ug/L	01/26/10	1	ND	ND
	ug/L	07/07/10	1	ND	ND
	ug/L	01/05/11	1	ND	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks
1,4-Dichlorobenzene	ug/L	04/07/99	5	ND		--
	ug/L	12/08/99	5	5		--
	ug/L	04/27/00	5	7		--
	ug/L	10/18/00	5	--		--
	ug/L	11/28/00	5	--		--
	ug/L	01/03/01	5	--		--
	ug/L	02/08/01	5	--		--
	ug/L	04/19/01	5	--		--
	ug/L	12/24/01	5	--		--
	ug/L	04/23/02	5	--		--
	ug/L	10/23/02	5	--		--
	ug/L	04/01/03	5	--		--
	ug/L	09/02/03	5	--		--
	ug/L	10/28/03	5	--		--
	ug/L	04/27/04	5	--		--
	ug/L	10/26/04	5	--		--
	ug/L	03/15/05	500	ND		ND
	ug/L	07/13/05	5	ND		ND
	ug/L	01/20/06	550	ND		ND
	ug/L	07/12/06	5	ND		ND
	ug/L	01/18/07	3	ND		ND
	ug/L	07/10/07	1	6.6		ND
	ug/L	01/15/08	1	ND		ND
	ug/L	07/15/08	1	7.2	J	ND
	ug/L	01/20/09	1	ND		ND
	ug/L	07/21/09	1	ND		ND
	ug/L	01/26/10	1	9.4	J	ND
	ug/L	07/07/10	1	9.0	J	ND
	ug/L	01/05/11	1	ND		ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
1,1-Dichloroethane	ug/L	04/07/99	5	9	--
	ug/L	12/08/99	5	9	--
	ug/L	04/27/00	5	ND	--
	ug/L	10/18/00	5	--	--
	ug/L	11/28/00	5	--	--
	ug/L	01/03/01	5	--	--
	ug/L	02/08/01	5	--	--
	ug/L	04/19/01	5	--	--
	ug/L	12/24/01	5	--	--
	ug/L	04/23/02	5	--	--
	ug/L	10/23/02	5	--	--
	ug/L	04/01/03	5	--	--
	ug/L	09/02/03	5	--	--
	ug/L	10/28/03	5	--	--
	ug/L	04/27/04	5	--	--
	ug/L	10/26/04	5	--	--
	ug/L	03/15/05	500	ND	ND
	ug/L	07/13/05	5	ND	ND
	ug/L	01/20/06	550	ND	ND
	ug/L	07/12/06	5	ND	ND
	ug/L	01/18/07	5	ND	ND
	ug/L	07/10/07	5	ND	ND
	ug/L	01/15/08	5	ND	ND
	ug/L	07/15/08	5	ND	ND
	ug/L	01/20/09	5	ND	ND
	ug/L	07/21/09	5	ND	ND
	ug/L	01/26/10	5	ND	ND
	ug/L	07/07/10	5	ND	ND
	ug/L	01/05/11	5	ND	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks
Ethylbenzene	ug/L	04/07/99	5	26		--
	ug/L	12/08/99	5	49		--
	ug/L	04/27/00	5	35		--
	ug/L	10/18/00	5	--		--
	ug/L	11/28/00	5	--		--
	ug/L	01/03/01	5	--		--
	ug/L	02/08/01	5	--		--
	ug/L	04/19/01	5	--		--
	ug/L	12/24/01	5	--		--
	ug/L	04/23/02	5	--		--
	ug/L	10/23/02	5	--		--
	ug/L	04/01/03	5	--		--
	ug/L	09/02/03	5	--		--
	ug/L	10/28/03	5	--		--
	ug/L	04/27/04	5	--		--
	ug/L	10/26/04	5	--		--
	ug/L	03/15/05	500	ND		ND
	ug/L	07/13/05	5	ND		ND
	ug/L	01/20/06	550	ND		ND
	ug/L	07/12/06	5	ND		ND
	ug/L	01/18/07	5	35	J	ND
	ug/L	07/10/07	1	15		ND
	ug/L	01/15/08	1	29	J	ND
	ug/L	07/15/08	1	24		ND
	ug/L	01/20/09	1	71		ND
	ug/L	07/21/09	1	4.0	J	ND
	ug/L	01/26/10	1	16	J	ND
	ug/L	07/07/10	1	12	J	ND
	ug/L	01/05/11	1	31	J	ND
2-Hexanone	ug/L	07/13/05	50	ND		ND
	ug/L	01/20/06	5500	ND		ND
	ug/L	07/12/06	50	ND		ND
	ug/L	01/18/07	50	17	J	ND
	ug/L	07/10/07	50	ND		ND
	ug/L	01/15/08	50	ND		ND
	ug/L	07/15/08	50	ND		ND
	ug/L	01/20/09	50	ND		ND
	ug/L	07/21/09	50	ND		ND
	ug/L	01/26/10	50	ND		ND
	ug/L	07/07/10	50	ND		ND
	ug/L	01/05/11	50	ND		ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
Methylene chloride	ug/L	04/07/99	10	68	--
	ug/L	12/08/99	10	21	--
	ug/L	04/27/00	10	ND	--
	ug/L	10/18/00	10	--	--
	ug/L	11/28/00	10	--	--
	ug/L	01/03/01	10	--	--
	ug/L	02/08/01	10	--	--
	ug/L	04/19/01	10	--	--
	ug/L	12/24/01	10	--	--
	ug/L	04/23/02	10	--	--
	ug/L	10/23/02	10	--	--
	ug/L	04/01/03	10	--	--
	ug/L	09/02/03	10	--	--
	ug/L	10/28/03	10	--	--
	ug/L	04/27/04	10	--	--
	ug/L	10/26/04	10	--	--
	ug/L	03/15/05	1000	ND	ND
	ug/L	07/13/05	10	ND	ND
	ug/L	01/20/06	1100	ND	ND
	ug/L	07/12/06	10	ND	ND
	ug/L	01/18/07	5.5	ND	ND
	ug/L	07/10/07	1	ND	ND
	ug/L	01/15/08	1	ND	ND
	ug/L	07/15/08	1	ND	ND
	ug/L	01/20/09	1	30 J	ND
	ug/L	07/21/09	1	ND	ND
	ug/L	01/26/10	1	ND	ND
	ug/L	07/07/10	1	ND	ND
	ug/L	01/05/11	1	ND	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
2-Butanone	ug/L	04/07/99	100	660	--
(Methyl Ethyl Ketone)	ug/L	12/08/99	100	12000	--
	ug/L	04/27/00	100	4400	--
	ug/L	10/18/00	100	--	--
	ug/L	11/28/00	100	--	--
	ug/L	01/03/01	100	--	--
	ug/L	02/08/01	100	--	--
	ug/L	04/19/01	100	--	--
	ug/L	12/24/01	100	--	--
	ug/L	04/23/02	100	--	--
	ug/L	10/23/02	100	--	--
	ug/L	04/01/03	100	--	--
	ug/L	09/02/03	100	--	--
	ug/L	10/28/03	100	--	--
	ug/L	04/27/04	100	--	--
	ug/L	10/26/04	100	--	--
	ug/L	03/15/05	100	34000	ND
	ug/L	07/13/05	100	1800	ND
	ug/L	01/20/06	11000	16600	ND
	ug/L	07/12/06	100	7870	ND
	ug/L	01/18/07	100	7300	ND
	ug/L	07/10/07	100	ND	ND
	ug/L	01/15/08	100	7800	ND
	ug/L	07/15/08	100	960	ND
	ug/L	01/20/09	100	6500	ND
	ug/L	07/21/09	100	660	ND
	ug/L	01/26/10	100	3800	ND
	ug/L	07/07/10	100	3800	ND
	ug/L	01/05/11	100	3900	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks
4-Methyl-2-pentanone	ug/L	04/07/99	100	ND		--
	ug/L	12/08/99	100	ND		--
	ug/L	04/27/00	100	110		--
	ug/L	10/18/00	100	--		--
	ug/L	11/28/00	100	--		--
	ug/L	01/03/01	100	--		--
	ug/L	02/08/01	100	--		--
	ug/L	04/19/01	100	--		--
	ug/L	12/24/01	100	--		--
	ug/L	04/23/02	100	--		--
	ug/L	10/23/02	100	--		--
	ug/L	04/01/03	100	--		--
	ug/L	09/02/03	100	--		--
	ug/L	10/28/03	100	--		--
	ug/L	04/27/04	100	--		--
	ug/L	10/26/04	100	--		--
	ug/L	03/15/05	10000	ND		ND
	ug/L	07/13/05	100	ND		ND
	ug/L	01/20/06	11000	ND		ND
	ug/L	07/12/06	100	ND		ND
	ug/L	01/18/07	100	95	J	ND
	ug/L	07/10/07	100	7.4	J	ND
	ug/L	01/15/08	100	ND		ND
	ug/L	07/15/08	100	ND		ND
	ug/L	01/20/09	100	110	J	ND
	ug/L	07/21/09	100	27	J	ND
	ug/L	01/26/10	100	180		ND
	ug/L	07/07/10	100	42	J	ND
	ug/L	01/05/11	100	66	J	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
Toluene	ug/L	04/07/99	5	100	--
	ug/L	12/08/99	5	150	--
	ug/L	04/27/00	5	120	--
	ug/L	10/18/00	5	--	--
	ug/L	11/28/00	5	--	--
	ug/L	01/03/01	5	--	--
	ug/L	02/08/01	5	--	--
	ug/L	04/19/01	5	--	--
	ug/L	12/24/01	5	--	--
	ug/L	04/23/02	5	--	--
	ug/L	10/23/02	5	--	--
	ug/L	04/01/03	5	--	--
	ug/L	09/02/03	5	--	--
	ug/L	10/28/03	5	--	--
	ug/L	04/27/04	5	--	--
	ug/L	10/26/04	5	--	--
	ug/L	03/15/05	500	ND	ND
	ug/L	07/13/05	5	ND	ND
	ug/L	01/20/06	550	ND	ND
	ug/L	07/12/06	5	255	ND
	ug/L	01/18/07	5	36 J	ND
	ug/L	07/10/07	1	9.0	ND
	ug/L	01/15/08	1	35 J	ND
	ug/L	07/15/08	1	23	ND
	ug/L	01/20/09	1	120	ND
	ug/L	07/21/09	1	ND	0.44 J
	ug/L	01/26/10	1	24	ND
	ug/L	07/07/10	1	14 J	ND
	ug/L	01/05/11	1	26 J	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks
Xylenes (total)	ug/L	04/07/99	5	30		--
	ug/L	12/08/99	5	62		--
	ug/L	04/27/00	5	56		--
	ug/L	10/18/00	5	--		--
	ug/L	11/28/00	5	--		--
	ug/L	01/03/01	5	--		--
	ug/L	02/08/01	5	--		--
	ug/L	04/19/01	5	--		--
	ug/L	12/24/01	5	--		--
	ug/L	04/23/02	5	--		--
	ug/L	10/23/02	5	--		--
	ug/L	04/01/03	5	--		--
	ug/L	09/02/03	5	--		--
	ug/L	10/28/03	5	--		--
	ug/L	04/27/04	5	--		--
	ug/L	10/26/04	5	--		--
	ug/L	03/15/05	500	ND		ND
	ug/L	07/13/05	5	ND		ND
	ug/L	01/20/06	550	ND		ND
	ug/L	07/12/06	5	ND		ND
	ug/L	01/18/07	--	60	J	ND
	ug/L	07/10/07	4	22		ND
	ug/L	01/15/08	5	42	J	ND
	ug/L	07/15/08	5	39		ND
	ug/L	01/20/09	5	100		ND
	ug/L	07/21/09	5	ND		ND
	ug/L	01/26/10	5	31		ND
	ug/L	07/07/10	5	29		ND
	ug/L	01/05/11	5	39	J	ND
Cyanide (total)	mg/L	01/20/06	0.01	ND		ND
	mg/L	07/12/06	0.05	ND		ND
	mg/L	01/18/07	10	ND		ND
	mg/L	07/10/07	10	ND		ND
	mg/L	01/15/08	10	ND		ND
	mg/L	07/15/08	10	ND		ND
	mg/L	01/20/09	10	0.0041	J	ND
	mg/L	07/21/09	10	ND		ND
	mg/L	01/26/10	10	0.0054	J	ND
	mg/L	07/07/10	0.01	ND		ND
	mg/L	01/05/11	0.01	0.0059	J	ND

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks	
Oil & Grease	mg/L	01/20/06	2	5		ND	
	mg/L	07/12/06	2	19		ND	
	mg/L	01/18/07	--	5		ND	
	mg/L	07/10/07	--	ND		ND	
	mg/L	01/15/08	--	9.15		ND	
	mg/L	07/15/08	--	3.00	J	ND	
	mg/L	01/20/09	--	5.11		ND	
	mg/L	07/21/09	--	5.29		ND	
	mg/L	01/26/10	--	ND		ND	
	mg/L	07/07/10	--	ND		ND	
	mg/L	01/05/11	--	7.34		ND	
Phenols	mg/L	03/15/05	0.05	0.84		ND	
	mg/L	01/20/06	0.2	1		ND	
	mg/L	07/12/06	0.1	1		ND	
	mg/L	01/18/07	--	0.92		ND	
	mg/L	07/10/07	--	0.03	J	ND	
	mg/L	01/15/08	--	1.1		ND	
	mg/L	07/15/08	--	0.20		ND	
	mg/L	1/20/2009	--	0.53		ND	
	mg/L	07/21/09	--	0.23		ND	
	mg/L	01/26/10	--	0.43		ND	
	mg/L	07/07/10	--	0.56		ND	
	mg/L	01/05/11	--	0.95		ND	
Total Kjeldahl Nitrogen	mg/L	03/15/05	0.05	480		ND	
	mg/L	01/20/06	1	495		ND	
	mg/L	07/12/06	0.05	396		ND	
	mg/L	01/18/07	--	440		ND	
	mg/L	07/10/07	--	570		ND	
	mg/L	01/15/08	--	560		0.088	
	mg/L	07/15/08	--	320		ND	
	mg/L	01/20/09	--	340		ND	
	mg/L	07/21/09	--	550		ND	
	mg/L	01/26/10	--	460		ND	
	mg/L	07/07/10	--	720		ND	
	mg/L	01/05/11	--	720		ND	
Nitrate as N	mg/L	07/13/05	0.1	ND		ND	
	mg/L	01/20/06	0.05	ND		ND	
	mg/L	07/12/06	0.05	ND		ND	
	mg/L	07/10/07	--	ND		ND	
	mg/L	01/15/08	10	0.025	B	0.014	J
	mg/L	07/15/08	10	ND		ND	
	mg/L	01/20/09	10	0.084	J	ND	
	mg/L	07/21/09	10	ND		ND	
	mg/L	01/26/10	10	0.052	J	ND	
	mg/L	07/07/10	10	0.025	J	ND	
	mg/L	01/05/11	10	0.072	J	ND	

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate		Blanks	
Sulfate	mg/L	07/13/05	2	ND		ND	
	mg/L	01/20/06	2	ND		ND	
	mg/L	07/12/06	2	6.23		ND	
	mg/L	01/18/07	--	29.3		2.25	J
	mg/L	07/10/07	--	34		1.1	
	mg/L	01/15/08	250	5.6	J	ND	
	mg/L	07/15/08	250	3.8	J	ND	
	mg/L	01/20/09	250	2.5	J	ND	
	mg/L	07/21/09	250	3.1	J	ND	
	mg/L	01/26/10	250	1.6	B	1.1	J
	mg/L	07/07/10	250	5.4	J	ND	
	mg/L	01/05/11	250	10	J	ND	
Biochemical Oxygen Demand	mg/L	03/15/05	2	1300		ND	
	mg/L	07/13/05	2	220	J	ND	
	mg/L	01/20/06	2	1910		ND	
	mg/L	07/12/06	2	1770		ND	
	mg/L	01/18/07	--	593		ND	
	mg/L	07/10/07	--	97		ND	
	mg/L	01/15/08	--	620		ND	
	mg/L	07/15/08	--	110		ND	
	mg/L	01/20/09	--	630		ND	
	mg/L	07/21/09	--	130		ND	
	mg/L	01/26/10	--	130		ND	
	mg/L	07/07/10	--	420		ND	
	mg/L	01/05/11	--	460		ND	
Chemical Oxygen Demand	mg/L	03/15/05	10	2500		ND	
	mg/L	07/13/05	10	1120		ND	
	mg/L	01/20/06	--	--		--	
	mg/L	02/27/06	40	1710		ND	
	mg/L	07/12/06	10	2990		ND	
	mg/L	01/18/07	--	1810		ND	
	mg/L	07/10/07	--	980		ND	
	mg/L	01/15/08	--	1600		ND	
	mg/L	07/15/08	--	950		ND	
	mg/L	01/20/09	--	1300		ND	
	mg/L	07/21/09	--	990		ND	
	mg/L	01/26/10	--	920		ND	
	mg/L	07/07/10	--	1700		ND	
	mg/L	01/05/11	--	1700		ND	

TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
Total Suspended Solids	mg/L	03/15/05	2	140	ND
	mg/L	07/13/05	--	--	--
	mg/L	01/20/06	--	--	--
	mg/L	07/12/06	2	264	ND
	mg/L	01/18/07	--	45	ND
	mg/L	07/10/07	--	21	ND
	mg/L	01/15/08	--	26	ND
	mg/L	07/15/08	--	59	ND
	mg/L	01/20/09	--	85	ND
	mg/L	07/21/09	--	17	ND
	mg/L	01/26/10	--	23	ND
	mg/L	07/07/10	--	67	ND
	mg/L	01/05/11	--	23	ND
Phosphorus (Total)	mg/L	03/15/05	0.03	1.8	ND
	mg/L	07/13/05	0.03	2.2	ND
	mg/L	01/20/06	0.1	2	ND
	mg/L	07/12/06	0.03	1	ND
	mg/L	01/18/07	--	1.7	ND
	mg/L	07/10/07	--	2.8	ND
	mg/L	01/15/08	--	2.6	ND
	mg/L	07/15/08	--	1.2	ND
	mg/L	01/20/09	--	0.82	ND
	mg/L	07/21/09	--	0.69	ND
	mg/L	01/26/10	--	1.7	ND
	mg/L	07/07/10	--	2.3	ND
	mg/L	01/05/11	--	2.1	ND
pH (Field)	S.U.	04/07/99	--	6.82	--
	S.U.	03/15/05	--	6.34	--
	S.U.	07/13/05	--	7.36	--
	S.U.	01/20/06	--	9.48	--
	S.U.	07/12/06	--	7.22	--
	S.U.	01/18/07	--	6.00	--
	S.U.	07/10/07	--	8.31	--
	S.U.	01/15/08	--	7.53	--
	S.U.	07/15/08	--	7.39	--
	S.U.	01/20/09	--	6.97	--
	S.U.	07/21/09	--	7.93	--
	S.U.	01/26/10	--	7.03	--
	S.U.	07/06/10	--	7.36	--
	S.U.	01/05/11	--	7.50	--

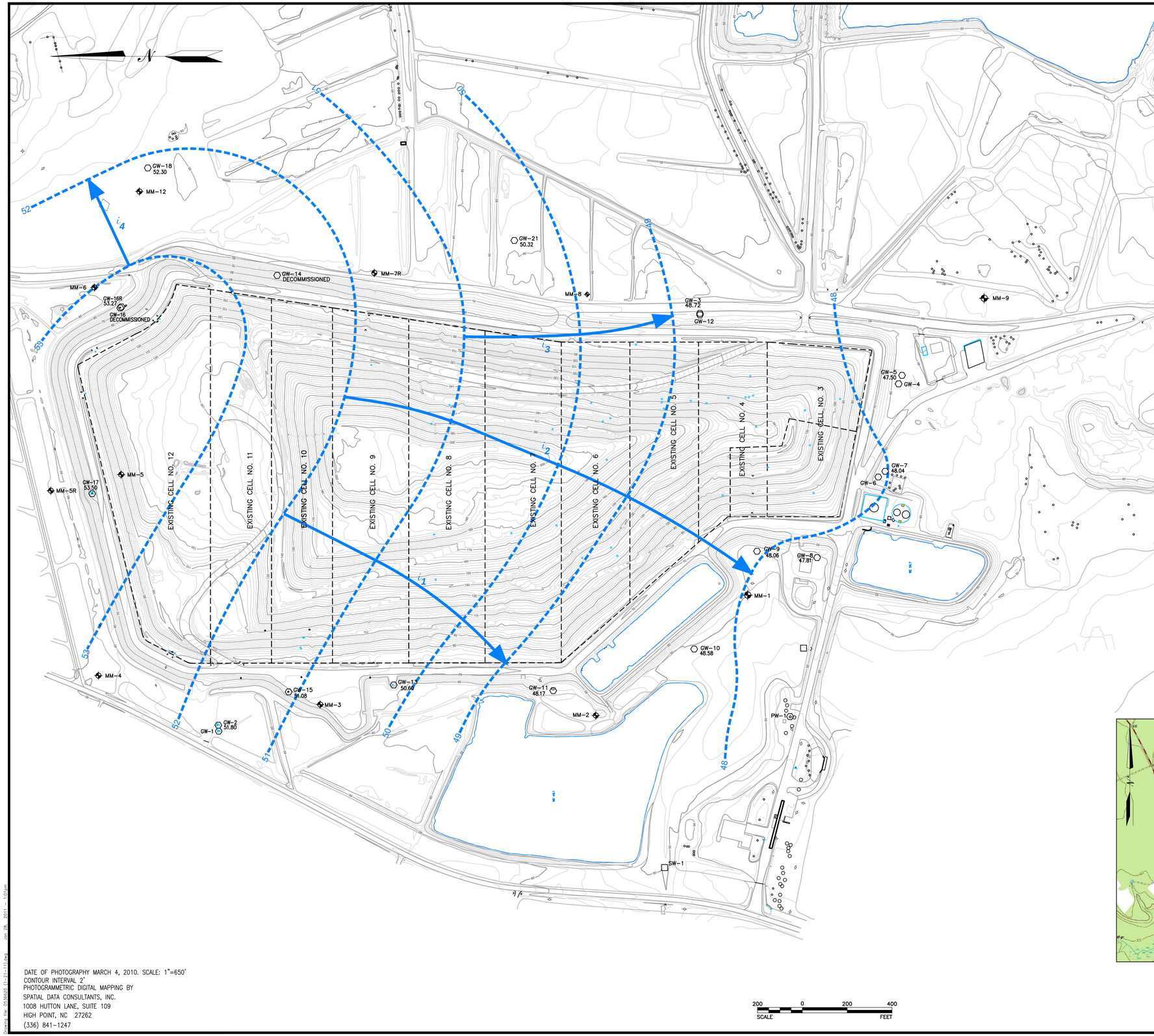
TABLE 7

Summary of Leachate Monitoring Results
Detected Constituents
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

Detected Monitoring Constituents/Parameters	Reporting Units	Sample Date	SWS Reporting Limit	Leachate	Blanks
Specific Conductance (Field)	uS/cm	04/07/99	--	2061	--
	uS/cm	03/15/05	--	6310	--
	uS/cm	07/13/05	--	14500	--
	uS/cm	01/20/06	--	4940	--
	uS/cm	07/12/06	--	7940	--
	uS/cm	01/18/07	--	3400	--
	uS/cm	07/10/07	--	9800	--
	uS/cm	01/15/08	--	13100	--
	uS/cm	07/15/08	--	5700	--
	uS/cm	01/20/09	--	4816	--
	uS/cm	07/21/09	--	10430	--
	uS/cm	01/26/10	--	8672	--
	uS/cm	07/06/10	--	11900	--
	uS/cm	01/05/11	--	11370	--
Temperature (Field)	°C	03/15/05	--	12.8	--
	°C	07/13/05	--	28.82	--
	°C	01/20/06	--	16.07	--
	°C	07/12/06	--	30.0	--
	°C	01/18/07	--	7.00	--
	°C	07/10/07	--	33.2	--
	°C	01/15/08	--	9.95	--
	°C	07/15/08	--	29.93	--
	°C	01/20/09	--	6.96	--
	°C	07/21/09	--	31.07	--
	°C	01/26/10	--	13.84	--
	°C	07/06/10	--	28.01	--
	°C	01/05/11	--	13.21	--

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
uS/cm microsiemens per centimeter
mV = Millivolts
J = Estimated value/not quantified
-- = no data
Blanks = field, trip and method blanks
SWS Reporting Limit = NCPQL prior to 2007 and NCSWSL starting in 01/18/07
1) The following dilutions were noted for the Jan 2011 event: VOCs (50x), TKN (50x), Antimony and Thallium (10x)

DRAWING

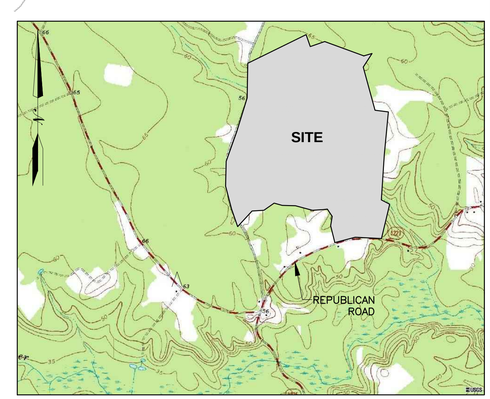


LEGEND

- EXISTING CONTOUR
- PROPERTY BOUNDARY
- 100' BUFFER
- LIMITS OF WASTE
- GROUNDWATER SURFACE CONTOURS — 48
- APPROXIMATE GROUNDWATER FLOW SEGMENT USED TO CALCULATE GRADIENT
- GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION — GW-2 51.80
- SURFACE WATER MONITORING POINT — SW-1
- METHANE MONITORING WELL — MM-1
- PRIVATE WATER SUPPLY WELL — PW-1

NOTES:

1. TOPOGRAPHIC CONTOUR INTERVAL = 2 FEET.
2. GROUNDWATER SURFACE CONTOUR INTERVAL = 1 FOOT.
3. GROUNDWATER ELEVATIONS MEASURED ON JANUARY 4, 2011.
4. GROUND WATER CONTOURS ARE BASED ON LINEAR INTERPOLATION BETWEEN AND EXTRAPOLATION FROM KNOWN DATA, TOPOGRAPHIC CONTOURS, AND KNOWN FIELD CONDITIONS. THEREFORE, GROUNDWATER CONTOURS MAY NOT REFLECT ACTUAL GROUNDWATER CONDITIONS.
5. GROUNDWATER CONTOUR LINES SHOW THE WATER TABLE SHAPE AND ELEVATION. THESE CONTOURS ARE INFERRED LINES FOLLOWING THE GROUNDWATER SURFACE AT A CONSTANT ELEVATION ABOVE SEA LEVEL. THE GROUNDWATER FLOW DIRECTION IS GENERALLY PERPENDICULAR TO THE GROUNDWATER SURFACE CONTOURS, SIMILAR TO THE RELATIONSHIP BETWEEN SURFACE WATER FLOW AND TOPOGRAPHIC CONTOURS.
6. MONITORING WELLS GW-1, GW-4, GW-6 AND GW-12 ARE SCREENED IN IN THE LOWER BLACK CREEK FORMATION AND GROUNDWATER ELEVATION DATA WERE NOT USED IN THE CONSTRUCTION OF CONTOURS.
7. THE LOCATION OF PW-1 IS APPROXIMATE.
8. GW-16 WAS DECOMMISSIONED FOLLOWING THE JULY 2007 EVENT AND GW-16R WAS INSTALLED AS A REPLACEMENT.
9. GW-14 WAS DECOMMISSIONED FOLLOWING THE JANUARY 2009 EVENT.



SITE LOCATION MAP

1.0 0 1.0
SCALE MILE
(SCALE IS APPROXIMATE)

200 0 200 400
SCALE FEET

DATE OF PHOTOGRAPHY MARCH 4, 2010. SCALE: 1"=650'
CONTOUR INTERVAL 2'
PHOTOGRAMMETRIC DIGITAL MAPPING BY
SPATIAL DATA CONSULTANTS, INC.
1008 HUTTON LANE, SUITE 109
HIGH POINT, NC 27262
(336) 841-1247

Golder Associates
GOLDER ASSOCIATES INC., INC.

REV	DATE	REVISION DESCRIPTION	CADD	CHK	RVW
1	1/17/11	UPDATE GROUNDWATER CONTOURS	LKB	DYR	RPK
2	03/05/10	UPDATE GROUNDWATER CONTOURS	LKB	DYR	RPK
3	09/01/09	UPDATE GROUNDWATER CONTOURS	LKB	DYR	RPK
4	02/20/09	UPDATE GROUNDWATER CONTOURS	LKB	DYR	RPK
5	08/11/08	UPDATE GROUNDWATER CONTOURS	LKB	JAD	DYR
6	01/31/08	UPDATE GROUNDWATER CONTOURS	LKB	DYR	RPK
7	06/14/07	UPDATE GROUNDWATER CONTOURS	LKB	BD	RPK
8	01/31/07	UPDATE GROUNDWATER CONTOURS	LKB	BD	RPK

PROJECT
EAST CAROLINA REGIONAL MSW LANDFILL
REPUBLIC SERVICES OF NORTH CAROLINA, LLC
BERTIE COUNTY, NORTH CAROLINA

TITLE
JANUARY 4, 2011 YORKTOWN FORMATION GROUNDWATER CONTOUR MAP

PROJECT No.	0536620.011	
FILE No.	0536620A01	
REV.	SCALE	AS SHOWN
DESIGN	DYR	02/20/09
CADD	LKB	02/20/09
CHECK	JAD	02/20/09
REVIEW	RPK	02/20/09

DWG 1

Drawing file: 0536620 (1-21-11).dwg Jan 28, 2011 - 1:01pm

APPENDIX A

GROUNDWATER, SURFACE WATER AND LEACHATE SAMPLING LOGS

Golder Associates

DATE: 1/4/11

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: GW-2
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 14.56 feet
Depth to Bottom: 30.00 feet
Water Column Thickness: 15.44 feet
Pumping Rate: 250 mL/min.
System Volume: 500 mL
Well Location: located between Republic road and perimeter road, NW corner of LF
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
1241	4.54	0.142	5.48	9.45	15.88	147.6	14.81
1244	4.48	0.141	8.40	8.49	16.27	151.0	14.80
1247	4.48	0.141	11.4	8.62	16.43	153.1	14.80
1250	4.55	0.140	9.95	8.43	16.52	163.4	14.80
	Sampled @ 1250						

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Weather - 40s, slight breeze, partly cloudy

Signature: Nath Rath **Date:** 1/4/11

QA/QC Sign Off: [signature] **Date:** 1-27-11

Golder Associates

DATE: 1/4/11

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: GW-7
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 10.75 feet
Depth to Bottom: 18.00 feet
Water Column Thickness: 7.25 feet
Pumping Rate: 200 mL/min.
System Volume: 500 mL
Well Location: next to leachate tanks
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
16:22	4.07	0.263	162	4.82	16.79	254.3	11.76
16:25	4.09	0.266	129	4.50	17.08	256.6	11.78
16:28	4.07	0.267	101	5.13	17.19	260.0	11.78
16:31	4.09	0.268	75.4	4.45	17.20	262.4	11.78
16:34	4.07	0.268	51.9	3.63	17.17	265.2	11.78
16:37	4.07	0.268	38.9	3.25	17.16	267.2	11.78
16:40	4.06	0.268	22.2	3.60	17.14	269.2	11.78
16:43	4.06	0.269	17.2	4.20	17.09	270.7	11.78
16:46	4.04	0.269	15.4	4.27	17.10	272.7	11.78
16:49	4.07	0.269	14.3	4.15	17.09	274.2	11.78
Sampled @ 1649							

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Weather: 30s, partly cloudy, calm

Signature: Ryan Stringfellow
Date: 1/4/11

QA/QC Sign Off: [illegible]
Date: 1-27-11

Golder Associates

DATE: 1/4/11

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: ~~MW~~ GW-8
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 12.23 feet
Depth to Bottom: 18.00 feet
Water Column Thickness: 5.77 feet
Pumping Rate: 250 mL/min.
System Volume: 500 mL
Well Location: located on corner of enterance rd and perimeter rd near garage
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
1546	485	0.151	16.8	6.90	15.74	152.0	12.34
1549	4.75	0.148	11.2	4.88	16.30	177.4	12.33
1552	4.69	0.147	8.78	4.55	16.35	191.1	12.32
1555	4.71	0.147	4.66	4.64	16.39	200.4	12.33
1558	4.68	0.148	4.34	4.79	16.43	209.7	12.33
1601	4.71	0.148	5.51	4.46	16.38	211.4	12.33
	Sampled @ 1601						

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Weather - 40s, partly cloudy, slight breeze

Signature: [signature] **Date:** 1/4/11

QA/QC Sign Off: [signature] **Date:** 1-27-11

Golder Associates

DATE: 1/4/11

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: GW-9
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 3.88 feet
Depth to Bottom: 13.00 feet
Water Column Thickness: 9.12 feet
Pumping Rate: 200 mL/min.
System Volume: 500 mL
Well Location: between maintenance shop and neighboring wetland
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
14:47	5.50	0.266	111	5.76	13.90	79.9	4.48
14:50	5.72	0.398	832	6.70	14.33	42.6	4.37
14:53	5.82	0.424	532	6.60	14.15	9.4	4.45
14:56	5.79	0.424	303	5.57	14.14	-1.7	4.57
14:59	5.74	0.416	260	4.04	14.21	-7.6	4.51
15:02	5.77	0.409	135	3.57	14.19	-6.1	4.46
15:03	5.79	0.395	95.4	3.84	14.23	-16.8	4.44
15:06	5.78	0.379	66.9	3.41	14.26	-26.1	4.50
15:09	5.74	0.376	50.0	3.14	14.26	-23.8	4.50
15:12	5.79	0.374	48.9	2.99	14.22	-19.7	4.50
15:15	5.74	0.361	52.3	2.61	14.22	-12.6	4.50
15:18	5.75	0.350	34.3	2.27	14.31	-17.6	4.50
15:21	5.72	0.342	39.0	2.19	14.31	-5.6	4.50
15:24	5.73	0.342	42.2	2.30	14.22	-5.9	4.50
Sampled @		1524					

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Partly Cloudy, Breezy, 40s

Signature: R. Stringfellow **Date:** 1/4/11

QA/QC Sign Off: [illegible] **Date:** 1-27-11

DATE: 1/4/11

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: GW-10
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 4.64 feet
Depth to Bottom: 20.00 feet
Water Column Thickness: 15.36 feet
Pumping Rate: 250 mL/min.
System Volume: 500 mL
Well Location: located down hill SW of seal pond and LF
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
1411	5.60	0.133	14.4	4.08	14.47	111.3	4.72
1414	5.71	0.135	102	3.13	14.58	94.7	4.69
1417	5.78	0.135	151	2.52	14.56	87.9	4.69
1420	5.77	0.135	121	2.00	14.55	87.5	4.69
1423	5.74	0.135	92.4	2.00	14.58	87.7	4.69
1426	5.75	0.136	57.1	1.96	14.58	85.9	4.69
1429	5.73	0.135	29.8	1.84	14.69	85.4	4.69
	Sampled @ 1429						

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Weather: calm, 40s, partly cloudy

Signature: [signature] **Date:** 1/4/11

QA/QC Sign Off: [signature] **Date:** 1-27-11

DATE: 1/4/11

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: GW-11
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 24.25 feet
Depth to Bottom: 29.30 feet
Water Column Thickness: 5.05 feet
Pumping Rate: 250 mL/min.
System Volume: 500 mL
Well Location: along perimeter road on Western side near large pond
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
13:33	4.94	0.066	5.78	7.18	17.00	140.2	24.85
13:36	5.00	0.061	8.28	6.30	17.56	136.7	25.22
13:39	5.04	0.060	9.71	6.40	17.58	134.2	25.49
13:42	5.09	0.061	8.28	6.54	17.62	131.0	25.55
13:45	5.00	0.062	8.01	6.24	17.54	138.1	25.60
Sampled @ 13:45							

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Partly Cloudy, breezy. 40s

Signature: [signature] **Date:** 1/4/11

QA/QC Sign Off: [signature] **Date:** 1-27-11

DATE: 1/4/11

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: GW-13
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 24.16 feet
Depth to Bottom: 41.60 feet
Water Column Thickness: 17.44 feet
Pumping Rate: 300 mL/min.
System Volume: 500 mL
Well Location: located next to seed pond and perimeter road
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
1305	4.70	0.101	3.51	8.66	16.04	158.0	24.18
1308	4.69	0.101	1.76	7.96	16.14	157.9	24.20
1311	4.73	0.102	1.38	7.99	16.13	158.4	24.20
1314	4.72	0.101	1.41	7.95	16.54	160.0	24.20
	Sampled @ 1314						

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Weather: slight breeze, 40s, partly cloudy

Signature: [signature] **Date:** 1/4/11

QA/QC Sign Off: [signature] **Date:** 1-27-11

DATE: 01/04/10

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: GW-15
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 27.15 feet
Depth to Bottom: 39.05 feet
Water Column Thickness: 11.90 feet
Pumping Rate: 250 mL/min.
System Volume: ~~704~~ RS 500 mL
Well Location: NW side of LF on perimeter rd by dumpster storage
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
12:23	4.87	0.102	11.75	7.87	15.06	149.5	27.19
12:26	4.97	0.102	1.56	7.53	15.42	146.8	27.25
12:29	4.89	0.100	0.94	7.16	15.70	147.6	27.21
12:32	4.91	0.100	0.80	8.19	15.81	151.6	27.21
12:35	4.95	0.099	0.79	7.29	15.50	153.6	27.21
12:38	4.86	0.100	0.72	6.96	15.~~58~~ ~~15.8~~ RS	156.3	27.21
12:41	4.86	0.100	0.78	7.07	~~15.58~~ ~~15.6~~ RS	151.7	27.21
					15.50		
Sampled @	12:41						

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Weather: Cloudy, ~~[illegible]~~ RS 40s, breezy

Signature: [signature] **Date:** 01/04/10

QA/QC Sign Off: [signature] **Date:** 1-27-11

DATE: 1/5/11

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: GW-16R
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 12.85 feet
Depth to Bottom: 27.20 feet
Water Column Thickness: 14.35 feet
Pumping Rate: 250 mL/min.
System Volume: 500 mL
Well Location: down hill off perimeter rd NE of LF
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
0916	4.67	0.033	8.31	2.31	14.80	172.5	12.94
0919	4.64	0.032	3.02	1.88	15.28	194.1	12.97
0922	4.63	0.032	1.83	1.60	15.41	192.1	12.87
0925	4.61	0.032	1.29	1.15	15.48	206.4	12.87
0928	4.49	0.032	~~0.8~~ 0.83	1.10	15.52	213.1	12.87
0931	4.46	0.032	0.67	1.00	15.51	219.2	12.87
	Sampled @ 0931						

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Weather - calm, 40s, partly cloudy

Signature: Nathan Rath
Date: 1/5/11

QA/QC Sign Off: Paul Roaf
Date: 1-27-11

DATE: 1/5/2011

Golder Associates

GROUNDWATER SAMPLING LOG

Project Name: East Carolina
Project No./Phase No.: 0536620011
Well ID: GW-17
Sampler(s): R.Stringfellow, N.Rathjen
Well Diameter: 2 inches
Initial Depth to Water: 32.18 feet
Depth to Bottom: 44.30 feet
Water Column Thickness: 12.12 feet
Pumping Rate: 250 mL/min.
System Volume: 500 mL
Well Location: North side of landfill along perimeter road
Equipment: YSI 556, QED MP-15, Hanna Turbidimeter, Water Level Meter
Dedicated Bladder Pump

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Dis O_2 (mg/L)	Temp. (°C)	ORP (millivolts)	DTW (feet)
9:59	4.54	0.078	680	5.29	14.80	233.1	32.44
10:02	4.53	0.081	277	4.43	15.07	236.7	32.44
10:05	4.53	0.081	172	4.10	15.20	234.0	32.44
10:08	4.45	0.082	213	4.07	15.22	234.2	32.44
10:11	4.59	0.082	223	3.99	15.26	241.2	32.44
10:14	4.59	0.082	215	3.91	15.31	235.4	32.44
10:17	4.60	0.081	184	4.06	15.30	233.6	32.44
10:20	4.58	0.082	161	3.91	15.30	239.8	32.44
10:23	4.54	0.082	124	3.96	15.33	237.3	32.44
10:26	4.50	0.082	119	3.93	15.40	240.0	32.44
10:29	4.60	0.082	113	3.97	15.40	239.6	32.44
10:32	4.53	0.082	107	3.93	15.53	239.0	32.44
10:35	4.51	0.082	101	4.08	15.56	238.0	32.44
10:38	4.61	0.082	105	3.89	15.47	237.4	32.44
10:41	4.48	0.082	82.2	4.04	15.44	243.4	32.44
Sampled @		10:41					

Comments (weather conditions, color, type of sample, purge-water management, etc.):
Weather: 30s, Partly Cloudy, Calm

Signature: [signature] **Date:** 1/5/2011

QA/QC Sign Off: [signature] **Date:** 1-27-11

Golder Associates

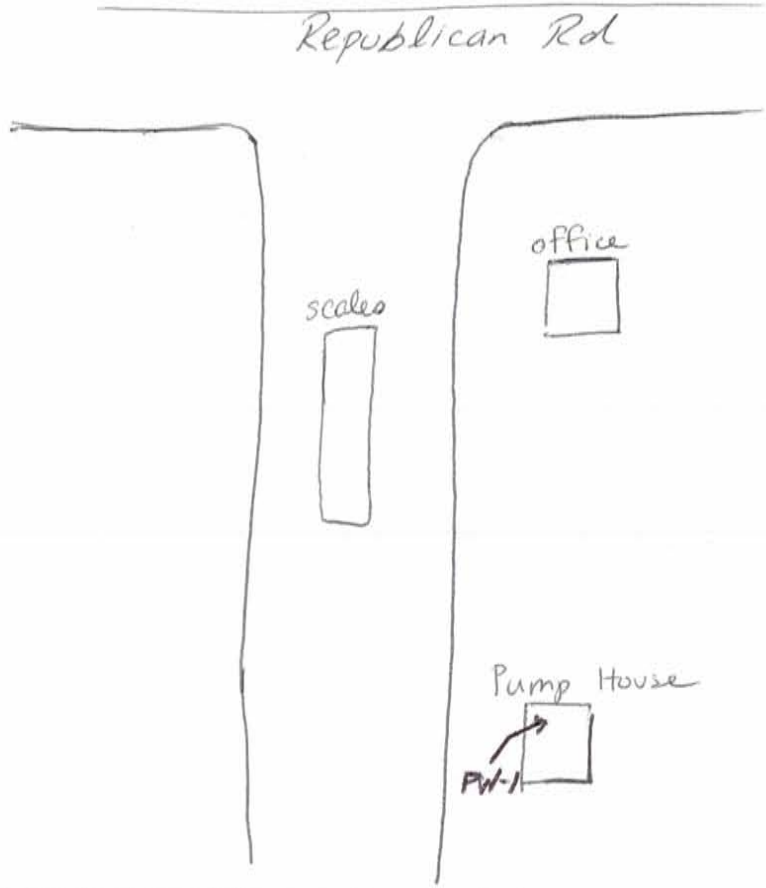
DATE: 1/5/11

SURFACE WATER SAMPLING LOG

Project Name: East Carolina **Project No./Phase No.:** 0536620011
Sample ID: PW-1 **Sampler(s):** R.Stringfellow, N.Rathjen
Sampling Location: spiget in back left corner of pump house
Equipment: YSI 556, Hanna Turbidimeter

Time	1130
pH s.u.	8.10
Cond. mS/cm	0.533
Turb. ntu	1.12
Dis. O_2 mg/L	–
Temp. °C	16.41
ORP mv	–

Surface Water Sampling Location Sketch



Comments (sample methodology, weather conditions, color, silt, etc.):
Weather - calm, partly cloudy 40s
Note: spigot located inside pump house

Signature: Nath Rath **Date:** 1/5/11

QA/QC Sign Off: Paul Reed **Date:** 1-27-11

Golder Associates

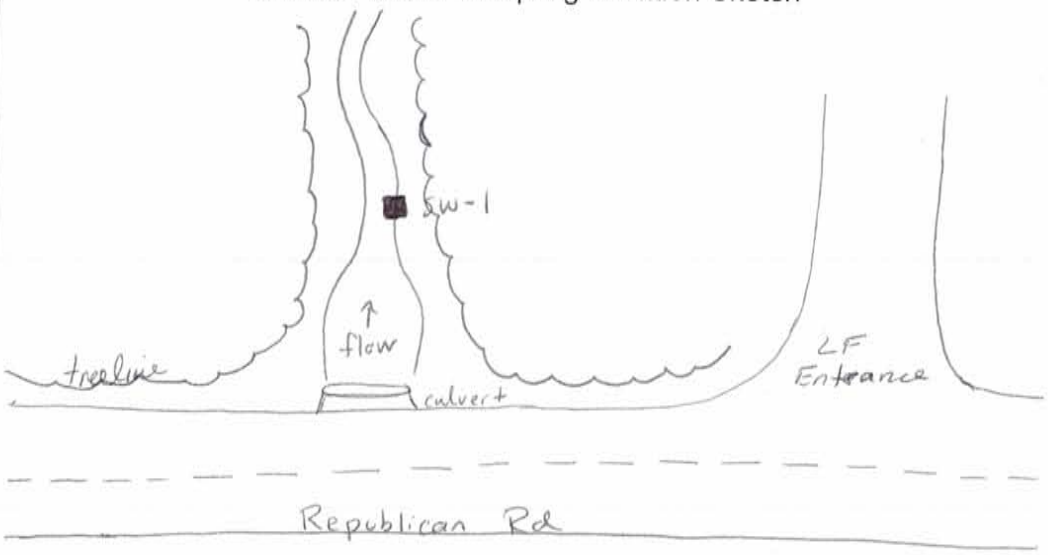
DATE: 1/5/11

SURFACE WATER SAMPLING LOG

Project Name: East Carolina **Project No./Phase No.:** 0536620011
Sample ID: SW-1 **Sampler(s):** R.Stringfellow, N.Rathjen
Sampling Location: located along Republican Rd near LF enterance
Equipment: YSI 556, Hanna Turbidimeter

Time	1150
pH s.u.	4.24
Cond. mS/cm	0.034
Turb. ntu	1.53
Dis. O_2 mg/L	8.08
Temp. °C	4.82
ORP mv	211.1

Surface Water Sampling Location Sketch



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

Signature: Nate Rath **Date:** 1/5/11

QA/QC Sign Off: [illegible] **Date:** 1-27-11

Golder Associates

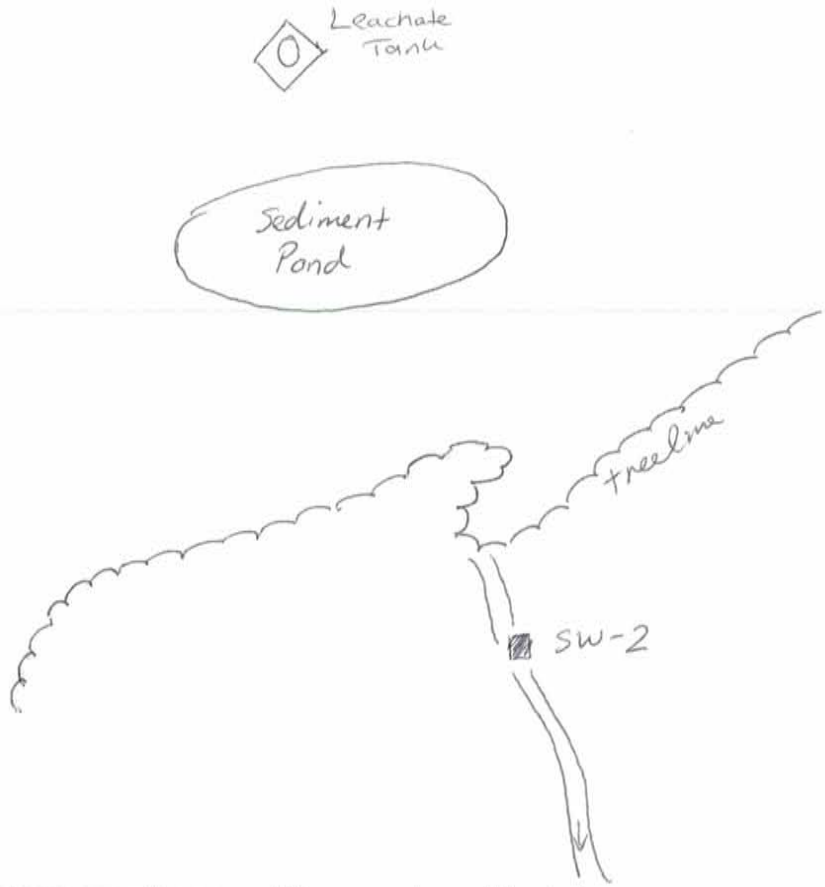
DATE: 1/5/11

SURFACE WATER SAMPLING LOG

Project Name: East Carolina **Project No./Phase No.:** 0536620011
Sample ID: SW-2 **Sampler(s):** R.Stringfellow, N.Rathjen
Sampling Location: near sediment pond in tree line
Equipment: YSI 556, Hanna Turbidimeter

Time	0829
pH s.u.	–
Cond. mS/cm	–
Turb. ntu	–
Dis. O_2 mg/L	–
Temp. °C	–
ORP mv	–

Surface Water Sampling Location Sketch



Comments (sample methodology, weather conditions, color, silt, etc.):
Dry, No sample collected

Signature: [signature] **Date:** 1/5/11

QA/QC Sign Off: [signature] **Date:** 1-27-11

Golder Associates

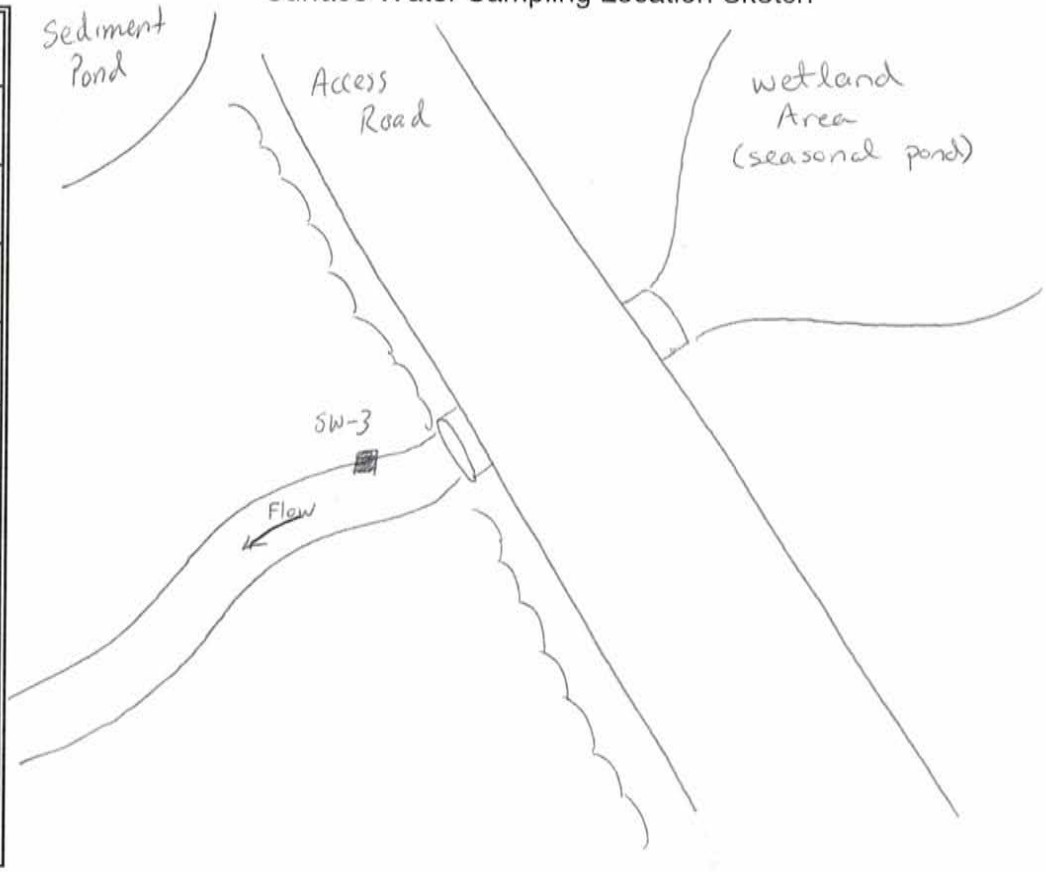
DATE: 1/4/11

SURFACE WATER SAMPLING LOG

Project Name: East Carolina **Project No./Phase No.:** 0536620011
Sample ID: SW-3 **Sampler(s):** R.Stringfellow, N.Rathjen
Sampling Location: located off access road near wetland area
Equipment: YSI 556, Hanna Turbidimeter

Time	1712
pH s.u.	5.51
Cond. mS/cm	0.126
Turb. ntu	12.9
Dis. O_2 mg/L	10.95
Temp. °C	6.06
ORP mv	288.5

Surface Water Sampling Location Sketch



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

Signature: [signature] **Date:** 1/4/11

QA/QC Sign Off: [signature] **Date:** 1-27-11

Golder Associates

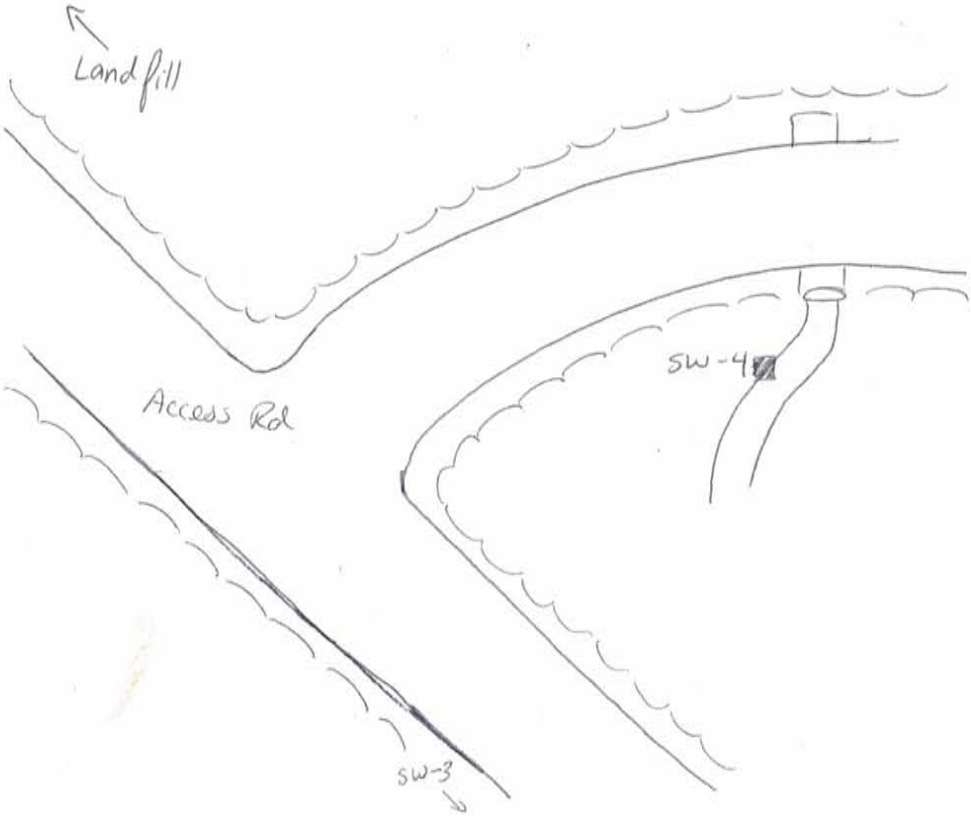
DATE: 1/4/11

SURFACE WATER SAMPLING LOG

Project Name: East Carolina **Project No./Phase No.:** 0536620011
Sample ID: SW-4 **Sampler(s):** R.Stringfellow, N.Rathjen
Sampling Location: from SW-3 go away from pond, first right, on R @ culvert
Equipment: YSI 556, Hanna Turbidimeter

Time	1717
pH s.u.	4.30
Cond. mS/cm	0.087
Turb. ntu	40.4
Dis. O_2 mg/L	10.59
Temp. °C	6.16
ORP mv	281.2

Surface Water Sampling Location Sketch



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

Signature: [signature] **Date:** 1/4/11

QA/QC Sign Off: [signature] **Date:** 1-27-11

Golder Associates

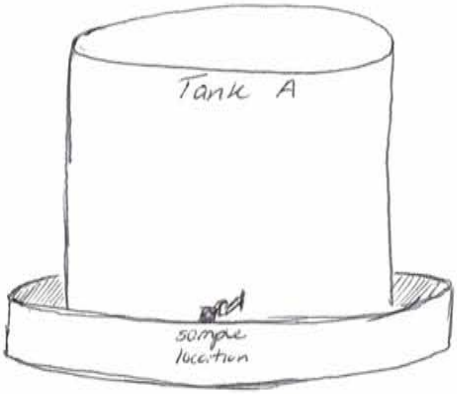
DATE: 1/5/11

LEACHATE SAMPLING LOG

Project Name: East Carolina **Project No./Phase No.:** 0536620011
Sample ID: Leachate Tank **Sampler(s):** R.Stringfellow, N.Rathjen
Sampling Location: new leachate tank near methane flare, sample @ spigot
Equipment: YSI 556

Time	1111
pH s.u.	7.50
Cond. mS/cm	11.37
Turb. ntu	1.12
Dis. O_2 mg/L	–
Temp. °C	16.41
ORP mv	–

Sampling Location Sketch



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

Signature: [signature] **Date:** 1/5/11

QA/QC Sign Off: [signature] **Date:** 1-27-11

Golder Associates

WELL CONDITION SUMMARY

DATE: 1/5/11

Project Name East Carolina

Personnel N. Rathien, R. Stringfellow

Project No./Task No. 0536620011

Page 1 of 1

Well ID	Protective Casing	Well Casing	Label	Lock	Pad Condition	Depth of Well (Feet)	General Turbudity	Comments/ Observations*
GW-2	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☐ Damaged		☐ Clear ☐ Turbid	
GW-15	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☐ Damaged		☐ Clear ☐ Turbid	
GW-13	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☐ Damaged		☐ Clear ☐ Turbid	
GW-11	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☒ Damaged		☐ Clear ☐ Turbid	-pulled pump for repair -loose pad
GW-10	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☐ Damaged		☐ Clear ☐ Turbid	-pulled pump for repair
GW-9	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☐ Damaged		☐ Clear ☐ Turbid	-pulled pump for repair
GW-8	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☐ Damaged		☐ Clear ☐ Turbid	-pulled pump for repair
GW-7	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☐ Damaged		☐ Clear ☐ Turbid	-pulled pump for repair
GW-16R	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☐ Damaged		☐ Clear ☐ Turbid	
GW-17	☒ OK ☐ Damaged	☒ OK ☐ Damaged	☒ OK ☐ Inadequate	☒ Yes ☐ No	☒ OK ☐ Damaged		☐ Clear ☐ Turbid	
	☐ OK ☐ Damaged	☐ OK ☐ Damaged	☐ OK ☐ Inadequate	☐ Yes ☐ No	☐ OK ☐ Damaged		☐ Clear ☐ Turbid	
	☐ OK ☐ Damaged	☐ OK ☐ Damaged	☐ OK ☐ Inadequate	☐ Yes ☐ No	☐ OK ☐ Damaged		☐ Clear ☐ Turbid	

* Note ponding water, weep holes, condition of surrounding area, including any disturbance of the ground since last inspection, evidence of contamination.

Signature: Nath Rath Date: 1/5/11

Paul M Reeves 2-16-11

APPENDIX B

JANUARY 2011 GROUNDWATER AND LEACHATE CERTIFICATES-OF-ANALYSIS, CHAIN-OF-CUSTODY FORMS AND 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

Tuesday, January 18, 2011

Golder Associates, Inc. (GO007)

Attn: Dusty Reedy

5B Oak Branch Drive

Greensboro, NC 27407

RE: Laboratory Results for
Project Number: 053-6620011.100, Project Name/Desc: Republic-East Carolina Landfill
ENCO Workorder: C015017

Dear Dusty Reedy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Wednesday, January 5, 2011.

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

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

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

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

Sincerely,

Stephanie Franz

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 65.

PROJECT NARRATIVE

Date: 18 January 2011
Client: Golder Associates, Inc. (GO007)
Project: Republic-East Carolina Landfill
Lab ID: C015017

Overview

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

Quality Control Samples

No Comments

Quality Control Remarks

No Comments

Other Comments

All samples received under this work order arrived in acceptable conditions. The samples were not checked for residual chlorine, as it is not required. SW-2 was not collected, as the source was dry.

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

Released By:
Environmental Conservation Laboratories, Inc.

Stephanie Franz
Project Manager

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 0803-GW2 **Lab ID: C015017-01** **Sampled: 01/04/11 11:50** **Received: 01/05/11 15:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11	08:07	1/7/2011 10:52
EPA 6020A	07/03/11	01/06/11	08:12	1/14/2011 10:15
EPA 8260B	01/18/11	01/06/11	08:59	1/7/2011 15:30

Client ID: 0803-GW7 (MS/MSD) **Lab ID: C015017-02** **Sampled: 01/04/11 16:49** **Received: 01/05/11 15:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11	08:07	1/7/2011 10:41
EPA 6020A	07/03/11	01/06/11	08:12	1/14/2011 09:57
EPA 8260B	01/18/11	01/06/11	08:59	1/7/2011 15:00

Client ID: 0803-GW8 **Lab ID: C015017-03** **Sampled: 01/04/11 16:01** **Received: 01/05/11 15:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11	08:07	1/7/2011 10:54
EPA 6020A	07/03/11	01/06/11	08:12	1/14/2011 10:19
EPA 8260B	01/18/11	01/06/11	08:59	1/7/2011 15:59

Client ID: 0803-GW9 **Lab ID: C015017-04** **Sampled: 01/04/11 15:24** **Received: 01/05/11 15:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11	08:07	1/7/2011 10:56
EPA 6020A	07/03/11	01/06/11	08:12	1/14/2011 10:22
EPA 8260B	01/18/11	01/06/11	08:59	1/7/2011 16:28

Client ID: 0803-GW10 **Lab ID: C015017-05** **Sampled: 01/04/11 14:29** **Received: 01/05/11 15:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11	08:07	1/7/2011 11:05
EPA 6020A	07/03/11	01/06/11	08:12	1/14/2011 10:33
EPA 8260B	01/18/11	01/06/11	08:59	1/7/2011 16:58

Client ID: 0803-GW11 **Lab ID: C015017-06** **Sampled: 01/04/11 13:45** **Received: 01/05/11 15:15**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)		Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11	08:07	1/7/2011 11:07
EPA 6020A	07/03/11	01/06/11	08:12	1/14/2011 10:37
EPA 8260B	01/18/11	01/06/11	08:59	1/7/2011 17:27

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Client ID: 0803-GW13	Lab ID: C015017-07	Sampled: 01/04/11 13:14	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11 08:07	1/7/2011 11:09
EPA 6020A	07/03/11	01/06/11 08:12	1/14/2011 10:40
EPA 8260B	01/18/11	01/06/11 08:59	1/7/2011 17:56

Client ID: 0803-GW15	Lab ID: C015017-08	Sampled: 01/04/11 12:41	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11 08:07	1/7/2011 11:11
EPA 6020A	07/03/11	01/06/11 08:12	1/14/2011 10:44
EPA 8260B	01/18/11	01/06/11 08:59	1/7/2011 18:26

Client ID: 0803-GW16R	Lab ID: C015017-09	Sampled: 01/05/11 09:31	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/04/11	01/06/11 08:07	1/7/2011 11:14
EPA 6020A	07/04/11	01/06/11 08:12	1/14/2011 10:48
EPA 8260B	01/19/11	01/06/11 08:59	1/7/2011 18:55

Client ID: 0803-GW17	Lab ID: C015017-10	Sampled: 01/05/11 10:41	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/04/11	01/06/11 08:07	1/7/2011 11:16
EPA 6020A	07/04/11	01/06/11 08:12	1/14/2011 10:51
EPA 8260B	01/19/11	01/06/11 08:59	1/7/2011 19:24

Client ID: 0803-PW1	Lab ID: C015017-11	Sampled: 01/05/11 11:30	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/04/11	01/06/11 08:07	1/7/2011 11:18
EPA 6020A	07/04/11	01/06/11 08:12	1/14/2011 10:55
EPA 8260B	01/19/11	01/06/11 08:59	1/7/2011 19:54

Client ID: 0803-SW1	Lab ID: C015017-12	Sampled: 01/05/11 11:50	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/04/11	01/06/11 08:07	1/7/2011 11:20
EPA 6020A	07/04/11	01/06/11 08:12	1/14/2011 10:58
EPA 8260B	01/19/11	01/06/11 08:59	1/7/2011 20:23

Client ID: 0803-SW3	Lab ID: C015017-13	Sampled: 01/04/11 17:12	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11 08:07	1/7/2011 11:23
EPA 6020A	07/03/11	01/06/11 08:12	1/14/2011 11:02
EPA 8260B	01/18/11	01/06/11 08:59	1/7/2011 20:52

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Client ID: 0803-SW4	Lab ID: C015017-14	Sampled: 01/04/11 17:17	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/03/11	01/06/11 08:07	1/7/2011 11:25
EPA 6020A	07/03/11	01/06/11 08:12	1/14/2011 11:06
EPA 8260B	01/18/11	01/06/11 08:59	1/7/2011 21:22

Client ID: 0803-Field Blank	Lab ID: C015017-15	Sampled: 01/05/11 11:35	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010C	07/04/11	01/06/11 08:07	1/7/2011 11:33
EPA 6020A	07/04/11	01/06/11 08:12	1/14/2011 11:16
EPA 8260B	01/19/11	01/06/11 08:59	1/7/2011 21:51

Client ID: 0803-Trip Blank	Lab ID: C015017-16RE1	Sampled: 01/04/11 11:50	Received: 01/05/11 15:15

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	01/18/11	01/12/11 09:43	1/12/2011 17:51

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 0803-GW2 **Lab ID: C015017-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	3.06	J	1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total	409		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	1.08		1	0.100	1.00	1	ug/L	EPA 6010C	
Cadmium - Total	0.434	J	1	0.360	1.00	1	ug/L	EPA 6010C	
Chromium - Total	1.46	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	9.65	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	2.30	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	6.42	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Zinc - Total	9.70	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-GW7 (MS/MSD) **Lab ID: C015017-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	5.85	J	1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total	100		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	2.38		1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	4.26	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	29.8		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	2.16	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Lead - Total	3.03	J	1	1.90	10.0	10	ug/L	EPA 6010C	
Nickel - Total	9.32	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Thallium - Total	0.122	J	1	0.110	1.00	5.5	ug/L	EPA 6020A	
Vanadium - Total	6.03	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	7.51	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-GW8 **Lab ID: C015017-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	120		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.799	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	1.42	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	3.63	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.17	J	1	1.80	10.0	50	ug/L	EPA 6010C	

Client ID: 0803-GW9 **Lab ID: C015017-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	6.00	J	1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total	207		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.574	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	4.41	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	3.19	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	3.09	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	4.60	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Selenium - Total	1.89	J	1	0.830	1.00	10	ug/L	EPA 6020A	
Vanadium - Total	10.5	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	14.0		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-GW10 **Lab ID: C015017-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	92.8	J	1	1.00	10.0	100	ug/L	EPA 6010C	

Client ID: 0803-GW10 **Lab ID: C015017-05**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Beryllium - Total	0.296	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Copper - Total	1.80	J	1	1.60	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-GW11 **Lab ID: C015017-06**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	21.8	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.427	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chloroform	0.44	J	1	0.20	1.0	5	ug/L	EPA 8260B	
Chromium - Total	4.82	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	1.19	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	4.68	J	1	1.60	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-GW13 **Lab ID: C015017-07**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	261		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.506	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Cobalt - Total	2.24	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.50	J	1	1.80	10.0	50	ug/L	EPA 6010C	

Client ID: 0803-GW15 **Lab ID: C015017-08**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	8.04	J	1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total	105		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.284	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	1.23	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	2.60	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.92	J	1	1.80	10.0	50	ug/L	EPA 6010C	

Client ID: 0803-GW16R **Lab ID: C015017-09**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	37.8	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.152	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Cobalt - Total	1.77	J	1	1.10	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-GW17 **Lab ID: C015017-10**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	156		1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.420	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chloroform	2.3	J	1	0.20	1.0	5	ug/L	EPA 8260B	
Chromium - Total	5.21	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	5.07	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	3.49	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	2.54	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	8.25	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	8.51	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-PW1 **Lab ID: C015017-11**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	63.0	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Copper - Total	20.1		1	1.60	10.0	10	ug/L	EPA 6010C	
Zinc - Total	44.0		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-SW1 **Lab ID: C015017-12**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Arsenic - Total	5.15	J	1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total	56.9	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.212	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	1.10	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	1.51	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	1.51	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	5.84	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-SW3 **Lab ID: C015017-13**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	59.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.178	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	1.40	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Copper - Total	1.67	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Vanadium - Total	2.02	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	8.05	J	1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-SW4 **Lab ID: C015017-14**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	87.6	J	1	1.00	10.0	100	ug/L	EPA 6010C	
Beryllium - Total	0.174	J	1	0.100	1.00	1	ug/L	EPA 6010C	
Chromium - Total	5.21	J	1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	3.01	J	1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	2.02	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Nickel - Total	3.41	J	1	1.80	10.0	50	ug/L	EPA 6010C	
Vanadium - Total	10.0	J	1	1.40	10.0	25	ug/L	EPA 6010C	
Zinc - Total	64.0		1	3.80	10.0	10	ug/L	EPA 6010C	

Client ID: 0803-Field Blank **Lab ID: C015017-15**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium - Total	1.11	J	1	1.00	10.0	100	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 0803-GW2 **Lab Sample ID:** C015017-01 **Received:** 01/05/11 15:15

Matrix: Ground Water **Sampled:** 01/04/11 11:50 **Work Order:** C015017

Project: Republic-East Carolina Landfill **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 15:30	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 15:30	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 15:30	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 15:30	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 15:30	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 15:30	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 15:30	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 15:30	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 15:30	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 15:30	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 15:30	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 15:30	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 15:30	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 15:30	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 15:30	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 15:30	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 15:30	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 15:30	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 15:30	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 15:30	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 15:30	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 15:30	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 15:30	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 15:30	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:30	jkg	

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Description: 0803-GW2 | **Lab Sample ID:** C015017-01 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 11:50 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 15:30	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 15:30	jkg	
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 15:30	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 15:30*	*jkg*	
Dibromofluoromethane	*45*	*1*	*50.0*	*91 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 15:30*	*jkg*	
Toluene-d8	*50*	*1*	*50.0*	*101 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 15:30*	*jkg*	

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Description: 0803-GW2 | **Lab Sample ID:** C015017-01 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 11:50 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:15	VLO	
Arsenic [7440-38-2] ^	**3.06**	J	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 10:52	JDH	
Barium [7440-39-3] ^	**409**		ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 10:52	JDH	
Beryllium [7440-41-7] ^	**1.08**		ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 10:52	JDH	
Cadmium [7440-43-9] ^	**0.434**	J	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 10:52	JDH	
Chromium [7440-47-3] ^	**1.46**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 10:52	JDH	
Cobalt [7440-48-4] ^	**9.65**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 10:52	JDH	
Copper [7440-50-8] ^	**2.30**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 10:52	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 10:52	JDH	
Nickel [7440-02-0] ^	**6.42**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 10:52	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:15	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 10:52	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:15	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 10:52	JDH	
Zinc [7440-66-6] ^	**9.70**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 10:52	JDH	

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

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Description: 0803-GW7 (MS/MSD) **Lab Sample ID:** C015017-02 **Received:** 01/05/11 15:15

Matrix: Ground Water **Sampled:** 01/04/11 16:49 **Work Order:** C015017

Project: Republic-East Carolina Landfill **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 15:00	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 15:00	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 15:00	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 15:00	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 15:00	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 15:00	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 15:00	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 15:00	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 15:00	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 15:00	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 15:00	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 15:00	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 15:00	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 15:00	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 15:00	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 15:00	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 15:00	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 15:00	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 15:00	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 15:00	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 15:00	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 15:00	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 15:00	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 15:00	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 15:00	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 15:00	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 15:00	jkg	

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Description: 0803-GW7 (MS/MSD) **Lab Sample ID:** C015017-02 **Received:** 01/05/11 15:15

Matrix: Ground Water **Sampled:** 01/04/11 16:49 **Work Order:** C015017

Project: Republic-East Carolina Landfill **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 15:00	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 15:00*	*jkg*	
Dibromofluoromethane	*44*	*1*	*50.0*	*89 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 15:00*	*jkg*	
Toluene-d8	*49*	*1*	*50.0*	*99 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 15:00*	*jkg*	

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Description: 0803-GW7 (MS/MSD) **Lab Sample ID:** C015017-02 **Received:** 01/05/11 15:15

Matrix: Ground Water **Sampled:** 01/04/11 16:49 **Work Order:** C015017

Project: Republic-East Carolina Landfill **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 09:57	VLO	
Arsenic [7440-38-2] ^	**5.85**	J	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 10:41	JDH	
Barium [7440-39-3] ^	**100**		ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 10:41	JDH	
Beryllium [7440-41-7] ^	**2.38**		ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 10:41	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 10:41	JDH	
Chromium [7440-47-3] ^	**4.26**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 10:41	JDH	
Cobalt [7440-48-4] ^	**29.8**		ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 10:41	JDH	
Copper [7440-50-8] ^	**2.16**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 10:41	JDH	
Lead [7439-92-1] ^	**3.03**	J	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 10:41	JDH	
Nickel [7440-02-0] ^	**9.32**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 10:41	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 09:57	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 10:41	JDH	
Thallium [7440-28-0] ^	**0.122**	J	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 09:57	VLO	
Vanadium [7440-62-2] ^	**6.03**	J	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 10:41	JDH	
Zinc [7440-66-6] ^	**7.51**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 10:41	JDH	

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

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Description: 0803-GW8 | **Lab Sample ID:** C015017-03 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 16:01 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 15:59	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 15:59	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 15:59	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 15:59	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 15:59	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 15:59	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 15:59	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 15:59	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 15:59	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 15:59	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 15:59	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 15:59	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 15:59	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 15:59	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 15:59	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 15:59	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 15:59	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 15:59	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 15:59	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 15:59	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 15:59	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 15:59	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 15:59	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 15:59	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 15:59	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 15:59	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 15:59	jkg	

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Description: 0803-GW8 | **Lab Sample ID:** C015017-03 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 16:01 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 15:59	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 15:59*	*jkg*	
Dibromofluoromethane	*44*	*1*	*50.0*	*89 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 15:59*	*jkg*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 15:59*	*jkg*	

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Description: 0803-GW8 | **Lab Sample ID:** C015017-03 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 16:01 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:19	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 10:54	JDH	
Barium [7440-39-3] ^	**120**		ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 10:54	JDH	
Beryllium [7440-41-7] ^	**0.799**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 10:54	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 10:54	JDH	
Chromium [7440-47-3] ^	**1.42**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 10:54	JDH	
Cobalt [7440-48-4] ^	**3.63**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 10:54	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 10:54	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 10:54	JDH	
Nickel [7440-02-0] ^	**2.17**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 10:54	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:19	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 10:54	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:19	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 10:54	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 10:54	JDH	

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

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Description: 0803-GW9 | **Lab Sample ID:** C015017-04 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 15:24 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 16:28	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 16:28	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 16:28	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 16:28	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 16:28	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 16:28	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 16:28	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 16:28	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 16:28	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 16:28	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 16:28	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 16:28	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 16:28	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 16:28	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 16:28	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 16:28	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 16:28	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 16:28	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 16:28	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 16:28	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 16:28	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 16:28	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 16:28	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 16:28	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 16:28	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 16:28	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 16:28	jkg	

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Description: 0803-GW9 | **Lab Sample ID:** C015017-04 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 15:24 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 16:28	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 16:28*	*jkg*	
Dibromofluoromethane	*45*	*1*	*50.0*	*89 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 16:28*	*jkg*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 16:28*	*jkg*	

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Description: 0803-GW9 | **Lab Sample ID:** C015017-04 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 15:24 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:22	VLO	
Arsenic [7440-38-2] ^	**6.00**	J	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 10:56	JDH	
Barium [7440-39-3] ^	**207**		ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 10:56	JDH	
Beryllium [7440-41-7] ^	**0.574**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 10:56	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 10:56	JDH	
Chromium [7440-47-3] ^	**4.41**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 10:56	JDH	
Cobalt [7440-48-4] ^	**3.19**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 10:56	JDH	
Copper [7440-50-8] ^	**3.09**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 10:56	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 10:56	JDH	
Nickel [7440-02-0] ^	**4.60**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 10:56	JDH	
Selenium [7782-49-2] ^	**1.89**	J	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:22	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 10:56	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:22	VLO	
Vanadium [7440-62-2] ^	**10.5**	J	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 10:56	JDH	
Zinc [7440-66-6] ^	**14.0**		ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 10:56	JDH	

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Description: 0803-GW10 | **Lab Sample ID:** C015017-05 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 14:29 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 16:58	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 16:58	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 16:58	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 16:58	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 16:58	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 16:58	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 16:58	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 16:58	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 16:58	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 16:58	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 16:58	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 16:58	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 16:58	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 16:58	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 16:58	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 16:58	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 16:58	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 16:58	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 16:58	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 16:58	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 16:58	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 16:58	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 16:58	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 16:58	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 16:58	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 16:58	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 16:58	jkg	

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Description: 0803-GW10 | **Lab Sample ID:** C015017-05 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 14:29 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 16:58	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 16:58*	*jkg*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 16:58*	*jkg*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 16:58*	*jkg*	

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Description: 0803-GW10 | **Lab Sample ID:** C015017-05 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 14:29 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:33	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:05	JDH	
Barium [7440-39-3] ^	**92.8**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:05	JDH	
Beryllium [7440-41-7] ^	**0.296**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:05	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:05	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:05	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:05	JDH	
Copper [7440-50-8] ^	**1.80**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:05	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:05	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:05	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:33	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:05	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:33	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:05	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:05	JDH	

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

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Description: 0803-GW11 | **Lab Sample ID:** C015017-06 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 13:45 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 17:27	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 17:27	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 17:27	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 17:27	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 17:27	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 17:27	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 17:27	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 17:27	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 17:27	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 17:27	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 17:27	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 17:27	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 17:27	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 17:27	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 17:27	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 17:27	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 17:27	jkg	
Chloroform [67-66-3] ^	**0.44**	J	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 17:27	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 17:27	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 17:27	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 17:27	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 17:27	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 17:27	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 17:27	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 17:27	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 17:27	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 17:27	jkg	

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Description: 0803-GW11 | **Lab Sample ID:** C015017-06 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 13:45 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 17:27	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*55*	*1*	*50.0*	*109 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 17:27*	*jkg*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 17:27*	*jkg*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 17:27*	*jkg*	

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Description: 0803-GW11 | **Lab Sample ID:** C015017-06 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 13:45 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:37	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:07	JDH	
Barium [7440-39-3] ^	**21.8**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:07	JDH	
Beryllium [7440-41-7] ^	**0.427**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:07	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:07	JDH	
Chromium [7440-47-3] ^	**4.82**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:07	JDH	
Cobalt [7440-48-4] ^	**1.19**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:07	JDH	
Copper [7440-50-8] ^	**4.68**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:07	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:07	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:07	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:37	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:07	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:37	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:07	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:07	JDH	

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

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Description: 0803-GW13 | **Lab Sample ID:** C015017-07 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 13:14 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 17:56	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 17:56	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 17:56	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 17:56	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 17:56	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 17:56	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 17:56	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 17:56	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 17:56	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 17:56	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 17:56	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 17:56	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 17:56	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 17:56	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 17:56	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 17:56	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 17:56	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 17:56	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 17:56	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 17:56	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 17:56	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 17:56	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 17:56	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 17:56	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 17:56	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 17:56	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 17:56	jkg	

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Description: 0803-GW13 | **Lab Sample ID:** C015017-07 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 13:14 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 17:56	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 17:56*	*jkg*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 17:56*	*jkg*	
Toluene-d8	*46*	*1*	*50.0*	*92 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 17:56*	*jkg*	

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Description: 0803-GW13 | **Lab Sample ID:** C015017-07 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 13:14 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:40	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:09	JDH	
Barium [7440-39-3] ^	**261**		ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:09	JDH	
Beryllium [7440-41-7] ^	**0.506**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:09	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:09	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:09	JDH	
Cobalt [7440-48-4] ^	**2.24**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:09	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:09	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:09	JDH	
Nickel [7440-02-0] ^	**2.50**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:09	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:40	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:09	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:40	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:09	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:09	JDH	

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

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Description: 0803-GW15 | **Lab Sample ID:** C015017-08 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 12:41 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 18:26	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 18:26	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 18:26	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 18:26	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 18:26	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 18:26	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 18:26	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 18:26	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 18:26	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 18:26	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 18:26	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 18:26	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 18:26	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 18:26	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 18:26	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 18:26	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 18:26	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 18:26	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 18:26	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 18:26	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 18:26	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 18:26	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 18:26	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 18:26	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 18:26	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 18:26	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 18:26	jkg	

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Description: 0803-GW15 | **Lab Sample ID:** C015017-08 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 12:41 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 18:26	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 18:26*	*jkg*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 18:26*	*jkg*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 18:26*	*jkg*	

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Description: 0803-GW15 | **Lab Sample ID:** C015017-08 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/04/11 12:41 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:44	VLO	
Arsenic [7440-38-2] ^	**8.04**	J	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:11	JDH	
Barium [7440-39-3] ^	**105**		ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:11	JDH	
Beryllium [7440-41-7] ^	**0.284**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:11	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:11	JDH	
Chromium [7440-47-3] ^	**1.23**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:11	JDH	
Cobalt [7440-48-4] ^	**2.60**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:11	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:11	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:11	JDH	
Nickel [7440-02-0] ^	**2.92**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:11	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:44	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:11	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:44	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:11	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:11	JDH	

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

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Description: 0803-GW16R | **Lab Sample ID:** C015017-09 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/05/11 09:31 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 18:55	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 18:55	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 18:55	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 18:55	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 18:55	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 18:55	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 18:55	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 18:55	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 18:55	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 18:55	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 18:55	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 18:55	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 18:55	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 18:55	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 18:55	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 18:55	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 18:55	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 18:55	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 18:55	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 18:55	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 18:55	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 18:55	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 18:55	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 18:55	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 18:55	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 18:55	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 18:55	jkg	

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Description: 0803-GW16R
Matrix: Ground Water
Project: Republic-East Carolina Landfill

Lab Sample ID: C015017-09
Sampled: 01/05/11 09:31
Sampled By: R. Stringfellow/N. Rathjen

Received: 01/05/11 15:15
Work Order: C015017

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 18:55	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 18:55*	*jkg*	
Dibromofluoromethane	*45*	*1*	*50.0*	*89 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 18:55*	*jkg*	
Toluene-d8	*49*	*1*	*50.0*	*98 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 18:55*	*jkg*	

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Description: 0803-GW16R
Matrix: Ground Water
Project: Republic-East Carolina Landfill

Lab Sample ID: C015017-09
Sampled: 01/05/11 09:31
Sampled By: R. Stringfellow/N. Rathjen

Received: 01/05/11 15:15
Work Order: C015017

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:48	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:14	JDH	
Barium [7440-39-3] ^	**37.8**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:14	JDH	
Beryllium [7440-41-7] ^	**0.152**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:14	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:14	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:14	JDH	
Cobalt [7440-48-4] ^	**1.77**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:14	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:14	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:14	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:14	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:48	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:14	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:48	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:14	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:14	JDH	

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

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Description: 0803-GW17 | **Lab Sample ID:** C015017-10 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/05/11 10:41 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 19:24	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 19:24	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 19:24	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 19:24	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 19:24	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 19:24	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 19:24	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 19:24	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 19:24	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 19:24	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 19:24	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 19:24	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 19:24	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 19:24	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 19:24	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 19:24	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 19:24	jkg	
Chloroform [67-66-3] ^	**2.3**	J	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 19:24	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 19:24	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 19:24	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 19:24	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 19:24	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 19:24	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 19:24	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 19:24	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 19:24	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 19:24	jkg	

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Description: 0803-GW17 | **Lab Sample ID:** C015017-10 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/05/11 10:41 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 19:24	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 19:24*	*jkg*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 19:24*	*jkg*	
Toluene-d8	*51*	*1*	*50.0*	*101 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 19:24*	*jkg*	

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Description: 0803-GW17 | **Lab Sample ID:** C015017-10 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/05/11 10:41 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:51	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:16	JDH	
Barium [7440-39-3] ^	**156**		ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:16	JDH	
Beryllium [7440-41-7] ^	**0.420**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:16	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:16	JDH	
Chromium [7440-47-3] ^	**5.21**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:16	JDH	
Cobalt [7440-48-4] ^	**5.07**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:16	JDH	
Copper [7440-50-8] ^	**3.49**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:16	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:16	JDH	
Nickel [7440-02-0] ^	**2.54**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:16	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:51	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:16	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:51	VLO	
Vanadium [7440-62-2] ^	**8.25**	J	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:16	JDH	
Zinc [7440-66-6] ^	**8.51**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:16	JDH	

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

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Description: 0803-PW1 | **Lab Sample ID:** C015017-11 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/05/11 11:30 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 19:54	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 19:54	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 19:54	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 19:54	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 19:54	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 19:54	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 19:54	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 19:54	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 19:54	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 19:54	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 19:54	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 19:54	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 19:54	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 19:54	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 19:54	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 19:54	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 19:54	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 19:54	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 19:54	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 19:54	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 19:54	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 19:54	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 19:54	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 19:54	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 19:54	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 19:54	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 19:54	jkg	

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Description: 0803-PW1 | **Lab Sample ID:** C015017-11 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/05/11 11:30 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 19:54	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 19:54*	*jkg*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 19:54*	*jkg*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 19:54*	*jkg*	

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Description: 0803-PW1 | **Lab Sample ID:** C015017-11 | **Received:** 01/05/11 15:15

Matrix: Ground Water | **Sampled:** 01/05/11 11:30 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:55	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:18	JDH	
Barium [7440-39-3] ^	**63.0**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:18	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:18	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:18	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:18	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:18	JDH	
Copper [7440-50-8] ^	**20.1**		ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:18	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:18	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:18	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:55	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:18	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:55	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:18	JDH	
Zinc [7440-66-6] ^	**44.0**		ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:18	JDH	

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

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Description: 0803-SW1 | **Lab Sample ID:** C015017-12 | **Received:** 01/05/11 15:15

Matrix: Surface Water | **Sampled:** 01/05/11 11:50 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 20:23	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 20:23	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 20:23	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 20:23	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 20:23	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 20:23	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 20:23	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 20:23	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 20:23	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 20:23	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 20:23	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 20:23	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 20:23	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 20:23	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 20:23	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 20:23	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 20:23	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 20:23	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 20:23	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 20:23	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 20:23	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 20:23	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 20:23	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 20:23	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 20:23	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 20:23	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 20:23	jkg	

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Description: 0803-SW1 | **Lab Sample ID:** C015017-12 | **Received:** 01/05/11 15:15

Matrix: Surface Water | **Sampled:** 01/05/11 11:50 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 20:23	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 20:23*	*jkg*	
Dibromofluoromethane	*44*	*1*	*50.0*	*88 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 20:23*	*jkg*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 20:23*	*jkg*	

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Description: 0803-SW1 | **Lab Sample ID:** C015017-12 | **Received:** 01/05/11 15:15

Matrix: Surface Water | **Sampled:** 01/05/11 11:50 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 10:58	VLO	
Arsenic [7440-38-2] ^	**5.15**	J	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:20	JDH	
Barium [7440-39-3] ^	**56.9**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:20	JDH	
Beryllium [7440-41-7] ^	**0.212**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:20	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:20	JDH	
Chromium [7440-47-3] ^	**1.10**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:20	JDH	
Cobalt [7440-48-4] ^	**1.51**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:20	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:20	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:20	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:20	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 10:58	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:20	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 10:58	VLO	
Vanadium [7440-62-2] ^	**1.51**	J	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:20	JDH	
Zinc [7440-66-6] ^	**5.84**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:20	JDH	

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

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Description: 0803-SW3 | **Lab Sample ID:** C015017-13 | **Received:** 01/05/11 15:15

Matrix: Surface Water | **Sampled:** 01/04/11 17:12 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 20:52	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 20:52	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 20:52	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 20:52	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 20:52	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 20:52	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 20:52	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 20:52	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 20:52	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 20:52	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 20:52	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 20:52	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 20:52	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 20:52	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 20:52	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 20:52	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 20:52	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 20:52	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 20:52	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 20:52	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 20:52	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 20:52	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 20:52	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 20:52	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 20:52	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 20:52	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 20:52	jkg	

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Description: 0803-SW3 | **Lab Sample ID:** C015017-13 | **Received:** 01/05/11 15:15

Matrix: Surface Water | **Sampled:** 01/04/11 17:12 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 20:52	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 20:52*	*jkg*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 20:52*	*jkg*	
Toluene-d8	*50*	*1*	*50.0*	*101 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 20:52*	*jkg*	

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Description: 0803-SW3 | **Lab Sample ID:** C015017-13 | **Received:** 01/05/11 15:15

Matrix: Surface Water | **Sampled:** 01/04/11 17:12 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 11:02	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:23	JDH	
Barium [7440-39-3] ^	**59.6**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:23	JDH	
Beryllium [7440-41-7] ^	**0.178**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:23	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:23	JDH	
Chromium [7440-47-3] ^	**1.40**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:23	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:23	JDH	
Copper [7440-50-8] ^	**1.67**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:23	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:23	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:23	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 11:02	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:23	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 11:02	VLO	
Vanadium [7440-62-2] ^	**2.02**	J	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:23	JDH	
Zinc [7440-66-6] ^	**8.05**	J	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:23	JDH	

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

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Description: 0803-SW4 | **Lab Sample ID:** C015017-14 | **Received:** 01/05/11 15:15

Matrix: Surface Water | **Sampled:** 01/04/11 17:17 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 21:22	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 21:22	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 21:22	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 21:22	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 21:22	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 21:22	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 21:22	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 21:22	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 21:22	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 21:22	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 21:22	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 21:22	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 21:22	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 21:22	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 21:22	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 21:22	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 21:22	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 21:22	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 21:22	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 21:22	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 21:22	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 21:22	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 21:22	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 21:22	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 21:22	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 21:22	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 21:22	jkg	

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Description: 0803-SW4 | **Lab Sample ID:** C015017-14 | **Received:** 01/05/11 15:15

Matrix: Surface Water | **Sampled:** 01/04/11 17:17 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 21:22	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 21:22*	*jkg*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 21:22*	*jkg*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 21:22*	*jkg*	

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Description: 0803-SW4 | **Lab Sample ID:** C015017-14 | **Received:** 01/05/11 15:15

Matrix: Surface Water | **Sampled:** 01/04/11 17:17 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 11:06	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:25	JDH	
Barium [7440-39-3] ^	**87.6**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:25	JDH	
Beryllium [7440-41-7] ^	**0.174**	J	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:25	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:25	JDH	
Chromium [7440-47-3] ^	**5.21**	J	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:25	JDH	
Cobalt [7440-48-4] ^	**3.01**	J	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:25	JDH	
Copper [7440-50-8] ^	**2.02**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:25	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:25	JDH	
Nickel [7440-02-0] ^	**3.41**	J	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:25	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 11:06	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:25	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 11:06	VLO	
Vanadium [7440-62-2] ^	**10.0**	J	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:25	JDH	
Zinc [7440-66-6] ^	**64.0**		ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:25	JDH	

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

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Description: 0803-Field Blank | **Lab Sample ID:** C015017-15 | **Received:** 01/05/11 15:15

Matrix: Water | **Sampled:** 01/05/11 11:35 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 21:51	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/07/11 21:51	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/07/11 21:51	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/07/11 21:51	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/07/11 21:51	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/07/11 21:51	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/07/11 21:51	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/07/11 21:51	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/07/11 21:51	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/07/11 21:51	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/07/11 21:51	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/07/11 21:51	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/07/11 21:51	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/07/11 21:51	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/07/11 21:51	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/07/11 21:51	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/07/11 21:51	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/07/11 21:51	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/07/11 21:51	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/07/11 21:51	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/07/11 21:51	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/07/11 21:51	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/07/11 21:51	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/07/11 21:51	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/07/11 21:51	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/07/11 21:51	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/07/11 21:51	jkg	

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Description: 0803-Field Blank
Matrix: Water
Project: Republic-East Carolina Landfill

Lab Sample ID: C015017-15
Sampled: 01/05/11 11:35
Sampled By: R. Stringfellow/N. Rathjen

Received: 01/05/11 15:15
Work Order: C015017

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/07/11 21:51	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*51-122*	*1A06015*	*EPA 8260B*	*01/07/11 21:51*	*jkg*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*68-117*	*1A06015*	*EPA 8260B*	*01/07/11 21:51*	*jkg*	
Toluene-d8	*50*	*1*	*50.0*	*100 %*	*69-110*	*1A06015*	*EPA 8260B*	*01/07/11 21:51*	*jkg*	

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Description: 0803-Field Blank | **Lab Sample ID:** C015017-15 | **Received:** 01/05/11 15:15

Matrix: Water | **Sampled:** 01/05/11 11:35 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** R. Stringfellow/N. Rathjen

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	0.220	U	ug/L	1	0.220	2.00	6	EPA 6020A	01/14/11 11:16	VLO	
Arsenic [7440-38-2] ^	2.80	U	ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:33	JDH	
Barium [7440-39-3] ^	**1.11**	J	ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:33	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:33	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:33	JDH	
Chromium [7440-47-3] ^	1.00	U	ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:33	JDH	
Cobalt [7440-48-4] ^	1.10	U	ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:33	JDH	
Copper [7440-50-8] ^	1.60	U	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:33	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:33	JDH	
Nickel [7440-02-0] ^	1.80	U	ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:33	JDH	
Selenium [7782-49-2] ^	0.830	U	ug/L	1	0.830	1.00	10	EPA 6020A	01/14/11 11:16	VLO	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:33	JDH	
Thallium [7440-28-0] ^	0.110	U	ug/L	1	0.110	1.00	5.5	EPA 6020A	01/14/11 11:16	VLO	
Vanadium [7440-62-2] ^	1.40	U	ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:33	JDH	
Zinc [7440-66-6] ^	3.80	U	ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:33	JDH	

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

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Description: 0803-Trip Blank | **Lab Sample ID:** C015017-16 | **Received:** 01/05/11 15:15

Matrix: Water | **Sampled:** 01/04/11 11:50 | **Work Order:** C015017

Project: Republic-East Carolina Landfill | **Sampled By:** ENCO

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/12/11 17:51	jkg	
1,1,1-Trichloroethane [71-55-6] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	0.33	U	ug/L	1	0.33	1.0	3	EPA 8260B	01/12/11 17:51	jkg	
1,1,2-Trichloroethane [79-00-5] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
1,1-Dichloroethane [75-34-3] ^	0.33	U	ug/L	1	0.33	1.0	5	EPA 8260B	01/12/11 17:51	jkg	
1,1-Dichloroethene [75-35-4] ^	0.24	U	ug/L	1	0.24	1.0	5	EPA 8260B	01/12/11 17:51	jkg	
1,2,3-Trichloropropane [96-18-4] ^	0.55	U	ug/L	1	0.55	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	0.48	U	ug/L	1	0.48	1.0	13	EPA 8260B	01/12/11 17:51	jkg	
1,2-Dibromoethane [106-93-4] ^	0.42	U	ug/L	1	0.42	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
1,2-Dichlorobenzene [95-50-1] ^	0.27	U	ug/L	1	0.27	1.0	5	EPA 8260B	01/12/11 17:51	jkg	
1,2-Dichloroethane [107-06-2] ^	0.65	U	ug/L	1	0.65	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
1,2-Dichloropropane [78-87-5] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
1,4-Dichlorobenzene [106-46-7] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
2-Butanone [78-93-3] ^	1.0	U	ug/L	1	1.0	5.0	100	EPA 8260B	01/12/11 17:51	jkg	
2-Hexanone [591-78-6] ^	0.69	U	ug/L	1	0.69	5.0	50	EPA 8260B	01/12/11 17:51	jkg	
4-Methyl-2-pentanone [108-10-1] ^	1.1	U	ug/L	1	1.1	5.0	100	EPA 8260B	01/12/11 17:51	jkg	
Acetone [67-64-1] ^	1.5	U	ug/L	1	1.5	5.0	100	EPA 8260B	01/12/11 17:51	jkg	
Acrylonitrile [107-13-1] ^	2.1	U	ug/L	1	2.1	10	200	EPA 8260B	01/12/11 17:51	jkg	
Benzene [71-43-2] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Bromochloromethane [74-97-5] ^	0.42	U	ug/L	1	0.42	1.0	3	EPA 8260B	01/12/11 17:51	jkg	
Bromodichloromethane [75-27-4] ^	0.37	U	ug/L	1	0.37	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Bromoform [75-25-2] ^	0.71	U	ug/L	1	0.71	1.0	3	EPA 8260B	01/12/11 17:51	jkg	
Bromomethane [74-83-9] ^	0.49	U	ug/L	1	0.49	1.0	10	EPA 8260B	01/12/11 17:51	jkg	
Carbon disulfide [75-15-0] ^	0.54	U	ug/L	1	0.54	5.0	100	EPA 8260B	01/12/11 17:51	jkg	
Carbon tetrachloride [56-23-5] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Chlorobenzene [108-90-7] ^	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	01/12/11 17:51	jkg	
Chloroethane [75-00-3] ^	0.30	U	ug/L	1	0.30	1.0	10	EPA 8260B	01/12/11 17:51	jkg	
Chloroform [67-66-3] ^	0.20	U	ug/L	1	0.20	1.0	5	EPA 8260B	01/12/11 17:51	jkg	
Chloromethane [74-87-3] ^	0.34	U	ug/L	1	0.34	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	0.36	U	ug/L	1	0.36	1.0	5	EPA 8260B	01/12/11 17:51	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Dibromochloromethane [124-48-1] ^	0.32	U	ug/L	1	0.32	1.0	3	EPA 8260B	01/12/11 17:51	jkg	
Dibromomethane [74-95-3] ^	0.37	U	ug/L	1	0.37	1.0	10	EPA 8260B	01/12/11 17:51	jkg	
Ethylbenzene [100-41-4] ^	0.20	U	ug/L	1	0.20	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Iodomethane [74-88-4] ^	0.52	U	ug/L	1	0.52	5.0	10	EPA 8260B	01/12/11 17:51	jkg	
Methylene chloride [75-09-2] ^	0.53	U	ug/L	1	0.53	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Styrene [100-42-5] ^	0.26	U	ug/L	1	0.26	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Tetrachloroethene [127-18-4] ^	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Toluene [108-88-3] ^	0.27	U	ug/L	1	0.27	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	0.34	U	ug/L	1	0.34	1.0	5	EPA 8260B	01/12/11 17:51	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	0.54	U	ug/L	1	0.54	1.0	100	EPA 8260B	01/12/11 17:51	jkg	
Trichloroethene [79-01-6] ^	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Trichlorofluoromethane [75-69-4] ^	0.28	U	ug/L	1	0.28	1.0	1	EPA 8260B	01/12/11 17:51	jkg	
Vinyl acetate [108-05-4] ^	0.98	U	ug/L	1	0.98	5.0	50	EPA 8260B	01/12/11 17:51	jkg	
Vinyl chloride [75-01-4] ^	0.30	U	ug/L	1	0.30	1.0	1	EPA 8260B	01/12/11 17:51	jkg	

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Description: 0803-Trip Blank
Matrix: Water
Project: Republic-East Carolina Landfill

Lab Sample ID: C015017-16
Sampled: 01/04/11 11:50
Sampled By: ENCO

Received: 01/05/11 15:15
Work Order: C015017

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7] ^	0.40	U	ug/L	1	0.40	1.0	5	EPA 8260B	01/12/11 17:51	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*51-122*	*1A12006*	*EPA 8260B*	*01/12/11 17:51*	*jkg*	
Dibromofluoromethane	*43*	*1*	*50.0*	*86 %*	*68-117*	*1A12006*	*EPA 8260B*	*01/12/11 17:51*	*jkg*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*69-110*	*1A12006*	*EPA 8260B*	*01/12/11 17:51*	*jkg*	

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1A06015 - EPA 5030B_MS

Blank (1A06015-BLK1) Prepared: 01/06/2011 08:59 Analyzed: 01/07/2011 12:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.40	U	1.0	ug/L							
1,1,1-Trichloroethane	0.27	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.33	U	1.0	ug/L							
1,1,2-Trichloroethane	0.37	U	1.0	ug/L							
1,1-Dichloroethane	0.33	U	1.0	ug/L							
1,1-Dichloroethene	0.24	U	1.0	ug/L							
1,2,3-Trichloropropane	0.55	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.42	U	1.0	ug/L							
1,2-Dichlorobenzene	0.27	U	1.0	ug/L							
1,2-Dichloroethane	0.65	U	1.0	ug/L							
1,2-Dichloropropane	0.20	U	1.0	ug/L							
1,4-Dichlorobenzene	0.38	U	1.0	ug/L							
2-Butanone	1.0	U	5.0	ug/L							
2-Hexanone	0.69	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.5	U	5.0	ug/L							
Acrylonitrile	2.1	U	10	ug/L							
Benzene	0.20	U	1.0	ug/L							
Bromochloromethane	0.42	U	1.0	ug/L							
Bromodichloromethane	0.37	U	1.0	ug/L							
Bromoform	0.71	U	1.0	ug/L							
Bromomethane	0.49	U	1.0	ug/L							
Carbon disulfide	0.54	U	5.0	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
Chlorobenzene	0.27	U	1.0	ug/L							
Chloroethane	0.30	U	1.0	ug/L							
Chloroform	0.20	U	1.0	ug/L							
Chloromethane	0.34	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.36	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.28	U	1.0	ug/L							
Dibromochloromethane	0.32	U	1.0	ug/L							
Dibromomethane	0.37	U	1.0	ug/L							
Ethylbenzene	0.20	U	1.0	ug/L							
Iodomethane	0.52	U	5.0	ug/L							
Methylene chloride	0.53	U	1.0	ug/L							
Styrene	0.26	U	1.0	ug/L							
Tetrachloroethene	0.36	U	1.0	ug/L							
Toluene	0.27	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.34	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.38	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.54	U	1.0	ug/L							
Trichloroethene	0.38	U	1.0	ug/L							
Trichlorofluoromethane	0.28	U	1.0	ug/L							
Vinyl acetate	0.98	U	5.0	ug/L							
Vinyl chloride	0.30	U	1.0	ug/L							
Xylenes (Total)	0.40	U	1.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*103*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1A06015 - EPA 5030B_MS

Blank (1A06015-BLK1) Continued Prepared: 01/06/2011 08:59 Analyzed: 01/07/2011 12:34

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*45*			*ug/L*	*50.0*		*91*	*68-117*			
Surrogate: Toluene-d8	*50*			*ug/L*	*50.0*		*100*	*69-110*			

LCS (1A06015-BS1) Prepared: 01/06/2011 08:59 Analyzed: 01/07/2011 13:03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		91	75-133			
Benzene	18		1.0	ug/L	20.0		92	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		98	83-117			
Toluene	20		1.0	ug/L	20.0		99	71-118			
Trichloroethene	19		1.0	ug/L	20.0		94	75-115			

Matrix Spike (1A06015-MS1) Prepared: 01/06/2011 08:59 Analyzed: 01/07/2011 13:32

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.24 U	95	75-133			
Benzene	19		1.0	ug/L	20.0	0.20 U	95	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.27 U	104	83-117			
Toluene	20		1.0	ug/L	20.0	0.27 U	101	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.38 U	100	75-115			

Matrix Spike Dup (1A06015-MSD1) Prepared: 01/06/2011 08:59 Analyzed: 01/07/2011 14:02

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	21		1.0	ug/L	20.0	0.24 U	103	75-133	8	20	
Benzene	20		1.0	ug/L	20.0	0.20 U	102	81-134	7	17	
Chlorobenzene	20		1.0	ug/L	20.0	0.27 U	102	83-117	2	16	
Toluene	20		1.0	ug/L	20.0	0.27 U	101	71-118	0.7	17	
Trichloroethene	21		1.0	ug/L	20.0	0.38 U	106	75-115	5	18	

Batch 1A12006 - EPA 5030B_MS

Blank (1A12006-BLK1) Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 15:23

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.40	U	1.0	ug/L							
1,1,1-Trichloroethane	0.27	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.33	U	1.0	ug/L							
1,1,2-Trichloroethane	0.37	U	1.0	ug/L							
1,1-Dichloroethane	0.33	U	1.0	ug/L							
1,1-Dichloroethene	0.24	U	1.0	ug/L							
1,2,3-Trichloropropane	0.55	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.42	U	1.0	ug/L							
1,2-Dichlorobenzene	0.27	U	1.0	ug/L							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1A12006 - EPA 5030B_MS

Blank (1A12006-BLK1) Continued Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 15:23

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2-Dichloroethane	0.65	U	1.0	ug/L							
1,2-Dichloropropane	0.20	U	1.0	ug/L							
1,4-Dichlorobenzene	0.38	U	1.0	ug/L							
2-Butanone	1.0	U	5.0	ug/L							
2-Hexanone	0.69	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.5	U	5.0	ug/L							
Acrylonitrile	2.1	U	10	ug/L							
Benzene	0.20	U	1.0	ug/L							
Bromochloromethane	0.42	U	1.0	ug/L							
Bromodichloromethane	0.37	U	1.0	ug/L							
Bromoform	0.71	U	1.0	ug/L							
Bromomethane	0.49	U	1.0	ug/L							
Carbon disulfide	0.54	U	5.0	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
Chlorobenzene	0.27	U	1.0	ug/L							
Chloroethane	0.30	U	1.0	ug/L							
Chloroform	0.20	U	1.0	ug/L							
Chloromethane	0.34	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.36	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.28	U	1.0	ug/L							
Dibromochloromethane	0.32	U	1.0	ug/L							
Dibromomethane	0.37	U	1.0	ug/L							
Ethylbenzene	0.20	U	1.0	ug/L							
Iodomethane	0.52	U	5.0	ug/L							
Methylene chloride	0.53	U	1.0	ug/L							
Styrene	0.26	U	1.0	ug/L							
Tetrachloroethene	0.36	U	1.0	ug/L							
Toluene	0.27	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.34	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.38	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.54	U	1.0	ug/L							
Trichloroethene	0.38	U	1.0	ug/L							
Trichlorofluoromethane	0.28	U	1.0	ug/L							
Vinyl acetate	0.98	U	5.0	ug/L							
Vinyl chloride	0.30	U	1.0	ug/L							
Xylenes (Total)	0.40	U	1.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*107*	*51-122*			
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*68-117*			
Surrogate: Toluene-d8	*49*			*ug/L*	*50.0*		*98*	*69-110*			

LCS (1A12006-BS1) Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 15:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		88	75-133			
Benzene	18		1.0	ug/L	20.0		92	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		98	83-117			
Toluene	19		1.0	ug/L	20.0		95	71-118			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1A12006 - EPA 5030B_MS

LCS (1A12006-BS1) Continued Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 15:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Trichloroethene	19		1.0	ug/L	20.0		94	75-115			

Matrix Spike (1A12006-MS1) Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 16:23

Source: C100423-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.24 U	90	75-133			
Benzene	19		1.0	ug/L	20.0	0.20 U	94	81-134			
Chlorobenzene	19		1.0	ug/L	20.0	0.27 U	94	83-117			
Toluene	19		1.0	ug/L	20.0	0.27 U	93	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.38 U	105	75-115			

Matrix Spike Dup (1A12006-MSD1) Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 16:52

Source: C100423-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	17		1.0	ug/L	20.0	0.24 U	87	75-133	4	20	
Benzene	19		1.0	ug/L	20.0	0.20 U	94	81-134	0.5	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.27 U	103	83-117	9	16	
Toluene	20		1.0	ug/L	20.0	0.27 U	101	71-118	8	17	
Trichloroethene	21		1.0	ug/L	20.0	0.38 U	103	75-115	2	18	

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

Batch 1A06004 - EPA 3005A

Blank (1A06004-BLK1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:35

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.00	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	1.90	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

LCS (1A06004-BS1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	495		10.0	ug/L	500		99	80-120			
Barium	500		10.0	ug/L	500		100	80-120			
Beryllium	253		1.00	ug/L	250		101	80-120			

QUALITY CONTROL

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

Batch 1A06004 - EPA 3005A

LCS (1A06004-BS1) Continued Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cadmium	247		1.00	ug/L	250		99	80-120			
Chromium	504		10.0	ug/L	500		101	80-120			
Cobalt	496		10.0	ug/L	500		99	80-120			
Copper	257		10.0	ug/L	250		103	80-120			
Lead	494		10.0	ug/L	500		99	80-120			
Nickel	498		10.0	ug/L	500		100	80-120			
Silver	252		10.0	ug/L	250		101	80-120			
Vanadium	246		10.0	ug/L	250		98	80-120			
Zinc	503		10.0	ug/L	500		101	80-120			

Matrix Spike (1A06004-MS1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:43

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	485		10.0	ug/L	500	5.85	96	75-125			
Barium	590		10.0	ug/L	500	100	98	75-125			
Beryllium	251		1.00	ug/L	250	2.38	99	75-125			
Cadmium	239		1.00	ug/L	250	0.360 U	96	75-125			
Chromium	496		10.0	ug/L	500	4.26	98	75-125			
Cobalt	515		10.0	ug/L	500	29.8	97	75-125			
Copper	253		10.0	ug/L	250	2.16	100	75-125			
Lead	482		10.0	ug/L	500	3.03	96	75-125			
Nickel	492		10.0	ug/L	500	9.32	97	75-125			
Silver	248		10.0	ug/L	250	1.90 U	99	75-125			
Vanadium	250		10.0	ug/L	250	6.03	98	75-125			
Zinc	493		10.0	ug/L	500	7.51	97	75-125			

Matrix Spike Dup (1A06004-MSD1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:46

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	489		10.0	ug/L	500	5.85	97	75-125	0.9	20	
Barium	595		10.0	ug/L	500	100	99	75-125	0.9	20	
Beryllium	253		1.00	ug/L	250	2.38	100	75-125	1	20	
Cadmium	241		1.00	ug/L	250	0.360 U	96	75-125	0.8	20	
Chromium	500		10.0	ug/L	500	4.26	99	75-125	0.8	20	
Cobalt	518		10.0	ug/L	500	29.8	98	75-125	0.5	20	
Copper	255		10.0	ug/L	250	2.16	101	75-125	0.8	20	
Lead	488		10.0	ug/L	500	3.03	97	75-125	1	20	
Nickel	493		10.0	ug/L	500	9.32	97	75-125	0.3	20	
Silver	249		10.0	ug/L	250	1.90 U	100	75-125	0.2	20	
Vanadium	252		10.0	ug/L	250	6.03	98	75-125	0.7	20	
Zinc	493		10.0	ug/L	500	7.51	97	75-125	0.02	20	

Post Spike (1A06004-PS1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:48

Source: C015017-02

QUALITY CONTROL

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

Batch 1A06004 - EPA 3005A

Post Spike (1A06004-PS1) Continued Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:48

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.948		0.0100	mg/L	1.00	0.00585	94	80-120			
Barium	1.05		0.0100	mg/L	1.00	0.100	95	80-120			
Beryllium	0.485		0.00100	mg/L	0.500	0.00238	96	80-120			
Cadmium	0.464		0.00100	mg/L	0.500	0.000240	93	80-120			
Chromium	0.956		0.0100	mg/L	1.00	0.00426	95	80-120			
Cobalt	0.969		0.0100	mg/L	1.00	0.0298	94	80-120			
Copper	0.491		0.0100	mg/L	0.500	0.00216	98	80-120			
Lead	0.938		0.0100	mg/L	1.00	0.00303	93	80-120			
Nickel	0.945		0.0100	mg/L	1.00	0.00932	94	80-120			
Silver	0.478		0.0100	mg/L	0.500	0.000369	96	80-120			
Vanadium	0.475		0.0100	mg/L	0.500	0.00603	94	80-120			
Zinc	0.954		0.0100	mg/L	1.00	0.00751	95	80-120			

Batch 1A06005 - EPA 3005A

Blank (1A06005-BLK1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 09:50

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.220	U	2.00	ug/L							
Selenium	0.830	U	1.00	ug/L							
Thallium	0.110	U	1.00	ug/L							

LCS (1A06005-BS1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 09:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	25.9		2.00	ug/L	25.0		104	80-120			
Selenium	27.1		1.00	ug/L	25.0		108	80-120			
Thallium	26.6		1.00	ug/L	25.0		106	80-120			

Matrix Spike (1A06005-MS1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 10:01

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	25.4		2.00	ug/L	25.0	0.220 U	102	75-125			
Selenium	28.2		1.00	ug/L	25.0	0.830 U	113	75-125			
Thallium	24.9		1.00	ug/L	25.0	0.122	99	75-125			

Matrix Spike Dup (1A06005-MSD1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 10:04

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	24.8		2.00	ug/L	25.0	0.220 U	99	75-125	3	20	
Selenium	28.3		1.00	ug/L	25.0	0.830 U	113	75-125	0.5	20	
Thallium	24.6		1.00	ug/L	25.0	0.122	98	75-125	1	20	

Post Spike (1A06005-PS1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 10:08

QUALITY CONTROL

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

Batch 1A06005 - EPA 3005A

Post Spike (1A06005-PS1) Continued Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 10:08

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	24.2		2.00	ug/L	25.0	-0.206	98	80-120			
Selenium	26.5		1.00	ug/L	25.0	0.733	103	80-120			
Thallium	24.3		1.00	ug/L	25.0	0.122	97	80-120			

FLAGS/NOTES AND DEFINITIONS

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

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

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

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Page 1 of 2

Client Name: Golder Associates, Inc. (GO007)	Project Number: 053-6620011.100
Address: 5B Oak Branch Drive	Project Name/Desc: Republic-East Carolina Landfill
City/ST/Zip: Greensboro, NC 27407	PO # / Billing Info: 2010: 24814
Tel: (336) 852-4903 Fax: (336) 852-4904	Reporting Contact: Dusty Reedy
Sampler(s) Name, Affiliation (Print): N. Rathjen R. Stringfellow	Billing Contact: Ray Hoffman
Sampler(s) Signature: [signature]	Site Location / Time Zone: East Carolina / Eastern

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

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due __/__/__

Lab Workorder: C015017

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Sn,Tl,V,Zn								Sample Comments
	0803-GW2	1/4/11	1150	G	GW	4	X	X								
	0803-GW7 (MS/MSD)	1/4/11	1649	G	GW	8	X	X								
	0803-GW8	1/4/11	1601	G	GW	4	X	X								
	0803-GW9	1/4/11	1524	G	GW	4	X	X								
	0803-GW10	1/4/11	1429	G	GW	4	X	X								
	0803-GW11	1/4/11	1345	G	GW	4	X	X								
	0803-GW13	1/4/11	1314	G	GW	4	X	X								
	0803-GW15	1/4/11	1241	G	GW	4	X	X								
	0803-GW16R	1/5/11	0931	G	GW	4	X	X								
	0803-GW17	1/5/11	1041	G	GW	4	X	X								
	0803-PW1	1/5/11	1130	G	GW	4	X	X								
	0803-SW1	1/5/11	1150	G	SW	4	X	X								
							<-- Total # of Containers									

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
Briana Gregory	12/21/10	[signature]	1/5/11 240	[signature]	1/5/11 240
		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	1/5/11 315

Comments/Special Reporting Requirements:
① please provide level 2 data report
② invoice Republic and send files to Golder

Cooler #'s & Temps on Receipt: C-782 2.3°C

Condition Upon Receipt: X Acceptable ___ Unacceptable

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

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

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
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Client Name: Golder Associates, Inc. (GO007)	Project Number: 053-6620011.100
Address: 5B Oak Branch Drive	Project Name/Desc: Republic-East Carolina Landfill
City/ST/Zip: Greensboro, NC 27407	PO #/ Billing Info: 2010: 24814
Tel: (336) 852-4903 Fax: (336) 852-4904	Reporting Contact: Dusty Reedy
Sampler(s) Name, Affiliation (Print): N. Rathjen, R. Stringfellow	Billing Contact: Ray Hoffman
Sampler(s) Signature: Natt Rathjen	Site Location / Time Zone: East Carolina / Eastern

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C015017

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

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Se,Tl,V,Zn									Sample Comments
	0803-SW2	—	—	G	SW	4	X	X									Dry, No sample collected
	0803-SW3	1/4/11	1712	G	SW	4	X	X									
	0803-SW4	1/4/11	1717	G	SW	4	X	X									
	Field Blank	1/5/11	1135	G	WA	4	X	X									
	Trip Blank	—	—	—	WA	2	X										

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
Buana Gregory	12/21/10	Natt Rathjen	1/5/11 1240	[signature]	1/5/11 240
		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
				[signature]	1/5/11 315

Comments/Special Reporting Requirements
① please provide "level 2" data report
② invoice Republic and send files to Golder

Cooler #'s & Temps on Receipt: C-782 2.3°C

Condition Upon Receipt: X Acceptable ___ Unacceptable

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

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

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

WORK ORDER

Printed: 1/18/2011 11:17:15AM

C015017

ENCO Cary

Sample Receipt Conditions

Client:	**Golder Associates, Inc. (GO007)**	**Lab Project Mgr:**	**Stephanie Franz**
Project:	**Republic-East Carolina Landfill**	**Project Number:**	**053-6620011.100**
PO #:	**2010: 24814**		

Report To:

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

Invoice To:

Republic Services of NC (RE014)
Ray Hoffman
P.O. Box 2943
Hickory, NC 28603
Phone :(828) 464-2414
Fax:

Received By:	Chris Brand	Date Received:	05-Jan-11 15:15
Logged In By:	Briana J Gregory	Date Logged In:	05-Jan-11 16:40

Work Order Comments:

C-782 received at 2.3°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	Y	Volatile Containers Preserved	Y	Volatile Containers Headspace Free	Y	Aqueous Samples Checked for Residual Cl	N	Received On Ice	Y

Project Name: Republic – East Carolina Landfill – Groundwater and Surface Water

Project Reference Number: 0536-620011.100

Sampling Event Date: January 4-5, 2011

Review Date: January 18, 2011 *Initials:*JAD

Report #: C015017

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

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

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

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

___ NC Closed Facility List (.500 Rules)

___ NC C & D List (New Rules)

X__ NC Appendix I

___ NC Appendix I + Detects

___ NC Appendix II

___ NC Subtitle D Leachate List

Other: _____

1.0 CHAIN OF CUSTODY (COC) REVIEW

JAD COC was properly signed by all parties.

JAD Correct project name and number are on the form.

JAD Sample receipt condition at laboratory was acceptable.

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

Notes: _____

2.0 SAMPLE HOLDING TIMES

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

Notes: _____

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

3.0 LABORATORY QUALITY CONTROL REVIEW

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

JAD Laboratory blank is interference-free.

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

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

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

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

4.0 ANALYTE LISTS/METHODS

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

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

5.0 DATA REPORTING

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

JAD 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:

- ***Barium @ 1.11 ug/L (J)***

JAD 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.

JAD The report provides the reporting limit for each constituent.

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

JAD No inorganic or organic constituents were reported above their respective NC 2L Drinking Water Standards or Groundwater Protection Standards in wells, or field/equipment/trip blanks, or above applicable surface water standards in surface water points.

GW-2:
- ***Cobalt @ 9.65 ug/L (J) (GWPS = 1 ug/L)***

GW-4:
- ***Cobalt @ 29.8 ug/L (GWPS = 1 ug/L)***
- ***Vanadium @ 6.03 ug/L (J) (GWPS = 0.3 ug/L)***

GW-8:
- ***Cobalt @ 3.63 ug/L (J) (GWPS = 1 ug/L)***

GW-9:
- ***Cobalt @ 3.19 ug/L (J) (GWPS = 1 ug/L)***
- ***Vanadium @ 10.5 ug/L (J) (GWPS = 0.3 ug/L)***

GW-11:
- ***Cobalt @ 1.19 ug/L (J) (GWPS = 1 ug/L)***

GW-13:
- ***Cobalt @ 2.24 ug/L (J) (GWPS = 1 ug/L)***

GW-15:
- ***Cobalt @ 2.60 ug/L (J) (GWPS = 1 ug/L)***

GW-16R:
- ***Cobalt @ 1.77 ug/L (J) (GWPS = 1 ug/L)***

GW-17:
- ***Cobalt @ 5.07 ug/L (J) (GWPS = 1 ug/L)***
- ***Vanadium @ 8.51 ug/L (J) (GWPS = 0.3 ug/L)***

SW-4:
- ***Zinc @ 64.0 ug/L (Surface Water Standard = 50 ug/L)***

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

- ***First quantified detection of barium in GW-9***

JAD Other report issues/Communications with laboratory/etc.:

- ***The recent lowering of the SWS reporting limit on 10/1/10 for cobalt has resulted in additional detections above the GWPS.***

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

Wednesday, January 19, 2011

Golder Associates, Inc. (GO007)

Attn: Dusty Reedy

5B Oak Branch Drive

Greensboro, NC 27407

RE: Laboratory Results for
Project Number: 053-6620011.100, Project Name/Desc: Republic-East Carolina Landfill leachate
ENCO Workorder: C015018

Dear Dusty Reedy,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Wednesday, January 5, 2011.

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

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

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

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

Sincerely,

Stephanie Franz

Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 25.

PROJECT NARRATIVE

Date: 19 January 2011
Client: Golder Associates, Inc. (GO007)
Project: Republic-East Carolina Landfill leachate
Lab ID: C015018

Overview

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

Quality Control Samples

The spike recovery of Cyanide was outside of control limits for the MS and MSD samples due to matrix interference, and the spike recovery of TKN was outside of acceptance criteria due to high concentrations of analyte in the source sample. The QC batches were approved based on acceptable LCS recovery of these analytes. Due to an analyst oversight, the MS and MSD samples for the NOx analysis were not spiked. This QC batch was approved based on acceptable LCS and LCSD results.

Quality Control Remarks

No Comments

Other Comments

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

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

Released By:
Environmental Conservation Laboratories, Inc.

Stephanie Franz
Project Manager

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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 0803-Leachate **Lab ID: C015018-01** **Sampled: 01/05/11 11:11** **Received: 01/05/11 15:15**

Parameter	Hold Date/Time(s)		Prep Date/Time(s)		Analysis Date/Time(s)
EPA 1664A	02/02/11		01/12/11	13:18	1/13/2011 14:32
EPA 300.0	02/02/11		01/07/11	00:55	1/7/2011 00:55
EPA 351.2	02/02/11		01/11/11	11:10	1/14/2011 14:47
EPA 353.2	01/07/11	11:11	01/05/11	20:16	1/5/2011 21:40
EPA 353.2	02/02/11		01/10/11	12:28	1/10/2011 15:58
EPA 353.2	02/02/11		01/13/11	11:54	1/13/2011 12:38
EPA 365.4	02/02/11		01/17/11	10:18	1/18/2011 16:09
EPA 420.1	02/02/11		01/14/11	10:18	1/14/2011 18:10
EPA 6010C	07/04/11		01/06/11	08:07	1/7/2011 11:36
EPA 6020A	07/04/11		01/06/11	08:12	1/14/2011 11:20
EPA 7470A	02/02/11		01/07/11	09:39	1/7/2011 14:38
EPA 8260B	01/19/11		01/12/11	09:43	1/12/2011 19:48
EPA 9014	01/19/11		01/10/11	11:19	1/11/2011 10:44
SM 2540D	01/12/11		01/10/11	09:03	1/10/2011 09:03
SM 5210B	01/07/11	11:11	01/06/11	16:22	1/6/2011 16:22
SM 5220D	02/02/11		01/10/11	13:57	1/10/2011 16:33

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 0803-Leachate **Lab ID:** C015018-01

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
2-Butanone	3900	D	50	50	250	100	ug/L	EPA 8260B	
4-Methyl-2-pentanone	66	JD	50	55	250	100	ug/L	EPA 8260B	
Acetone	3600	D	50	75	250	100	ug/L	EPA 8260B	
Antimony - Total	20.0	D	10	2.20	20.0	6	ug/L	EPA 6020A	
Arsenic - Total	72.7		1	2.80	10.0	10	ug/L	EPA 6010C	
Barium - Total	426		1	1.00	10.0	100	ug/L	EPA 6010C	
Biochemical Oxygen Demand	460000		1	2000	2000	NE	ug/L	SM 5210B	
Chemical Oxygen Demand	1700000		1	14000	50000	NE	ug/L	SM 5220D	
Chromium - Total	59.7		1	1.00	10.0	10	ug/L	EPA 6010C	
Cobalt - Total	19.8		1	1.10	10.0	10	ug/L	EPA 6010C	
Copper - Total	2.57	J	1	1.60	10.0	10	ug/L	EPA 6010C	
Cyanide (total)	5.9	J	1	5.0	10	10	ug/L	EPA 9014	
Ethylbenzene	31	JD	50	10	50	1	ug/L	EPA 8260B	
Nickel - Total	86.3		1	1.80	10.0	50	ug/L	EPA 6010C	
Nitrate as N	72	J	1	25	100	10000	ug/L	EPA 353.2	
Nitrate/Nitrite as N	97	J	1	25	100	NE	ug/L	EPA 353.2	
Nitrite as N	25	J	1	5.6	100	1000	ug/L	EPA 353.2	
Oil & Grease (HEM)	7340		1	3000	5000	NE	ug/L	EPA 1664A	
Phenolics	950		1	20	50	NE	ug/L	EPA 420.1	
Phosphorus	2100		1	21	100	NE	ug/L	EPA 365.4	
Sulfate as SO4	10000	J	1	120	5000	250000	ug/L	EPA 300.0	
Toluene	26	JD	50	14	50	1	ug/L	EPA 8260B	
Total Kjeldahl Nitrogen	720000	D	100	14000	48000	NE	ug/L	EPA 351.2	
Total Suspended Solids	23000		1	1000	1000	NE	ug/L	SM 2540D	
Vanadium - Total	110		1	1.40	10.0	25	ug/L	EPA 6010C	
Xylenes (Total)	39	JD	50	20	50	5	ug/L	EPA 8260B	
Zinc - Total	34.9		1	3.80	10.0	10	ug/L	EPA 6010C	

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ANALYTICAL RESULTS

Description: 0803-Leachate
Matrix: Water
Project: Republic-East Carolina Landfill leachate

Lab Sample ID: C015018-01
Sampled: 01/05/11 11:11
Sampled By: Ryan Stringfellow

Received: 01/05/11 15:15
Work Order: C015018

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] ^	20	UD	ug/L	50	20	50	5	EPA 8260B	01/12/11 19:48	jkg	
1,1,1-Trichloroethane [71-55-6] ^	14	UD	ug/L	50	14	50	1	EPA 8260B	01/12/11 19:48	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] ^	16	UD	ug/L	50	16	50	3	EPA 8260B	01/12/11 19:48	jkg	
1,1,2-Trichloroethane [79-00-5] ^	18	UD	ug/L	50	18	50	1	EPA 8260B	01/12/11 19:48	jkg	
1,1-Dichloroethane [75-34-3] ^	16	UD	ug/L	50	16	50	5	EPA 8260B	01/12/11 19:48	jkg	
1,1-Dichloroethene [75-35-4] ^	12	UD	ug/L	50	12	50	5	EPA 8260B	01/12/11 19:48	jkg	
1,2,3-Trichloropropane [96-18-4] ^	28	UD	ug/L	50	28	50	1	EPA 8260B	01/12/11 19:48	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] ^	24	UD	ug/L	50	24	50	13	EPA 8260B	01/12/11 19:48	jkg	
1,2-Dibromoethane [106-93-4] ^	21	UD	ug/L	50	21	50	1	EPA 8260B	01/12/11 19:48	jkg	
1,2-Dichlorobenzene [95-50-1] ^	14	UD	ug/L	50	14	50	5	EPA 8260B	01/12/11 19:48	jkg	
1,2-Dichloroethane [107-06-2] ^	32	UD	ug/L	50	32	50	1	EPA 8260B	01/12/11 19:48	jkg	
1,2-Dichloropropane [78-87-5] ^	10	UD	ug/L	50	10	50	1	EPA 8260B	01/12/11 19:48	jkg	
1,4-Dichlorobenzene [106-46-7] ^	19	UD	ug/L	50	19	50	1	EPA 8260B	01/12/11 19:48	jkg	
2-Butanone [78-93-3] ^	**3900**	D	ug/L	50	50	250	100	EPA 8260B	01/12/11 19:48	jkg	
2-Hexanone [591-78-6] ^	34	UD	ug/L	50	34	250	50	EPA 8260B	01/12/11 19:48	jkg	
4-Methyl-2-pentanone [108-10-1] ^	**66**	JD	ug/L	50	55	250	100	EPA 8260B	01/12/11 19:48	jkg	
Acetone [67-64-1] ^	**3600**	D	ug/L	50	75	250	100	EPA 8260B	01/12/11 19:48	jkg	
Acrylonitrile [107-13-1] ^	100	UD	ug/L	50	100	500	200	EPA 8260B	01/12/11 19:48	jkg	
Benzene [71-43-2] ^	10	UD	ug/L	50	10	50	1	EPA 8260B	01/12/11 19:48	jkg	
Bromochloromethane [74-97-5] ^	21	UD	ug/L	50	21	50	3	EPA 8260B	01/12/11 19:48	jkg	
Bromodichloromethane [75-27-4] ^	18	UD	ug/L	50	18	50	1	EPA 8260B	01/12/11 19:48	jkg	
Bromoform [75-25-2] ^	36	UD	ug/L	50	36	50	3	EPA 8260B	01/12/11 19:48	jkg	
Bromomethane [74-83-9] ^	24	UD	ug/L	50	24	50	10	EPA 8260B	01/12/11 19:48	jkg	
Carbon disulfide [75-15-0] ^	27	UD	ug/L	50	27	250	100	EPA 8260B	01/12/11 19:48	jkg	
Carbon tetrachloride [56-23-5] ^	19	UD	ug/L	50	19	50	1	EPA 8260B	01/12/11 19:48	jkg	
Chlorobenzene [108-90-7] ^	14	UD	ug/L	50	14	50	3	EPA 8260B	01/12/11 19:48	jkg	
Chloroethane [75-00-3] ^	15	UD	ug/L	50	15	50	10	EPA 8260B	01/12/11 19:48	jkg	
Chloroform [67-66-3] ^	10	UD	ug/L	50	10	50	5	EPA 8260B	01/12/11 19:48	jkg	
Chloromethane [74-87-3] ^	17	UD	ug/L	50	17	50	1	EPA 8260B	01/12/11 19:48	jkg	
cis-1,2-Dichloroethene [156-59-2] ^	18	UD	ug/L	50	18	50	5	EPA 8260B	01/12/11 19:48	jkg	
cis-1,3-Dichloropropene [10061-01-5] ^	14	UD	ug/L	50	14	50	1	EPA 8260B	01/12/11 19:48	jkg	
Dibromochloromethane [124-48-1] ^	16	UD	ug/L	50	16	50	3	EPA 8260B	01/12/11 19:48	jkg	
Dibromomethane [74-95-3] ^	18	UD	ug/L	50	18	50	10	EPA 8260B	01/12/11 19:48	jkg	
Ethylbenzene [100-41-4] ^	**31**	JD	ug/L	50	10	50	1	EPA 8260B	01/12/11 19:48	jkg	
Iodomethane [74-88-4] ^	26	UD	ug/L	50	26	250	10	EPA 8260B	01/12/11 19:48	jkg	
Methylene chloride [75-09-2] ^	26	UD	ug/L	50	26	50	1	EPA 8260B	01/12/11 19:48	jkg	
Styrene [100-42-5] ^	13	UD	ug/L	50	13	50	1	EPA 8260B	01/12/11 19:48	jkg	
Tetrachloroethene [127-18-4] ^	18	UD	ug/L	50	18	50	1	EPA 8260B	01/12/11 19:48	jkg	
Toluene [108-88-3] ^	**26**	JD	ug/L	50	14	50	1	EPA 8260B	01/12/11 19:48	jkg	
trans-1,2-Dichloroethene [156-60-5] ^	17	UD	ug/L	50	17	50	5	EPA 8260B	01/12/11 19:48	jkg	
trans-1,3-Dichloropropene [10061-02-6] ^	19	UD	ug/L	50	19	50	1	EPA 8260B	01/12/11 19:48	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] ^	27	UD	ug/L	50	27	50	100	EPA 8260B	01/12/11 19:48	jkg	
Trichloroethene [79-01-6] ^	19	UD	ug/L	50	19	50	1	EPA 8260B	01/12/11 19:48	jkg	

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Description: 0803-Leachate
Matrix: Water
Project: Republic-East Carolina Landfill leachate

Lab Sample ID: C015018-01
Sampled: 01/05/11 11:11
Sampled By: Ryan Stringfellow

Received: 01/05/11 15:15
Work Order: C015018

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4] ^	14	UD	ug/L	50	14	50	1	EPA 8260B	01/12/11 19:48	jkg	
Vinyl acetate [108-05-4] ^	49	UD	ug/L	50	49	250	50	EPA 8260B	01/12/11 19:48	jkg	
Vinyl chloride [75-01-4] ^	15	UD	ug/L	50	15	50	1	EPA 8260B	01/12/11 19:48	jkg	
Xylenes (Total) [1330-20-7] ^	**39**	JD	ug/L	50	20	50	5	EPA 8260B	01/12/11 19:48	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*51-122*	*1A12006*	*EPA 8260B*	*01/12/11 19:48*	*jkg*	
Dibromofluoromethane	*44*	*1*	*50.0*	*89 %*	*68-117*	*1A12006*	*EPA 8260B*	*01/12/11 19:48*	*jkg*	
Toluene-d8	*50*	*1*	*50.0*	*99 %*	*69-110*	*1A12006*	*EPA 8260B*	*01/12/11 19:48*	*jkg*	

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Description:	0803-Leachate	**Lab Sample ID:**	C015018-01	**Received:**	01/05/11 15:15
Matrix:	Water	**Sampled:**	01/05/11 11:11	**Work Order:**	C015018
Project:	Republic-East Carolina Landfill leachate	**Sampled By:**	Ryan Stringfellow		

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Mercury [7439-97-6] ^	0.170	U	ug/L	1	0.170	0.200	0.2	EPA 7470A	01/07/11 14:38	NLH	

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Description: 0803-Leachate
Matrix: Water
Project: Republic-East Carolina Landfill leachate

Lab Sample ID: C015018-01
Sampled: 01/05/11 11:11
Sampled By: Ryan Stringfellow

Received: 01/05/11 15:15
Work Order: C015018

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

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] ^	**20.0**	D	ug/L	10	2.20	20.0	6	EPA 6020A	01/14/11 11:20	VLO	
Arsenic [7440-38-2] ^	**72.7**		ug/L	1	2.80	10.0	10	EPA 6010C	01/07/11 11:36	JDH	
Barium [7440-39-3] ^	**426**		ug/L	1	1.00	10.0	100	EPA 6010C	01/07/11 11:36	JDH	
Beryllium [7440-41-7] ^	0.100	U	ug/L	1	0.100	1.00	1	EPA 6010C	01/07/11 11:36	JDH	
Cadmium [7440-43-9] ^	0.360	U	ug/L	1	0.360	1.00	1	EPA 6010C	01/07/11 11:36	JDH	
Chromium [7440-47-3] ^	**59.7**		ug/L	1	1.00	10.0	10	EPA 6010C	01/07/11 11:36	JDH	
Cobalt [7440-48-4] ^	**19.8**		ug/L	1	1.10	10.0	10	EPA 6010C	01/07/11 11:36	JDH	
Copper [7440-50-8] ^	**2.57**	J	ug/L	1	1.60	10.0	10	EPA 6010C	01/07/11 11:36	JDH	
Lead [7439-92-1] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:36	JDH	
Nickel [7440-02-0] ^	**86.3**		ug/L	1	1.80	10.0	50	EPA 6010C	01/07/11 11:36	JDH	
Selenium [7782-49-2] ^	2.70	U	ug/L	1	2.70	10.0	10	EPA 6010C	01/07/11 11:36	JDH	
Silver [7440-22-4] ^	1.90	U	ug/L	1	1.90	10.0	10	EPA 6010C	01/07/11 11:36	JDH	
Thallium [7440-28-0] ^	1.10	UD	ug/L	10	1.10	10.0	5.5	EPA 6020A	01/14/11 11:20	VLO	
Vanadium [7440-62-2] ^	**110**		ug/L	1	1.40	10.0	25	EPA 6010C	01/07/11 11:36	JDH	
Zinc [7440-66-6] ^	**34.9**		ug/L	1	3.80	10.0	10	EPA 6010C	01/07/11 11:36	JDH	

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Description: 0803-Leachate
Matrix: Water
Project: Republic-East Carolina Landfill leachate

Lab Sample ID: C015018-01
Sampled: 01/05/11 11:11
Sampled By: Ryan Stringfellow

Received: 01/05/11 15:15
Work Order: C015018

Classical Chemistry Parameters

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Biochemical Oxygen Demand [ECL-0017] ^	**460000**		ug/L	1	2000	2000	NE	SM 5210B	01/06/11 16:22	JOC	
Chemical Oxygen Demand [ECL-0035] ^	**1700000**		ug/L	1	14000	50000	NE	SM 5220D	01/10/11 16:33	JOC	
Cyanide (total) [57-12-5] ^	**5.9**	J	ug/L	1	5.0	10	10	EPA 9014	01/11/11 10:44	AJB	
Nitrate as N [14797-55-8] ^	**72**	J	ug/L	1	25	100	10000	EPA 353.2	01/13/11 12:38	AJB	
Nitrate/Nitrite as N [ECL-0010] ^	**97**	J	ug/L	1	25	100	NE	EPA 353.2	01/10/11 15:58	AJB	
Nitrite as N [14797-65-0] ^	**25**	J	ug/L	1	5.6	100	1000	EPA 353.2	01/05/11 21:40	CCB	
Phosphorus [7723-14-0] ^	**2100**		ug/L	1	21	100	NE	EPA 365.4	01/18/11 16:09	CCB	
Sulfate as SO4 [14808-79-8] ^	**10000**	J	ug/L	1	120	5000	250000	EPA 300.0	01/07/11 00:55	AJB	
Total Kjeldahl Nitrogen [ECL-0162] ^	**720000**	D	ug/L	100	14000	48000	NE	EPA 351.2	01/14/11 14:47	CCB	
Total Suspended Solids [ECL-0169] ^	**23000**		ug/L	1	1000	1000	NE	SM 2540D	01/10/11 09:03	KLJ	

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Description: 0803-Leachate
Matrix: Water
Project: Republic-East Carolina Landfill leachate

Lab Sample ID: C015018-01
Sampled: 01/05/11 11:11
Sampled By: Ryan Stringfellow

Received: 01/05/11 15:15
Work Order: C015018

Classical Chemistry Parameters

^ - ENCO Orlando certified analyte [NC 424]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Phenolics [ECL-0123] ^	**950**		ug/L	1	20	50	NE	EPA 420.1	01/14/11 18:10	RMM	

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Description:	0803-Leachate	**Lab Sample ID:**	C015018-01	**Received:**	01/05/11 15:15
Matrix:	Water	**Sampled:**	01/05/11 11:11	**Work Order:**	C015018
Project:	Republic-East Carolina Landfill leachate	**Sampled By:**	Ryan Stringfellow		

Classical Chemistry Parameters

^ - ENCO Jacksonville certified analyte [NC 442]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Oil & Grease (HEM) [C-0007] ^	**7340**		ug/L	1	3000	5000	NE	EPA 1664A	01/13/11 14:32	MJF	

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

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1A12006 - EPA 5030B_MS

Blank (1A12006-BLK1) Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 15:23

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.40	U	1.0	ug/L							
1,1,1-Trichloroethane	0.27	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.33	U	1.0	ug/L							
1,1,2-Trichloroethane	0.37	U	1.0	ug/L							
1,1-Dichloroethane	0.33	U	1.0	ug/L							
1,1-Dichloroethene	0.24	U	1.0	ug/L							
1,2,3-Trichloropropane	0.55	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.42	U	1.0	ug/L							
1,2-Dichlorobenzene	0.27	U	1.0	ug/L							
1,2-Dichloroethane	0.65	U	1.0	ug/L							
1,2-Dichloropropane	0.20	U	1.0	ug/L							
1,4-Dichlorobenzene	0.38	U	1.0	ug/L							
2-Butanone	1.0	U	5.0	ug/L							
2-Hexanone	0.69	U	5.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	1.5	U	5.0	ug/L							
Acrylonitrile	2.1	U	10	ug/L							
Benzene	0.20	U	1.0	ug/L							
Bromochloromethane	0.42	U	1.0	ug/L							
Bromodichloromethane	0.37	U	1.0	ug/L							
Bromoform	0.71	U	1.0	ug/L							
Bromomethane	0.49	U	1.0	ug/L							
Carbon disulfide	0.54	U	5.0	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
Chlorobenzene	0.27	U	1.0	ug/L							
Chloroethane	0.30	U	1.0	ug/L							
Chloroform	0.20	U	1.0	ug/L							
Chloromethane	0.34	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.36	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.28	U	1.0	ug/L							
Dibromochloromethane	0.32	U	1.0	ug/L							
Dibromomethane	0.37	U	1.0	ug/L							
Ethylbenzene	0.20	U	1.0	ug/L							
Iodomethane	0.52	U	5.0	ug/L							
Methylene chloride	0.53	U	1.0	ug/L							
Styrene	0.26	U	1.0	ug/L							
Tetrachloroethene	0.36	U	1.0	ug/L							
Toluene	0.27	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.34	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.38	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.54	U	1.0	ug/L							
Trichloroethene	0.38	U	1.0	ug/L							
Trichlorofluoromethane	0.28	U	1.0	ug/L							
Vinyl acetate	0.98	U	5.0	ug/L							
Vinyl chloride	0.30	U	1.0	ug/L							
Xylenes (Total)	0.40	U	1.0	ug/L							
Surrogate: 4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*107*	*51-122*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 1A12006 - EPA 5030B_MS

Blank (1A12006-BLK1) Continued Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 15:23

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*44*			*ug/L*	*50.0*		*88*	*68-117*			
Surrogate: Toluene-d8	*49*			*ug/L*	*50.0*		*98*	*69-110*			

LCS (1A12006-BS1) Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 15:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0		88	75-133			
Benzene	18		1.0	ug/L	20.0		92	81-134			
Chlorobenzene	20		1.0	ug/L	20.0		98	83-117			
Toluene	19		1.0	ug/L	20.0		95	71-118			
Trichloroethene	19		1.0	ug/L	20.0		94	75-115			

Matrix Spike (1A12006-MS1) Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 16:23

Source: C100423-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.24 U	90	75-133			
Benzene	19		1.0	ug/L	20.0	0.20 U	94	81-134			
Chlorobenzene	19		1.0	ug/L	20.0	0.27 U	94	83-117			
Toluene	19		1.0	ug/L	20.0	0.27 U	93	71-118			
Trichloroethene	21		1.0	ug/L	20.0	0.38 U	105	75-115			

Matrix Spike Dup (1A12006-MSD1) Prepared: 01/12/2011 09:43 Analyzed: 01/12/2011 16:52

Source: C100423-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	17		1.0	ug/L	20.0	0.24 U	87	75-133	4	20	
Benzene	19		1.0	ug/L	20.0	0.20 U	94	81-134	0.5	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.27 U	103	83-117	9	16	
Toluene	20		1.0	ug/L	20.0	0.27 U	101	71-118	8	17	
Trichloroethene	21		1.0	ug/L	20.0	0.38 U	103	75-115	2	18	

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 1A07006 - EPA 245.1

Blank (1A07006-BLK1) Prepared: 01/07/2011 09:39 Analyzed: 01/07/2011 14:08

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

LCS (1A07006-BS1) Prepared: 01/07/2011 09:39 Analyzed: 01/07/2011 14:11

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.89		0.200	ug/L	5.00		98	85-115			

Matrix Spike (1A07006-MS1) Prepared: 01/07/2011 09:39 Analyzed: 01/07/2011 14:23

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 1A07006 - EPA 245.1

Matrix Spike (1A07006-MS1) Continued Prepared: 01/07/2011 09:39 Analyzed: 01/07/2011 14:23

Source: C100244-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.93		0.200	ug/L	5.00	0.170 U	99	85-115			

Matrix Spike Dup (1A07006-MSD1) Prepared: 01/07/2011 09:39 Analyzed: 01/07/2011 14:26

Source: C100244-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.88		0.200	ug/L	5.00	0.170 U	98	85-115	1	15	

Post Spike (1A07006-PS1) Prepared: 01/07/2011 09:39 Analyzed: 01/07/2011 14:29

Source: C100244-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.56		0.200	ug/L	5.00	0.114	89	75-125			

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

Batch 1A06004 - EPA 3005A

Blank (1A06004-BLK1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:35

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.80	U	10.0	ug/L							
Barium	1.00	U	10.0	ug/L							
Beryllium	0.100	U	1.00	ug/L							
Cadmium	0.360	U	1.00	ug/L							
Chromium	1.00	U	10.0	ug/L							
Cobalt	1.10	U	10.0	ug/L							
Copper	1.60	U	10.0	ug/L							
Lead	1.90	U	10.0	ug/L							
Nickel	1.80	U	10.0	ug/L							
Selenium	2.70	U	10.0	ug/L							
Silver	1.90	U	10.0	ug/L							
Vanadium	1.40	U	10.0	ug/L							
Zinc	3.80	U	10.0	ug/L							

LCS (1A06004-BS1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	495		10.0	ug/L	500		99	80-120			
Barium	500		10.0	ug/L	500		100	80-120			
Beryllium	253		1.00	ug/L	250		101	80-120			
Cadmium	247		1.00	ug/L	250		99	80-120			
Chromium	504		10.0	ug/L	500		101	80-120			
Cobalt	496		10.0	ug/L	500		99	80-120			
Copper	257		10.0	ug/L	250		103	80-120			
Lead	494		10.0	ug/L	500		99	80-120			
Nickel	498		10.0	ug/L	500		100	80-120			

QUALITY CONTROL

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

Batch 1A06004 - EPA 3005A

LCS (1A06004-BS1) Continued Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Selenium	506		10.0	ug/L	500		101	80-120			
Silver	252		10.0	ug/L	250		101	80-120			
Vanadium	246		10.0	ug/L	250		98	80-120			
Zinc	503		10.0	ug/L	500		101	80-120			

Matrix Spike (1A06004-MS1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:43

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	485		10.0	ug/L	500	5.85	96	75-125			
Barium	590		10.0	ug/L	500	100	98	75-125			
Beryllium	251		1.00	ug/L	250	2.38	99	75-125			
Cadmium	239		1.00	ug/L	250	0.360 U	96	75-125			
Chromium	496		10.0	ug/L	500	4.26	98	75-125			
Cobalt	515		10.0	ug/L	500	29.8	97	75-125			
Copper	253		10.0	ug/L	250	2.16	100	75-125			
Lead	482		10.0	ug/L	500	3.03	96	75-125			
Nickel	492		10.0	ug/L	500	9.32	97	75-125			
Selenium	497		10.0	ug/L	500	2.70 U	99	75-125			
Silver	248		10.0	ug/L	250	1.90 U	99	75-125			
Vanadium	250		10.0	ug/L	250	6.03	98	75-125			
Zinc	493		10.0	ug/L	500	7.51	97	75-125			

Matrix Spike Dup (1A06004-MSD1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:46

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	489		10.0	ug/L	500	5.85	97	75-125	0.9	20	
Barium	595		10.0	ug/L	500	100	99	75-125	0.9	20	
Beryllium	253		1.00	ug/L	250	2.38	100	75-125	1	20	
Cadmium	241		1.00	ug/L	250	0.360 U	96	75-125	0.8	20	
Chromium	500		10.0	ug/L	500	4.26	99	75-125	0.8	20	
Cobalt	518		10.0	ug/L	500	29.8	98	75-125	0.5	20	
Copper	255		10.0	ug/L	250	2.16	101	75-125	0.8	20	
Lead	488		10.0	ug/L	500	3.03	97	75-125	1	20	
Nickel	493		10.0	ug/L	500	9.32	97	75-125	0.3	20	
Selenium	491		10.0	ug/L	500	2.70 U	98	75-125	1	20	
Silver	249		10.0	ug/L	250	1.90 U	100	75-125	0.2	20	
Vanadium	252		10.0	ug/L	250	6.03	98	75-125	0.7	20	
Zinc	493		10.0	ug/L	500	7.51	97	75-125	0.02	20	

Post Spike (1A06004-PS1) Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:48

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.948		0.0100	mg/L	1.00	0.00585	94	80-120			
Barium	1.05		0.0100	mg/L	1.00	0.100	95	80-120			

QUALITY CONTROL

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

Batch 1A06004 - EPA 3005A

Post Spike (1A06004-PS1) Continued Prepared: 01/06/2011 08:07 Analyzed: 01/07/2011 10:48

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Beryllium	0.485		0.00100	mg/L	0.500	0.00238	96	80-120			
Cadmium	0.464		0.00100	mg/L	0.500	0.000240	93	80-120			
Chromium	0.956		0.0100	mg/L	1.00	0.00426	95	80-120			
Cobalt	0.969		0.0100	mg/L	1.00	0.0298	94	80-120			
Copper	0.491		0.0100	mg/L	0.500	0.00216	98	80-120			
Lead	0.938		0.0100	mg/L	1.00	0.00303	93	80-120			
Nickel	0.945		0.0100	mg/L	1.00	0.00932	94	80-120			
Selenium	0.964		0.0100	mg/L	1.00	-0.00331	97	80-120			
Silver	0.478		0.0100	mg/L	0.500	0.000369	96	80-120			
Vanadium	0.475		0.0100	mg/L	0.500	0.00603	94	80-120			
Zinc	0.954		0.0100	mg/L	1.00	0.00751	95	80-120			

Batch 1A06005 - EPA 3005A

Blank (1A06005-BLK1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 09:50

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

LCS (1A06005-BS1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 09:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	25.9		2.00	ug/L	25.0		104	80-120			
Thallium	26.6		1.00	ug/L	25.0		106	80-120			

Matrix Spike (1A06005-MS1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 10:01

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	25.4		2.00	ug/L	25.0	0.220 U	102	75-125			
Thallium	24.9		1.00	ug/L	25.0	0.122	99	75-125			

Matrix Spike Dup (1A06005-MSD1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 10:04

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	24.8		2.00	ug/L	25.0	0.220 U	99	75-125	3	20	
Thallium	24.6		1.00	ug/L	25.0	0.122	98	75-125	1	20	

Post Spike (1A06005-PS1) Prepared: 01/06/2011 08:12 Analyzed: 01/14/2011 10:08

Source: C015017-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	24.2		2.00	ug/L	25.0	-0.206	98	80-120			
Thallium	24.3		1.00	ug/L	25.0	0.122	97	80-120			

QUALITY CONTROL

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

Batch 1A06005 - EPA 3005A

Classical Chemistry Parameters - Quality Control

Batch 1A05031 - NO PREP

Blank (1A05031-BLK1) Prepared: 01/05/2011 20:16 Analyzed: 01/05/2011 21:22

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	5.6	U	100	ug/L							

LCS (1A05031-BS1) Prepared: 01/05/2011 20:16 Analyzed: 01/05/2011 21:23

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	1.0		0.10	mg/L	1.00		103	90-110			

Matrix Spike (1A05031-MS1) Prepared: 01/05/2011 20:16 Analyzed: 01/05/2011 21:41

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.95		0.10	mg/L	1.00	0.025	93	90-110			

Matrix Spike Dup (1A05031-MSD1) Prepared: 01/05/2011 20:16 Analyzed: 01/05/2011 21:43

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrite as N	0.95		0.10	mg/L	1.00	0.025	92	90-110	0.6	10	

Batch 1A06013 - NO PREP

Blank (1A06013-BLK1) Prepared & Analyzed: 01/06/2011 19:19

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	120	U	5000	ug/L							

LCS (1A06013-BS1) Prepared & Analyzed: 01/06/2011 19:38

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	48		5.0	mg/L	50.0		97	90-110			

Matrix Spike (1A06013-MS1) Prepared & Analyzed: 01/07/2011 08:32

Source: C015018-01RE1

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	0.0	U	5.0	mg/L	20.0	0.12 U		90-110			

Matrix Spike (1A06013-MS2) Prepared & Analyzed: 01/07/2011 01:51

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	29		5.0	mg/L	20.0	10	93	90-110			

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 1A06013 - NO PREP

Matrix Spike Dup (1A06013-MSD1) Prepared & Analyzed: 01/07/2011 08:46

Source: C015018-01RE1

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	0.0	U	5.0	mg/L	20.0	0.12 U		90-110		10	

Matrix Spike Dup (1A06013-MSD2) Prepared & Analyzed: 01/07/2011 02:10

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate as SO4	29		5.0	mg/L	20.0	10	92	90-110	0.5	10	

Batch 1A06033 - NO PREP

Blank (1A06033-BLK1) Prepared & Analyzed: 01/06/2011 16:32

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	2000	U	2000	ug/L							

LCS (1A06033-BS1) Prepared & Analyzed: 01/06/2011 16:32

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	190		2.0	mg/L	198		98	85-115			

Duplicate (1A06033-DUP1) Prepared & Analyzed: 01/06/2011 16:32

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Biochemical Oxygen Demand	470000		2000	ug/L		460000			2	25	

Batch 1A10004 - Same

Blank (1A10004-BLK1) Prepared: 01/10/2011 11:19 Analyzed: 01/11/2011 10:20

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	5.0	U	10	ug/L							

LCS (1A10004-BS1) Prepared: 01/10/2011 11:19 Analyzed: 01/11/2011 10:22

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	0.15		0.010	mg/L	0.150		97	85-115			

Matrix Spike (1A10004-MS1) Prepared: 01/10/2011 11:19 Analyzed: 01/11/2011 10:36

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	0.093		0.010	mg/L	0.150	0.0059	58	85-115			QM-05

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 1A10004 - Same

Matrix Spike Dup (1A10004-MSD1) Prepared: 01/10/2011 11:19 Analyzed: 01/11/2011 10:38

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cyanide (total)	0.099		0.010	mg/L	0.150	0.0059	62	85-115	6	20	QM-05

Batch 1A10007 - NO PREP

Blank (1A10007-BLK1) Prepared & Analyzed: 01/10/2011 09:03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	1000	U	1000	ug/L							

LCS (1A10007-BS1) Prepared & Analyzed: 01/10/2011 09:03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	88		1.0	mg/L	80.0		110	90-122			

Duplicate (1A10007-DUP1) Prepared & Analyzed: 01/10/2011 09:03

Source: C015851-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Suspended Solids	25000		1000	ug/L		21000			17	25	

Batch 1A10017 - Same

Blank (1A10017-BLK1) Prepared: 01/10/2011 13:57 Analyzed: 01/10/2011 16:33

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	2800	U	10000	ug/L							

LCS (1A10017-BS1) Prepared: 01/10/2011 13:57 Analyzed: 01/10/2011 16:33

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	510		10	mg/L	500		102	90-110			

Matrix Spike (1A10017-MS1) Prepared: 01/10/2011 13:57 Analyzed: 01/10/2011 16:33

Source: C014016-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	520		10	mg/L	500	7.5	103	90-110			

Matrix Spike Dup (1A10017-MSD1) Prepared: 01/10/2011 13:57 Analyzed: 01/10/2011 16:33

Source: C014016-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Chemical Oxygen Demand	510		10	mg/L	500	7.5	101	90-110	3	10	

Batch 1A10019 - NO PREP

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QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Blank (1A10019-BLK1) Prepared: 01/10/2011 12:29 Analyzed: 01/10/2011 15:53

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	25	U	100	ug/L							

LCS (1A10019-BS1) Prepared: 01/10/2011 12:29 Analyzed: 01/10/2011 15:56

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.2		0.10	mg/L	1.25		97	90-110			

LCS Dup (1A10019-BSD1) Prepared: 01/10/2011 12:29 Analyzed: 01/10/2011 15:47

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	1.3		0.10	mg/L	1.25		106	90-110	9	10	

Matrix Spike (1A10019-MS1) Prepared: 01/10/2011 12:29 Analyzed: 01/10/2011 16:00

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	0.093		0.10	mg/L	0.513	0.097	NR	90-110			

Matrix Spike Dup (1A10019-MSD1) Prepared: 01/10/2011 12:29 Analyzed: 01/10/2011 16:02

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Nitrate/Nitrite as N	0.089		0.10	mg/L	0.513	0.097	NR	90-110	4	10	

Batch 1A11008 - Same

Blank (1A11008-BLK1) Prepared: 01/11/2011 11:10 Analyzed: 01/14/2011 14:38

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	140	U	480	ug/L							

LCS (1A11008-BS1) Prepared: 01/11/2011 11:10 Analyzed: 01/14/2011 14:40

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	13		0.48	mg/L	12.0		106	90-110			

Matrix Spike (1A11008-MS1) Prepared: 01/11/2011 11:10 Analyzed: 01/14/2011 14:42

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	700	D	0.48	mg/L	4.80	720	NR	90-110			QM-17

Matrix Spike Dup (1A11008-MSD1) Prepared: 01/11/2011 11:10 Analyzed: 01/14/2011 14:45

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Kjeldahl Nitrogen	730	D	0.48	mg/L	4.80	720	366	90-110	5	10	QM-17

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QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 1A11008 - Same

Batch 1A17004 - Same

Blank (1A17004-BLK1) Prepared: 01/17/2011 10:18 Analyzed: 01/18/2011 16:02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	21	U	100	ug/L							

LCS (1A17004-BS1) Prepared: 01/17/2011 10:18 Analyzed: 01/18/2011 16:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	1.5		0.10	mg/L	1.60		94	80-120			

Matrix Spike (1A17004-MS1) Prepared: 01/17/2011 10:18 Analyzed: 01/18/2011 16:05

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	2.7		0.10	mg/L	0.640	2.1	104	80-120			

Matrix Spike Dup (1A17004-MSD1) Prepared: 01/17/2011 10:18 Analyzed: 01/18/2011 16:07

Source: C015018-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phosphorus	2.7		0.10	mg/L	0.640	2.1	94	80-120	2	25	

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 1A12006 - EPA 1664A

Blank (1A12006-BLK1) Prepared: 01/12/2011 13:18 Analyzed: 01/13/2011 14:32

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Oil & Grease (HEM)	3000	U	5000	ug/L							

LCS (1A12006-BS1) Prepared: 01/12/2011 13:18 Analyzed: 01/13/2011 14:32

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Oil & Grease (HEM)	35200		5000	ug/L	40700		87	78-114			

Matrix Spike (1A12006-MS1) Prepared: 01/12/2011 13:18 Analyzed: 01/13/2011 14:32

Source: B100147-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Oil & Grease (HEM)	35800		5000	ug/L	41000	3000 U	87	78-114			

Matrix Spike Dup (1A12006-MSD1) Prepared: 01/12/2011 13:18 Analyzed: 01/13/2011 14:32

Source: B100147-02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Oil & Grease (HEM)	34000		5000	ug/L	40900	3000 U	83	78-114	5	18	

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 1A12006 - EPA 1664A

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 1A14009 - NO PREP

Blank (1A14009-BLK1) Prepared: 01/14/2011 10:18 Analyzed: 01/14/2011 18:10

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phenolics	23	U	50	ug/L							

LCS (1A14009-BS1) Prepared: 01/14/2011 10:18 Analyzed: 01/14/2011 18:10

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phenolics	460		50	ug/L	500		91	78-110			

Matrix Spike (1A14009-MS1) Prepared: 01/14/2011 10:18 Analyzed: 01/14/2011 18:10

Source: A006089-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phenolics	440		50	ug/L	500	23 U	88	78-110			

Matrix Spike Dup (1A14009-MSD1) Prepared: 01/14/2011 10:18 Analyzed: 01/14/2011 18:10

Source: A006089-01

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Phenolics	440		50	ug/L	500	23 U	89	78-110	0.7	10	

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
QM-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.
QM-17	Matrix spike recovery was outside acceptance limits due to high concentrations of analyte in source sample.

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

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

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Page 1 of 2

Client Name: Golder Associates, Inc. (GO007)	Project Number: 053-6620011.100
Address: 5B Oak Branch Drive	Project Name/Desc: Republic-East Carolina Landfill leachate
City/ST/Zip: Greensboro, NC 27407	PO # / Billing Info: 2010: 24814
Tel: (336) 852-4903 Fax: (336) 852-4904	Reporting Contact: Dusty Reedy
Sampler(s) Name, Affiliation (Print): Ryan Stringfellow	Billing Contact: Ray Hoffman
Sampler(s) Signature: Ryan Stringfellow	Site Location / Time Zone

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due __/__/__

Lab Workorder: C015018

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	8260B Appendix 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Se,Tl,V,Zn	BOD SM5210B	COD SM5220D	Cyanide Total 9014	Hg	Nitrate Calc 353.2	Nitrite as N 353.2	NOX 353.2,P,TKN 351.2	O&G 1664A	Sample Comments
	0803-Leachate	1/5/2011	11:11	G	WA	14	X	X	X	X	X	X	X	X	X	X	

<-- Total # of Containers

Sample Kit Prepared By: SPF	Date/Time: 12/21/10		
Relinquished By: Ryan Stringfellow	Date/Time: 1/5/11 2:40	Received By: [signature]	Date/Time: 1/5/11 2:40
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By: [signature]	Date/Time: 1/5/11 3:15

Comments/Special Reporting Requirements:
1. Please sent a Level 2 report
2. Invoice Republic, files sent to Golder.

Cooler #'s & Temps on Receipt: C-75 2.3°C

Condition Upon Receipt: X Acceptable ___ Unacceptable

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

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

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

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Client Name: Golder Associates, Inc. (GO007)	Project Number: 053-6620011.100
Address: 5B Oak Branch Drive	Project Name/Desc: Republic-East Carolina Landfill leachate
City/ST/Zip: Greensboro, NC 27407	PO #./ Billing Info: 2010: 24814
Tel: (336) 852-4903 Fax: (336) 852-4904	Reporting Contact: Dusty Reedy
Sampler(s) Name, Affiliation (Print)	Billing Contact: Ray Hoffman
Sampler(s) Signature	Site Location / Time Zone

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard

___ Expedited

Due ___/___/___

Lab Workorder: C015018

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	Phenols 420.1	Sulfate 300	TSS SM2540D								Sample Comments
	0803-Leachate	1/5/11	11:11	G	WA	14	X	X	X								

Requested Analyses

Preservation (See Codes) (Combine as necessary)

<-- Total # of Containers

Sample Kit Prepared By: ppf	Date/Time: 12/21/10	Relinquished By: [signature]	Date/Time: 1/5/11 2:40	Received By: [signature]	Date/Time: 1/5/11 2:40
Comments/Special Reporting Requirements: See page one		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By: [signature]	Date/Time: 1/5/11 3:15
		Cooler #'s & Temps on Receipt: C-75 2.3°C		Condition Upon Receipt: X Acceptable ___ Unacceptable	

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

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

WORK ORDER

Printed: 1/19/2011 3:15:03PM

C015018

ENCO Cary

Sample Receipt Conditions

Client:	**Golder Associates, Inc. (GO007)**	**Lab Project Mgr:**	**Stephanie Franz**
Project:	**Republic-East Carolina Landfill leachate**	**Project Number:**	**053-6620011.100**
PO #:	**2010: 24814**		

Report To:

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

Invoice To:

Republic Services of NC (RE014)
Ray Hoffman
P.O. Box 2943
Hickory, NC 28603
Phone :(828) 464-2414
Fax:

Received By:	Chris Brand	Date Received:	05-Jan-11 15:15
Logged In By:	Briana J Gregory	Date Logged In:	05-Jan-11 16:11

Work Order Comments:

C-75 received at 2.3°C

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

Reviewed By

Date

Project Name: Republic – East Carolina Landfill - Leachate

Project Reference Number: 0536-620011.100

Sampling Event Date: January 5, 2011

Review Date: January 20, 2011 *Initials:*JAD

Report #: C015018

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

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

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

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

___ NC Closed Facility List (.500 Rules)

___ NC C & D List (New Rules)

___ NC Appendix I

___ NC Appendix I + Detects

___ NC Appendix II

X NC Subtitle D Leachate List

Other: _____

1.0 CHAIN OF CUSTODY (COC) REVIEW

JAD COC was properly signed by all parties.

JAD Correct project name and number are on the form.

JAD Sample receipt condition at laboratory was acceptable.

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

Notes: _____

2.0 SAMPLE HOLDING TIMES

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

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

3.0 LABORATORY QUALITY CONTROL REVIEW

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

JAD Laboratory blank is interference-free.

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

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

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

JAD 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 recovery of cyanide was outside of control limits for the MS and MSD samples due to matrix interference and the spike recovery of TKN was outside of acceptance criteria due to high concentrations of analyte in the source sample. The QC batches were approved based on acceptable LCS recovery of these analytes.***
- ***The MS and MSD samples for the NOX analysis were not spiked. This QC batch was approved based on acceptable LCS and LCSD results.***

4.0 ANALYTE LISTS/METHODS

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

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

Notes: _____

5.0 DATA REPORTING

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

JAD 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.

JAD 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.

- ***VOCs diluted 50x***
- ***Antimony and Thallium diluted 10x***
- ***TKN diluted 100x***

JAD The report provides the reporting limit for each constituent.

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

NA No organic or inorganic constituents were reported above their respective NC 2L Drinking Water Standards or Groundwater Protection Standards in wells, or field/equipment/trip blanks, or above applicable surface water standards in surface water points.

JAD No inorganic or 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).

JAD Other report issues/Communications with laboratory/etc.:

APPENDIX C

STATISTICAL EVALUATION WORKSHEETS AND SUMMARY TABLE

Summary of Statistical Analysis
East Carolina Regional Landfill, Permit No. 08-03
Bertie County, North Carolina

January 2011 - Yorktown Formation													
Detected Monitoring Constituent/Analytes	**Reporting Units**			**Prediction Interval**	**GW-7**	**GW-8**	**GW-9**	**GW-10**	**GW-11**	**GW-13**	**GW-15**	**GW-16R**	**GW-17**
Barium	ug/L	Interwell	Nonparametric Prediction Interval	545	100	120	207	92.8 J	21.8 J	261	105	37.8 J	156
Beryllium	ug/L	Interwell	Nonparametric Prediction Interval	1.34	2.38	0.799 J	0.574 J	0.296 J	0.427 J	0.506 J	0.284 J	0.152 J	0.420 J
		Intrawell GW-7	Upper Tolerance Limit	4.12									
Cobalt	ug/L	Interwell	Upper Prediction Limit	19.8	29.8	3.63 J	3.19 J	ND	1.19 J	2.24 J	2.60 J	1.77 J	5.07 J
		Intrawell GW-7	Upper Tolerance Limit	50.6									
Zinc	ug/L	Interwell	Nonparametric Prediction Interval	110	7.51 J	ND	14.0	ND	ND	ND	ND	ND	8.51 J

Notes:
1. Shaded values represent apparent statistical significant increases (SSIs) over background concentrations.
2. Statistical worksheets are provided in Appendix III.
3. ug/L = micrograms per liter
4. J = estimated concentration below the Solid Waste Section Limit
5. B = blank-qualified detection
6. ND = Not Detected

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Analyte: Barium

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	10/28/98	GW-2	ND		500
2	4/7/99	GW-2	ND		500
3	12/8/99	GW-2	ND		500
4	4/27/00	GW-2	ND		500
5	10/18/00	GW-2	ND		500
6	4/19/01	GW-2	ND		500
7	12/24/01	GW-2	ND		500
8	4/23/02	GW-2	ND		500
9	10/23/02	GW-2	ND		500
10	4/1/03	GW-2	ND		500
11	10/28/03	GW-2	ND		500
12	4/27/04	GW-2	500		500
13	10/26/04	GW-2	ND		500
14	3/15/05	GW-2	500		500
15	7/12/05	GW-2	ND		500
16	1/19/06	GW-2	523		500
17	7/11/06	GW-2	517		500
18	1/17/07	GW-2	516		100
19	7/9/07	GW-2	448		100
20	1/14/08	GW-2	405		100
21	07/14/08	GW-2	500		100
22	1/19/09	GW-2	534		100
23	7/20/09	GW-2	534		100
24	1/25/10	GW-2	545		100
25	7/6/10	GW-2	419		100
26	1/4/11	GW-2	409		100

Number of Data	26
Number of Truncated Data	13
Percentage of Truncated Data	50%

Nonparametric Prediction Interval: **545** ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Analyte: Beryllium

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	10/28/98	GW-2	ND		2
2	4/7/99	GW-2	ND		2
3	12/8/99	GW-2	ND		2
4	4/27/00	GW-2	ND		2
5	10/18/00	GW-2	ND		2
6	4/19/01	GW-2	ND		2
7	12/24/01	GW-2	ND		2
8	4/23/02	GW-2	ND		2
9	10/23/02	GW-2	ND		2
10	4/1/03	GW-2	ND		2
11	10/28/03	GW-2	ND		2
12	4/27/04	GW-2	ND		2
13	10/26/04	GW-2	ND		2
14	3/15/05	GW-2	ND		2
15	7/12/05	GW-2	ND		2
16	1/19/06	GW-2	ND		2
17	7/11/06	GW-2	ND		2
18	1/17/07	GW-2	1		1
19	7/9/07	GW-2	0.7	J	1
20	1/14/08	GW-2	ND		1
21	07/14/08	GW-2	0.8	J	1
22	1/19/09	GW-2	0.9	J	1
23	7/20/09	GW-2	1.26		1
24	1/25/10	GW-2	1.34		1
25	7/6/10	GW-2	0.873	J	1
26	1/4/11	GW-2	1.08		1

Number of Data	26
Number of Truncated Data	18
Percentage of Truncated Data	69%

Nonparametric Prediction Interval: **1.34** ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Analyte: Beryllium (GW-7 Intrawell)

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	10/28/98	GW-7	ND		2
2	4/7/99	GW-7	2		2
3	12/8/99	GW-7	ND		2
4	4/27/00	GW-7	ND		2
5	10/18/00	GW-7	ND		2
6	4/19/01	GW-7	ND		2
7	12/24/01	GW-7	ND		2
8	4/23/02	GW-7	ND		2
9	10/23/02	GW-7	3		2
10	4/1/03	GW-7	ND		2
11	10/28/03	GW-7	3		2
12	4/27/04	GW-7	3		2
13	10/26/04	GW-7	3		2
14	3/15/05	GW-7	ND		2
15	7/12/05	GW-7	2.2		2
16	1/19/06	GW-7	2		2
17	7/11/06	GW-7	ND		2
18	1/17/07	GW-7	1.9		1
19	7/9/07	GW-7	1.9		1
20	1/14/08	GW-7	1.5		1
21	07/14/08	GW-7	1.6		1
22	1/19/09	GW-7	1.3		1
23	7/20/09	GW-7	2.11		1
24	1/25/10	GW-7	2.11		1
25	7/6/10	GW-7	1.98		1

Number of Data	25
Number of Truncated Data	10
Percentage of Truncated Data	40%

Aitchison's Adjusted Antilog UTL: **4.12** ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Determination of reported background value as an outlier

Analyte: Beryllium (GW-7 Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)		Quantitation Limit (ug/l)
1	10/28/98	GW-7	ND		2
2	04/07/99	GW-7	2		2
3	12/08/99	GW-7	ND		2
4	04/27/00	GW-7	ND		2
5	10/18/00	GW-7	ND		2
6	04/19/01	GW-7	ND		2
7	12/24/01	GW-7	ND		2
8	04/23/02	GW-7	ND		2
9	10/23/02	GW-7	3		2
10	04/01/03	GW-7	ND		2
11	10/28/03	GW-7	3		2
12	04/27/04	GW-7	3		2
13	10/26/04	GW-7	3		2
14	03/15/05	GW-7	ND		2
15	07/12/05	GW-7	2.2		2
16	01/19/06	GW-7	2		2
17	07/11/06	GW-7	ND		2
18	01/17/07	GW-7	1.9		1
19	07/09/07	GW-7	1.9		1
20	01/14/08	GW-7	1.5		1
21	07/14/08	GW-7	1.6		1
22	01/19/09	GW-7	1.3		1
23	07/20/09	GW-7	2.11		1
24	01/25/10	GW-7	2.11		1
25	07/06/10	GW-7	1.98		1

mean = 2.173
STD = 0.569

Note: All concentrations are micrograms per liter

Using the data listed above, form the statistic Tn:

Tn = (Xn - mean) / STD

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

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For	Xn =	3.000
	mean =	2.173
	STD =	0.569
	Tn =	**1.453**

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

Number of samples =	25
Tc =	**2.663**

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

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Probability Plots to determine the distribution of Beryllium (GW-7 Intrawell)

Complete the following table where:

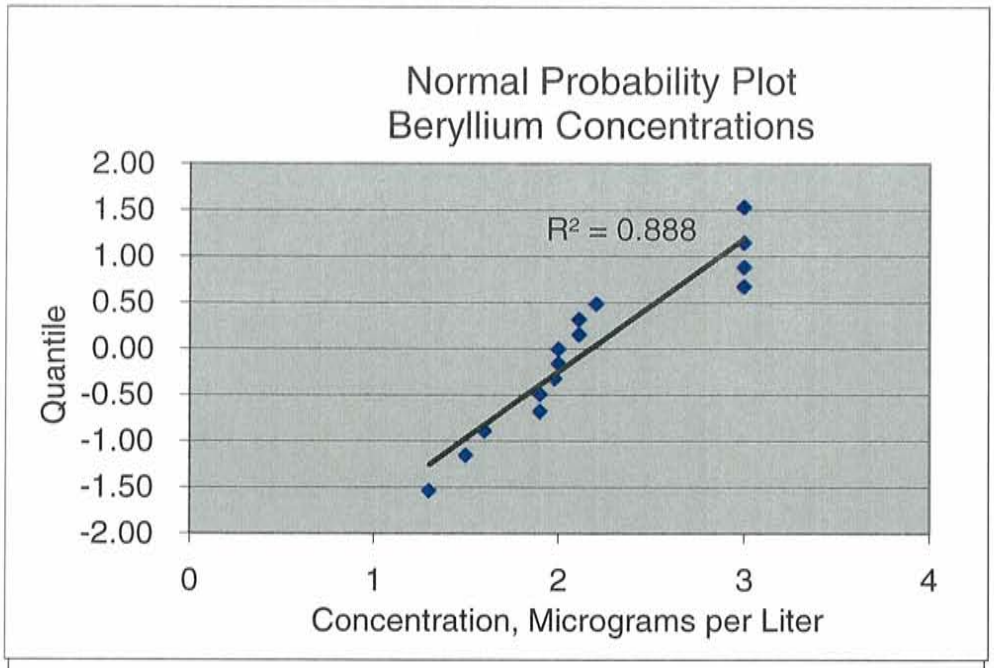
i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
LN[X(i)] = Natural Log Value of sample concentrations arranged from smallest to largest
[i/(n+1)] = Cumulative probability
n = number of samples = 15

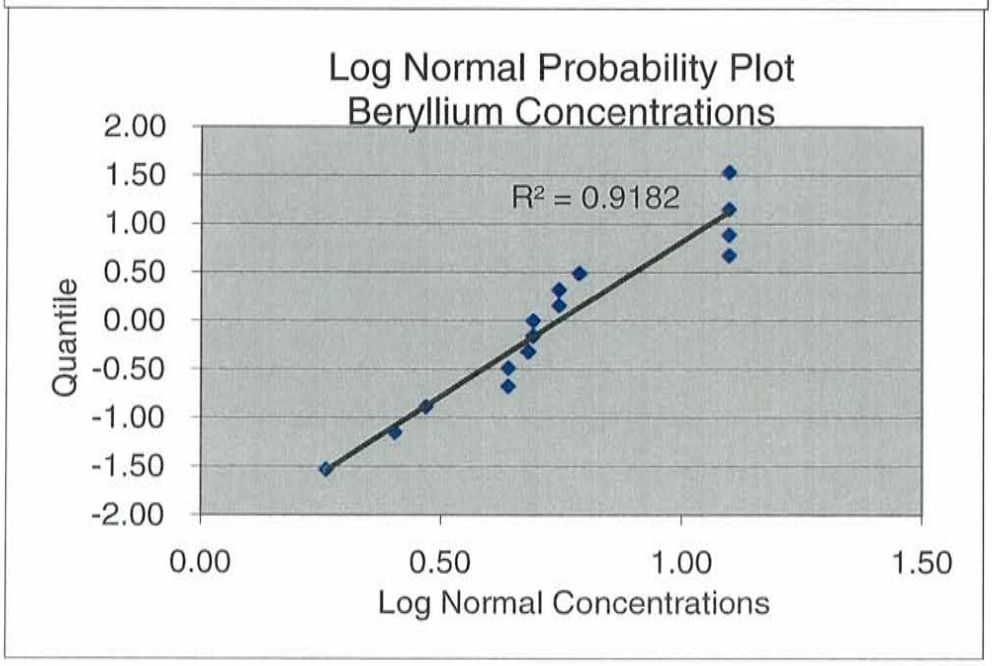
X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
1.3	0.26	1	1	0.063	-1.53
1.5	0.41	2	2	0.125	-1.15
1.6	0.47	3	3	0.188	-0.89
1.9	0.64	4	4	0.250	-0.67
1.9	0.64	5	5	0.313	-0.49
1.98	0.68	6	6	0.375	-0.32
2	0.69	7	7	0.438	-0.16
2	0.69	8	8	0.500	0.00
2.11	0.75	9	9	0.563	0.16
2.11	0.75	10	10	0.625	0.32
2.2	0.79	11	11	0.688	0.49
3	1.10	12	12	0.750	0.67
3	1.10	13	13	0.813	0.89
3	1.10	14	14	0.875	1.15
3	1.10	15	15	0.938	1.53

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 01/20/11

Probability Plots to determine the distribution of Beryllium (GW-7 Intrawell)





Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Shapiro Wilk Test Statistic (W) for normality of total Beryllium (GW-7 Intrawell)

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	1.30	3.00	1.7	0.515	0.88
2	1.50	3.00	1.5	0.3306	0.50
3	1.60	3.00	1.4	0.2495	0.35
4	1.90	3.00	1.1	0.1878	0.21
5	1.90	2.20	0.3	0.1353	0.04
6	1.98	2.11	0.13	0.0880	0.01
7	2.00	2.11	0.11	0.0433	0.00
8	2.00	2.00	0	0	0.00
9	2.11	2.00			
10	2.11	1.98			
11	2.20	1.90			
12	3.00	1.90			
13	3.00	1.60			
14	3.00	1.50			
15	3.00	1.30			

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) = 1.98
SD = standard deviation of the data group = 0.57
n = number of samples = 15

W = 0.868

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) = 0.881
and the calculated W = 0.868

Therefore the data is Non Normal

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Shapiro Wilk Test Statistic (W) for log normality of Beryllium (GW-7 Intrawell)

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	0.26	1.10	0.8362	0.5150	0.4307
2	0.41	1.10	0.6931	0.3306	0.2292
3	0.47	1.10	0.6286	0.2495	0.1568
4	0.64	1.10	0.4568	0.1878	0.0858
5	0.64	0.79	0.1466	0.1353	0.0198
6	0.68	0.75	0.0636	0.0880	0.0056
7	0.69	0.75	0.0535	0.0433	0.0023
8	0.69	0.69	0.0000	0.0000	0.0000
9	0.75	0.69			
10	0.75	0.68			
11	0.79	0.64			
12	1.10	0.64			
13	1.10	0.47			
14	1.10	0.41			
15	1.10	0.26			

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) = 0.9302
SD = standard deviation of the data group = 0.2614
n = number of samples = 15

W = 0.9047

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) = 0.881
and the calculated W = 0.905

Therefore the data set is Log Normal

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Aitchison's Adjustment for Beryllium (GW-7 Intrawell)

Background Values (positive detects only)

Sample No.	Sample Date	Location	Concentration (ug/l)	ln(conc)
1	10/28/98	GW-7	ND	ND
2	04/07/99	GW-7	2	0.693
3	12/08/99	GW-7	ND	ND
4	04/27/00	GW-7	ND	ND
5	10/18/00	GW-7	ND	ND
6	04/19/01	GW-7	ND	ND
7	12/24/01	GW-7	ND	ND
8	04/23/02	GW-7	ND	ND
9	10/23/02	GW-7	3	1.099
10	04/01/03	GW-7	ND	ND
11	10/28/03	GW-7	3	1.099
12	04/27/04	GW-7	3	1.099
13	10/26/04	GW-7	3	1.099
14	03/15/05	GW-7	ND	ND
15	07/12/05	GW-7	2.2	0.788
16	01/19/06	GW-7	2	0.693
17	07/11/06	GW-7	ND	ND
18	01/17/07	GW-7	1.9	0.642
19	07/09/07	GW-7	1.9	0.642
20	01/14/08	GW-7	1.5	0.405
21	07/14/08	GW-7	1.6	0.470
22	01/19/09	GW-7	1.3	0.262
23	07/20/09	GW-7	2.11	0.747
24	01/25/10	GW-7	2.11	0.747
25	07/06/10	GW-7	1.98	0.683

Mean of detected values = 0.74
Standard Deviation of detected values = 0.26

The adjusted mean can be found using

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

where:
d = number non- detected values = 10
n = total number samples = 25
M = mean detected values = 0.74

M(a) = 0.45

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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	=	25
	d =	number non-detected values	=	10
	S =	std deviation of detected values squared	=	0.07
	MM =	mean of detected values squared	=	0.55
		STD(a)	=	0.18

and the adjusted standard deviation is then

S(a) = SQRT(STD(a)) = 0.42

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Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Parametric Prediction Interval for Aitchison's adjusted data

Analyte: Beryllium (GW-7 Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)	ln(Concentration)
1	10/28/98	GW-7	ND	2.00	ND
2	04/07/99	GW-7	2.00	2.00	0.693
3	12/08/99	GW-7	ND	2.00	ND
4	04/27/00	GW-7	ND	2.00	ND
5	10/18/00	GW-7	ND	2.00	ND
6	04/19/01	GW-7	ND	2.00	ND
7	12/24/01	GW-7	ND	2.00	ND
8	04/23/02	GW-7	ND	2.00	ND
9	10/23/02	GW-7	3.00	2.00	1.099
10	04/01/03	GW-7	ND	2.00	ND
11	10/28/03	GW-7	3.00	2.00	1.099
12	04/27/04	GW-7	3.00	2.00	1.099
13	10/26/04	GW-7	3.00	2.00	1.099
14	03/15/05	GW-7	ND	2.00	ND
15	07/12/05	GW-7	2.20	2.00	0.788
16	01/19/06	GW-7	2.00	2.00	0.693
17	07/11/06	GW-7	ND	2.00	ND
18	01/17/07	GW-7	1.90	1.00	0.642
19	07/09/07	GW-7	1.90	1.00	0.642
20	01/14/08	GW-7	1.50	1.00	0.405
21	07/14/08	GW-7	1.60	1.00	0.470
22	01/19/09	GW-7	1.30	1.00	0.262
23	07/20/09	GW-7	2.11	1.00	0.747
24	01/25/10	GW-7	2.11	1.00	0.747
25	07/06/10	GW-7	1.98	1.00	0.683

Note: All sample concentrations are micrograms per liter

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

the ln(adjusted mean) and l(standard deviation) are

ln(adjusted mean) = 0.45
ln(adjusted standard deviation) = 0.42

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)

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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 =	0.447	
	Std Dev =	0.422	
	t(n-1,k,.95)*sqrt(1/m+1/n) =	1.750	
	k =	1	
	m =	1	
	n =	25	
	Antilog UPL =	**3.27**	ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Parametric Tolerance Interval for Aitchison's adjusted data

Analyte: Beryllium (GW-7 Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)	ln(Concentration) (ug/l)
1	10/28/98	GW-7	ND	2.00	ND
2	04/07/99	GW-7	2.00	2.00	0.693
3	12/08/99	GW-7	ND	2.00	ND
4	04/27/00	GW-7	ND	2.00	ND
5	10/18/00	GW-7	ND	2.00	ND
6	04/19/01	GW-7	ND	2.00	ND
7	12/24/01	GW-7	ND	2.00	ND
8	04/23/02	GW-7	ND	2.00	ND
9	10/23/02	GW-7	3.00	2.00	1.099
10	04/01/03	GW-7	ND	2.00	ND
11	10/28/03	GW-7	3.00	2.00	1.099
12	04/27/04	GW-7	3.00	2.00	1.099
13	10/26/04	GW-7	3.00	2.00	1.099
14	03/15/05	GW-7	ND	2.00	ND
15	07/12/05	GW-7	2.20	2.00	0.788
16	01/19/06	GW-7	2.00	2.00	0.693
17	07/11/06	GW-7	ND	2.00	ND
18	01/17/07	GW-7	1.90	1.00	0.642
19	07/09/07	GW-7	1.90	1.00	0.642
20	01/14/08	GW-7	1.50	1.00	0.405
21	07/14/08	GW-7	1.60	1.00	0.470
22	01/19/09	GW-7	1.30	1.00	0.262
23	07/20/09	GW-7	2.11	1.00	0.747
24	01/25/10	GW-7	2.11	1.00	0.747
25	07/06/10	GW-7	1.98	1.00	0.683

Note: All sample concentrations are micrograms per liter

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

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

ln(adjusted mean) = 0.45
ln(adjusted standard deviation) = 0.42

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

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

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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 = 2.292

n = 25

Antilog UTL = 4.12 ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Analyte: Cobalt

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	10/28/98	GW-2	ND		10
2	4/7/99	GW-2	ND		10
3	12/8/99	GW-2	10		10
4	4/27/00	GW-2	ND		10
5	10/18/00	GW-2	ND		10
6	4/19/01	GW-2	ND		10
7	12/24/01	GW-2	ND		10
8	4/23/02	GW-2	ND		10
9	10/23/02	GW-2	ND		10
10	4/1/03	GW-2	10		10
11	10/28/03	GW-2	ND		10
12	4/27/04	GW-2	ND		10
13	10/26/04	GW-2	ND		10
14	3/15/05	GW-2	10		10
15	7/12/05	GW-2	ND		10
16	1/19/06	GW-2	11.9		10
17	7/11/06	GW-2	12.5		10
18	1/17/07	GW-2	10.3		10
19	7/9/07	GW-2	10		10
20	1/14/08	GW-2	11.3		10
21	07/14/08	GW-2	10.1		10
22	1/19/09	GW-2	12		10
23	7/20/09	GW-2	11.4		10
24	1/25/10	GW-2	12.6		10
25	7/6/10	GW-2	8.59	J	10
26	1/4/11	GW-2	9.65	J	10

Number of Data	26
Number of Truncated Data	12
Percentage of Truncated Data	46%

Upper Prediction Limit: **19.8** ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

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	10/28/98	GW-2	ND		10
2	04/07/99	GW-2	ND		10
3	12/08/99	GW-2	10.0		10
4	04/27/00	GW-2	ND		10
5	10/18/00	GW-2	ND		10
6	04/19/01	GW-2	ND		10
7	12/24/01	GW-2	ND		10
8	04/23/02	GW-2	ND		10
9	10/23/02	GW-2	ND		10
10	04/01/03	GW-2	10.0		10
11	10/28/03	GW-2	ND		10
12	04/27/04	GW-2	ND		10
13	10/26/04	GW-2	ND		10
14	03/15/05	GW-2	10.0		10
15	07/12/05	GW-2	ND		10
16	01/19/06	GW-2	11.9		10
17	07/11/06	GW-2	12.5		10
18	01/17/07	GW-2	10.3		10
19	07/09/07	GW-2	10.0		10
20	01/14/08	GW-2	11.3		10
21	07/14/08	GW-2	10.1		10
22	01/19/09	GW-2	12.0		10
23	07/20/09	GW-2	11.4		10
24	01/25/10	GW-2	12.6		10
25	07/06/10	GW-2	8.59	J	10
26	01/04/11	GW-2	9.65	J	10

mean = 10.739
STD = 1.204

Note: All concentrations are micrograms per liter

Using the data listed above, form the statistic Tn:

Tn = (Xn - mean) / STD

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where:

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

For	Xn =	12.600
	mean =	10.739
	STD =	1.204
	Tn =	**1.546**

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

Number of samples =	26
Tc =	**2.681**

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

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Probability Plots to determine the distribution of Cobalt

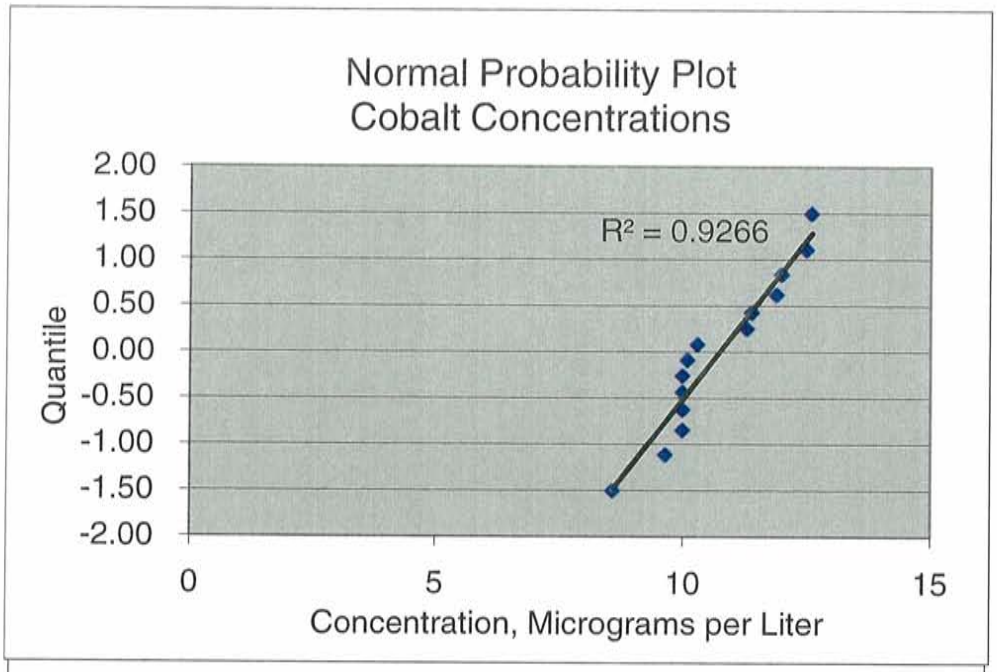
Complete the following table where:

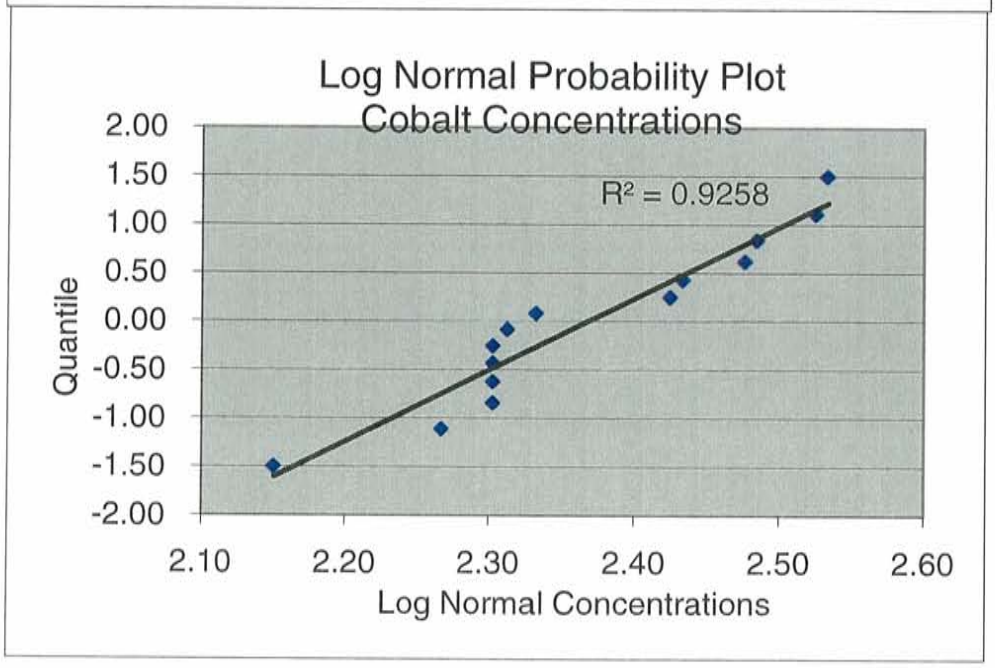
i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
LN[X(i)] = Natural Log Value of sample concentrations arranged from smallest to largest
[i/(n+1)] = Cumulative probability
n = number of samples = 14

X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
8.59	2.15	1	1	0.067	-1.50
9.65	2.27	2	2	0.133	-1.11
10	2.30	3	3	0.200	-0.84
10	2.30	4	4	0.267	-0.62
10	2.30	5	5	0.333	-0.43
10	2.30	6	6	0.400	-0.25
10.1	2.31	7	7	0.467	-0.08
10.3	2.33	8	8	0.533	0.08
11.3	2.42	9	9	0.600	0.25
11.4	2.43	10	10	0.667	0.43
11.9	2.48	11	11	0.733	0.62
12	2.48	12	12	0.800	0.84
12.5	2.53	13	13	0.867	1.11
12.6	2.53	14	14	0.933	1.50

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 01/20/11

Probability Plots to determine the distribution of Cobalt





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Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

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	8.59	12.60	4.01	0.5251	2.11
2	9.65	12.50	2.85	0.3318	0.95
3	10.00	12.00	2.00	0.246	0.49
4	10.00	11.90	1.9	0.1802	0.34
5	10.00	11.40	1.4	0.124	0.17
6	10.00	11.30	1.3	0.0727	0.09
7	10.10	10.30	0.2	0.0240	0.00
8	10.30	10.10			
9	11.30	10.00			
10	11.40	10.00			
11	11.90	10.00			
12	12.00	10.00			
13	12.50	9.65			
14	12.60	8.59			

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)	=	4.16
SD =	standard deviation of the data group	=	1.20
n =	number of samples	=	14
		W =	0.918

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) = 0.874
and the calculated W = 0.918

Therefore the data set is Normal

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Aitchison's Adjustment for Cobalt

Background Values (positive detects only)

Sample No.	Sample Date	Location	Concentration (ug/l)
1	10/28/98	GW-2	ND
2	04/07/99	GW-2	ND
3	12/08/99	GW-2	10
4	04/27/00	GW-2	ND
5	10/18/00	GW-2	ND
6	04/19/01	GW-2	ND
7	12/24/01	GW-2	ND
8	04/23/02	GW-2	ND
9	10/23/02	GW-2	ND
10	04/01/03	GW-2	10
11	10/28/03	GW-2	ND
12	04/27/04	GW-2	ND
13	10/26/04	GW-2	ND
14	03/15/05	GW-2	10
15	07/12/05	GW-2	ND
16	01/19/06	GW-2	11.9
17	07/11/06	GW-2	12.5
18	01/17/07	GW-2	10.3
19	07/09/07	GW-2	10
20	01/14/08	GW-2	11.3
21	07/14/08	GW-2	10.1
22	01/19/09	GW-2	12
23	07/20/09	GW-2	11.4
24	01/25/10	GW-2	12.6
25	07/06/10	GW-2	8.59
26	01/04/11	GW-2	9.65

Mean of detected values = 10.74
Standard Deviation of detected values = 1.20

The adjusted mean can be found using

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

where:

d =	number non- detected values	=	12
n =	total number samples	=	26
M =	mean detected values	=	10.74
	M(a)	=	**5.78**

The adjusted standard deviation squared may be found using

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

where:	n =	total number samples	=	26
	d =	number non-detected values	=	12
	S =	std deviation of detected values squared	=	1.45
	MM =	mean of detected values squared	=	115.32
		STD(a)	=	30.56

and the adjusted standard deviation is then

S(a) = SQRT(STD(a)) = 5.53

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

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	10/28/98	GW-2	ND	10.00
2	04/07/99	GW-2	ND	10.00
3	12/08/99	GW-2	10.00	10.00
4	04/27/00	GW-2	ND	10.00
5	10/18/00	GW-2	ND	10.00
6	04/19/01	GW-2	ND	10.00
7	12/24/01	GW-2	ND	10.00
8	04/23/02	GW-2	ND	10.00
9	10/23/02	GW-2	ND	10.00
10	04/01/03	GW-2	10.00	10.00
11	10/28/03	GW-2	ND	10.00
12	04/27/04	GW-2	ND	10.00
13	10/26/04	GW-2	ND	10.00
14	03/15/05	GW-2	10.00	10.00
15	07/12/05	GW-2	ND	10.00
16	01/19/06	GW-2	11.90	10.00
17	07/11/06	GW-2	12.50	10.00
18	01/17/07	GW-2	10.30	10.00
19	07/09/07	GW-2	10.00	10.00
20	01/14/08	GW-2	11.30	10.00
21	07/14/08	GW-2	10.10	10.00
22	01/19/09	GW-2	12.00	10.00
23	07/20/09	GW-2	11.40	10.00
24	01/25/10	GW-2	12.60	10.00
25	07/06/10	GW-2	8.59	10.00
26	01/04/11	GW-2	9.65	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 = 5.78
adjusted standard deviation = 5.53

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)

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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 =	5.782	
Std Dev =	5.528	
t(n-1,k,.95)*sqrt(1/m+1/n) =	2.54	
k =	9	
m =	1	
n =	26	
UPL =	**19.8**	ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

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	10/28/98	GW-2	ND	10.00
2	04/07/99	GW-2	ND	10.00
3	12/08/99	GW-2	10.00	10.00
4	04/27/00	GW-2	ND	10.00
5	10/18/00	GW-2	ND	10.00
6	04/19/01	GW-2	ND	10.00
7	12/24/01	GW-2	ND	10.00
8	04/23/02	GW-2	ND	10.00
9	10/23/02	GW-2	ND	10.00
10	04/01/03	GW-2	10.00	10.00
11	10/28/03	GW-2	ND	10.00
12	04/27/04	GW-2	ND	10.00
13	10/26/04	GW-2	ND	10.00
14	03/15/05	GW-2	10.00	10.00
15	07/12/05	GW-2	ND	10.00
16	01/19/06	GW-2	11.90	10.00
17	07/11/06	GW-2	12.50	10.00
18	01/17/07	GW-2	10.30	10.00
19	07/09/07	GW-2	10.00	10.00
20	01/14/08	GW-2	11.30	10.00
21	07/14/08	GW-2	10.10	10.00
22	01/19/09	GW-2	12.00	10.00
23	07/20/09	GW-2	11.40	10.00
24	01/25/10	GW-2	12.60	10.00
25	07/06/10	GW-2	8.59	10.00
26	01/04/11	GW-2	9.65	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 = 5.78
adjusted standard deviation = 5.53

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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 = 2.278

n = 26

UTL = 18.4 ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Analyte: Cobalt (GW-7 Intrawell)

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	10/28/98	GW-7	30		10
2	4/7/99	GW-7	20		10
3	12/8/99	GW-7	20		10
4	4/27/00	GW-7	30		10
5	10/18/00	GW-7	30		10
6	4/19/01	GW-7	30		10
7	12/24/01	GW-7	30		10
8	4/23/02	GW-7	30		10
9	10/23/02	GW-7	50		10
10	4/1/03	GW-7	40		10
11	10/28/03	GW-7	50		10
12	4/27/04	GW-7	30		10
13	10/26/04	GW-7	40		10
14	3/15/05	GW-7	36		10
15	7/12/05	GW-7	40		10
16	1/19/06	GW-7	30		10
17	7/11/06	GW-7	31.6		10
18	1/17/07	GW-7	34.9		10
19	7/9/07	GW-7	37.5		10
20	1/14/08	GW-7	35.1		10
21	07/14/08	GW-7	37.3		10
22	1/19/09	GW-7	23.7		10
23	7/20/09	GW-7	35.4		10
24	1/25/10	GW-7	21.5		10
25	7/6/10	GW-7	26.6		10

Number of Data	25
Number of Truncated Data	0
Percentage of Truncated Data	0%

Upper Tolerance Limit: **50.6** ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Determination of reported background value as an outlier

Analyte: Cobalt (GW-7 Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)		Quantitation Limit (ug/l)
1	10/28/98	GW-7	30		10
2	04/07/99	GW-7	20		10
3	12/08/99	GW-7	20		10
4	04/27/00	GW-7	30		10
5	10/18/00	GW-7	30		10
6	04/19/01	GW-7	30		10
7	12/24/01	GW-7	30		10
8	04/23/02	GW-7	30		10
9	10/23/02	GW-7	50		10
10	04/01/03	GW-7	40		10
11	10/28/03	GW-7	50		10
12	04/27/04	GW-7	30		10
13	10/26/04	GW-7	40		10
14	03/15/05	GW-7	36		10
15	07/12/05	GW-7	40		10
16	01/19/06	GW-7	30		10
17	07/11/06	GW-7	31.6		10
18	01/17/07	GW-7	34.9		10
19	07/09/07	GW-7	37.5		10
20	01/14/08	GW-7	35.1		10
21	07/14/08	GW-7	37.3		10
22	01/19/09	GW-7	23.7		10
23	07/20/09	GW-7	35.4		10
24	01/25/10	GW-7	21.5		10
25	07/06/10	GW-7	26.6		10

mean = 32.784
STD = 7.792

Note: All concentrations are micrograms per liter

Using the data listed above, form the statistic Tn:

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

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

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For	Xn =	50.000
	mean =	32.784
	STD =	7.792
	Tn =	**2.210**

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

Number of samples =	25
Tc =	**2.663**

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

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Probability Plots to determine the distribution of Cobalt (GW-7 Intrawell)

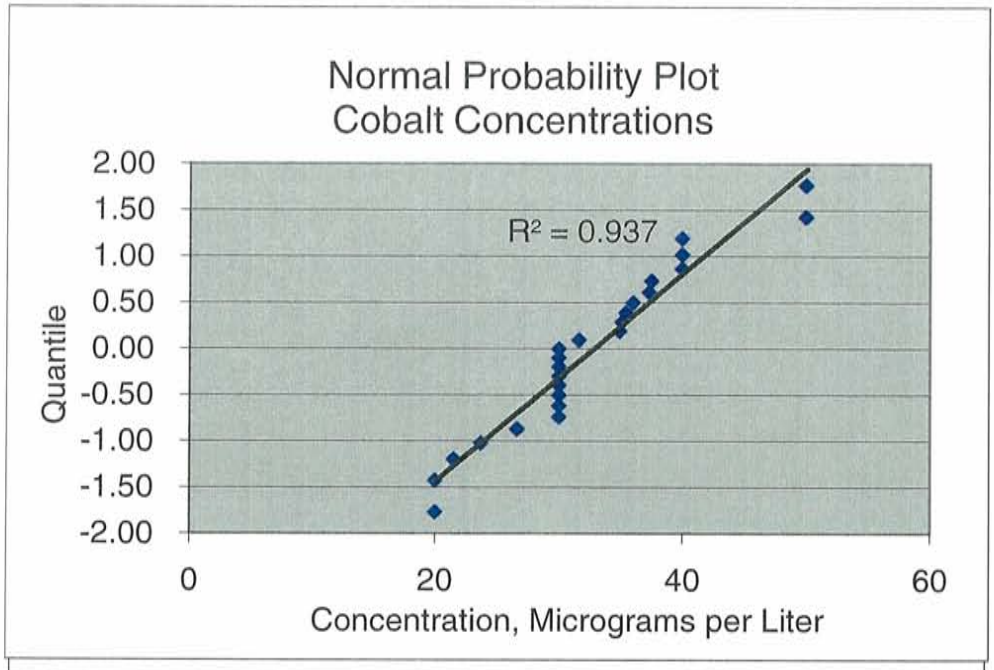
Complete the following table where:

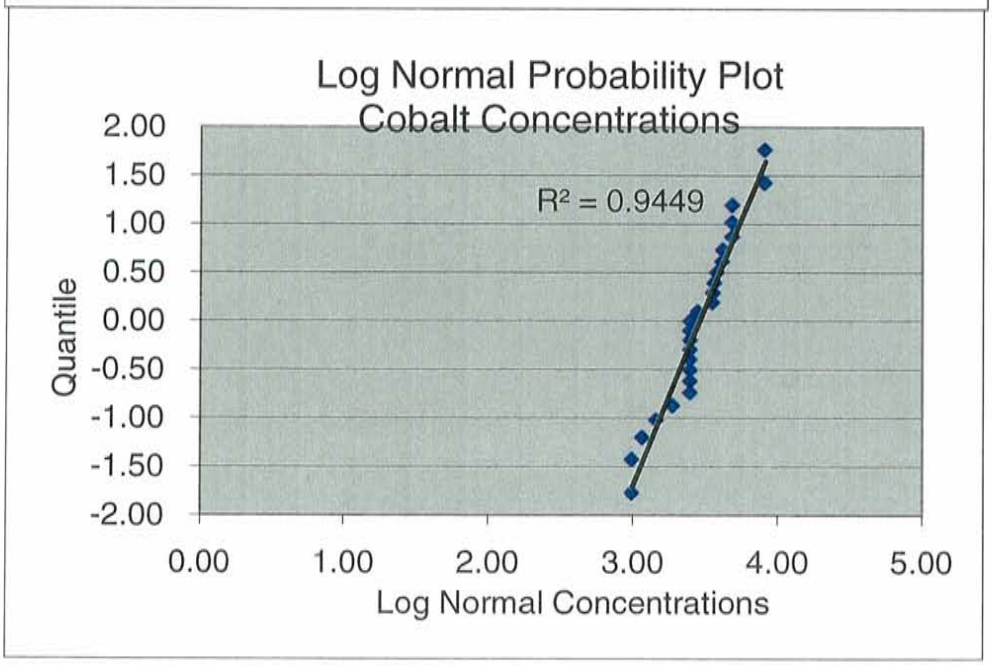
i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
LN[X(i)] = Natural Log Value of sample concentrations arranged from smallest to largest
[i/(n+1)] = Cumulative probability
n = number of samples = 25

X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
20	3.00	1	1	0.038	-1.77
20	3.00	2	2	0.077	-1.43
21.5	3.07	3	3	0.115	-1.20
23.7	3.17	4	4	0.154	-1.02
26.6	3.28	5	5	0.192	-0.87
30	3.40	6	6	0.231	-0.74
30	3.40	7	7	0.269	-0.62
30	3.40	8	8	0.308	-0.50
30	3.40	9	9	0.346	-0.40
30	3.40	10	10	0.385	-0.29
30	3.40	11	11	0.423	-0.19
30	3.40	12	12	0.462	-0.10
30	3.40	13	13	0.500	0.00
31.6	3.45	14	14	0.538	0.10
34.9	3.55	15	15	0.577	0.19
35.1	3.56	16	16	0.615	0.29
35.4	3.57	17	17	0.654	0.40
36	3.58	18	18	0.692	0.50
37.3	3.62	19	19	0.731	0.62
37.5	3.62	20	20	0.769	0.74
40	3.69	21	21	0.808	0.87
40	3.69	22	22	0.846	1.02
40	3.69	23	23	0.885	1.20
50	3.91	24	24	0.923	1.43
50	3.91	25	25	0.962	1.77

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 01/20/11

Probability Plots to determine the distribution of Cobalt (GW-7 Intrawell)





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Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Shapiro Wilk Test Statistic (W) for normality of total Cobalt (GW-7 Intrawell)

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	20.00	50.00	30	0.445	13.35
2	20.00	50.00	30	0.3069	9.21
3	21.50	40.00	18.5	0.2543	4.70
4	23.70	40.00	16.3	0.2148	3.50
5	26.60	40.00	13.4	0.1822	2.44
6	30.00	37.50	7.5	0.1539	1.15
7	30.00	37.30	7.3	0.1283	0.94
8	30.00	36.00	6	0.1046	0.63
9	30.00	35.40	5.4	0.0823	0.44
10	30.00	35.10	5.1	0.061	0.31
11	30.00	34.90	4.9	0.0403	0.20
12	30.00	31.60	1.6	0.02	0.03
13	30.00	30.00	0	0	0.00
14	31.60	30.00			
15	34.90	30.00			
16	35.10	30.00			
17	35.40	30.00			
18	36.00	30.00			
19	37.30	30.00			
20	37.50	30.00			
21	40.00	26.60			
22	40.00	23.70			
23	40.00	21.50			
24	50.00	20.00			
25	50.00	20.00			

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)	=	36.91
SD =	standard deviation of the data group	=	7.79
n =	number of samples	=	25

W = 0.935

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Compare this value to the critical value in Table A-2 of Statistical Analysis of 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) = 0.918
and the calculated W = 0.935

Therefore the data set is Normal

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Parametric Prediction Interval for normally distributed data

Analyte: Cobalt (GW-7 Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	10/28/98	GW-7	30.00	10.00
2	04/07/99	GW-7	20.00	10.00
3	12/08/99	GW-7	20.00	10.00
4	04/27/00	GW-7	30.00	10.00
5	10/18/00	GW-7	30.00	10.00
6	04/19/01	GW-7	30.00	10.00
7	12/24/01	GW-7	30.00	10.00
8	04/23/02	GW-7	30.00	10.00
9	10/23/02	GW-7	50.00	10.00
10	04/01/03	GW-7	40.00	10.00
11	10/28/03	GW-7	50.00	10.00
12	04/27/04	GW-7	30.00	10.00
13	10/26/04	GW-7	40.00	10.00
14	03/15/05	GW-7	36.00	10.00
15	07/12/05	GW-7	40.00	10.00
16	01/19/06	GW-7	30.00	10.00
17	07/11/06	GW-7	31.60	10.00
18	01/17/07	GW-7	34.90	10.00
19	07/09/07	GW-7	37.50	10.00
20	01/14/08	GW-7	35.10	10.00
21	07/14/08	GW-7	37.30	10.00
22	01/19/09	GW-7	23.70	10.00
23	07/20/09	GW-7	35.40	10.00
24	01/25/10	GW-7	21.50	10.00
25	07/06/10	GW-7	26.60	10.00

Note: All sample concentrations are micrograms per liter

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 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

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For:	Mean Conc =	32.784	
	Std Dev =	7.792	
	t(n-1,k,.95)*sqrt(1/m+1/n) =	1.750	
	k =	1	
	m =	1	
	n =	25	
	UPL =	**46.4**	ug/L

Golder Associates

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Parametric Tolerance Interval for normally distributed data

Analyte: Cobalt (GW-7 Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	10/28/98	GW-7	30.00	10.00
2	04/07/99	GW-7	20.00	10.00
3	12/08/99	GW-7	20.00	10.00
4	04/27/00	GW-7	30.00	10.00
5	10/18/00	GW-7	30.00	10.00
6	04/19/01	GW-7	30.00	10.00
7	12/24/01	GW-7	30.00	10.00
8	04/23/02	GW-7	30.00	10.00
9	10/23/02	GW-7	50.00	10.00
10	04/01/03	GW-7	40.00	10.00
11	10/28/03	GW-7	50.00	10.00
12	04/27/04	GW-7	30.00	10.00
13	10/26/04	GW-7	40.00	10.00
14	03/15/05	GW-7	36.00	10.00
15	07/12/05	GW-7	40.00	10.00
16	01/19/06	GW-7	30.00	10.00
17	07/11/06	GW-7	31.60	10.00
18	01/17/07	GW-7	34.90	10.00
19	07/09/07	GW-7	37.50	10.00
20	01/14/08	GW-7	35.10	10.00
21	07/14/08	GW-7	37.30	10.00
22	01/19/09	GW-7	23.70	10.00
23	07/20/09	GW-7	35.40	10.00
24	01/25/10	GW-7	21.50	10.00
25	07/06/10	GW-7	26.60	10.00

Note: All sample concentrations are micrograms per liter

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

Upper Tolerance Limit = (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
n = number of background samples
STDS = Standard Deviation Samples

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For:	n =	25	
	K =	2.292	
	Mean Conc =	32.78	
	STDS =	7.79	
	UTL =	**50.6**	ug/L

Project Name: East Carolina Landfill
Project No: 0536-620011.100
Date: 1/20/11

Analyte: Zinc

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	10/28/98	GW-2	ND		50
2	4/7/99	GW-2	50		50
3	12/8/99	GW-2	ND		50
4	4/27/00	GW-2	90		50
5	10/18/00	GW-2	ND		50
6	4/19/01	GW-2	ND		50
7	12/24/01	GW-2	ND		50
8	4/23/02	GW-2	ND		50
9	10/23/02	GW-2	ND		50
10	4/1/03	GW-2	110		50
11	10/28/03	GW-2	ND		50
12	4/27/04	GW-2	ND		50
13	10/26/04	GW-2	ND		50
14	3/15/05	GW-2	ND		50
15	7/12/05	GW-2	ND		50
16	1/19/06	GW-2	ND		50
17	7/11/06	GW-2	ND		50
18	7/9/07	GW-2	8.3	J	10
19	1/14/08	GW-2	13.3		10
20	1/19/09	GW-2	10.9		10
21	7/20/09	GW-2	10.3		10
22	1/25/10	GW-2	13		10
23	7/6/10	GW-2	12		10
24	1/4/11	GW-2	9.7	J	10

Number of Data	24
Number of Truncated Data	14
Percentage of Truncated Data	58%

Nonparametric Prediction Interval: **110** ug/L

Golder Associates