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).
- In accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- 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):

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

Name: Trevor J. Benton, P.G. Phone: 864-288-1265

E-mail: trevor@blecorp.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
White Oak Landfill	278 Recycle Road Clyde, North Carolina	44-07	.1600	April 23-24, 2008

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.

Trevor J. Benton, P.G.	Hydrogeologist	864-288-1265
Facility Representative Name (Print)	Title	(Area Code) Telephone Number

Signature — Date: 08/08/08

Affix NC Licensed/ Professional Geologist/Engineer Seal here:

NORTH CAROLINA LICENSED SEAL 2025 GEOLOGIST TREVOR J. BENTON

Revised 01/2007

BUNNELL-LAMMONS ENGINEERING, INC.

GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

REPORT OF GROUNDWATER QUALITY RESULTS & STATISTICAL ANALYSIS

FIRST SEMI-ANNUAL SAMPLING EVENT OF 2008

WHITE OAK LANDFILL
PERMIT NUMBER: 44-07
HAYWOOD COUNTY, NORTH CAROLINA

Prepared for:

HAYWOOD COUNTY SOLID WASTE MANAGEMENT
278 Recycle Road
Clyde, North Carolina 28721

Prepared By:

BUNNELL-LAMMONS ENGINEERING, INC.
6004 Ponders Court
Greenville, South Carolina 29615

NORTH CAROLINA LICENSED SEAL 2025 GEOLOGIST TREVOR J. BENTON 8/8/08

August 8, 2008

BLE Project Number J08-1957-04

BLE INC.
BUNNELL-LAMMONS ENGINEERING, INC.
GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

August 8, 2008

Haywood County Solid Waste Management
278 Recycle Road
Clyde, NC 28721

Attention: Mr. Stephen King
Solid Waste Director

Subject: **Report of Groundwater Quality Results & Statistical Analysis**
First Semi-Annual Sampling Event of 2008
White Oak Landfill
Permit Number: 44-07
Haywood County, North Carolina
BLE Project Number J08-1957-04

Dear Mr. King:

As authorized, Bunnell-Lammons Engineering, Inc. (BLE) has performed the statistical analysis of groundwater quality data obtained during the first semi-annual sampling event of 2008 for the White Oak Municipal Solid Waste (MSW) and Construction and Demolition (C&D) Landfills. The enclosed report describes the work performed and presents the results obtained with our conclusions. The purpose of this work was to statistically compare the laboratory analytical results of groundwater samples from the background monitoring wells to the downgradient monitoring wells at the subject landfill in accordance with Title 15A NCAC 13B .1632 (g), (h), and (i). This report of the sampling and statistical analysis has been prepared for submittal to the North Carolina Division of Waste Management (NCDWM) in accordance with Rule 15A NCAC 13B .1632 (j).

We appreciate the opportunity to serve as your hydrogeological consultant on this project and look forward to working with you on future projects. If you have any questions, please contact us at (864) 288-1265.

Sincerely,
BUNNELL-LAMMONS ENGINEERING, INC.

NORTH CAROLINA LICENSED SEAL 2025 GEOLOGIST TREVOR J. BENTON 8/8/08

Mark Preddy

Trevor J. Benton, P.G.
Project Hydrogeologist
Registered, North Carolina No. 2025

Mark S. Preddy, P.G.
Senior Hydrogeologist
Registered, North Carolina No. 1043

c.c: Mr. Ervin Lane – NC DENR Solid Waste Section, 401 Oberlin Road, Ste. 150, Raleigh, NC 27605

6004 PONDERS COURT
GREENVILLE, SOUTH CAROLINA 29615

PHONE (864) 288-1265
FAX (864) 288-4430

PROJECT INFORMATION

The subject landfill site is located in Haywood County, North Carolina, approximately twelve miles north of the city of Waynesville on White Oak Road at exit 15 of Interstate 40 (Figure 1). The Subtitle D lined MSW landfill has fifteen groundwater monitoring wells consisting of two upgradient (MW-11S and MW-11D) and thirteen downgradient wells (MW-1A, MW-2, MW-2D, MW-3, MW-3D, MW-4A, MW-5A, MW-5D, MW-8, MW-9, MW-12, MW-13S, and MW-13D). Additionally, there are four surface water sampling points (SW-1, SW-2, SW-3, and SW-5), a leachate lagoon sampling point (LSP), and a settling pond sampling point. The C&D landfill, which is located on the same property, is monitored by one upgradient (MW-14), one downgradient well (MW-15), and two locations for surface water monitoring (SW-6 and SW-7).

BLE was retained by Haywood County to prepare the semi-annual sampling reports for 2008. Historical data from multiple sources and in multiple formats had to be gathered from multiple sources and formats, and synthesized into this report. Water quality data available to BLE extends back to April 1993, however, many of the currently existing wells were not present during the earlier sampling events. As a result, the statistical database in this report uses data from sampling events ranging from April 2000 to the current sampling event (April 2008).

This report presents data from the first semi-annual sampling event in 2008 for the site. The water samples were collected and analyzed as required in North Carolina's regulations for operation of MSW and C&D landfills.

FIELD ACTIVITIES, SAMPLING, AND ANALYSIS

Groundwater, surface water, and leachate samples were collected for the first semi-annual sampling event of 2008 by personnel from Pace Analytical Services, Inc. (Pace) of Asheville, North Carolina on April 23 and 24, 2008. Sampling was performed in general accordance with the *Operations Plan* for the White Oak Landfill. Summary tables of historic and current analytical results are attached in Appendix A (groundwater) and Appendix B (surface water).

Groundwater samples were collected from each of the monitoring wells, surface water points, leachate lagoon sampling point, and settling pond. The samples were analyzed in the laboratory for North Carolina's *Appendix I* list of constituents that include total metals and volatile organic compounds (VOCs) and in the field for pH, specific conductance, and temperature. Additionally, the LSP was also analyzed for BOD, COD, sulfate, nitrate, nitrite, and nitrogen. A copy of the Pace laboratory and field data is included in Appendix C.

The water level data collected during the groundwater sampling is presented in Table 1. A water table surface elevation contour map is presented as Figure 2 along with generalized groundwater flow directions. Flow velocity calculations are provided on Table 2. Please note, hydraulic conductivity and effective porosity values for the existing wells were obtained from prior reports prepared by other consultants.

SUMMARY OF LABORATORY RESULTS

Concentrations of total arsenic (two wells), total barium (17 wells), total beryllium (one well), total cadmium (one well), total chromium (six wells), total cobalt (three wells), total copper (three wells), total lead (three wells), total nickel (eleven wells), total vanadium (11 wells), and total zinc (14 wells) were detected in the groundwater monitoring wells during the current sampling event. Concentrations of total lead in MW-15 were detected above North Carolina maximum contaminant levels[1] (MCLs). No VOCs were detected. A summary of the detected concentrations is included in Appendix A.

Total barium was detected in each of the six surface water samples, LSP, and settling pond during the current sampling event; but North Carolina has not established surface water[2] MCL for this constituent. Additionally, total cadmium (SW-5), total chromium (SW-5 and LSP), total cobalt (SW-5, LSP, and STP), total nickel (SW-5 and LSP), total vanadium (SW-5 and LSP), and total zinc (SW-

[1] North Carolina Department of Environment and Natural Resources, Classifications of Water Quality Standards, Section 15A NCAC 2L.202, December 1, 2005.

[2] North Carolina Department of Environment and Natural Resources, "Redbook", Surface Waters and Wetlands Standards, Section 15A NCAC 02B.0100, .0200, and .0300, May 1, 2007.

2 through SW-5, LSP, and settling pond) were detected in the surface water samples during the first semi-annual sampling event for 2008; but the detections were either below North Carolina surface water MCLs or an MCL has not been established for these constituents. No VOCs were detected. A summary of the detected surface water concentrations is included in Appendix B.

STATISTICAL METHODS PERFORMED

The purpose of performing statistical analysis of groundwater quality data is to determine if a release of leachate has occurred from the landfill cells to the groundwater at the site. The US EPA has prepared guidance documents for evaluating groundwater quality data, which include the *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Interim Final Guidance* (April 1989) and the *Addendum to the Interim Final Guidance* (July 1992). The procedures and methodology used for data analysis of this project are consistent with these US EPA guidance documents, and meet or exceed the performance criteria specified in the North Carolina solid waste management rules Title 15A NCAC 13B .1632(g-i). Five methods of statistical analysis were performed depending on the number of detected concentrations and the distribution of the data for a specific compound, as follows:

1. If greater than 90% of the data were not detected, Poisson Tolerance Limits were performed. Additionally, Wilcoxon rank-sum tests were performed for those compounds that failed the initial Poisson Tolerance Limits test;

2. If 15% to 90% of the data were not detected, the one-way non-parametric analysis of variance (ANOVA) Kruskal-Wallis rank-sum test was performed;

3. If less than 15% of the data were not detected, and if the data was normally distributed and homogeneous, then one-way parametric ANOVA was performed. If the data were not normally distributed and homogeneous, then a non-parametric type test was used (Kruskal-Wallis);

4. Alternatively, if greater than 50% of the data were not detected, Poisson Prediction Limits may be performed, or if less than 50% of the data were not detected, Normal Prediction Limits may be performed; and

5. Intrawell comparisons were performed, if necessary, using Shewhart-CUSUM control charts.

SUMMARY OF STATISTICAL RESULTS

The statistical results of the sampling events summarized on Table 3 and included in Appendix D indicate that:

1. The Poisson Prediction Limit and Wilcoxon tests performed for total antimony, total selenium, total silver, total thallium, and carbon disulfide did not calculate SSIs; and

2. The Kruskal-Wallis tests and Shewhart-CUSUM control charts did not calculate SSIs for total arsenic, total beryllium, total cadmium, total chromium, total cobalt, total copper, total lead, total nickel, total vanadium, and total zinc.

3. The ANOVA test and Shewhart-CUSUM control charts performed for total barium did not calculate SSIs.

CONCLUSION

Concentrations of various total metals were detected in the groundwater monitoring wells and surface water sampling points during the current sampling event. No VOCs were detected. Only concentrations of total lead in MW-15 were detected above North Carolina MCLs. The remaining detected concentrations were either below North Carolina's promulgated MCLs, or MCLs have not been established for a particular constituent. Additionally, none of the constituents were calculated to be statistically significant.

In summary, the detected concentrations of total metals are most likely naturally occurring and related to sample turbidity. Metal cations typically adsorb to the surface of platy particles (clay and silt). Therefore, turbidity of the groundwater and surface water samples will relate to detected concentrations of the metal cations. Consequently, the metal concentrations detected should be considered natural background concentrations.

We recommend that the field sampling contractor test the groundwater for turbidity prior to sample collection during future sampling events. We also recommend that sampling continue on a semi-annual basis for the *Appendix I* list of VOCs and total metals constituents.

TABLES

TABLE 1

POTENTIOMETRIC SURFACE DATA
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Monitoring Well	TOC Elevation	Groundwater Elevation Data									
		10/30/03	4/20/04	10/21/04	4/18/05	10/13/05	4/25/06	10/20/06	4/26/07	10/31/07	4/24/08
MW-1A	2520.46	2502.66	2503.12	2502.74	2503.41	2502.02	2502.91	2501.25	2501.09	2495.77	2500.64
MW-2	2497.00	2466.57	2468.00	2466.94	2468.07	2466.29	2467.76	2466.13	2466.97	2465.40	2467.50
MW-2D	2497.94	2467.54	2469.02	2467.94	2469.11	2467.31	2468.76	2467.08	2467.94	2466.34	2468.34
MW-3	2437.66	2428.66	2430.25	2429.37	2430.96	2428.76	2430.98	2428.45	2429.31	2426.90	2429.66
MW-3D	2436.90	2420.13	2421.07	2420.58	2421.33	2420.09	2421.13	2420.19	2420.20	2419.28	2420.51
MW-4A	2499.45	2451.08	2451.13	2452.87	2452.32	2451.68	2449.88	2448.68	2448.37	2448.63	2448.98
MW-5A	2504.06	2498.18	2498.23	2497.91	2498.96	2497.97	2499.76	NS	2498.56	2497.51	2498.10
MW-5D	2503.28	2496.77	2496.90	2496.63	2497.30	2496.68	2497.96	NS	2497.10	2496.47	2497.19
MW-8	2477.70	2446.61	2447.54	2447.17	2448.00	2446.67	2447.74	2446.33	2446.96	2445.28	2446.98
MW-9	2430.15	2420.98	2421.06	2420.90	2421.02	2420.83	2420.99	2421.09	2420.87	2420.47	2420.75
MW-11S	2674.58	2587.72	2589.31	2590.86	2592.08	2593.90	2594.94	2595.11	2593.96	2592.58	2590.76
MW-11D	2675.21	2587.93	2589.95	2590.84	2592.06	2593.84	2594.62	2594.89	2593.67	2592.31	2590.45
MW-12	2529.77	2519.19	2518.13	2517.47	2518.23	2517.57	2518.77	2517.65	2517.87	2517.00	2517.82
MW-13S	2532.35	2521.63	2520.78	2519.68	2520.50	2520.03	2520.65	2519.56	2519.97	2518.60	2519.64
MW-13D	2531.05	2520.31	2519.29	2518.41	2519.22	2518.74	2519.29	2518.42	2518.69	2517.61	2518.48
MW-14	2711.69	2610.79	2611.66	2612.36	2613.19	2613.51	2612.41	2611.74	2610.50	2608.31	2607.56
MW-15	2547.41	2538.15	2538.46	2538.49	2538.70	2538.39	2538.71	2538.33	2538.33	2537.58	2538.06

NOTES:

1. Elevations are in FEET above mean sea level (MSL)
2. *TOC* = top of casing
3. Current water level measurements are from ASI field sampling notes
4. *NP* = Not Present during sampling event
5. *NS* = Not sampled during event

Prepared By: IAI
Checked By: TJB

TABLE 2

GROUNDWATER FLOW DATA
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Monitoring Well	Hydraulic Conductivity			Local Hydraulic Gradient (ft/ft)	Effective Porosity	Flow Velocity (ft/day)	Flow Velocity (ft/yr)
	cm/sec	ft/min	ft/day				
MW-1A	1.50E-04	2.95E-04	4.25E-01	0.0732	0.114	0.27	99.62
MW-2	1.50E-04	2.95E-04	4.31E+00	0.0732	0.114	2.76	1,008.64
MW-3	1.50E-04	2.95E-04	4.31E+00	0.0732	0.114	2.76	1,008.64
MW-4A	1.49E-04	2.93E-04	4.28E+00	0.1875	0.05	16.04	5,853.33
MW-5A	1.50E-04	2.95E-04	4.31E+00	0.0932	0.114	3.52	1,284.49
MW-8	1.50E-04	2.95E-04	4.31E+00	0.0732	0.114	2.76	1,008.64
MW-11S	2.40E-06	4.72E-06	6.89E-02	0.0586	0.114	0.04	12.92
MW-12	1.36E-04	2.68E-04	3.90E+00	0.0932	0.17	2.14	780.97
MW-13S	3.76E-04	7.40E-04	1.08E+01	0.0932	0.17	5.92	2,159.15
MW-14	1.38E-05	2.72E-05	3.96E-01	0.0579	0.17	0.13	49.25
MW-15	2.10E-05	4.13E-05	6.03E-01	0.0579	0.17	0.21	74.95

Notes:

1. Hydraulic conductivity and effective porosity values are from prior site hydrogeologic studies performed by others.
2. Hydraulic gradients and flow velocities calculated from measurements taken during the April 2008 sampling event.
3. Groundwater flow velocities calculated using the equation $V = Ki/n_e$ where
4. V = velocity
5. K = hydraulic conductivity
6. i = hydraulic gradient
7. n_e = effective porosity

Prepared By: IAI
Checked By: TJB

TABLE 3

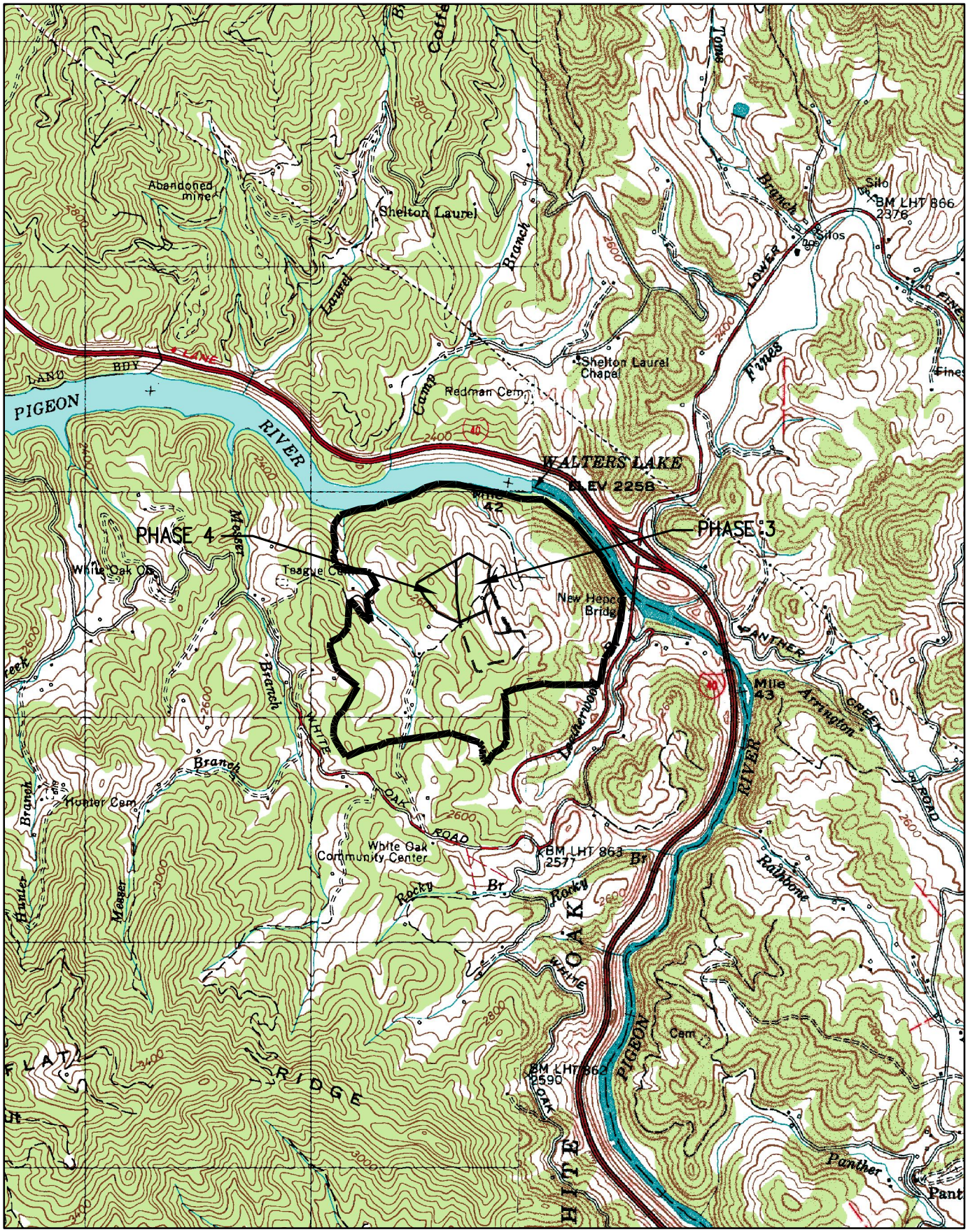
SUMMARY OF STATISTICAL ANALYSIS RESULTS
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Chemical/ Compound	Percent ND	Primary Statistical Test	Primary Pass/Fail	Secondary Statistical Test	Secondary Pass/Fail	SSI Calculated	SSI Validated as Leachate	SSI Concentration Above MCL During Current Event
Total Antimony	98%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Arsenic	86%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Barium	9%	ANOVA	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Beryllium	79%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Cadmium	78%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Chromium	48%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Cobalt	61%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Copper	55%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Lead	65%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Nickel	52%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Selenium	98%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Silver	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Thallium	92%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Vanadium	46%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Zinc	22%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Carbon Disulfide	95%	Poisson Prediction Limits	Pass	-	-	-	-	-

Notes:
1. MCL = *Maximum Contaminant Level*
2. SSI = *Statistically Significant Increase*

Prepared By: IAI
Checked By: MSP

FIGURES



REFERENCE:
USGS TOPOGRAPHIC MAP, 7.5 MINUTE SERIES,
COVE CREEK GAP AND FINES CREEK, N.C. QUADRANGLES, 1967.

DRAWN: AEH	DATE: 11-09-07	BLE INC. BURNELL-LAMMONS ENGINEERING, INC. 6004 PONDERS COURT GREENVILLE, SOUTH CAROLINA 29615 PHONE: (864)288-1265 FAX: (864)288-4430	SITE LOCATION MAP WHITE OAK LANDFILL HAYWOOD COUNTY, NORTH CAROLINA	FIGURE 1
CHECKED: TJB	CAD: WHITEOAK-04SLM			
APPROVED:	JOB NO: J08-1957-04			

DRAWING TITLED "CONCEPTUAL SITE PLAN, OPTION 1 & 2" BY McGILL ASSOCIATES DATED JUNE 2007.

REVISIONS		
No.	DESCRIPTION	BY

DRAWN:	AEH
CHECKED:	IAI
APPROVED:	

DATE:	06-24-08
CAD FILE:	HCWOLF04-POT42308
JOB NO:	J08-1957-04

BLE INC.

BUNNELL-LAMMONS ENGINEERING, INC.
6004 PONDERS COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE: (864)288-1265 FAX: (864)288-4430

GROUNDWATER ELEVATION CONTOUR MAP – 4/23/08
WHITE OAK MSW LANDFILL
HAYWOOD COUNTY, NORTH CAROLINA

FIGURE NO. 2

APPENDICES

APPENDIX A

Summary Tables of Groundwater Analytical Results

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-24-1993)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	umhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.11	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	10	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	2	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-28-1993)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT

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White Oak GW Stats First 2008.xls
(9-28-1993)

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-1-1993)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	[illegible]1200	[illegible]1300	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-2-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-4-1993)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	ND	ND	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.075	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
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ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-25-1994)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	27[illegible]1400	920	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	11	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	3	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-26-1994)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	[illegible] 1670	298	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	11	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	101	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
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Shaded cells indicated exceedances of MCLs.

White Oak GW Stats First 2008.xls
(10-26-1994)

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-12-1995)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	747	201	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	6	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-13-1995)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NA	NS	NS	804	335	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NA	NS	NS	ND	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NA	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acrylonitrile	µg/l	200	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NT	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
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NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-29-1996)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	586	162	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-23-1996)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	280	278	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	2	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.075	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
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NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-29-1997)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	[illegible] 1800	200	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	[illegible] 360	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-4-1997)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-11	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	400	500	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	ND	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	NT	NT	NS	NS	NS	13	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	30	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-9-1998)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	11	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	[illegible]2900	400	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	80	NT	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	30	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-14-1998)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	6.5	6.4	6.6	6.3	6.3	7.5	5.2	5.1	5.8	6.6	NS	NS	NS	NS	NT
Specific Conductance	umhos/cm (on-site)	1	NE	NS	NS	NS	69	50	55	110	78	120	32	60	79	160	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	14	15	16	17	15	14	16	14	16	17	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	3	NE	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NT
Total Arsenic (As)	µg/l	5	50	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	100	1000	NS	NS	NS	[illegible]1200	100	100	ND	100	100	ND	300	[illegible]1200	100	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	1	NE	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	1	50	NS	NS	NS	6	2	3	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	1	NE	NS	NS	NS	15	ND	ND	6	ND	1	ND	ND	ND	2	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	10	1000	NS	NS	NS	ND	ND	20	10	10	ND	ND	ND	10	ND	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	5	15	NS	NS	NS	ND	5	ND	ND	ND	ND	ND	ND	14	ND	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	5	50	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	1	18	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	1	NE	NS	NS	NS	ND	4	ND	ND	ND	ND	3	ND	ND	ND	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	5	NE	NS	NS	NS	23	7	9	ND	ND	8	ND	ND	16	6	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	10	2100	NS	NS	NS	30	ND	20	ND	ND	20	ND	ND	10	10	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-26-1999)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	5.9	5.5	5.7	6.4	6.4	7.2	4.5	5.2	6.4	6.7	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	71	59	55	110	50	130	38	59	99	150	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	13	15	14	13	13	14	11	13	15	11	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	5	NE	NS	NS	NS	ND	ND	ND	5	ND	ND	ND	7	ND	5	NS	NS	NS	NS	8
Total Arsenic (As)	µg/l	5	50	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	100	1000	NS	NS	NS	200	300	ND	ND	200	200	ND	200	200	200	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	1	NE	NS	NS	NS	2	2	2	2	1	2	2	2	ND	2	NS	NS	NS	NS	2
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	2	50	NS	NS	NS	15	18	3	2	17	20	3	3	27	2	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	2	NE	NS	NS	NS	ND	7	ND	7	10	8	ND	ND	16	3	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	10	1000	NS	NS	NS	ND	ND	20	ND	10	20	10	ND	ND	ND	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	5	15	NS	NS	NS	7	7	ND	5	ND	6	7	ND	ND	6	NS	NS	NS	NS	8
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	5	50	NS	NS	NS	ND	ND	7	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	2	18	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	2	NE	NS	NS	NS	ND	ND	2	ND	ND	ND	ND	ND	2	2	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	5	NE	NS	NS	NS	13	30	ND	3000	16	24	ND	ND	42	6	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	10	2100	NS	NS	NS	20	40	10	10	20	40	10	ND	30	200	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DDCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT

Notes:
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NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-21-1999)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	5.1	5.2	5.3	6.5	6.2	6.8	6.2	6	5.8	5.9	NS	NS	NS	NS	NT
Specific Conductance	umhos/cm (on-site)	1	NE	NS	NS	NS	75	55	58	88	79	110	36	59	100	160	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	14	13	13	15	14	17	15	14	14	15	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	10	NE	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	5	1000	NS	NS	NS	1000	170	160	79	190	350	74	170	230	160	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	2.2	ND	ND	ND	ND	2.1	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	6.3	ND	1.4	ND	1.9	3.7	1.1	ND	5.6	ND	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	5	50	NS	NS	NS	130	54	320	380	270	46	ND	5.5	62	8.8	NS	NS	NS	NS	29
Total Cobalt (Co)	µg/l	5	NE	NS	NS	NS	26	ND	ND	ND	8.9	18	ND	ND	27	ND	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	5	1000	NS	NS	NS	39	ND	15	ND	18	41	ND	ND	21	ND	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	ND	ND	ND	ND	ND	15	ND	ND	ND	10	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	5	100	NS	NS	NS	110	7.1	13	9	22	43	ND	7.8	31	7.7	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	65	ND	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	2	18	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	2	NE	NS	NS	NS	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	5	NE	NS	NS	NS	130	130	22	7.1	20	56	ND	8.1	71	6.4	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	10	2100	NS	NS	NS	210	56	49	40	51	67	ND	12	51	41	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-17-2000)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	5	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	2	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	10	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT

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Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-24-2000)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2A	MW-2D	MW-3A	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.9	NS	NS	6.1	5.1	5.1	6.2	5.9	5.4	5.7	5.5	5.2	6.3	NS	NS	NS	NS	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	72	NS	NS	69	55	51	89	85	89	31	49	100	130	NS	NS	NS	NS	NS
Temperature	°C (on-site)	-	NE	12	NS	NS	13	14	14	12	12	13	10	12	13	10	NS	NS	NS	NS	NS
Turbidity	NTU (on-site)	0.1	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Total Antimony (Sb)	µg/l	10	NE	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Total Arsenic (As)	µg/l	10	50	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Total Barium (Ba)	µg/l	5	1000	250	NS	NS	240	420	200	63	300	93	81	170	230	ND	NS	NS	NS	NS	NS
Total Beryllium (Be)	µg/l	2	NE	4.4	NS	NS	ND	2	ND	2.2	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Total Cadmium (Cd)	µg/l	1	5	2	NS	NS	ND	1.3	1.2	1.3	2.1	ND	ND	ND	[illegible]	ND	NS	NS	NS	NS	NS
Total Chromium (Cr)	µg/l	5	50	35	NS	NS	18	37	11	ND	26	5.4	ND	ND	50	ND	NS	NS	NS	NS	NS
Total Cobalt (Co)	µg/l	5	NE	ND	NS	NS	ND	8.2	5.4	ND	14	ND	ND	ND	16	ND	NS	NS	NS	NS	NS
Total Copper (Cu)	µg/l	5	1000	12	NS	NS	ND	ND	13	ND	27	ND	ND	ND	22	ND	NS	NS	NS	NS	NS
Total Lead (Pb)	µg/l	10	15	[illegible]	NS	NS	ND	ND	ND	ND	13	ND	10	ND	ND	ND	NS	NS	NS	NS	NS
Total Nickel (Ni)	µg/l	5	100	15	NS	NS	17	12	8.3	ND	24	6.7	ND	5.6	22	ND	NS	NS	NS	NS	NS
Total Selenium (Se)	µg/l	20	50	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Total Silver (Ag)	µg/l	2	18	3.7	NS	NS	ND	ND	ND	6.9	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS
Total Thallium (Tl)	µg/l	2	NE	2	NS	NS	ND	3	2	4	ND	2	ND	3	5	ND	NS	NS	NS	NS	NS
Total Vanadium (V)	µg/l	5	NE	17	NS	NS	19	32	21	ND	29	8.9	ND	ND	78	ND	NS	NS	NS	NS	NS
Total Zinc (Zn)	µg/l	10	2100	150	NS	NS	35	48	36	12	43	28	12	14	68	ND	NS	NS	NS	NS	NS
Acetone	µg/l	100	700	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Acrylonitrile	µg/l	200	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Benzene	µg/l	5	1	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Bromochloromethane	µg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Bromodichloromethane	µg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Bromoform	µg/l	5	0.19	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Carbon Disulfide	µg/l	100	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Carbon tetrachloride	µg/l	10	0.3	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Chlorobenzene (mono)	µg/l	5	50	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Chloroethane	µg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Chloroform	µg/l	5	0.19	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Dibromochloromethane	µg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Dibromomethane	µg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	µg/l	5	620	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	µg/l	5	75	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,1-Dichloroethane	µg/l	5	700	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,2-Dichloroethane	µg/l	5	0.38	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,2-Dichloropropane	µg/l	5	0.56	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Ethylbenzene	µg/l	5	29	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
2-Hexanone	µg/l	50	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Iodomethane	µg/l	10	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Styrene	µg/l	10	100	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Toluene	µg/l	5	1000	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	µg/l	5	200	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,1,2-Trichloroethane	µg/l	5	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Trichlorofluoromethane	µg/l	5	2100	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
1,2,3-Trichloropropane	µg/l	35	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Vinyl acetate	µg/l	50	NE	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Vinyl chloride	µg/l	10	0.015	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS
Xylene	µg/l	5	530	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NS

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (6-26-2000)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	5.9	6.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	29	60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	14	14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	5	1000	300	67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	1.6	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	5	50	22	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	5	NE	10	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	5	1000	17	6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	ND	10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	5	100	15	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	5	NE	40	6.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	10	2100	37	12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (7-26-2000)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	5	1000	330	39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	1.1	3.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	5	50	29	28	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	5	NE	9.9	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	5	1000	12	6.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	5	100	16	9.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	5	NE	45	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	10	2100	65	66	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	35	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	30	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-18-2000)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	330	92	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	8.8	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.36	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-9-2001)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	5.9	7.3	NS	6.4	6	6.3	6	6.1	8.2	5.1	5.9	5.8	7	NS	NS	NS	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	20	60	NS	75	75	68	130	90	110	45	61	125	140	NS	NS	NS	NS	NT
Temperature	°C (on-site)	-	NE	15	15	NS	13	15	15	14	15	15	10	13	15	11	NS	NS	NS	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Barium (Ba)	µg/l	5	1000	[illegible]	330	NS	180	330	320	80	290	360	80	140	970	130	NS	NS	NS	NS	ND
Total Beryllium (Be)	µg/l	2	NE	2.3	7	NS	ND	ND	ND	ND	ND	3.4	ND	ND	4.8	ND	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	[illegible]	2	NS	ND	ND	ND	1.7	1.8	2.7	ND	ND	[illegible]	ND	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	5	50	[illegible]	ND	NS	11	8.4	ND	ND	20	27	ND	ND	[illegible]	ND	NS	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	5	NE	54	ND	NS	ND	ND	ND	13	12	13	ND	ND	59	8.1	NS	NS	NS	NS	ND
Total Copper (Cu)	µg/l	5	1000	77	8.4	NS	ND	ND	5.4	ND	26	38	ND	ND	110	ND	NS	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	15	ND	[illegible]	NS	ND	ND	ND	ND	ND	[illegible]	ND	ND	2.5	ND	NS	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	5	100	76	7.2	NS	9.6	5.3	ND	ND	18	28	ND	ND	6.1	7.3	NS	NS	NS	NS	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	2	NE	40	ND	NS	ND	ND	ND	ND	ND	ND	30	ND	ND	ND	NS	NS	NS	NS	ND
Total Vanadium (V)	µg/l	5	NE	250	1.4	NS	13	19	9.2	ND	24	41	ND	ND	238	8	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	10	2100	230	130	NS	12	24	18	17	32	75	ND	ND	200	2.9	NS	NS	NS	NS	24
Acetone	µg/l	100	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Benzene	µg/l	5	1	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromoform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Styrene	µg/l	10	100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Toluene	µg/l	5	1000	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	35	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT
Xylene	µg/l	5	530	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	NT

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-18-2001)

TEST [1]	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.83	5.15	8.36	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	45	43	70	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	12.9	13.5	14.9	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Total Antimony (Sb)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11	ND	ND	NS	ND
Total Barium (Ba)	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1800	4700	90	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	5.3	ND	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10	8.9	ND	NS	ND
Total Chromium (Cr)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	51	66	5.4	NS	ND
Total Cobalt (Co)	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	54	53	ND	NS	ND
Total Copper (Cu)	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	35	44	ND	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	27	ND	ND	NS	ND
Total Nickel (Ni)	µg/l	5	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	97	59	ND	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Silver (Ag)	µg/l	2	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Thallium (Tl)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Vanadium (V)	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	160	170	6.4	NS	ND
Total Zinc (Zn)	µg/l	10	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	130	220	ND	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-29-2001)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.98	5.12	7.72	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	39	46	50	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	13	12.5	12.6	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Total Antimony (Sb)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	17	ND	ND	NS	ND
Total Barium (Ba)	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3000	450	27	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.2	ND	ND	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	ND	ND	NS	ND
Total Chromium (Cr)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	82	ND	ND	NS	ND
Total Cobalt (Co)	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	87	ND	ND	NS	ND
Total Copper (Cu)	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	47	ND	ND	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	743	ND	ND	NS	ND
Total Nickel (Ni)	µg/l	5	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	120	ND	ND	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Silver (Ag)	µg/l	2	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Thallium (Tl)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	3.1
Total Vanadium (V)	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	250	9.2	ND	NS	ND
Total Zinc (Zn)	µg/l	10	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	200	17	ND	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (1-30-2002)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.57	5.73	6.85	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	40	51	41	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	13.8	12.6	13	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Total Antimony (Sb)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Barium (Ba)	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	980	360	41	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.5	ND	ND	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.9	ND	ND	NS	ND
Total Chromium (Cr)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	21	ND	ND	NS	ND
Total Cobalt (Co)	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	38	5.7	ND	NS	ND
Total Copper (Cu)	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	ND	ND	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	26	ND	ND	NS	ND
Total Nickel (Ni)	µg/l	5	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	49	5.5	ND	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Silver (Ag)	µg/l	2	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Thallium (Tl)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	ND
Total Vanadium (V)	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	83	12	ND	NS	ND
Total Zinc (Zn)	µg/l	10	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	62	16	11	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.075	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (2-28-2002)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Specific Conductance	umhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	ND	NS	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	NS	1300	NS	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4300	NS	2.5	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.1	NS	15	NS	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11	NS	17	NS	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	200	NS	58	NS	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	180	NS	58	NS	ND
Acetone	µg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Benzene	µg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	75	0.023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	NT

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-15-2002)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.01	6.42	NS	6.46	5.89	5.25	5.75	5.68	6.88	4.77	5.38	6.01	5.87	5.37	5.3	6.16	NS	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	21	42	NS	75	82	84	101	93	94	41	51	125	109	38	59	41	NS	NT
Temperature	°C (on-site)	-	NE	15.9	17.4	NS	15.3	15.7	16.8	16.2	13.2	16.3	14.6	16	17.3	11	14.1	14.2	14.9	NS	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Total Antimony (Sb)	µg/l	10	NE	15.0	ND	NS	ND	ND	ND	NT	ND	ND	ND	ND	81	ND	ND	ND	ND	NS	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	ND	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Total Barium (Ba)	µg/l	5	1000	1300	41	NS	ND	ND	160	23	190	460	180	250	1400	110	540	820	38	NS	ND
Total Beryllium (Be)	µg/l	2	NE	2.1	ND	NS	ND	ND	ND	ND	ND	2.5	ND	ND	4.5	ND	2.1	2.2	ND	NS	ND
Total Cadmium (Cd)	µg/l	10	5	13	ND	NS	ND	ND	ND	4	ND	5.5	1.3	ND	19	ND	2.3	2.2	ND	NS	ND
Total Chromium (Cr)	µg/l	5	50	170	ND	NS	ND	ND	5.7	7	10	56	13	7.1	180	ND	9.2	12	ND	NS	ND
Total Cobalt (Co)	µg/l	5	NE	58	ND	NS	ND	ND	ND	18	8.2	21	ND	ND	82	6.8	13	12	ND	NS	ND
Total Copper (Cu)	µg/l	2	1000	69	ND	NS	ND	ND	ND	ND	13	68	4.4	5.1	120	4.7	5.6	8.4	ND	NS	350
Total Lead (Pb)	µg/l	10	15	13	ND	NS	ND	ND	ND	ND	ND	13	ND	ND	29	ND	14	10	ND	NS	ND
Total Nickel (Ni)	µg/l	5	100	74	ND	NS	ND	ND	ND	6.2	9.2	44	7.1	8.7	68	6.9	20	13	ND	NS	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Total Thallium (Tl)	µg/l	2	NE	40	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
Total Vanadium (V)	µg/l	5	NE	240	ND	NS	ND	ND	13	21	14	69	17	12	260	ND	37	37	ND	NS	ND
Total Zinc (Zn)	µg/l	10	2100	230	16	NS	ND	ND	13	33	38	120	37	31	230	52	53	79	ND	NS	15
Acetone	µg/l	100	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Benzene	µg/l	5	1	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Bromoform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Chloroethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Chloroform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Dibromomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Ethylbenzene	µg/l	5	29	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
2-Hexanone	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Iodomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Styrene	µg/l	10	100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Toluene	µg/l	5	1000	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT
Xylene	µg/l	5	530	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (9-26-2002)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.5	7.3	7.09	6.14	6.17	6.18	5.96	5.96	7.22	6.1	6.5	6.37	5.91	6.7	6.39	6.86	6.65	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	22	59	52	71	85	82	117	101	92	40	72	130	134	44	72	60	97	NT
Temperature	°C (on-site)	-	NE	15.1	13.5	13.7	13.5	13.9	14	15.8	14.6	15.1	18.6	15.8	17.7	16	14.9	15.7	15.3	16.6	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	98	ND
Total Arsenic (As)	µg/l	3	50	ND	5.7	ND	ND	ND	ND	ND	ND	27	ND	ND	ND	ND	30	6.5	ND	68	ND
Total Barium (Ba)	µg/l	5	1000	330	500	750	4300	120	230	93	410	910	130	320	1400	140	8600	1600	46	11000	ND
Total Beryllium (Be)	µg/l	2	NE	ND	7	2.1	5.1	ND	ND	ND	ND	8.5	ND	ND	4.7	ND	13	3.6	ND	95	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	4.2	21	ND	10	ND	2.3	4.2	ND	ND	19	ND	27	5.4	ND	180	ND
Total Chromium (Cr)	µg/l	5	50	33	5.4	33	510	ND	5.2	ND	37	36	5.5	9.1	230	ND	180	52	ND	770	ND
Total Cobalt (Co)	µg/l	5	NE	13	5.4	16	100	ND	16	7.4	21	19	ND	ND	85	7.7	200	30	ND	560	ND
Total Copper (Cu)	µg/l	2	1000	20	18	31	220	ND	ND	2.6	42	88	3.3	7.4	150	6.8	100	31	ND	450	ND
Total Lead (Pb)	µg/l	10	15	ND	76	29	ND	ND	ND	ND	ND	150	ND	ND	20	ND	81	ND	ND	740	ND
Total Nickel (Ni)	µg/l	5	100	16	6.8	31	400	ND	ND	ND	27	40	ND	6.5	78	5.6	180	27	ND	430	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	65	ND
Total Vanadium (V)	µg/l	5	NE	53	16	44	640	ND	ND	ND	42	50	8.2	17	310	8.8	530	130	ND	1000	ND
Total Zinc (Zn)	µg/l	10	2100	57	120	110	580	ND	20	ND	56	250	17	20	280	43	510	110	15	4300	2000
Acetone	µg/l	100	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzene	µg/l	5	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Bromoform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Styrene	µg/l	10	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Toluene	µg/l	5	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Xylene	µg/l	5	530	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-28-2003)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	8.3	7.15	6.89	6.37	6.21	6.17	6.4	6.16	8.15	4.94	5.7	5.85	5.73	NT	NT	NT	6.75	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	29	43	65	91	120	99	150	134	100	51	78	138	129	NT	NT	NT	125	NT
Temperature	°C (on-site)	-	NE	16.7	15.9	15.6	15.6	16.3	15.3	13.5	14.2	17.7	14	15	14.9	13	NT	NT	NT	18.4	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	24	ND
Total Barium (Ba)	µg/l	5	1000	600	66	220	[illegible]	160	140	110	92	360	95	140	800	140	NT	NT	NT	2800	ND
Total Beryllium (Be)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	2.2	ND	NT	NT	NT	20	ND
Total Cadmium (Cd)	µg/l	1	5	3.6	ND	ND	[illegible]	ND	ND	ND	ND	2.9	ND	ND	[illegible]	ND	NT	NT	NT	20	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	[illegible]	ND	ND	ND	ND	ND	ND	ND	[illegible]	ND	NT	NT	NT	27	ND
Total Cobalt (Co)	µg/l	5	NE	21	ND	ND	37	ND	ND	6.9	ND	17	ND	ND	60	ND	NT	NT	NT	81	ND
Total Copper (Cu)	µg/l	2	1000	24	ND	2.6	40	ND	ND	ND	ND	28	ND	ND	94	ND	NT	NT	NT	71	ND
Total Lead (Pb)	µg/l	10	15	ND	ND	ND	ND	ND	ND	ND	ND	[illegible]	ND	ND	ND	ND	NT	NT	NT	300	ND
Total Nickel (Ni)	µg/l	5	100	ND	ND	ND	90	ND	ND	ND	ND	ND	ND	ND	26	ND	NT	NT	NT	70	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	ND	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	ND	ND
Total Thallium (Tl)	µg/l	1	NE	ND	ND	ND	1.6	ND	ND	ND	ND	1.4	ND	ND	ND	1	NT	NT	NT	15	ND
Total Vanadium (V)	µg/l	5	NE	89	ND	9.6	170	6.8	6.8	ND	ND	37	ND	ND	230	ND	NT	NT	NT	130	ND
Total Zinc (Zn)	µg/l	10	2100	86	14	31	160	16	ND	ND	ND	81	ND	ND	190	240	NT	NT	NT	800	ND
Acetone	µg/l	100	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzene	µg/l	5	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Bromoform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Butanone (Medyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Styrene	µg/l	10	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Toluene	µg/l	5	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Xylene	µg/l	5	530	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-30-2003)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.48	6.9	6.73	6.57	6.36	6.44	6.33	6.27	7.7	4.81	5.81	6.18	6.54	5.59	5.71	6.5	6.46	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	39	39	58	82	119	110	140	115	105	40	80	149	112	50	88	53	120	NT
Temperature	°C (on-site)	-	NE	15	15.1	14.9	15.8	15.9	16.7	15	14	17.5	15	14	16.3	14	15	16.2	17.3	16	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	NT	ND	ND	ND	ND	ND	ND	6.2	ND	5.2	ND	6.3	ND	ND	81	ND
Total Barium (Ba)	µg/l	5	1000	320	100	NT	210	330	130	95	110	200	530	190	270	130	920	330	29	4900	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	NT	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND	ND	ND	33	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	2	50	30	ND	NT	ND	6.3	ND	ND	ND	31	83	ND	4.6	ND	22	3.9	ND	140	ND
Total Cobalt (Co)	µg/l	5	NE	9	ND	NT	ND	ND	ND	5.7	ND	52	11	ND	8.8	ND	28	ND	ND	110	ND
Total Copper (Cu)	µg/l	2	1000	18	ND	NT	ND	2.3	2.6	ND	3	85	26	ND	4.4	2.9	16	2.7	ND	150	ND
Total Lead (Pb)	µg/l	5	15	8.7	12	NT	ND	ND	ND	ND	ND	39	25	ND	7.4	ND	29	ND	ND	640	ND
Total Nickel (Ni)	µg/l	5	100	19	ND	NT	6.9	6.9	ND	ND	ND	48	22	ND	ND	7.7	34	ND	ND	190	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	54	ND	NT	6.6	16	ND	ND	ND	92	82	5.9	14	ND	82	13	ND	200	ND
Total Zinc (Zn)	µg/l	10	2100	55	22	NT	17	26	10	ND	ND	140	100	12	26	64	61	24	13	1800	ND
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	28	15	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-20-2004)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.71	6.81	6.78	5.57	5.4	5.47	5.47	5.41	7.36	5.39	6.01	5.17	6.2	6.39	5.64	6.67	6.83	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	25	31	40	67	135	120	115	100	100	42	60	115	103	39	49	35	70	NT
Temperature	°C (on-site)	-	NE	15.8	15.6	15.5	13.5	14.6	14.4	13.5	14.1	15.3	14.1	15	14.9	11.5	14	13.1	14.9	13.8	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.4	ND	9.2	ND	ND	30	ND
Total Barium (Ba)	µg/l	5	1000	320	56	120	410	460	170	140	210	62	85	170	940	150	1600	860	36	2000	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8	ND	3.7	1.2	ND	8.9	ND
Total Chromium (Cr)	µg/l	2	50	33	ND	2.1	45	13	ND	ND	11	3.5	ND	2.9	190	ND	50	12	ND	68	ND
Total Cobalt (Co)	µg/l	5	NE	9.5	ND	ND	7.7	5.2	ND	13	6.4	ND	ND	ND	43	ND	47	7.4	ND	50	ND
Total Copper (Cu)	µg/l	2	1000	18	ND	2.8	12	5.3	2.3	4.3	13	7.4	ND	2.3	100	2.3	27	8	ND	89	ND
Total Lead (Pb)	µg/l	5	15	7.2	7	5.2	6.4	5.4	ND	ND	ND	12	ND	ND	39	ND	43	12	ND	250	ND
Total Nickel (Ni)	µg/l	5	100	20	ND	ND	30	7.3	ND	ND	12	5.3	ND	ND	49	12	36	8.4	ND	110	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	55	ND	ND	45	25	ND	ND	13	5.1	ND	5.6	240	ND	140	33	ND	88	ND
Total Zinc (Zn)	µg/l	10	2100	55	10	ND	44	30	31	14	19	23	ND	ND	220	160	120	36	35	770	11
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,1-Dichlorethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,2-Dichlorethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT

Notes:
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Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-21-2004)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.83	6.55	6.76	6.9	5.92	6.39	6.76	6.03	7.84	5.36	5.55	5.57	6.05	6.65	5.46	6.58	7.12	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	29	49	62	96	290	302	196	148	111	59	93	198	90	69	69	50	134	NT
Temperature	°C (on-site)	-	NE	14.3	16.7	14	13	14.7	14.3	15	14.5	14.3	16.5	15.5	14.6	15	15.1	15.5	16.7	17	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	1000	320	40	200	300	310	140	140	130	12	100	320	900	110	2700	1700	29	4900	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	1.4	1.2	ND	25	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND
Total Chromium (Cr)	µg/l	2	50	21	ND	2.8	16	2	ND	ND	ND	ND	ND	5.5	120	ND	14	31	ND	140	ND
Total Cobalt (Co)	µg/l	5	NE	6.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31	ND	42	12	ND	120	ND
Total Copper (Cu)	µg/l	2	1000	11	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	63	ND	11	14	ND	140	ND
Total Lead (Pb)	µg/l	5	15	7.2	5.6	5.7	ND	ND	ND	ND	ND	ND	ND	5.6	524	ND	18	16	ND	430	ND
Total Nickel (Ni)	µg/l	5	100	12	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	35	ND	23	14	ND	160	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	41	ND	ND	18	ND	ND	ND	ND	ND	ND	10	160	ND	46	59	ND	210	ND
Total Zinc (Zn)	µg/l	10	2100	29	ND	ND	17	ND	14	ND	12	15	31	11	70	55	27	31	15	1200	ND
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	10	NE	ND	74	ND	ND	ND	ND	ND	ND	15	14	19	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-18-2005)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.95	7.44	6.15	6.2	5.58	6.04	6.02	6.18	7.46	5.01	5.2	5.6	5.6	5.72	5.73	6.64	6.85	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	25	40	42	78	330	161	171	139	95	49	90	149	149	125	51	41	128	NT
Temperature	°C (on-site)	-	NE	14.2	15.6	15	13.5	15	17.7	13	13.5	16.3	13	15	14.1	14.1	12	13	14.5	16.4	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	5.3	ND	21	ND	ND	65	ND
Total Barium (Ba)	µg/l	5	1000	480	55	160	7200	610	180	160	140	12	78	150	1000	140	2000	1000	31	3700	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	7.2	ND	ND	ND	ND	ND	ND	ND	3.8	ND	3	1.5	ND	26	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	2	50	40	12	8.3	680	2.9	ND	ND	3.2	ND	ND	2.4	210	ND	36	18	ND	100	ND
Total Cobalt (Co)	µg/l	5	NE	12	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	36	ND	82	9.3	ND	70	ND
Total Copper (Cu)	µg/l	2	1000	29	ND	ND	240	ND	ND	ND	3.8	ND	ND	ND	120	ND	25	12	ND	130	ND
Total Lead (Pb)	µg/l	5	15	13	8	5.2	2973	ND	ND	ND	ND	ND	ND	ND	79	ND	40	13	ND	380	ND
Total Nickel (Ni)	µg/l	5	100	29	9.6	17	450	ND	ND	5.5	5.4	ND	ND	ND	59	ND	61	12	ND	170	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	85	ND	ND	680	5.4	ND	ND	ND	ND	ND	ND	240	ND	100	44	ND	110	ND
Total Zinc (Zn)	µg/l	10	2100	83	ND	ND	780	ND	38	13	10	ND	ND	13	240	200	96	38	14	1200	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	53	17	ND	ND	ND	ND	16	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
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Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-13-2005)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	7.21	7.38	7.79	6.26	6.07	6.25	6.08	6.6	7.73	5.61	6.49	6.08	6.35	5.75	6.24	6.35	6.72	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	21	35	40	85	580	201	185	160	102	50	82	180	145	75	50	40	52	NT
Temperature	°C (on-site)	-	NE	13.2	14	13.3	13.3	14.9	14.3	16.5	15.5	15.3	14.1	16.5	16.5	16.3	15.1	16.2	16.1	16.8	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	53	9.9	ND	44	ND
Total Barium (Ba)	µg/l	5	1000	770	37	160	1700	870	250	160	140	27	110	290	810	150	5500	4400	27	2700	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	3.4	ND	11	9.5	ND	21	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	2	50	52	ND	3.7	230	4.7	ND	ND	ND	ND	5.3	6.8	150	ND	130	120	ND	88	ND
Total Cobalt (Co)	µg/l	5	NE	21	ND	ND	37	ND	ND	5.1	ND	ND	ND	ND	29	ND	150	48	ND	56	ND
Total Copper (Cu)	µg/l	2	1000	31	2.6	3.5	70	ND	ND	ND	ND	3	4.6	3.8	82	ND	75	72	ND	96	ND
Total Lead (Pb)	µg/l	5	15	14	6.9	ND	20	ND	ND	ND	ND	ND	ND	ND	28	ND	110	62	ND	290	ND
Total Nickel (Ni)	µg/l	5	100	29	ND	ND	160	6.8	ND	ND	6.1	ND	ND	ND	46	ND	160	72	ND	100	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	2	18	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	82	ND	ND	210	8.9	ND	ND	ND	ND	ND	5.7	170	ND	330	310	ND	82	ND
Total Zinc (Zn)	µg/l	10	2100	92	13	12	230	19	25	ND	ND	14	23	36	170	81	330	280	11	800	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-25-2006)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.33	7.06	6.61	6.07	5.45	6.16	5.63	5.62	7.7	5.16	5.78	5.56	6.03	5.97	5.77	6.55	5.83	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	53	48	51	106	105	383	301	236	136	99	101	251	157	170	70	63	70	NT
Temperature	°C (on-site)	-	NE	18.1	19.2	16.1	13.7	19.5	20.6	12.4	13.8	14.6	12.1	13.5	14.8	12.3	12.5	12.9	14.1	12.9	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	42	ND
Total Barium (Ba)	µg/l	500	2000	650	ND	ND	ND	1100	ND	ND	ND	ND	820	ND	750	ND	ND	1700	ND	2700	ND
Total Beryllium (Be)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND	17	ND
Total Cadmium (Cd)	µg/l	11	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	68	ND	16	ND	ND	ND	ND	ND	16	200	ND	100	ND	ND	20	ND	93	ND
Total Cobalt (Co)	µg/l	10	NE	16	ND	ND	ND	ND	ND	ND	ND	ND	22	ND	25	ND	170	12	ND	57	ND
Total Copper (Cu)	µg/l	200	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	10	15	15	ND	ND	ND	ND	ND	ND	ND	53	34	ND	19	ND	ND	18	ND	300	ND
Total Nickel (Ni)	µg/l	50	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	88	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	10	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	110	ND	ND	ND	ND	ND	ND	ND	ND	160	ND	120	ND	ND	54	ND	85	ND
Total Zinc (Zn)	µg/l	50	1050	130	ND	88	ND	ND	ND	ND	ND	310	180	ND	120	120	ND	56	ND	780	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
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White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-20-2006)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.47	6.81	6.51	6.74	5.56	6.14	5.87	5.74	8.2	NS	NS	5.61	5.96	6.07	5.73	6.83	5.97	NT
Specific Conductance	umhos/cm (on-site)	1	NE	229	48	53	108	876	564	149	200	12.8	NS	NS	330	239	142	71	52	33	NT
Temperature	°C (on-site)	-	NE	12.2	11.9	12.8	12.5	12.7	12.9	14.9	13.7	13.5	NS	NS	13.3	12.7	13.6	13.5	13.5	14.9	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	11	25	ND	13	ND
Total Barium (Ba)	µg/l	5	2000	410	32	180	470	1100	ND	ND	ND	160	NS	NS	ND	ND	1800	1400	ND	650	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	2.9	2.4	ND	5.7	ND
Total Cadmium (Cd)	µg/l	1	1.75	[illegible] 3.8	ND	ND	ND	ND	ND	ND	ND	1.5	NS	NS	ND	ND	4.6	4.7	ND	5.2	ND
Total Chromium (Cr)	µg/l	5	50	50	ND	31	24	ND	ND	ND	ND	17	NS	NS	ND	ND	43	31	ND	27	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	13	ND	ND	ND
Total Copper (Cu)	µg/l	5	1000	26	ND	ND	9.6	ND	ND	ND	ND	20	NS	NS	ND	ND	ND	ND	ND	25	ND
Total Lead (Pb)	µg/l	5	15	[illegible] 20	ND	ND	ND	ND	ND	ND	ND	32	NS	NS	ND	ND	30	37	ND	89	ND
Total Nickel (Ni)	µg/l	5	100	22	ND	8.3	25	ND	ND	ND	ND	13	NS	NS	ND	ND	ND	ND	ND	24	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	79	ND	ND	28	ND	ND	ND	ND	23	NS	NS	ND	ND	120	100	ND	30	ND
Total Zinc (Zn)	µg/l	10	1050	74	ND	20	37	ND	ND	ND	ND	55	NS	NS	ND	82	110	75	ND	200	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-25-2007)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.04	7.08	6.27	6.25	5.36	5.83	5.7	5.73	8.01	5.22	5.84	5.54	6.26	5.6	5.69	6.68	9.08	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	31	50	54	105	1540	757	391	312	134	139	95	336	238	274	76	50	46	NT
Temperature	°C (on-site)	-	NE	13.4	14.2	14	13	14	14.6	14	13	15.7	12	13.5	15.4	12	12	12	12.4	12.5	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	6	NE	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND
Total Barium (Ba)	µg/l	100	2000	290	ND	200	240	1300	1500	130	180	ND	240	250	ND	160	160	120	ND	600	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.9	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	20	ND	ND	16	ND	410	ND	ND	ND	31	ND	ND	ND	ND	ND	ND	17	ND
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	ND	260	ND	ND	ND	ND	10	ND	ND	92	ND	ND	ND	ND
Total Copper (Cu)	µg/l	10	1000	15	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26	ND
Total Lead (Pb)	µg/l	10	15	ND	ND	ND	ND	ND	96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	69	ND
Total Nickel (Ni)	µg/l	50	100	ND	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Selenium (Se)	µg/l	10	50	12	ND	ND	ND	ND	460	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18	ND
Total Silver (Ag)	µg/l	10	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.5	NE	ND	ND	ND	ND	ND	35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	25	NE	43	ND	ND	ND	ND	300	ND	ND	ND	33	ND	ND	ND	ND	ND	ND	26	ND
Total Zinc (Zn)	µg/l	10	1050	55	21	30	30	23	830	22	15	10	39	21	12	74	37	20	12	200	12
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
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Shaded cells indicated exceedances of MCLs.

White Oak GW Stats First 2008.xls
(4-25-2007)

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-31-2007)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.4	6.8	6.3	6.22	5.9	6	5.5	5.9	7.09	5.58	5.96	5.5	6.2	6	5.7	6.56	5.9	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	28	61	45	94	1475	911	346	300	132	84	105	543	351	146	76	53	36	NT
Temperature	°C (on-site)	-	NE	13.8	16	16.1	14.8	17.5	17.6	17.5	17.2	14.8	19.2	18.6	15.6	12.5	17.2	16.9	16.9	17.2	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	42.8	11.4	ND	21.4	ND
Total Barium (Ba)	µg/l	5	2000	501	31.5	223	193	1350	591	184	208	62.4	86.7	149	516	201	2000	1400	30.1	872	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	40.9	ND	11.9	10.9	7.8	ND	ND	ND	5.1	ND	ND	75.5	ND	40.7	52.3	ND	33.7	ND
Total Cobalt (Co)	µg/l	5	NE	16.8	ND	ND	ND	10.6	ND	ND	ND	ND	ND	ND	ND	ND	147	102	ND	17.6	ND
Total Copper (Cu)	µg/l	5	1000	29.2	ND	ND	ND	ND	ND	ND	ND	6.3	ND	ND	40.3	ND	42.2	35.6	ND	47.4	ND
Total Lead (Pb)	µg/l	5	15	17.5	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.3	ND	46.5	23.1	ND	123	ND
Total Nickel (Ni)	µg/l	5	100	24	ND	8	8.4	13.8	ND	5.8	9.8	ND	ND	ND	29.2	ND	73.1	30.3	ND	36.1	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.5	NE	11.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.5	ND	12.3	10.5	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	89	ND	8.8	14.7	20	ND	ND	ND	8.6	ND	ND	103	ND	176	146	ND	48.2	ND
Total Zinc (Zn)	µg/l	10	1050	86	ND	66.2	14	37.4	33.3	12	ND	11.6	ND	14.2	91.1	66.9	169	148	ND	336	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (04-23-2008)

TEST	UNITS	MDL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	EQUIP. BLANK
pH	pH units (on-site)	-	NE	6.59	7.23	6.58	6.33	5.71	6.05	5.66	5.65	8.13	5.32	6.04	5.56	6.42	5.86	6.01	6.51	6.69	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	25	49	49	102	1546	946	411	318	124	239	103	481	402	244	68	46	33	NT
Temperature	°C (on-site)	-	NE	13.9	14.2	14.2	13.2	14.6	14.4	13.4	14.7	17.4	16	15.7	14.8	12.8	13.5	13.9	12.9	14.1	NT
Turbidity	NTU (on-site)	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	ND	ND	10.2	ND
Total Barium (Ba)	µg/l	5	2000	194	30.8	253	168	1230	661	216	202	61.8	257	256	151	185	171	169	24.1	361	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND
Total Chromium (Cr)	µg/l	5	50	10.7	ND	16.8	7.8	ND	ND	ND	ND	7.6	ND	ND	7.3	ND	ND	ND	ND	14.9	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5	ND	ND	ND	115	ND	ND	22.3	ND
Total Copper (Cu)	µg/l	5	1000	7.2	ND	ND	ND	ND	ND	ND	ND	7.2	ND	ND	ND	ND	ND	ND	ND	17	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	8.4	ND	ND	ND	ND	ND	5.8	ND	ND	ND	ND	ND	ND	ND	50.2	ND
Total Nickel (Ni)	µg/l	5	100	7.3	ND	12.9	6.3	10.8	5.7	ND	11.3	5.3	ND	6.2	ND	7.2	17.2	ND	ND	59	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	26.1	ND	11.4	9.7	10.1	ND	ND	5.1	9.7	ND	8.6	10	ND	7.2	6.1	ND	23.1	ND
Total Zinc (Zn)	µg/l	10	1050	27.3	ND	50.3	12.2	24.4	36.9	ND	10.3	17.5	27.9	22.2	28.8	123	32.7	12.1	ND	138	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	0.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

APPENDIX B

Summary Table of Surface Water Analytical Results

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (9-14-1998)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	7	7.6	7.6	6.4	NS	NS	NS	7.2	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	80	75	78	120	NS	NS	NS	2700	NS
Temperature	°C (on-site)	-	29	16	16	21	15	NS	NS	NS	18	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	0.31	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NS	NS	NS	79	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	79	NS
Sulfate	mg/l	500	250	NT	NT	NT	NT	NS	NS	NS	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NS	NS	NS	120	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NS	NS	NS	360	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NS	NS	NS	1600	NS
Cyanide	µg/l	2	70	NT	NT	NT	NT	NS	NS	NS	ND	NS
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Barium (Ba)	µg/l	500	NE	100	ND	ND	ND	NS	NS	NS	400	NS
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Cobalt (Co)	µg/l	10	NE	2	ND	ND	2	NS	NS	NS	NT	NS
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Magnesium (Mg)	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Silver (Ag)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Vanadium (V)	µg/l	40	NE	5	ND	ND	ND	NS	NS	NS	NT	NS
Total Zinc (Zn)	µg/l	50	NE	10	20	ND	ND	NS	NS	NS	50	NS
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NS	NS	NS	ND	NS
Acetone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Benzene	µg/l	5	51	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromoform	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NS	NS	NS	NT	NS
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Styrene	µg/l	10	100	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NS	NS	NS	NT	NS
Toluene	µg/l	5	1000	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NS	NS	NS	NT	NS
Xylene	µg/l	5	530	NT	NT	NT	NT	NS	NS	NS	NT	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-26-1999)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	6	6.8	6.9	6	NS	NS	NS	NT	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	80	72	75	50	NS	NS	NS	NT	NS
Temperature	°C (on-site)	-	29	12	13	17	14	NS	NS	NS	NT	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	ND	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NS	NS	NS	90	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	90	NS
Sulfate	mg/l	500	250	NT	NT	NT	NT	NS	NS	NS	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NS	NS	NS	100	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NS	NS	NS	310	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NS	NS	NS	1200	NS
Cyanide	µg/l	2	70	NT	NT	NT	NT	NS	NS	NS	ND	NS
Total Antimony (Sb)	µg/l	30	NE	11	ND	5	6	NS	NS	NS	ND	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Barium (Ba)	µg/l	500	NE	100	ND	100	ND	NS	NS	NS	300	NS
Total Beryllium (Be)	µg/l	2	6.5	20	2	2	2	NS	NS	NS	ND	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Chromium (Cr)	µg/l	10	50	3	ND	ND	3	NS	NS	NS	6	NS
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	2	NS	NS	NS	ND	NS
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Lead (Pb)	µg/l	10	25	6	5	6	ND	NS	NS	NS	ND	NS
Total Magnesium (Mg)	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	63000	NS
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Selenium (Se)	µg/l	20	5	ND	ND	5	ND	NS	NS	NS	8	NS
Total Silver (Ag)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Zinc (Zn)	µg/l	50	NE	10	20	ND	ND	NS	NS	NS	ND	NS
Mercury	µg/l	0.2	0.012	ND	ND	NT	NT	NS	NS	NS	ND	NS
Acetone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Benzene	µg/l	5	51	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromoform	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NS	NS	NS	NT	NS
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Styrene	µg/l	10	100	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NS	NS	NS	NT	NS
Toluene	µg/l	5	1000	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NS	NS	NS	NT	NS
Xylene	µg/l	5	530	NT	NT	NT	NT	NT	NT	NT	NT	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested.
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (9-21-1999)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	6.6	6.7	6.4	5.3	NS	NS	NS	NT	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	88	82	89	55	NS	NS	NS	NT	NS
Temperature	°C (on-site)	-	29	14	16	16	12	NS	NS	NS	NT	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	ND	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NS	NS	NS	41	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	41	NS
Sulfate	mg/l	500	250	NT	NT	NT	NT	NS	NS	NS	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NS	NS	NS	3500	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NS	NS	NS	600	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NS	NS	NS	1900	NS
Cyanide	µg/l	2	70	NT	NT	NT	NT	NS	NS	NS	NT	NS
Total Aluminum (Al)	µg/l	250	NE	NT	NT	NT	NT	NS	NS	NS	1700	NS
Total Antimony (Sb)	µg/l	30	50	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Arsenic (As)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Barium (Ba)	µg/l	500	6.5	88	62	98	76	NS	NS	NS	180	NS
Total Beryllium (Be)	µg/l	2	2	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Cadmium (Cd)	µg/l	1	50	ND	1.4	1.3	ND	NS	NS	NS	1.8	NS
Total Calcium (Ca)	µg/l	100	NE	NT	NT	NT	ND	NS	NS	NS	27000	NS
Total Chromium (Cr)	µg/l	10	NE	16	51	48	ND	NS	NS	NS	43	NS
Total Cobalt (Co)	µg/l	10	25	ND	ND	ND	ND	NS	NS	NS	9.7	NS
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Iron (Fe)	µg/l	20	88	NT	NT	NT	NT	NS	NS	NS	9900	NS
Total Lead (Pb)	µg/l	10	5	ND	ND	ND	13	NS	NS	NS	ND	NS
Total Magnesium (Mg)	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	75000	NS
Total Manganese (Mn)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	1800	NS
Total Molybdenum (Mo)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	10	NS
Total Nickel (Ni)	µg/l	50	NE	ND	ND	6.2	ND	NS	NS	NS	41	NS
Total Potassium (K)	µg/l	500	0.012	ND	ND	ND	NT	NS	NS	NS	18000	NS
Total Selenium (Se)	µg/l	20	NE	ND	ND	ND	NT	NS	NS	NS	ND	NS
Total Silicon (Si)	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	610	NS
Total Silver (Ag)	µg/l	10	51	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Sodium (Na)	µg/l	250	NE	NT	NT	NT	NT	NS	NS	NS	15000	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Tin (Sn)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	10	NS
Total Titanium (Ti)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	130	NS
Total Vanadium (V)	µg/l	40	NE	ND	ND	9.2	ND	NS	NS	NS	11	NS
Total Zinc (Zn)	µg/l	50	0.3	24	46	38	ND	NS	NS	NS	86	NS
Mercury	µg/l	0.2	0.012	ND	ND	ND	NT	NS	NS	NS	NT	NS
Acetone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Benzene	µg/l	5	51	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromoform	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NS	NS	NS	NT	NS
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Styrene	µg/l	10	100	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NS	NS	NS	NT	NS
Toluene	µg/l	5	1000	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NS	NS	NS	NT	NS
Xylene	µg/l	5	530	NT	NT	NT	NT	NS	NS	NS	NT	NS

Notes:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-24-2000)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	6.4	6.3	6.7	6.4	NS	NS	NS	7.8	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	65	65	59	65	NS	NS	NS	2600	NS
Temperature	°C (on-site)	-	29	11	11	14	11	NS	NS	NS	11	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	300	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NS	NS	NS	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NS	NS	NS	95	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	95	NS
Sulfate	mg/l	500	250	NT	NT	NT	NT	NS	NS	NS	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NS	NS	NS	190	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NS	NS	NS	670	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NS	NS	NS	2700	NS
Cyanide	µg/l	2	70	NT	NT	NT	NT	NS	NS	NS	13	NS
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	25	NS	NS	NS	NT	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Barium (Ba)	µg/l	500	NE	91	70	29	62	NS	NS	NS	NT	NS
Total Beryllium (Be)	µg/l	2	6.5	ND	2	ND	ND	NS	NS	NS	NT	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	NS	NS	NS	13	NS
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	16	NS	NS	NS	NT	NS
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	ND	NS	NS	NS	ND	NS
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	3.8	NS	NS	NS	NT	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	NS	2	NS
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	NS	NS	NS	NT	NS
Total Zinc (Zn)	µg/l	50	NE	13	26	14	ND	NS	NS	NS	NT	NS
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NS	NS	NS	[illegible]	NS
Acetone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Benzene	µg/l	5	51	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromoform	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NS	NS	NS	NT	NS
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NS	NS	NS	NT	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NS	NS	NS	NT	NS
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Styrene	µg/l	10	100	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NS	NS	NS	NT	NS
Toluene	µg/l	5	1000	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NS	NS	NS	NT	NS
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NS	NS	NS	NT	NS
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NS	NS	NS	NT	NS
Xylene	µg/l	5	530	NT	NT	NT	NT	NS	NS	NS	NT	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-9-2001)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	7	7.1	7.1	NS	NS	NS	8.1	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	73	80	75	NS	NS	NS	3600	NS
Temperature	°C (on-site)	-	29	11	13	18	NS	NS	NS	15	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	ND	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NS	NS	NS	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NS	NS	120	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NS	NS	120	NS
Sulfate	mg/l	500	250	NT	NT	NT	NS	NS	NS	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NS	NS	240	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NS	NS	430	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NS	NS	NS	5000	NS
Cyanide	µg/l	2	70	NT	NT	NT	NS	NS	NS	ND	NS
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	NS	NS	NS	NT	NS
Total Barium (Ba)	µg/l	500	NE	99	81	55	NS	NS	NS	NT	NS
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	NS	NS	NS	NT	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	NS	NS	NS	NT	NS
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	NS	NS	NS	10	NS
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	NS	NS	NS	ND	NS
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	NS	NS	NS	210	NS
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	NS	NS	NS	NT	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	NS	NS	NS	ND	NS
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Zinc (Zn)	µg/l	50	NE	15	31	20	NS	NS	NS	NT	NS
Mercury	µg/l	0.2	0.012	NT	NT	NT	NS	NS	NS	ND	NS
Acetone	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NS	NS	NS	NT	NS
Benzene	µg/l	5	51	NT	NT	NT	NS	NS	NS	NT	NS
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromoform	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NS	NS	NS	NT	NS
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NS	NS	NS	NT	NS
Chloroethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Chloroform	µg/l	5	0.19	NT	NT	NT	NS	NS	NS	NT	NS
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NS	NS	NS	NT	NS
Dibromomethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NS	NS	NS	NT	NS
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Ethylbenzene	µg/l	5	29	NT	NT	NT	NS	NS	NS	NT	NS
2-Hexanone	µg/l	50	NE	NT	NT	NT	NS	NS	NS	NT	NS
Iodomethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NS	NS	NS	NT	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NS	NS	NS	NT	NS
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Styrene	µg/l	10	100	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NS	NS	NS	NT	NS
Toluene	µg/l	5	1000	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NS	NS	NS	NT	NS
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NS	NS	NS	NT	NS
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NS	NS	NS	NT	NS
Xylene	µg/l	5	530	NT	NT	NT	NS	NS	NS	NT	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (9-18-2001)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	NS	NS	NS	7.48	NS	NS	NS	6.02
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	160	NS	NS	NS	120
Temperature	°C (on-site)	-	29	NS	NS	NS	20	NS	NS	NS	19
Turbidity	NTU (on-site)	0.1	50	NS	NS	NS	NT	NS	NS	NS	NT
Nitrate as N	mg/l	0.1	10	NS	NS	NS	NT	NS	NS	NS	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NS	NS	NS	NT	NS	NS	NS	NT
Nitrite as N	mg/l	0.1	1	NS	NS	NS	NT	NS	NS	NS	NT
Nitrogen	mg/l	0.2	NE	NS	NS	NS	NT	NS	NS	NS	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
Sulfate	mg/l	500	250	NS	NS	NS	NT	NS	NS	NS	NT
Biochemical Oxygen Demand	mg/l	2	NE	NS	NS	NS	NT	NS	NS	NS	NT
Chemical Oxygen Demand	mg/l	25	NE	NS	NS	NS	NT	NS	NS	NS	NT
Total Dissolved Solids	mg/l	20	1000	NS	NS	NS	NT	NS	NS	NS	NT
Cyanide	µg/l	2	70	NS	NS	NS	NT	NS	NS	NS	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	ND	NS	NS	NS	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	ND	NS	NS	NS	ND
Total Barium (Ba)	µg/l	500	NE	NS	NS	NS	71	NS	NS	NS	110
Total Beryllium (Be)	µg/l	2	6.5	NS	NS	NS	ND	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	2	NS	NS	NS	ND	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	ND	NS	NS	NS	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	7.2	NS	NS	NS	13
Total Copper (Cu)	µg/l	200	NE	NS	NS	NS	ND	NS	NS	NS	ND
Total Lead (Pb)	µg/l	10	25	NS	NS	NS	ND	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	NE	NS	NS	NS	9.4	NS	NS	NS	8.1
Total Selenium (Se)	µg/l	20	88	NS	NS	NS	ND	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	5	NS	NS	NS	ND	NS	NS	NS	ND
Total Thallium (Tl)	µg/l	10	NE	NS	NS	NS	ND	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	ND	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	50	NE	NS	NS	NS	11	NS	NS	NS	35
Mercury	µg/l	0.2	0.012	NS	NS	NS	NT	NS	NS	NS	NT
Acetone	µg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NS	NS	NS	NT
Benzene	µg/l	5	51	NS	NS	NS	NT	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Bromoform	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NS	NS	NS	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NS	NS	NS	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NS	NS	NS	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NS	NS	NS	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NS	NS	NS	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NS	NS	NS	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-15-2002)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	6.67	6.08	6.46	7	NS	NS	6.71	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	78	78	80	170	NS	NS	265	NT
Temperature	°C (on-site)	-	29	17.8	13.3	19.4	20	NS	NS	20.1	NT
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NS	NS	NT	NT
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NS	NS	NT	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	0.3	NT
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NS	NS	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NS	NS	96	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NS	NS	96	NT
Sulfate	mg/l	500	250	NT	NT	NT	NT	NS	NS	NT	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NS	NS	740	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NS	NS	1400	NT
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NS	NS	2300	NT
Cyanide	µg/l	2	70	NT	NT	NT	NT	NS	NS	0.006	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	NS	NS	NT	NT
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	NS	NS	NT	NT
Total Barium (Ba)	µg/l	500	NE	92	91	40	140	NS	NS	NT	NT
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	NS	NS	NT	NT
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	NS	NS	NT	NT
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	NS	NS	34	NT
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	7.7	NS	NS	NT	NT
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	ND	NS	NS	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	NS	NS	ND	NT
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	9	NS	NS	NT	NT
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	ND	NS	NS	ND	NT
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	ND	NS	NS	NT	NT
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	ND	NT
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	6.5	NS	NS	NT	NT
Total Zinc (Zn)	µg/l	50	NE	ND	37	32	60	NS	NS	NT	NT
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NS	NS	ND	NT
Acetone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NS	NS	NT	NT
Benzene	µg/l	5	51	NT	NT	NT	NT	NS	NS	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NS	NS	NT	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NS	NS	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NS	NS	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NS	NS	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NS	NS	NT	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NS	NS	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NS	NS	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NS	NS	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NS	NS	NT	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NS	NS	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NS	NS	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NS	NS	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NS	NS	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NT	NT
Styrene	µg/l	10	100	NT	NT	NT	NT	NS	NS	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NS	NS	NT	NT
Toluene	µg/l	5	1000	NT	NT	NT	NT	NS	NS	NT	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NS	NS	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NS	NS	NT	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NS	NS	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NS	NS	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NT	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NS	NS	NT	NT
Xylene	µg/l	5	530	NT	NT	NT	NT	NS	NS	NT	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (9-26-2002)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	6.9	6.88	7.01	NS	NS	NS	7.48	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	102	151	115	NS	NS	NS	3700	NS
Temperature	°C (on-site)	-	29	16.5	17.2	17.5	NS	NS	NS	18.4	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NS	NS	NS	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	ND	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NS	NS	NS	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NS	NS	ND	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NS	NS	130	NS
Sulfate	mg/l	500	250	NT	NT	NT	NS	NS	NS	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NS	NS	210	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NS	NS	1300	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NS	NS	NS	3000	NS
Cyanide	µg/l	2	70	NT	NT	NT	NS	NS	NS	2.5	NS
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	NS	NS	NS	NT	NS
Total Barium (Ba)	µg/l	500	NE	150	160	80	NS	NS	NS	NT	NS
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	NS	NS	NS	NT	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	NS	NS	NS	NT	NS
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	NS	NS	NS	34	NS
Total Cobalt (Co)	µg/l	10	NE	7.2	ND	ND	NS	NS	NS	NT	NS
Total Copper (Cu)	µg/l	200	NE	ND	4.5	2.7	NS	NS	NS	NT	NS
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	NS	NS	NS	ND	NS
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	NS	NS	NS	NT	NS
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	NS	NS	NS	ND	NS
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	NS	NS	NS	NT	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	NS	NS	NS	ND	NS
Total Vanadium (V)	µg/l	40	NE	ND	6.4	ND	NS	NS	NS	NT	NS
Total Zinc (Zn)	µg/l	50	NE	19	100	41	NS	NS	NS	NT	NS
Mercury	µg/l	0.2	0.012	NT	NT	NT	NS	NS	NS	ND	NS
Acetone	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NS	NS	NS	NT	NS
Benzene	µg/l	5	51	NT	NT	NT	NS	NS	NS	NT	NS
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromoform	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NS	NS	NS	NT	NS
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NS	NS	NS	NT	NS
Chloroethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Chloroform	µg/l	5	0.19	NT	NT	NT	NS	NS	NS	NT	NS
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NS	NS	NS	NT	NS
Dibromomethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NS	NS	NS	NT	NS
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NS	NS	NS	NT	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NS	NS	NS	NT	NS
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NS	NS	NS	NT	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Ethylbenzene	µg/l	5	29	NT	NT	NT	NS	NS	NS	NT	NS
2-Hexanone	µg/l	50	NE	NT	NT	NT	NS	NS	NS	NT	NS
Iodomethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NS	NS	NS	NT	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NS	NS	NS	NT	NS
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT	NS
Styrene	µg/l	10	100	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NS	NS	NS	NT	NS
Toluene	µg/l	5	1000	NT	NT	NT	NS	NS	NS	NT	NS
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NS	NS	NS	NT	NS
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NS	NS	NS	NT	NS
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NS	NS	NS	NT	NS
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NS	NS	NS	NT	NS
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NS	NS	NS	NT	NS
Xylene	µg/l	5	530	NT	NT	NT	NS	NS	NS	NT	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-29-2003)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	6.91	6.42	7.17	NS	6.41	6.71	NT	7.05
Specific Conductance	µmhos/cm (on-site)	1	NE	77	75	101	NS	19	29	NT	130
Temperature	°C (on-site)	-	29	11.8	13	16	NS	15.6	14.9	NT	23
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NS	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NS	NT	NT	NT	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	ND	NT
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NS	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NT	NT	220	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NT	NT	220	NT
Sulfate	mg/l	500	250	NT	NT	NT	NS	NT	NT	NT	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NT	NT	2500	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NT	NT	1100	NT
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NS	NT	NT	120	NT
Cyanide	µg/l	2	70	NT	NT	NT	NS	NT	NT	110	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	NS	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	NS	ND	ND	15	ND
Total Barium (Ba)	µg/l	500	NE	90	82	64	NS	27	27	270	92
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	NS	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	NS	ND	ND	2.5	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	NS	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	16	ND
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	NS	ND	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	NS	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	NS	ND	ND	ND	ND
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	NS	ND	ND	ND	ND
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	NS	ND	ND	2.4	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	NS	ND	ND	19	ND
Total Zinc (Zn)	µg/l	50	NE	ND	45	20	NS	ND	ND	1000	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	NS	NT	NT	NT	NT
Acetone	µg/l	100	NE	NT	NT	NT	NS	NT	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NS	NT	NT	NT	NT
Benzene	µg/l	5	51	NT	NT	NT	NS	NT	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NS	NT	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NS	NT	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NS	NT	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Chloroform	µg/l	5	0.19	NT	NT	NT	NS	NT	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NS	NT	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NS	NT	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NS	NT	NT	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NS	NT	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NS	NT	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NS	NT	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NS	NT	NT	NT	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NS	NT	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Ethylbenzene	µg/l	5	29	NT	NT	NT	NS	NT	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NS	NT	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NS	NT	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NS	NT	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NS	NT	NT	NT	NT
Styrene	µg/l	10	100	NT	NT	NT	NS	NT	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NS	NT	NT	NT	NT
Toluene	µg/l	5	1000	NT	NT	NT	NS	NT	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NS	NT	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NS	NT	NT	NT	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NS	NT	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NS	NT	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NS	NT	NT	NT	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NS	NT	NT	NT	NT
Xylene	µg/l	5	530	NT	NT	NT	NS	NT	NT	NT	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-30-2003)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	7.41	7.38	7.42	NS	5.87	7.14	8.37	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	80	80	80	NS	19	29	3500	NS
Temperature	°C (on-site)	-	29	12	12	12	NS	14.2	15.1	19.3	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NS	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NS	NT	NT	3.4	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	3.4	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NS	NT	NT	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NT	NT	72	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NT	NT	69	NS
Sulfate	mg/l	500	250	NT	NT	NT	NS	NT	NT	NT	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NT	NT	ND	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NT	NT	250	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NS	NT	NT	2500	NS
Cyanide	µg/l	2	70	NT	NT	NT	NS	NT	NT	NT	NS
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	NS	ND	ND	NT	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	NS	5.5	ND	NT	NS
Total Barium (Ba)	µg/l	500	NE	110	130	84	NS	24	27	NT	NS
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	NS	ND	ND	NT	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	NS	ND	ND	NT	NS
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	NS	ND	ND	10	NS
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Total Copper (Cu)	µg/l	200	NE	ND	2.7	2.2	NS	2.2	ND	NT	NS
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	NS	ND	ND	ND	NS
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	NS	ND	ND	NT	NS
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	NS	ND	ND	ND	NS
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	NS	ND	ND	NT	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	ND	NS
Total Vanadium (V)	µg/l	40	NE	ND	5.3	ND	NS	ND	ND	NT	NS
Total Zinc (Zn)	µg/l	50	NE	ND	80	40	NS	14	ND	NT	NS
Mercury	µg/l	0.2	0.012	NT	NT	NT	NS	NT	NT	ND	NS
Acetone	µg/l	100	NE	ND	ND	ND	NS	ND	ND	NT	NS
Acrylonitrile	µg/l	200	NE	ND	ND	ND	NS	ND	ND	NT	NS
Benzene	µg/l	5	51	ND	ND	ND	NS	ND	ND	NT	NS
Bromochloromethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Bromoform	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	NS	ND	11	NT	NS
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Carbon tetrachloride	µg/l	10	0.3	ND	ND	ND	NS	ND	ND	NT	NS
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	NS	ND	ND	NT	NS
Chloroethane	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Chloroform	µg/l	5	0.19	ND	ND	ND	NS	ND	ND	NT	NS
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	NS	ND	ND	NT	NS
Dibromomethane	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	NS	ND	ND	NT	NS
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	NS	ND	ND	NT	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	NS	ND	ND	NT	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	NS	ND	ND	NT	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	NS	ND	ND	NT	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	NS	ND	ND	NT	NS
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	NS	ND	ND	NT	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Ethylbenzene	µg/l	5	29	ND	ND	ND	NS	ND	ND	NT	NS
2-Hexanone	µg/l	50	NE	ND	ND	ND	NS	ND	ND	NT	NS
Iodomethane	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	ND	ND	ND	NS	ND	ND	NT	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	ND	ND	ND	NS	ND	ND	NT	NS
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	NS	ND	ND	NT	NS
Styrene	µg/l	10	100	ND	ND	ND	NS	ND	ND	NT	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	NS	ND	ND	NT	NS
Toluene	µg/l	5	1000	ND	ND	ND	NS	ND	ND	NT	NS
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	NS	ND	ND	NT	NS
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	NS	ND	ND	NT	NS
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	NS	ND	ND	NT	NS
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	NS	ND	ND	NT	NS
Vinyl acetate	µg/l	50	NE	ND	ND	ND	NS	ND	ND	NT	NS
Vinyl chloride	µg/l	10	0.015	ND	ND	ND	NS	ND	ND	NT	NS
Xylene	µg/l	5	530	ND	ND	ND	NS	ND	ND	NT	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-20-2004)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	6.8	7.05	7.19	8.05	6.19	6.35	8.37	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	74	73	142	1790	19	29	4050	NS
Temperature	°C (on-site)	-	29	13	13	15	17	17	16	28.4	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NT	NT	0.11	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	0.11	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NT	NT	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NS
Sulfate	mg/l	500	250	NT	NT	NT	NT	NT	NT	640	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	470	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	1100	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NT	NT	NT	NS
Cyanide	µg/l	2	70	NT	NT	NT	NT	NT	NT	NT	NS
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	ND	ND	16	NS
Total Barium (Ba)	µg/l	500	NE	120	95	83	260	18	26	140	NS
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	NS
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	ND	ND	28	NS
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	26	ND	ND	17	NS
Total Copper (Cu)	µg/l	200	NE	ND	ND	3.1	ND	ND	ND	ND	NS
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	ND	ND	ND	NS
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	12	ND	ND	45	NS
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	6	ND	ND	8	NS
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	ND	ND	12	NS
Total Zinc (Zn)	µg/l	50	NE	ND	48	31	310	15	ND	62	NS
Mercury	µg/l	0.2	0.012	NT	NT	NT	ND	NT	NT	ND	NS
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	490	NS
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	NS
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND	NS
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	14	NS
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon tetrachloride	µg/l	10	0.3	ND	ND	ND	ND	ND	ND	ND	NS
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	NS
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	NS
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	NS
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	ND	ND	ND	ND	ND	ND	300	NS
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	µg/l	10	100	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	NS
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl chloride	µg/l	10	0.015	ND	ND	ND	ND	ND	ND	ND	NS
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	NS

Notes:
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Section 15A NCAC 02B.0100, .0200, and .0300.
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NS = Not Sampled
NT = Not Tested
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NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-21-2004)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	7.06	6.62	NS	7.16	7.42	6.41	7.89	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	103	103	NS	129	26	38	3270	NS
Temperature	°C (on-site)	-	29	14	14.5	NS	15	15	16	23.4	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NS	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NS	NT	NT	NT	ND	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NS	NT	NT	NT	ND	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NS	NT	NT	NT	NT	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NS	NT	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NS
Sulfate	mg/l	500	250	NT	NT	NS	NT	NT	NT	34	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NS	NT	NT	NT	640	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NS	NT	NT	NT	1300	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NS	NT	NT	NT	NT	NS
Cyanide	µg/l	2	70	NT	NT	NS	NT	NT	NT	NT	NS
Total Antimony (Sb)	µg/l	30	NE	ND	ND	NS	ND	ND	ND	ND	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	ND	ND	ND	10	NS
Total Barium (Ba)	µg/l	500	NE	100	100	NS	87	24	31	160	NS
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	NS	ND	2.6	ND	ND	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	NS	ND	32.1	ND	ND	NS
Total Chromium (Cr)	µg/l	10	50	ND	ND	NS	ND	3.7	2.3	26	NS
Total Cobalt (Co)	µg/l	10	NE	ND	ND	NS	6.5	ND	ND	ND	NS
Total Copper (Cu)	µg/l	200	NE	ND	ND	NS	ND	ND	ND	ND	NS
Total Lead (Pb)	µg/l	10	25	ND	ND	NS	ND	ND	ND	ND	NS
Total Nickel (Ni)	µg/l	50	NE	ND	ND	NS	ND	ND	ND	24	NS
Total Selenium (Se)	µg/l	20	88	ND	ND	NS	ND	ND	ND	6.2	NS
Total Silver (Ag)	µg/l	10	5	ND	ND	NS	ND	ND	ND	ND	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Total Vanadium (V)	µg/l	40	NE	ND	ND	NS	ND	ND	ND	8.2	NS
Total Zinc (Zn)	µg/l	50	NE	ND	44	NS	17	12	13	43	NS
Mercury	µg/l	0.2	0.012	NT	NT	NS	NT	NT	NT	NT	NS
Acetone	µg/l	100	NE	ND	ND	NS	ND	ND	ND	290	NS
Acrylonitrile	µg/l	200	NE	ND	ND	NS	ND	ND	ND	ND	NS
Benzene	µg/l	5	51	ND	ND	NS	ND	ND	ND	ND	NS
Bromochloromethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Bromodichloromethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Bromoform	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Carbon Disulfide	µg/l	100	NE	ND	ND	NS	ND	39	32	ND	NS
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Carbon tetrachloride	µg/l	10	0.3	ND	ND	NS	ND	ND	ND	ND	NS
Chlorobenzene (mono)	µg/l	5	50	ND	ND	NS	ND	ND	ND	ND	NS
Chloroethane	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Chloroform	µg/l	5	0.19	ND	ND	NS	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Dibromochloromethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	NS	ND	ND	ND	ND	NS
Dibromomethane	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	NS	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	NS	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,1-Dichloroethane	µg/l	5	700	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	NS	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	NS	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	NS	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	NS	ND	ND	ND	ND	NS
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	NS	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Ethylbenzene	µg/l	5	29	ND	ND	NS	ND	ND	ND	ND	NS
2-Hexanone	µg/l	50	NE	ND	ND	NS	ND	ND	ND	ND	NS
Iodomethane	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	ND	ND	NS	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	ND	ND	NS	ND	ND	ND	260	NS
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	NS	ND	ND	ND	ND	NS
Styrene	µg/l	10	100	ND	ND	NS	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	NS	ND	ND	ND	ND	NS
Toluene	µg/l	5	1000	ND	ND	NS	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	NS	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	NS	ND	ND	ND	ND	NS
Trichlorofluoromethane	µg/l	5	2100	ND	ND	NS	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	NS	ND	ND	ND	ND	NS
Vinyl acetate	µg/l	50	NE	ND	ND	NS	ND	ND	ND	ND	NS
Vinyl chloride	µg/l	10	0.015	ND	ND	NS	ND	ND	ND	ND	NS
Xylene	µg/l	5	530	ND	ND	NS	ND	ND	ND	ND	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
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NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-18-2005)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	6.49	5.99	6.21	7.05	7.08	7.27	7.28	6.26
Specific Conductance	µmhos/cm (on-site)	1	NE	79	88	151	120	21	28	6500	172
Temperature	°C (on-site)	-	29	13	123	13.5	16	14.1	13	19	21
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NT	NT	ND	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NT
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	250	NT	NT	NT	NT	NT	NT	1300	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	300	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	760	NT
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	70	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	ND	ND	22	ND
Total Barium (Ba)	µg/l	500	NE	100	120	98	79	24	28	390	83
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	ND	ND	31	ND
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	14	ND
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	ND	ND	ND	50	ND
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	ND	ND	ND	7.4	ND
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	ND	ND	17	ND
Total Zinc (Zn)	µg/l	50	NE	ND	50	22	34	ND	ND	150	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	240	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	0.3	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	11	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	11	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	ND	ND	ND	ND	ND	ND	410	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	40	ND
Styrene	µg/l	10	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	63	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	10	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	43	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-13-2005)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	7.11	6.72	7.18	6.28	6.76	8.13	8.01	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	89	90	240	340	91	31	6500	NS
Temperature	°C (on-site)	-	29	15.7	16.9	16.9	18.9	18.7	15.2	21.1	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NT	NT	ND	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NT	NT	ND	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NS
Sulfate	mg/l	500	250	NT	NT	NT	NT	NT	NT	1300	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	720	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	920	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NT	NT	NT	NS
Cyanide	µg/l	2	70	NT	NT	NT	NT	NT	NT	NT	NS
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT	ND	NT	NT	NT	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	ND	ND	16	NS
Total Barium (Ba)	µg/l	500	NE	120	96	140	90	86	36	430	NS
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT	ND	NT	NT	NT	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	NS
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	4.2	ND	ND	50	NS
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT	6.8	NT	NT	NT	NS
Total Copper (Cu)	µg/l	200	NE	NT	NT	NT	2.4	NT	NT	NT	NS
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	ND	ND	ND	NS
Total Nickel (Ni)	µg/l	50	NE	NT	NT	NT	ND	NT	NT	NT	NS
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	ND	ND	ND	9.2	NS
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	NS
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT	ND	NT	NT	NT	NS
Total Vanadium (V)	µg/l	40	NE	NT	NT	NT	ND	NT	NT	NT	NS
Total Zinc (Zn)	µg/l	50	NE	NT	NT	NT	33	NT	NT	NT	NS
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	ND	NS
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	NS
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND	NS
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon tetrachloride	µg/l	10	0.3	ND	ND	ND	ND	ND	ND	ND	NS
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	NS
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	NS
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	NS
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	ND	ND	ND	ND	ND	ND	ND	NS
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	µg/l	10	100	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	NS
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl chloride	µg/l	10	0.015	ND	ND	ND	ND	ND	ND	ND	NS
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-25-2006)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	7.07	7.11	7.18	6.73	6.45	6.28	7.55	6.81
Specific Conductance	µmhos/cm (on-site)	1	NE	107	138	340	201	45	53	8660	216
Temperature	°C (on-site)	-	29	14.1	13.8	15.6	18.6	14.8	14.3	17.1	20.4
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NT	NT	2.4	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	2.4	NT
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	250	NT	NT	NT	NT	NT	NT	2400	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	51	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	700	NT
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	70	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	ND	ND	18	ND
Total Barium (Ba)	µg/l	500	NE	ND	ND	ND	ND	ND	ND	580	ND
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	ND	ND	40	ND
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	15	ND
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	11	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	ND	ND	ND	56	ND
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	50	NE	ND	ND	ND	ND	ND	ND	130	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	0.3	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	6.2	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	ND	ND	ND	ND	ND	ND	24	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	15	ND
Styrene	µg/l	10	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	12	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	10	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	16.1	ND

Notes:
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Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-16-2006)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	7.53	7.1	NT	7.14	6.64	7.13	8.11	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	123	139	NT	200	46	40	9800	NS
Temperature	°C (on-site)	-	29	11.9	10.9	NT	11.9	13.4	11.3	19.6	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NT	NT	0.58	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NT	NT	ND	NS
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NS
Sulfate	mg/l	500	250	NT	NT	NT	NT	NT	NT	2100	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	61	NS
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	780	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NT	NT	NT	NS
Cyanide	µg/l	2	70	NT	NT	NT	NT	NT	NT	NT	NS
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	ND	ND	18	NS
Total Barium (Ba)	µg/l	500	NE	120	140	120	240	54	33	430	NS
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	5.8	ND	ND	ND	NS
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	21	ND	ND	54	NS
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	7.4	ND	14	NS
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	23	ND	ND	ND	NS
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	18	ND	ND	ND	NS
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	8.4	ND	ND	68	NS
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	ND	ND	ND	ND	NS
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	NS
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	62	ND	ND	18	NS
Total Zinc (Zn)	µg/l	50	NE	ND	39	22	130	ND	ND	63	NS
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NS
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	NS
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND	NS
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon tetrachloride	µg/l	10	0.3	ND	ND	ND	ND	ND	ND	ND	NS
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	NS
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	NS
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	NS
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	ND	ND	ND	ND	ND	ND	ND	NS
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	µg/l	10	100	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	NS
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl chloride	µg/l	10	0.015	ND	ND	ND	ND	ND	ND	ND	NS
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-23-2007)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	NT	NT	NT	NT	NT	NT	NT	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NT	NT	NT	NT	NT	NT	NT	NT
Temperature	°C (on-site)	-	29	NT	NT	NT	NT	NT	NT	NT	NT
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NT	NT	0.38	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NT	NT	ND	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	250	NT	NT	NT	NT	NT	NT	2400	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	89	NT
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	1000	NT
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	70	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	ND	ND	16	ND
Total Barium (Ba)	µg/l	500	NE	100	120	250	ND	ND	ND	380	ND
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	ND	ND	46	ND
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Copper (Cu)	µg/l	200	NE	ND	ND	ND	38	ND	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	50	NE	ND	ND	ND	ND	ND	ND	50	ND
Total Selenium (Se)	µg/l	20	88	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	50	NE	13	37	130	91	15	11	80	15
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	0.3	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	10	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	10	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	46	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	10	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	31.3	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-31-07)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	7.04	7.11	6.8	7.5	6.35	6.74	8.03	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	156	150	266	320	61	40	1282	NS
Temperature	°C (on-site)	-	29	16.5	13.4	12.7	17.2	11.5	9	14.3	NS
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NT	NT	NT	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NS
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NT	NT	NT	NS
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	0.53	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NS
Sulfate	mg/l	500	250	NT	NT	NT	NT	NT	NT	3010	NS
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	221	NS
Chemical Oxygen Demand	mg/l	100	NE	NT	NT	NT	NT	NT	NT	968	NS
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NT	NT	NT	NS
Cyanide	µg/l	2	70	NT	NT	NT	NT	NT	NT	NT	NS
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	24.6	NS
Total Barium (Ba)	µg/l	5	NE	583	154	162	85	111	30.3	436	NS
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND	NS
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	NS
Total Chromium (Cr)	µg/l	5	50	25.7	ND	ND	ND	ND	ND	74.1	NS
Total Cobalt (Co)	µg/l	5	NE	10.5	ND	ND	ND	ND	ND	12	NS
Total Copper (Cu)	µg/l	5	NE	18.4	ND	ND	ND	8.3	ND	ND	NS
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND	NS
Total Nickel (Ni)	µg/l	5	NE	18.1	ND	ND	ND	ND	ND	81.2	NS
Total Selenium (Se)	µg/l	10	88	ND	ND	ND	ND	ND	ND	ND	NS
Total Silver (Ag)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	NS
Total Thallium (Tl)	µg/l	5.5	NE	6.3	ND	ND	ND	ND	ND	ND	NS
Total Vanadium (V)	µg/l	5	NE	56.2	ND	ND	6.8	11.4	ND	23.9	NS
Total Zinc (Zn)	µg/l	10	NE	135	71.9	60	41.3	20.4	ND	76.7	NS
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NS
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	NS
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	NS
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND	NS
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	NS
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Carbon tetrachloride	µg/l	1	0.3	ND	ND	ND	ND	ND	ND	ND	NS
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	NS
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	NS
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.0004	ND	ND	ND	ND	ND	ND	ND	NS
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichlorobenzene	µg/l	1	620	ND	ND	ND	ND	ND	ND	ND	NS
1,4-Dichlorobenzene	µg/l	1	75	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,4-Dichloro-2butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethane	µg/l	1	700	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	NS
1,2-Dichloropropane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	µg/l	1	29	ND	ND	ND	ND	ND	ND	ND	NS
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	NS
2-Butanone (Methyl ethyl ketone)	µg/l	5	170	ND	ND	ND	ND	ND	ND	ND	NS
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	NS
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	NS
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	NS
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	NS
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	NS
Xylene	µg/l	2	530	ND	ND	ND	ND	ND	ND	ND	NS

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (04-23-08)

TEST	UNITS	MDL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate	Settling
pH	pH units (on-site)	-	<6.0; >8.5	6.8	7.32	7.06	7.2	7.56	7	8.56	7.37
Specific Conductance	µmhos/cm (on-site)	1	NE	124	162	234	426	48	42	8140	228
Temperature	°C (on-site)	-	29	13.1	14.5	14.3	16.9	15.2	15.6	21.4	13.1
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	10	NT	NT	NT	NT	NT	NT	ND	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	1	NT	NT	NT	NT	NT	NT	ND	NT
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	250	NT	NT	NT	NT	NT	NT	1940	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	741	NT
Chemical Oxygen Demand	mg/l	100	NE	NT	NT	NT	NT	NT	NT	1620	NT
Total Dissolved Solids	mg/l	20	1000	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	70	NT	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	9.5	ND
Total Barium (Ba)	µg/l	5	NE	111	145	133	184	34.4	24.9	247	127
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	1.5	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	6.5	ND	ND	28.9	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	11.2	ND	ND	9	5.5
Total Copper (Cu)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	NE	ND	ND	ND	7.6	ND	ND	51.3	ND
Total Selenium (Se)	µg/l	10	88	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	14.4	ND	ND	9.1	ND
Total Zinc (Zn)	µg/l	10	NE	ND	52.3	50.1	124	ND	ND	52.3	21.7
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	34.1	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.0004	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	620	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	75	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	700	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	29	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	170	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the method detection limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

APPENDIX C

Laboratory Analytical Results

Sampling Event
April 23, 2008

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May 09, 2008

Mr. Stephen King
Haywood Co. Solid Waste
278 Recycle Rd.
Clyde, NC 28721

RE: Project: White Oak LF-April 08
Pace Project No.: 9217964

Dear Mr. King:
Enclosed are the analytical results for sample(s) received by the laboratory between April 23, 2008 and April 24, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Charlotte Certification IDs

Florida/NELAP Certification Number: E87627
Kansas Certification Number: E-10364
Louisiana/LELAP Certification Number: 04034
North Carolina Drinking Water Certification Number: 37706
North Carolina Wastewater Certification Number: 12
North Carolina Field Services Certification Number: 5342
South Carolina Certification Number: 990060001
South Carolina Bioassay Certification Number: 990060003
Tennessee Certification Number: 04010
Virginia Certification Number: 00213

Asheville Certification IDs

Florida/NELAP Certification Number: E87648
Louisiana/LELAP Certification Number: 03095
New Jersey Certification Number: NC011
North Carolina Drinking Water Certification Number: 37712
North Carolina Wastewater Certification Number: 40
North Carolina Bioassay Certification Number: 9
Pennsylvania Certification Number: 68-03578
South Carolina Certification Number: 99030001
South Carolina Bioassay Certification Number: 99030002
Tennessee Certification Number: 2980
Virginia Certification Number: 00072

Eden Certification IDs

North Carolina Drinking Water Certification Number: 37738
Virginia Drinking Water Certification Number: 00424
North Carolina Wastewater Certification Number: 633

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-1A Lab ID: 9217964001 Collected: 04/23/08 14:10 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 11:36		
Collected Date	4/23/08			1		05/01/08 11:36		
Collected Time	14:10			1		05/01/08 11:36		
Field pH	6.33	Std. Units		1		05/01/08 11:36		
Field Temperature	13..2	deg C		1		05/01/08 11:36		
Static Water Level	19.82	feet		1		05/01/08 11:36		
Field Specific Conductance	102	umhos/cm		1		05/01/08 11:36		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina				Preparation Method: EPA 3010			
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7440-38-2	
Barium	168	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 07:59	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 07:59	7440-43-9	
Chromium	7.8	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7439-92-1	
Nickel	6.3	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 07:59	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 07:59	7440-28-0	
Vanadium	9.7	ug/L	5.0	1	04/25/08 12:40	04/30/08 07:59	7440-62-2	
Zinc	12.2	ug/L	10.0	1	04/25/08 12:40	04/30/08 07:59	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 19:52	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 19:52	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 19:52	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 19:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 19:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 19:52	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 19:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 19:52	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 19:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 19:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 19:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 19:52	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 19:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 19:52	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 19:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 19:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 19:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 19:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 19:52	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 19:52	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-1A Lab ID: 9217964001 Collected: 04/23/08 14:10 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 19:52	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 19:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 19:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 19:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 19:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 19:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 19:52	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 19:52	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 19:52	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 19:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 19:52	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 19:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 19:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 19:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 19:52	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 19:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 19:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 19:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 19:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 19:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 19:52	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 19:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 19:52	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 19:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 19:52	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 19:52	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109	1		04/29/08 19:52	460-00-4	
Dibromofluoromethane (S)	100	%	85-115	1		04/29/08 19:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	79-120	1		04/29/08 19:52	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 19:52	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-2 Lab ID: 9217964002 Collected: 04/23/08 13:55 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 11:40		
Collected Date	4/23/08			1		05/01/08 11:40		
Collected Time	13:55			1		05/01/08 11:40		
Field pH	5.71	Std. Units		1		05/01/08 11:40		
Field Temperature	14.6	deg C		1		05/01/08 11:40		
Static Water Level	29.5	feet		1		05/01/08 11:40		
Field Specific Conductance	1546	umhos/cm		1		05/01/08 11:40		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7440-38-2	
Barium	1230	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:03	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:03	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7439-92-1	
Nickel	10.8	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:03	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:03	7440-28-0	
Vanadium	10.1	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:03	7440-62-2	
Zinc	24.4	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:03	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 20:16	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 20:16	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 20:16	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 20:16	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 20:16	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 20:16	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 20:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 20:16	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 20:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 20:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 20:16	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 20:16	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 20:16	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 20:16	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 20:16	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 20:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 20:16	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 20:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 20:16	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 20:16	106-46-7	

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(704)875-9092

ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-2 Lab ID: 9217964002 Collected: 04/23/08 13:55 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 20:16	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 20:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 20:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 20:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 20:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 20:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 20:16	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 20:16	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 20:16	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 20:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 20:16	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 20:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 20:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 20:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 20:16	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 20:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 20:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 20:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 20:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 20:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 20:16	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 20:16	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 20:16	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 20:16	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 20:16	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 20:16	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 20:16	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		04/29/08 20:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	79-120	1		04/29/08 20:16	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 20:16	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-2D Lab ID: 9217964003 Collected: 04/23/08 14:00 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 11:41		
Collected Date	4/23/08			1		05/01/08 11:41		
Collected Time	14:00			1		05/01/08 11:41		
Field pH	6.05	Std. Units		1		05/01/08 11:41		
Field Temperature	14.4	deg C		1		05/01/08 11:41		
Static Water Level	29.60	feet		1		05/01/08 11:41		
Field Specific Conductance	946	umhos/cm		1		05/01/08 11:41		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7440-38-2	
Barium	661	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:15	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:15	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7439-92-1	
Nickel	5.7	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:15	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:15	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:15	7440-62-2	
Zinc	36.9	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:15	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 20:40	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 20:40	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 20:40	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 20:40	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 20:40	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 20:40	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 20:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 20:40	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 20:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 20:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 20:40	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 20:40	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 20:40	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 20:40	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 20:40	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 20:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 20:40	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 20:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 20:40	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 20:40	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-2D Lab ID: 9217964003 Collected: 04/23/08 14:00 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 20:40	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 20:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 20:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 20:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 20:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 20:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 20:40	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 20:40	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 20:40	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 20:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 20:40	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 20:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 20:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 20:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 20:40	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 20:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 20:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 20:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 20:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 20:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 20:40	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 20:40	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 20:40	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 20:40	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 20:40	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 20:40	95-47-6	
4-Bromofluorobenzene (S)	105	%	87-109	1		04/29/08 20:40	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		04/29/08 20:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	79-120	1		04/29/08 20:40	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		04/29/08 20:40	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-3 Lab ID: **9217964004** Collected: 04/23/08 13:10 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 11:41		
Collected Date	4/23/08			1		05/01/08 11:41		
Collected Time	13:10			1		05/01/08 11:41		
Field pH	5.66	Std. Units		1		05/01/08 11:41		
Field Temperature	13.4	deg C		1		05/01/08 11:41		
Static Water Level	8.00	feet		1		05/01/08 11:41		
Field Specific Conductance	411	umhos/cm		1		05/01/08 11:41		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7440-38-2	
Barium	216	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:19	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:19	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:19	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:19	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:19	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:19	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 21:04	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 21:04	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 21:04	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 21:04	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 21:04	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 21:04	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 21:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 21:04	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 21:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 21:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 21:04	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 21:04	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 21:04	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 21:04	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 21:04	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 21:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 21:04	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 21:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 21:04	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 21:04	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-3 Lab ID: 9217964004 Collected: 04/23/08 13:10 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 21:04	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 21:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 21:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 21:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 21:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 21:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 21:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 21:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 21:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 21:04	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 21:04	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 21:04	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 21:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 21:04	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 21:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 21:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 21:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 21:04	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 21:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 21:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 21:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 21:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 21:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 21:04	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 21:04	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 21:04	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 21:04	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 21:04	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 21:04	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 21:04	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		04/29/08 21:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	79-120	1		04/29/08 21:04	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 21:04	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-3D | Lab ID: 9217964005 | Collected: 04/23/08 13:15 | Received: 04/23/08 17:00 | Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 11:43		
Collected Date	4/23/08			1		05/01/08 11:43		
Collected Time	13:15			1		05/01/08 11:43		
Field pH	5.65	Std. Units		1		05/01/08 11:43		
Field Temperature	14.7	deg C		1		05/01/08 11:43		
Static Water Level	16.39	feet		1		05/01/08 11:43		
Field Specific Conductance	318	umhos/cm		1		05/01/08 11:43		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7440-38-2	
Barium	202	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:23	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:23	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7439-92-1	
Nickel	11.3	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:23	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:23	7440-28-0	
Vanadium	5.1	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:23	7440-62-2	
Zinc	10.3	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:23	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 21:28	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 21:28	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 21:28	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 21:28	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 21:28	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 21:28	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 21:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 21:28	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 21:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 21:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 21:28	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 21:28	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 21:28	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 21:28	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 21:28	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 21:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 21:28	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 21:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 21:28	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 21:28	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-3D | Lab ID: 9217964005 | Collected: 04/23/08 13:15 | Received: 04/23/08 17:00 | Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 21:28	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 21:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 21:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 21:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 21:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 21:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 21:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 21:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 21:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 21:28	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 21:28	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 21:28	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 21:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 21:28	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 21:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 21:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 21:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 21:28	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 21:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 21:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 21:28	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 21:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 21:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 21:28	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 21:28	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 21:28	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 21:28	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 21:28	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 21:28	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 21:28	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		04/29/08 21:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	79-120	1		04/29/08 21:28	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 21:28	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-8 Lab ID: 9217964006 Collected: 04/23/08 13:45 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 11:43		
Collected Date	4/23/08			1		05/01/08 11:43		
Collected Time	13:45			1		05/01/08 11:43		
Field pH	5.56	Std. Units		1		05/01/08 11:43		
Field Temperature	14.8	deg C		1		05/01/08 11:43		
Static Water Level	30.72	feet		1		05/01/08 11:43		
Field Specific Conductance	481	umhos/cm		1		05/01/08 11:43		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7440-38-2	
Barium	151	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:27	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:27	7440-43-9	
Chromium	7.3	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:27	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:27	7440-28-0	
Vanadium	10	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:27	7440-62-2	
Zinc	38.8	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:27	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/30/08 03:42	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/30/08 03:42	107-13-1	
Benzene	ND	ug/L	1.0	1		04/30/08 03:42	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/30/08 03:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/30/08 03:42	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/30/08 03:42	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/30/08 03:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/30/08 03:42	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/30/08 03:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/30/08 03:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/30/08 03:42	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/30/08 03:42	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/30/08 03:42	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/30/08 03:42	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/30/08 03:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/30/08 03:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/30/08 03:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/30/08 03:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 03:42	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 03:42	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-8 **Lab ID: 9217964006** Collected: 04/23/08 13:45 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/30/08 03:42	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/30/08 03:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/30/08 03:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/30/08 03:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 03:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 03:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 03:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 03:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 03:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/30/08 03:42	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/30/08 03:42	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/30/08 03:42	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/30/08 03:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/30/08 03:42	108-10-1	
Styrene	ND	ug/L	1.0	1		04/30/08 03:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 03:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 03:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/30/08 03:42	127-18-4	
Toluene	ND	ug/L	1.0	1		04/30/08 03:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/30/08 03:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/30/08 03:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/30/08 03:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/30/08 03:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/30/08 03:42	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/30/08 03:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/30/08 03:42	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/30/08 03:42	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/30/08 03:42	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/30/08 03:42	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/30/08 03:42	460-00-4	
Dibromofluoromethane (S)	105	%	85-115	1		04/30/08 03:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	79-120	1		04/30/08 03:42	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/30/08 03:42	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-11S Lab ID: 9217964007 Collected: 04/23/08 14:30 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 11:44		
Collected Date	4/23/08			1		05/01/08 11:44		
Collected Time	14:30			1		05/01/08 11:44		
Field pH	6.59	Std. Units		1		05/01/08 11:44		
Field Temperature	13.9	deg C		1		05/01/08 11:44		
Static Water Level	83.82	feet		1		05/01/08 11:44		
Field Specific Conductance	25	umhos/cm		1		05/01/08 11:44		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7440-38-2	
Barium	194	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:31	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:31	7440-43-9	
Chromium	10.7	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7440-48-4	
Copper	7.2	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7439-92-1	
Nickel	7.3	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:31	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:31	7440-28-0	
Vanadium	26.1	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:31	7440-62-2	
Zinc	27.3	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:31	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/30/08 04:06	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/30/08 04:06	107-13-1	
Benzene	ND	ug/L	1.0	1		04/30/08 04:06	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/30/08 04:06	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/30/08 04:06	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/30/08 04:06	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/30/08 04:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/30/08 04:06	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/30/08 04:06	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/30/08 04:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/30/08 04:06	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/30/08 04:06	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/30/08 04:06	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/30/08 04:06	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/30/08 04:06	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/30/08 04:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/30/08 04:06	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/30/08 04:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 04:06	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 04:06	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-11S Lab ID: 9217964007 Collected: 04/23/08 14:30 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/30/08 04:06	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/30/08 04:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/30/08 04:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/30/08 04:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 04:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 04:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 04:06	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 04:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 04:06	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/30/08 04:06	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/30/08 04:06	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/30/08 04:06	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/30/08 04:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/30/08 04:06	108-10-1	
Styrene	ND	ug/L	1.0	1		04/30/08 04:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 04:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 04:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/30/08 04:06	127-18-4	
Toluene	ND	ug/L	1.0	1		04/30/08 04:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/30/08 04:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/30/08 04:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/30/08 04:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/30/08 04:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/30/08 04:06	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/30/08 04:06	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/30/08 04:06	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/30/08 04:06	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/30/08 04:06	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/30/08 04:06	95-47-6	
4-Bromofluorobenzene (S)	103	%	87-109	1		04/30/08 04:06	460-00-4	
Dibromofluoromethane (S)	103	%	85-115	1		04/30/08 04:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	79-120	1		04/30/08 04:06	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		04/30/08 04:06	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-11D **Lab ID: 9217964008** Collected: 04/23/08 14:35 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 11:45		
Collected Date	4/23/08			1		05/01/08 11:45		
Collected Time	14:35			1		05/01/08 11:45		
Field pH	7.22	Std. Units		1		05/01/08 11:45		
Field Temperature	14.2	deg C		1		05/01/08 11:45		
Static Water Level	84.76	feet		1		05/01/08 11:45		
Field Specific Conductance	49	umhos/cm		1		05/01/08 11:45		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7440-38-2	
Barium	30.8	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:35	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:35	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:35	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:35	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:35	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:35	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/30/08 04:29	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/30/08 04:29	107-13-1	
Benzene	ND	ug/L	1.0	1		04/30/08 04:29	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/30/08 04:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/30/08 04:29	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/30/08 04:29	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/30/08 04:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/30/08 04:29	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/30/08 04:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/30/08 04:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/30/08 04:29	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/30/08 04:29	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/30/08 04:29	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/30/08 04:29	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/30/08 04:29	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/30/08 04:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/30/08 04:29	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/30/08 04:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 04:29	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 04:29	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-11D **Lab ID: 9217964008** Collected: 04/23/08 14:35 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/30/08 04:29	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/30/08 04:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/30/08 04:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/30/08 04:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 04:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 04:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 04:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 04:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 04:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/30/08 04:29	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/30/08 04:29	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/30/08 04:29	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/30/08 04:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/30/08 04:29	108-10-1	
Styrene	ND	ug/L	1.0	1		04/30/08 04:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 04:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 04:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/30/08 04:29	127-18-4	
Toluene	ND	ug/L	1.0	1		04/30/08 04:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/30/08 04:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/30/08 04:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/30/08 04:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/30/08 04:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/30/08 04:29	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/30/08 04:29	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/30/08 04:29	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/30/08 04:29	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/30/08 04:29	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/30/08 04:29	95-47-6	
4-Bromofluorobenzene (S)	103	%	87-109	1		04/30/08 04:29	460-00-4	
Dibromofluoromethane (S)	103	%	85-115	1		04/30/08 04:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	79-120	1		04/30/08 04:29	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		04/30/08 04:29	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-14 **Lab ID: 9217964009** Collected: 04/23/08 15:45 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 11:46		
Collected Date	4/23/08			1		05/01/08 11:46		
Collected Time	15:45			1		05/01/08 11:46		
Field pH	6.58	Std. Units		1		05/01/08 11:46		
Field Temperature	14.2	deg C		1		05/01/08 11:46		
Static Water Level	104.13	feet		1		05/01/08 11:46		
Field Specific Conductance	49	umhos/cm		1		05/01/08 11:46		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7440-38-2	
Barium	253	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:39	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:39	7440-43-9	
Chromium	16.8	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7440-50-8	
Lead	8.4	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7439-92-1	
Nickel	12.9	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:39	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:39	7440-28-0	
Vanadium	11.4	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:39	7440-62-2	
Zinc	50.3	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:39	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 21:51	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 21:51	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 21:51	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 21:51	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 21:51	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 21:51	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 21:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 21:51	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 21:51	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 21:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 21:51	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 21:51	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 21:51	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 21:51	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 21:51	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 21:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 21:51	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 21:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 21:51	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 21:51	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-14 Lab ID: 9217964009 Collected: 04/23/08 15:45 Received: 04/23/08 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 21:51	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 21:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 21:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 21:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 21:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 21:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 21:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 21:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 21:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 21:51	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 21:51	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 21:51	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 21:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 21:51	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 21:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 21:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 21:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 21:51	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 21:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 21:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 21:51	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 21:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 21:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 21:51	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 21:51	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 21:51	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 21:51	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 21:51	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 21:51	95-47-6	
4-Bromofluorobenzene (S)	105	%	87-109	1		04/29/08 21:51	460-00-4	
Dibromofluoromethane (S)	100	%	85-115	1		04/29/08 21:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	79-120	1		04/29/08 21:51	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		04/29/08 21:51	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-4A Lab ID: 9217964010 Collected: 04/24/08 15:40 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 16:48		
Collected Date	4/23/08			1		05/01/08 16:48		
Collected Time	15:40			1		05/01/08 16:48		
Field pH	8.13	Std. Units		1		05/01/08 16:48		
Field Temperature	17.4	deg C		1		05/01/08 16:48		
Static Water Level	50.47	feet		1		05/01/08 16:48		
Field Specific Conductance	124	umhos/cm		1		05/01/08 16:48		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7440-38-2	
Barium	61.8	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:43	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:43	7440-43-9	
Chromium	7.6	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7440-48-4	
Copper	7.2	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7440-50-8	
Lead	5.8	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7439-92-1	
Nickel	5.3	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:43	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:43	7440-28-0	
Vanadium	9.7	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:43	7440-62-2	
Zinc	17.5	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:43	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 16:46	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 16:46	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 16:46	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 16:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 16:46	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 16:46	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 16:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 16:46	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 16:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 16:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 16:46	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 16:46	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 16:46	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 16:46	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 16:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 16:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 16:46	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 16:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 16:46	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 16:46	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-4A **Lab ID: 9217964010** Collected: 04/24/08 15:40 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 16:46	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 16:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 16:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 16:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 16:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 16:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 16:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 16:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 16:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 16:46	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 16:46	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 16:46	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 16:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 16:46	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 16:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 16:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 16:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 16:46	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 16:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 16:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 16:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 16:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 16:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 16:46	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 16:46	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 16:46	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 16:46	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 16:46	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 16:46	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 16:46	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		04/29/08 16:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	79-120	1		04/29/08 16:46	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		04/29/08 16:46	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-5A | Lab ID: 9217964011 | Collected: 04/24/08 13:45 | Received: 04/24/08 16:44 | Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:12		
Collected Date	4/24/08			1		05/01/08 18:12		
Collected Time	13:45			1		05/01/08 18:12		
Field pH	5.32	Std. Units		1		05/01/08 18:12		
Field Temperature	16.0	deg C		1		05/01/08 18:12		
Static Water Level	5.96	feet		1		05/01/08 18:12		
Field Specific Conductance	239	umhos/cm		1		05/01/08 18:12		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7440-38-2	
Barium	257	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:47	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:47	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7440-47-3	
Cobalt	5.5	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:47	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:47	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:47	7440-62-2	
Zinc	27.9	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:47	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 17:10	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 17:10	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 17:10	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 17:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 17:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 17:10	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 17:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 17:10	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 17:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 17:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 17:10	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 17:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 17:10	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 17:10	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 17:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 17:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 17:10	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 17:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 17:10	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 17:10	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-5A Lab ID: 9217964011 Collected: 04/24/08 13:45 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 17:10	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 17:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 17:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 17:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 17:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 17:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 17:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 17:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 17:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 17:10	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 17:10	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 17:10	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 17:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 17:10	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 17:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 17:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 17:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 17:10	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 17:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 17:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 17:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 17:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 17:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 17:10	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 17:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 17:10	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 17:10	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 17:10	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 17:10	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 17:10	460-00-4	
Dibromofluoromethane (S)	103	%	85-115	1		04/29/08 17:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	79-120	1		04/29/08 17:10	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 17:10	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-5D | Lab ID: 9217964012 | Collected: 04/24/08 13:50 | Received: 04/24/08 16:44 | Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:13		
Collected Date	4/24/08			1		05/01/08 18:13		
Collected Time	13:50			1		05/01/08 18:13		
Field pH	6.04	Std. Units		1		05/01/08 18:13		
Field Temperature	15.7	deg C		1		05/01/08 18:13		
Static Water Level	6.09	feet		1		05/01/08 18:13		
Field Specific Conductance	103	umhos/cm		1		05/01/08 18:13		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7440-38-2	
Barium	256	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:51	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 08:51	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7439-92-1	
Nickel	6.2	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:51	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 08:51	7440-28-0	
Vanadium	8.6	ug/L	5.0	1	04/25/08 12:40	04/30/08 08:51	7440-62-2	
Zinc	22.2	ug/L	10.0	1	04/25/08 12:40	04/30/08 08:51	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 17:33	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 17:33	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 17:33	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 17:33	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 17:33	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 17:33	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 17:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 17:33	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 17:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 17:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 17:33	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 17:33	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 17:33	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 17:33	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 17:33	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 17:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 17:33	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 17:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 17:33	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 17:33	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-5D Lab ID: 9217964012 Collected: 04/24/08 13:50 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 17:33	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 17:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 17:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 17:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 17:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 17:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 17:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 17:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 17:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 17:33	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 17:33	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 17:33	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 17:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 17:33	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 17:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 17:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 17:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 17:33	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 17:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 17:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 17:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 17:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 17:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 17:33	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 17:33	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 17:33	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 17:33	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 17:33	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 17:33	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 17:33	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		04/29/08 17:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	79-120	1		04/29/08 17:33	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 17:33	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-12 Lab ID: 9217964013 Collected: 04/24/08 14:45 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:13		
Collected Date	4/24/08			1		05/01/08 18:13		
Collected Time	14:45			1		05/01/08 18:13		
Field pH	5.86	Std. Units		1		05/01/08 18:13		
Field Temperature	13.5	deg C		1		05/01/08 18:13		
Static Water Level	11.95	feet		1		05/01/08 18:13		
Field Specific Conductance	244	umhos/cm		1		05/01/08 18:13		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7440-36-0	
Arsenic	5.2	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7440-38-2	
Barium	171	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 10:24	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 10:24	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7440-47-3	
Cobalt	115	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7439-92-1	
Nickel	17.2	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 10:24	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 10:24	7440-28-0	
Vanadium	7.2	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:24	7440-62-2	
Zinc	32.7	ug/L	10.0	1	04/25/08 12:40	04/30/08 10:24	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 17:57	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 17:57	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 17:57	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 17:57	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 17:57	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 17:57	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 17:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 17:57	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 17:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 17:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 17:57	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 17:57	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 17:57	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 17:57	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 17:57	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 17:57	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 17:57	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 17:57	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 17:57	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 17:57	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-12 Lab ID: 9217964013 Collected: 04/24/08 14:45 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 17:57	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 17:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 17:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 17:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 17:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 17:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 17:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 17:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 17:57	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 17:57	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 17:57	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 17:57	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 17:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 17:57	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 17:57	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 17:57	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 17:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 17:57	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 17:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 17:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 17:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 17:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 17:57	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 17:57	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 17:57	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 17:57	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 17:57	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 17:57	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 17:57	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 17:57	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		04/29/08 17:57	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	79-120	1		04/29/08 17:57	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 17:57	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-13S Lab ID: 9217964014 Collected: 04/24/08 14:25 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:14		
Collected Date	4/24/08			1		05/01/08 18:14		
Collected Time	14:25			1		05/01/08 18:14		
Field pH	6.01	Std. Units		1		05/01/08 18:14		
Field Temperature	13.9	deg C		1		05/01/08 18:14		
Static Water Level	12.71	feet		1		05/01/08 18:14		
Field Specific Conductance	68	umhos/cm		1		05/01/08 18:14		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7440-38-2	
Barium	169	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 10:27	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 10:27	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 10:27	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 10:27	7440-28-0	
Vanadium	6.1	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:27	7440-62-2	
Zinc	12.1	ug/L	10.0	1	04/25/08 12:40	04/30/08 10:27	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 18:20	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 18:20	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 18:20	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 18:20	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 18:20	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 18:20	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 18:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 18:20	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 18:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 18:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 18:20	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 18:20	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 18:20	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 18:20	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 18:20	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 18:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 18:20	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 18:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 18:20	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 18:20	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-13S **Lab ID: 9217964014** Collected: 04/24/08 14:25 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 18:20	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 18:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 18:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 18:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 18:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 18:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 18:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 18:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 18:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 18:20	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 18:20	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 18:20	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 18:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 18:20	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 18:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 18:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 18:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 18:20	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 18:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 18:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 18:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 18:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 18:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 18:20	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 18:20	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 18:20	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 18:20	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 18:20	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 18:20	95-47-6	
4-Bromofluorobenzene (S)	106	%	87-109	1		04/29/08 18:20	460-00-4	
Dibromofluoromethane (S)	100	%	85-115	1		04/29/08 18:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	79-120	1		04/29/08 18:20	17060-07-0	
Toluene-d8 (S)	101	%	70-120	1		04/29/08 18:20	2037-26-5	

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ANALYTICAL RESULTS

Project: While Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-13D | Lab ID: 9217964015 | Collected: 04/24/08 14:30 | Received: 04/24/08 16:44 | Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:15		
Collected Date	4/24/08			1		05/01/08 18:15		
Collected Time	14:30			1		05/01/08 18:15		
Field pH	6.51	Std. Units		1		05/01/08 18:15		
Field Temperature	12.9	deg C		1		05/01/08 18:15		
Static Water Level	12.57	feet		1		05/01/08 18:15		
Field Specific Conductance	46	umhos/cm		1		05/01/08 18:15		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7440-36-0	
Arsenic	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7440-38-2	
Barium	24.1	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 10:31	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 12:40	04/30/08 10:31	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 10:31	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/25/08 12:40	04/30/08 10:31	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/25/08 12:40	04/30/08 10:31	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/25/08 12:40	04/30/08 10:31	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 18:43	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 18:43	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 18:43	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 18:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 18:43	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 18:43	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 18:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 18:43	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 18:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 18:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 18:43	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 18:43	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 18:43	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 18:43	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 18:43	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 18:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 18:43	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 18:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 18:43	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 18:43	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-13D **Lab ID: 9217964015** Collected: 04/24/08 14:30 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 18:43	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 18:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 18:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 18:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 18:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 18:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 18:43	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 18:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 18:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 18:43	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 18:43	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 18:43	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 18:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 18:43	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 18:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 18:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 18:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 18:43	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 18:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 18:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 18:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 18:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 18:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 18:43	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 18:43	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 18:43	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 18:43	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 18:43	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 18:43	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 18:43	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		04/29/08 18:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	79-120	1		04/29/08 18:43	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 18:43	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-9 Lab ID: 9217964016 Collected: 04/24/08 10:30 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:16		
Collected Date	4/24/08			1		05/01/08 18:16		
Collected Time	10:30			1		05/01/08 18:16		
Field pH	6.42	Std. Units		1		05/01/08 18:16		
Field Temperature	12.8	deg C		1		05/01/08 18:16		
Static Water Level	9.40	feet		1		05/01/08 18:16		
Field Specific Conductance	402	umhos/cm		1		05/01/08 18:16		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7440-36-0	
Arsenic	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7440-38-2	
Barium	185	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 17:41	7440-41-7	
Cadmium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 17:41	7440-43-9	
Chromium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7440-48-4	
Copper	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7440-50-8	
Lead	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7439-92-1	
Nickel	7.2	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 17:41	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 17:41	7440-28-0	
Vanadium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:41	7440-62-2	
Zinc	123	ug/L	10.0	1	05/02/08 19:50	05/04/08 17:41	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 19:07	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 19:07	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 19:07	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 19:07	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 19:07	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 19:07	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 19:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 19:07	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 19:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 19:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 19:07	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 19:07	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 19:07	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 19:07	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 19:07	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 19:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 19:07	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 19:07	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 19:07	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 19:07	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-9 Lab ID: 9217964016 Collected: 04/24/08 10:30 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 19:07	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 19:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 19:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 19:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 19:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 19:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 19:07	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 19:07	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 19:07	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 19:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 19:07	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 19:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 19:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 19:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 19:07	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 19:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 19:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 19:07	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 19:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 19:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/29/08 19:07	96-18-4	
Vinyl acetate	ND	ug/L	1.0	1		04/29/08 19:07	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		04/29/08 19:07	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 19:07	1330-20-7	
m&p-Xylene	ND	ug/L	1.0	1		04/29/08 19:07	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 19:07	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 19:07	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		04/29/08 19:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	79-120	1		04/29/08 19:07	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 19:07	2037-26-5	

Date: 05/09/2008 10:18 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-15 Lab ID: 9217964017 Collected: 04/24/08 11:55 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:17		
Collected Date	4/24/08			1		05/01/08 18:17		
Collected Time	11:55			1		05/01/08 18:17		
Field pH	6.69	Std. Units		1		05/01/08 18:17		
Field Temperature	14.1	deg C		1		05/01/08 18:17		
Static Water Level	9.35	feet		1		05/01/08 18:17		
Field Specific Conductance	33	umhos/cm		1		05/01/08 18:17		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7440-36-0	
Arsenic	10.2	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7440-38-2	
Barium	361	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7440-39-3	
Beryllium	3.0	ug/L	1.0	1	05/02/08 19:50	05/04/08 17:54	7440-41-7	
Cadmium	1.6	ug/L	1.0	1	05/02/08 19:50	05/04/08 17:54	7440-43-9	
Chromium	14.9	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7440-47-3	
Cobalt	22.3	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7440-48-4	
Copper	17.0	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7440-50-8	
Lead	50.2	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7439-92-1	
Nickel	19.0	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 17:54	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 17:54	7440-28-0	
Vanadium	23.1	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:54	7440-62-2	
Zinc	138	ug/L	10.0	1	05/02/08 19:50	05/04/08 17:54	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 19:30	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 19:30	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 19:30	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 19:30	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 19:30	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 19:30	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 19:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 19:30	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 19:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 19:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 19:30	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 19:30	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 19:30	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 19:30	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 19:30	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 19:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 19:30	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 19:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 19:30	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 19:30	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: MW-15 Lab ID: 9217964017 Collected: 04/24/08 11:55 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 19:30	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 19:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 19:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 19:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 19:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 19:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 19:30	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 19:30	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 19:30	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 19:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 19:30	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 19:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 19:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 19:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 19:30	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 19:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 19:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 19:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 19:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 19:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 19:30	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 19:30	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 19:30	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 19:30	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 19:30	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 19:30	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 19:30	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		04/29/08 19:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	79-120	1		04/29/08 19:30	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 19:30	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-1 Lab ID: 9217964018 Collected: 04/24/08 09:55 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:18		
Collected Date	4/24/08			1		05/01/08 18:18		
Collected Time	09:55			1		05/01/08 18:18		
Field pH	6.80	Std. Units		1		05/01/08 18:18		
Field Temperature	13.1	deg C		1		05/01/08 18:18		
Field Specific Conductance	124	umhos/cm		1		05/01/08 18:18		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7440-36-0	
Arsenic	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7440-38-2	
Barium	111	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 17:58	7440-41-7	
Cadmium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 17:58	7440-43-9	
Chromium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7440-48-4	
Copper	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7440-50-8	
Lead	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7439-92-1	
Nickel	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 17:58	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 17:58	7440-28-0	
Vanadium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 17:58	7440-62-2	
Zinc	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 17:58	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 19:54	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 19:54	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 19:54	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 19:54	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 19:54	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 19:54	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 19:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 19:54	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 19:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 19:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 19:54	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 19:54	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 19:54	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 19:54	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 19:54	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 19:54	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 19:54	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 19:54	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 19:54	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 19:54	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 19:54	110-57-6	

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ANALYTICAL RESULTS

Project: While Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-1 **Lab ID: 9217964018** Collected: 04/24/08 09:55 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 19:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 19:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 19:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 19:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 19:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 19:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 19:54	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 19:54	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 19:54	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 19:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 19:54	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 19:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 19:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 19:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 19:54	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 19:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 19:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 19:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 19:54	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 19:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 19:54	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 19:54	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 19:54	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 19:54	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 19:54	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 19:54	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 19:54	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		04/29/08 19:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	79-120	1		04/29/08 19:54	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 19:54	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-2 Lab ID: 9217964019 Collected: 04/24/08 10:25 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:19		
Collected Date	4/24/08			1		05/01/08 18:19		
Collected Time	10:25			1		05/01/08 18:19		
Field pH	7.32	Std. Units		1		05/01/08 18:19		
Field Temperature	14.5	deg C		1		05/01/08 18:19		
Field Specific Conductance	162	umhos/cm		1		05/01/08 18:19		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7440-36-0	
Arsenic	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7440-38-2	
Barium	145	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:01	7440-41-7	
Cadmium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:01	7440-43-9	
Chromium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7440-48-4	
Copper	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7440-50-8	
Lead	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7439-92-1	
Nickel	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:01	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 18:01	7440-28-0	
Vanadium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:01	7440-62-2	
Zinc	52.3	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:01	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 20:17	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 20:17	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 20:17	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 20:17	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 20:17	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 20:17	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 20:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 20:17	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 20:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 20:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 20:17	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 20:17	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 20:17	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 20:17	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 20:17	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 20:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 20:17	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 20:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 20:17	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 20:17	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 20:17	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-2 **Lab ID: 9217964019** Collected: 04/24/08 10:25 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 20:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 20:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 20:17	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 20:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 20:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 20:17	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 20:17	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 20:17	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 20:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 20:17	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 20:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 20:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 20:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 20:17	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 20:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 20:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 20:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 20:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 20:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 20:17	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 20:17	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 20:17	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 20:17	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 20:17	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 20:17	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 20:17	460-00-4	
Dibromofluoromethane (S)	100	%	85-115	1		04/29/08 20:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	79-120	1		04/29/08 20:17	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/29/08 20:17	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-3 Lab ID: 9217964020 Collected: 04/24/08 10:50 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:19		
Collected Date	4/24/08			1		05/01/08 18:19		
Collected Time	10:50			1		05/01/08 18:19		
Field pH	7.06	Std. Units		1		05/01/08 18:19		
Field Temperature	14.3	deg C		1		05/01/08 18:19		
Field Specific Conductance	234	umhos/cm		1		05/01/08 18:19		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7440-36-0	
Arsenic	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7440-38-2	
Barium	133	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:04	7440-41-7	
Cadmium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:04	7440-43-9	
Chromium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7440-48-4	
Copper	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7440-50-8	
Lead	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7439-92-1	
Nickel	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:04	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 18:04	7440-28-0	
Vanadium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:04	7440-62-2	
Zinc	50.1	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:04	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/29/08 20:41	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/29/08 20:41	107-13-1	
Benzene	ND	ug/L	1.0	1		04/29/08 20:41	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/29/08 20:41	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/29/08 20:41	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/29/08 20:41	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/29/08 20:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/29/08 20:41	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/29/08 20:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/29/08 20:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/29/08 20:41	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/29/08 20:41	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/29/08 20:41	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/29/08 20:41	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/29/08 20:41	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/29/08 20:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/29/08 20:41	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/29/08 20:41	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 20:41	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/29/08 20:41	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/29/08 20:41	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-3 Lab ID: 9217964020 Collected: 04/24/08 10:50 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		04/29/08 20:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/29/08 20:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/29/08 20:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/29/08 20:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 20:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/29/08 20:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/29/08 20:41	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/29/08 20:41	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/29/08 20:41	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/29/08 20:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/29/08 20:41	108-10-1	
Styrene	ND	ug/L	1.0	1		04/29/08 20:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 20:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/29/08 20:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/29/08 20:41	127-18-4	
Toluene	ND	ug/L	1.0	1		04/29/08 20:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/29/08 20:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/29/08 20:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/29/08 20:41	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/29/08 20:41	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/29/08 20:41	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/29/08 20:41	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/29/08 20:41	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/29/08 20:41	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/29/08 20:41	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/29/08 20:41	95-47-6	
4-Bromofluorobenzene (S)	104	%	87-109	1		04/29/08 20:41	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		04/29/08 20:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	79-120	1		04/29/08 20:41	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		04/29/08 20:41	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-5 Lab ID: 9217964021 Collected: 04/24/08 00:00 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:20		
Collected Date	4/24/08			1		05/01/08 18:20		
Collected Time	14:10			1		05/01/08 18:20		
Field pH	7.20	Std. Units		1		05/01/08 18:20		
Field Temperature	16.9	deg C		1		05/01/08 18:20		
Field Specific Conductance	426	umhos/cm		1		05/01/08 18:20		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7440-36-0	
Arsenic	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7440-38-2	
Barium	184	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:08	7440-41-7	
Cadmium	1.5	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:08	7440-43-9	
Chromium	6.5	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7440-47-3	
Cobalt	11.2	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7440-48-4	
Copper	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7440-50-8	
Lead	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7439-92-1	
Nickel	7.6	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:08	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 18:08	7440-28-0	
Vanadium	14.4	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:08	7440-62-2	
Zinc	124	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:08	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/30/08 07:13	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/30/08 07:13	107-13-1	
Benzene	ND	ug/L	1.0	1		04/30/08 07:13	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/30/08 07:13	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/30/08 07:13	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/30/08 07:13	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/30/08 07:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/30/08 07:13	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/30/08 07:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/30/08 07:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/30/08 07:13	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/30/08 07:13	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/30/08 07:13	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/30/08 07:13	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/30/08 07:13	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/30/08 07:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/30/08 07:13	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/30/08 07:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 07:13	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 07:13	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/30/08 07:13	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-5 Lab ID: 9217964021 Collected: 04/24/08 00:00 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		04/30/08 07:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/30/08 07:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/30/08 07:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 07:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 07:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 07:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 07:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 07:13	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/30/08 07:13	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/30/08 07:13	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/30/08 07:13	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/30/08 07:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/30/08 07:13	108-10-1	
Styrene	ND	ug/L	1.0	1		04/30/08 07:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 07:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 07:13	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/30/08 07:13	127-18-4	
Toluene	ND	ug/L	1.0	1		04/30/08 07:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/30/08 07:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/30/08 07:13	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/30/08 07:13	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/30/08 07:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/30/08 07:13	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/30/08 07:13	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/30/08 07:13	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/30/08 07:13	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/30/08 07:13	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/30/08 07:13	95-47-6	
4-Bromofluorobenzene (S)	103	%	87-109	1		04/30/08 07:13	460-00-4	
Dibromofluoromethane (S)	103	%	85-115	1		04/30/08 07:13	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	79-120	1		04/30/08 07:13	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/30/08 07:13	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-6 Lab ID: 9217964022 Collected: 04/24/08 11:45 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:21		
Collected Date	4/24/08			1		05/01/08 18:21		
Collected Time	11:45			1		05/01/08 18:21		
Field pH	7.56	Std. Units		1		05/01/08 18:21		
Field Temperature	15.2	deg C		1		05/01/08 18:21		
Field Specific Conductance	48	umhos/cm		1		05/01/08 18:21		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7440-36-0	
Arsenic	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7440-38-2	
Barium	34.4	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:11	7440-41-7	
Cadmium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:11	7440-43-9	
Chromium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7440-48-4	
Copper	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7440-50-8	
Lead	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7439-92-1	
Nickel	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:11	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 18:11	7440-28-0	
Vanadium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:11	7440-62-2	
Zinc	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:11	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/30/08 07:37	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/30/08 07:37	107-13-1	
Benzene	ND	ug/L	1.0	1		04/30/08 07:37	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/30/08 07:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/30/08 07:37	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/30/08 07:37	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/30/08 07:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/30/08 07:37	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/30/08 07:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/30/08 07:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/30/08 07:37	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/30/08 07:37	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/30/08 07:37	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/30/08 07:37	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/30/08 07:37	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/30/08 07:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/30/08 07:37	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/30/08 07:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 07:37	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 07:37	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/30/08 07:37	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-6 | Lab ID: 9217964022 | Collected: 04/24/08 11:45 | Received: 04/24/08 16:44 | Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		04/30/08 07:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/30/08 07:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/30/08 07:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 07:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 07:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 07:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 07:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 07:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/30/08 07:37	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/30/08 07:37	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/30/08 07:37	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/30/08 07:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/30/08 07:37	108-10-1	
Styrene	ND	ug/L	1.0	1		04/30/08 07:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 07:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 07:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/30/08 07:37	127-18-4	
Toluene	ND	ug/L	1.0	1		04/30/08 07:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/30/08 07:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/30/08 07:37	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/30/08 07:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/30/08 07:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/30/08 07:37	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/30/08 07:37	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/30/08 07:37	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/30/08 07:37	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/30/08 07:37	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/30/08 07:37	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109	1		04/30/08 07:37	460-00-4	
Dibromofluoromethane (S)	105	%	85-115	1		04/30/08 07:37	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	79-120	1		04/30/08 07:37	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/30/08 07:37	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-7 Lab ID: 9217964023 Collected: 04/24/08 12:15 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:22		
Collected Date	4/24/08			1		05/01/08 18:22		
Collected Time	12:15			1		05/01/08 18:22		
Field pH	7.00	Std. Units		1		05/01/08 18:22		
Field Temperature	15.6	deg C		1		05/01/08 18:22		
Field Specific Conductance	42	umhos/cm		1		05/01/08 18:22		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7440-36-0	
Arsenic	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7440-38-2	
Barium	24.9	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:14	7440-41-7	
Cadmium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:14	7440-43-9	
Chromium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7440-48-4	
Copper	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7440-50-8	
Lead	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7439-92-1	
Nickel	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:14	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 18:14	7440-28-0	
Vanadium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:14	7440-62-2	
Zinc	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:14	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/30/08 08:00	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/30/08 08:00	107-13-1	
Benzene	ND	ug/L	1.0	1		04/30/08 08:00	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/30/08 08:00	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/30/08 08:00	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/30/08 08:00	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/30/08 08:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/30/08 08:00	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/30/08 08:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/30/08 08:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/30/08 08:00	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/30/08 08:00	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/30/08 08:00	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/30/08 08:00	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/30/08 08:00	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/30/08 08:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/30/08 08:00	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/30/08 08:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 08:00	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 08:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/30/08 08:00	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: SW-7 | Lab ID: 9217964023 | Collected: 04/24/08 12:15 | Received: 04/24/08 16:44 | Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		04/30/08 08:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/30/08 08:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/30/08 08:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 08:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 08:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 08:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 08:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 08:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/30/08 08:00	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/30/08 08:00	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/30/08 08:00	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/30/08 08:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/30/08 08:00	108-10-1	
Styrene	ND	ug/L	1.0	1		04/30/08 08:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 08:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 08:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/30/08 08:00	127-18-4	
Toluene	ND	ug/L	1.0	1		04/30/08 08:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/30/08 08:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/30/08 08:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/30/08 08:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/30/08 08:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/30/08 08:00	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/30/08 08:00	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/30/08 08:00	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/30/08 08:00	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/30/08 08:00	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/30/08 08:00	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109	1		04/30/08 08:00	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		04/30/08 08:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	79-120	1		04/30/08 08:00	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		04/30/08 08:00	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: Leachate Lab ID: 9217964024 Collected: 04/24/08 11:15 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:23		
Collected Date	4/24/08			1		05/01/08 18:23		
Collected Time	11:15			1		05/01/08 18:23		
Field pH	8.56	Std. Units		1		05/01/08 18:23		
Field Temperature	21.4	deg C		1		05/01/08 18:23		
Field Specific Conductance	8140	umhos/cm		1		05/01/08 18:23		
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7440-36-0	
Arsenic	9.5	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7440-38-2	
Barium	247	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/25/08 16:25	04/30/08 13:06	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/25/08 16:25	04/30/08 13:06	7440-43-9	
Chromium	28.9	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7440-47-3	
Cobalt	9.0	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7440-48-4	
Copper	ND	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7440-50-8	
Lead	ND	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7439-92-1	
Nickel	51.3	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/25/08 16:25	04/30/08 13:06	7782-49-2	
Silver	ND	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7440-22-4	
Thallium	ND	ug/L	10.0	1	04/25/08 16:25	04/30/08 13:06	7440-28-0	
Vanadium	9.1	ug/L	5.0	1	04/25/08 16:25	04/30/08 13:06	7440-62-2	
Zinc	52.3	ug/L	10.0	1	04/25/08 16:25	04/30/08 13:06	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	34.1	ug/L	25.0	1		04/30/08 08:23	67-64-1	
Benzene	ND	ug/L	1.0	1		04/30/08 08:23	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		04/30/08 08:23	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		04/30/08 08:23	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/30/08 08:23	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/30/08 08:23	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/30/08 08:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/30/08 08:23	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		04/30/08 08:23	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		04/30/08 08:23	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		04/30/08 08:23	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		04/30/08 08:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/30/08 08:23	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/30/08 08:23	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/30/08 08:23	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/30/08 08:23	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		04/30/08 08:23	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		04/30/08 08:23	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/30/08 08:23	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/30/08 08:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/30/08 08:23	106-93-4	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: Leachate Lab ID: 9217964024 Collected: 04/24/08 11:15 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Dibromomethane	ND	ug/L	1.0	1		04/30/08 08:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 08:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 08:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 08:23	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		04/30/08 08:23	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/30/08 08:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/30/08 08:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/30/08 08:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 08:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 08:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 08:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		04/30/08 08:23	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 08:23	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		04/30/08 08:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 08:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 08:23	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		04/30/08 08:23	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		04/30/08 08:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		04/30/08 08:23	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		04/30/08 08:23	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		04/30/08 08:23	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		04/30/08 08:23	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		04/30/08 08:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/30/08 08:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/30/08 08:23	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		04/30/08 08:23	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		04/30/08 08:23	103-65-1	
Styrene	ND	ug/L	1.0	1		04/30/08 08:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 08:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 08:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/30/08 08:23	127-18-4	
Toluene	ND	ug/L	1.0	1		04/30/08 08:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		04/30/08 08:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		04/30/08 08:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/30/08 08:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/30/08 08:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/30/08 08:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/30/08 08:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/30/08 08:23	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		04/30/08 08:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		04/30/08 08:23	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		04/30/08 08:23	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/30/08 08:23	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		04/30/08 08:23	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/30/08 08:23	95-47-6	
4-Bromofluorobenzene (S)	103	%	87-109	1		04/30/08 08:23	460-00-4	
Dibromofluoromethane (S)	103	%	85-115	1		04/30/08 08:23	1868-53-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: Leachate **Lab ID: 9217964024** Collected: 04/24/08 11:15 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,2-Dichloroethane-d4 (S)	107	%	79-120	1		04/30/08 08:23	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/30/08 08:23	2037-26-5	
5210B BOD, Low Level	Analytical Method: SM 5210B							
BOD, 5 day	741	mg/L	2.0	1	04/25/08 14:35	04/30/08 16:30		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		04/26/08 00:00		
Nitrogen, Nitrite	ND	mg/L	0.10	1		04/26/08 00:00		
Nitrogen, NO2 plus NO3	ND	mg/L	0.10	1		04/26/08 00:00		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1							
Phosphorus	5.1	mg/L	0.50	5		04/29/08 13:45	7723-14-0	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	1620	mg/L	50.0	1		05/01/08 12:41		
ASTM D516-90 Sulfate Water	Analytical Method: ASTM D516-90							
Sulfate	1940	mg/L	500	2		04/27/08 19:37	14808-79-8	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: Sett Pond **Lab ID: 9217964025** Collected: 04/24/08 11:00 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	MPS			1		05/01/08 18:23		
Collected Date	4/24/08			1		05/01/08 18:23		
Collected Time	11:00			1		05/01/08 18:23		
Field pH	7.37	Std. Units		1		05/01/08 18:23		
Field Temperature	13.1	deg C		1		05/01/08 18:23		
Field Specific Conductance	228	umhos/cm		1		05/01/08 18:23		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7440-36-0	
Arsenic	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7440-38-2	
Barium	127	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:18	7440-41-7	
Cadmium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:18	7440-43-9	
Chromium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7440-47-3	
Cobalt	5.5	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7440-48-4	
Copper	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7440-50-8	
Lead	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7439-92-1	
Nickel	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:18	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 18:18	7440-28-0	
Vanadium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:18	7440-62-2	
Zinc	21.7	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:18	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/30/08 08:47	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/30/08 08:47	107-13-1	
Benzene	ND	ug/L	1.0	1		04/30/08 08:47	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/30/08 08:47	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/30/08 08:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/30/08 08:47	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/30/08 08:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/30/08 08:47	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/30/08 08:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/30/08 08:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/30/08 08:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/30/08 08:47	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/30/08 08:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/30/08 08:47	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/30/08 08:47	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/30/08 08:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/30/08 08:47	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/30/08 08:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 08:47	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 08:47	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/30/08 08:47	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: Sett Pond **Lab ID: 9217964025** Collected: 04/24/08 11:00 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		04/30/08 08:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/30/08 08:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/30/08 08:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 08:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 08:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 08:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 08:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 08:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/30/08 08:47	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/30/08 08:47	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/30/08 08:47	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/30/08 08:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/30/08 08:47	108-10-1	
Styrene	ND	ug/L	1.0	1		04/30/08 08:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 08:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 08:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/30/08 08:47	127-18-4	
Toluene	ND	ug/L	1.0	1		04/30/08 08:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/30/08 08:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/30/08 08:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/30/08 08:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/30/08 08:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/30/08 08:47	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/30/08 08:47	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/30/08 08:47	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/30/08 08:47	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/30/08 08:47	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/30/08 08:47	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109	1		04/30/08 08:47	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		04/30/08 08:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	79-120	1		04/30/08 08:47	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		04/30/08 08:47	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: TVL BLK | Lab ID: 9217964026 | Collected: 04/23/08 00:00 | Received: 04/24/08 16:44 | Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		04/30/08 02:55	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		04/30/08 02:55	107-13-1	
Benzene	ND	ug/L	1.0	1		04/30/08 02:55	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		04/30/08 02:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/30/08 02:55	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/30/08 02:55	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/30/08 02:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		04/30/08 02:55	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		04/30/08 02:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/30/08 02:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/30/08 02:55	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/30/08 02:55	75-00-3	
Chloroform	ND	ug/L	1.0	1		04/30/08 02:55	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/30/08 02:55	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		04/30/08 02:55	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/30/08 02:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/30/08 02:55	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/30/08 02:55	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 02:55	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/30/08 02:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		04/30/08 02:55	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/30/08 02:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/30/08 02:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/30/08 02:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 02:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/30/08 02:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/30/08 02:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 02:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/30/08 02:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		04/30/08 02:55	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		04/30/08 02:55	591-78-6	
Iodomethane	ND	ug/L	5.0	1		04/30/08 02:55	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		04/30/08 02:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		04/30/08 02:55	108-10-1	
Styrene	ND	ug/L	1.0	1		04/30/08 02:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 02:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/30/08 02:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/30/08 02:55	127-18-4	
Toluene	ND	ug/L	1.0	1		04/30/08 02:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/30/08 02:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/30/08 02:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/30/08 02:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/30/08 02:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		04/30/08 02:55	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		04/30/08 02:55	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/30/08 02:55	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		04/30/08 02:55	1330-20-7	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: TVL BLK **Lab ID: 9217964026** Collected: 04/23/08 00:00 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		04/30/08 02:55	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		04/30/08 02:55	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109	1		04/30/08 02:55	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		04/30/08 02:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	79-120	1		04/30/08 02:55	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		04/30/08 02:55	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: Equip Blank **Lab ID: 9217964027** Collected: 04/23/08 00:00 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7440-36-0	
Arsenic	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7440-38-2	
Barium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:21	7440-41-7	
Cadmium	ND	ug/L	1.0	1	05/02/08 19:50	05/04/08 18:21	7440-43-9	
Chromium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7440-48-4	
Copper	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7440-50-8	
Lead	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7439-92-1	
Nickel	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7440-02-0	
Selenium	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:21	7782-49-2	
Silver	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7440-22-4	
Thallium	ND	ug/L	5.4	1	05/02/08 19:50	05/04/08 18:21	7440-28-0	
Vanadium	ND	ug/L	5.0	1	05/02/08 19:50	05/04/08 18:21	7440-62-2	
Zinc	ND	ug/L	10.0	1	05/02/08 19:50	05/04/08 18:21	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/01/08 17:01	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/01/08 17:01	107-13-1	
Benzene	ND	ug/L	1.0	1		05/01/08 17:01	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/01/08 17:01	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/01/08 17:01	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/01/08 17:01	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/01/08 17:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/01/08 17:01	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/01/08 17:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/01/08 17:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/01/08 17:01	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/01/08 17:01	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/01/08 17:01	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/01/08 17:01	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		05/01/08 17:01	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/01/08 17:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/01/08 17:01	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/01/08 17:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/01/08 17:01	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/01/08 17:01	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/01/08 17:01	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/01/08 17:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/01/08 17:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/01/08 17:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/01/08 17:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/01/08 17:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/01/08 17:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/01/08 17:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/01/08 17:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/01/08 17:01	100-41-4	

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ANALYTICAL RESULTS

Project: White Oak LF-April 08
Pace Project No.: 9217964

Sample: Equip Blank Lab ID: 9217964027 Collected: 04/23/08 00:00 Received: 04/24/08 16:44 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
2-Hexanone	ND	ug/L	5.0	1		05/01/08 17:01	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/01/08 17:01	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/01/08 17:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/01/08 17:01	108-10-1	
Styrene	ND	ug/L	1.0	1		05/01/08 17:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/01/08 17:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/01/08 17:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/01/08 17:01	127-18-4	
Toluene	ND	ug/L	1.0	1		05/01/08 17:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/01/08 17:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/01/08 17:01	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/01/08 17:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/01/08 17:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/01/08 17:01	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/01/08 17:01	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/01/08 17:01	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/01/08 17:01	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/01/08 17:01	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		05/01/08 17:01	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109	1		05/01/08 17:01	460-00-4	
Dibromofluoromethane (S)	106	%	85-115	1		05/01/08 17:01	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	79-120	1		05/01/08 17:01	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		05/01/08 17:01	2037-26-5	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: MPRP/2243 — Analysis Method: EPA 6010 GW North Carolina
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 9217964001, 9217964002, 9217964003, 9217964004, 9217964005, 9217964006, 9217964007, 9217964008, 9217964009, 9217964010, 9217964011, 9217964012, 9217964013, 9217964014, 9217964015

METHOD BLANK: 105902
Associated Lab Samples: 9217964001, 9217964002, 9217964003, 9217964004, 9217964005, 9217964006, 9217964007, 9217964008, 9217964009, 9217964010, 9217964011, 9217964012, 9217964013, 9217964014, 9217964015

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Antimony	ug/L	ND	5.0	
Arsenic	ug/L	ND	5.0	
Barium	ug/L	ND	5.0	
Beryllium	ug/L	ND	1.0	
Cadmium	ug/L	ND	1.0	
Chromium	ug/L	ND	5.0	
Cobalt	ug/L	ND	5.0	
Copper	ug/L	ND	5.0	
Lead	ug/L	ND	5.0	
Nickel	ug/L	ND	5.0	
Selenium	ug/L	ND	10.0	
Silver	ug/L	ND	5.0	
Thallium	ug/L	ND	5.4	
Vanadium	ug/L	ND	5.0	
Zinc	ug/L	ND	10.0	

LABORATORY CONTROL SAMPLE: 105903

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	443	89	80-120	
Arsenic	ug/L	500	454	91	80-120	
Barium	ug/L	500	426	85	80-120	
Beryllium	ug/L	500	453	91	80-120	
Cadmium	ug/L	500	468	94	80-120	
Chromium	ug/L	500	450	90	80-120	
Cobalt	ug/L	500	446	89	80-120	
Copper	ug/L	500	430	86	80-120	
Lead	ug/L	500	467	93	80-120	
Nickel	ug/L	500	448	90	80-120	
Selenium	ug/L	500	458	92	80-120	
Silver	ug/L	250	240	96	80-120	
Thallium	ug/L	500	435	87	80-120	
Vanadium	ug/L	500	440	88	80-120	
Zinc	ug/L	500	463	93	80-120	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

MATRIX SPIKE SAMPLE: 105904

Parameter	Units	9217935007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	437	87	75-125	
Arsenic	ug/L	ND	500	455	90	75-125	
Barium	ug/L	3.5J	500	420	83	75-125	
Beryllium	ug/L	0.76J	500	456	91	75-125	
Cadmium	ug/L	0.50J	500	459	92	75-125	
Chromium	ug/L	1.9J	500	448	89	75-125	
Cobalt	ug/L	ND	500	439	88	75-125	
Copper	ug/L	ND	500	427	85	75-125	
Lead	ug/L	4.3J	500	454	90	75-125	
Nickel	ug/L	ND	500	437	87	75-125	
Selenium	ug/L	ND	500	451	90	75-125	
Silver	ug/L	0.15J	250	235	94	75-125	
Thallium	ug/L	ND	500	425	85	75-125	
Vanadium	ug/L	1.9J	500	439	87	75-125	
Zinc	ug/L	5.6J	500	456	90	75-125	

SAMPLE DUPLICATE: 105905

Parameter	Units	9217935008 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND	200	
Arsenic	ug/L	4.6J	ND	155	
Barium	ug/L	12.0J	6.8	55	R1
Beryllium	ug/L	0.95J	.16J	142	
Cadmium	ug/L	ND	ND	0	
Chromium	ug/L	1.9J	.42J	126	
Cobalt	ug/L	ND	ND	0	
Copper	ug/L	ND	ND	200	
Lead	ug/L	4.6J	ND	101	
Nickel	ug/L	ND	ND	200	
Selenium	ug/L	ND	ND	200	
Silver	ug/L	0.59J	ND	200	
Thallium	ug/L	ND	ND	200	
Vanadium	ug/L	2.4J	1J	80	
Zinc	ug/L	5.7J	3.4J	52	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: WET/3808
QC Batch Method: SM 5210B
Analysis Method: SM 5210B
Analysis Description: 5210B BOD, Low Level
Associated Lab Samples: 9217964024

METHOD BLANK: 106136
Associated Lab Samples: 9217964024

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
BOD, 5 day	mg/L	ND	2.0	

LABORATORY CONTROL SAMPLE: 106137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	217	110	84-115	

SAMPLE DUPLICATE: 106138

Parameter	Units	9218005002 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	428	418	2	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: MPRP/2249
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 9217964024

METHOD BLANK: 106150
Associated Lab Samples: 9217964024

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Antimony	ug/L	ND	5.0	
Arsenic	ug/L	ND	5.0	
Barium	ug/L	ND	5.0	
Beryllium	ug/L	ND	1.0	
Cadmium	ug/L	ND	1.0	
Chromium	ug/L	ND	5.0	
Cobalt	ug/L	ND	5.0	
Copper	ug/L	ND	5.0	
Lead	ug/L	ND	5.0	
Nickel	ug/L	ND	5.0	
Selenium	ug/L	ND	10.0	
Silver	ug/L	ND	5.0	
Thallium	ug/L	ND	10.0	
Vanadium	ug/L	ND	5.0	
Zinc	ug/L	ND	10.0	

LABORATORY CONTROL SAMPLE: 106151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	435	87	80-120	
Arsenic	ug/L	500	443	89	80-120	
Barium	ug/L	500	426	85	80-120	
Beryllium	ug/L	500	450	90	80-120	
Cadmium	ug/L	500	459	92	80-120	
Chromium	ug/L	500	456	91	80-120	
Cobalt	ug/L	500	449	90	80-120	
Copper	ug/L	500	428	86	80-120	
Lead	ug/L	500	458	92	80-120	
Nickel	ug/L	500	450	90	80-120	
Selenium	ug/L	500	443	89	80-120	
Silver	ug/L	250	226	90	80-120	
Thallium	ug/L	500	413	83	80-120	
Vanadium	ug/L	500	438	88	80-120	
Zinc	ug/L	500	461	92	80-120	

MATRIX SPIKE SAMPLE: 106152

Parameter	Units	9218050007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	413	83	75-125	
Arsenic	ug/L	ND	500	425	85	75-125	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

MATRIX SPIKE SAMPLE: 106152

Parameter	Units	9218050007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	76.5	500	464	78	75-125	
Beryllium	ug/L	ND	500	439	88	75-125	
Cadmium	ug/L	ND	500	436	87	75-125	
Chromium	ug/L	ND	500	430	86	75-125	
Cobalt	ug/L	ND	500	422	84	75-125	
Copper	ug/L	ND	500	404	81	75-125	
Lead	ug/L	ND	500	427	85	75-125	
Nickel	ug/L	ND	500	426	85	75-125	
Selenium	ug/L	ND	500	421	84	75-125	
Silver	ug/L	ND	250	217	87	75-125	
Thallium	ug/L	ND	500	393	79	75-125	
Vanadium	ug/L	ND	500	415	83	75-125	
Zinc	ug/L	10.4	500	444	87	75-125	

SAMPLE DUPLICATE: 106153

Parameter	Units	9218050008 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND	0	
Arsenic	ug/L	ND	ND	200	
Barium	ug/L	137	128	7	
Beryllium	ug/L	ND	ND	200	
Cadmium	ug/L	ND	ND	200	
Chromium	ug/L	ND	2.8J	30	
Cobalt	ug/L	ND	ND	132	
Copper	ug/L	ND	ND	200	
Lead	ug/L	ND	ND	200	
Nickel	ug/L	ND	ND	110	
Selenium	ug/L	ND	ND	0	
Silver	ug/L	ND	.25J	109	
Thallium	ug/L	ND	ND	0	
Vanadium	ug/L	ND	1.9J	55	
Zinc	ug/L	ND	8.2J	9	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: WETA/2552
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 9217964024

METHOD BLANK: 106587
Associated Lab Samples: 9217964024

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	
Nitrogen, Nitrite	mg/L	ND	0.10	
Nitrogen, NO2 plus NO3	mg/L	ND	0.10	

LABORATORY CONTROL SAMPLE: 106588

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	5	5.4	107	90-110	
Nitrogen, Nitrite	mg/L	1	0.94	94	90-110	
Nitrogen, NO2 plus NO3	mg/L	5	5.4	107	90-110	

MATRIX SPIKE SAMPLE: 106589

Parameter	Units	9218086001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	5.0	5	9.5	90	90-110	
Nitrogen, Nitrite	mg/L	ND	1	0.95	95	90-110	
Nitrogen, NO2 plus NO3	mg/L	5.0	5	9.5	90	90-110	

MATRIX SPIKE SAMPLE: 106591

Parameter	Units	9218108003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.48	5	5.6	103	90-110	
Nitrogen, Nitrite	mg/L	ND	1	0.91	91	90-110	
Nitrogen, NO2 plus NO3	mg/L	0.48	5	5.6	103	90-110	

SAMPLE DUPLICATE: 106590

Parameter	Units	9218086002 Result	Dup Result	RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND	0	
Nitrogen, Nitrite	mg/L	ND	ND	0	
Nitrogen, NO2 plus NO3	mg/L	ND	ND	0	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

SAMPLE DUPLICATE: 106592

Parameter	Units	9218155001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Nitrate	mg/L	25.7	26.0	1	
Nitrogen, Nitrite	mg/L	ND	ND	0	
Nitrogen, NO2 plus NO3	mg/L	25.7	26.0	1	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: WETA/2556 | Analysis Method: ASTM D516-90
QC Batch Method: ASTM D516-90 | Analysis Description: ASTM D516-90 Sulfate Water
Associated Lab Samples: 9217964024

METHOD BLANK: 106702
Associated Lab Samples: 9217964024

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Sulfate	mg/L	ND	5.0	

LABORATORY CONTROL SAMPLE: 106703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	20.6	103	90-110	

MATRIX SPIKE SAMPLE: 106704

Parameter	Units	9218027005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	4610	1000	5640	103	75-125	

MATRIX SPIKE SAMPLE: 106706

Parameter	Units	9217856001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	44.4	20	57.5	66	75-125	M0

SAMPLE DUPLICATE: 106705

Parameter	Units	9217785001 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	ND	ND	17	

SAMPLE DUPLICATE: 106707

Parameter	Units	9218086001 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	6.3	6.4	2	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: WETA/2573
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 9217964024

METHOD BLANK: 106846
Associated Lab Samples: 9217964024

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Phosphorus	mg/L	ND	0.10	

LABORATORY CONTROL SAMPLE: 106847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 106848

Parameter	Units	9217964024 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	5.1	1	6.5	138	90-110	M3

SAMPLE DUPLICATE: 106849

Parameter	Units	9217852005 Result	Dup Result	RPD	Qualifiers
Phosphorus	mg/L	6.6	6.6	.4	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: MSV/3242 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9217964001, 9217964002, 9217964003, 9217964004, 9217964005, 9217964009

METHOD BLANK: 107347
Associated Lab Samples: 9217964001, 9217964002, 9217964003, 9217964004, 9217964005, 9217964009

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,2-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,2,3-Trichloropropane	ug/L	ND	1.0	
1,2-Dibromo-3-chloropropane	ug/L	ND	3.0	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	
1,2-Dichlorobenzene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,2-Dichloropropane	ug/L	ND	1.0	
1,4-Dichlorobenzene	ug/L	ND	1.0	
2-Butanone (MEK)	ug/L	ND	5.0	
2-Hexanone	ug/L	ND	5.0	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	
Acetone	ug/L	ND	25.0	
Acrylonitrile	ug/L	ND	10.0	
Benzene	ug/L	ND	1.0	
Bromochloromethane	ug/L	ND	1.0	
Bromodichloromethane	ug/L	ND	1.0	
Bromoform	ug/L	ND	1.0	
Bromomethane	ug/L	ND	5.0	
Carbon disulfide	ug/L	ND	2.0	
Carbon tetrachloride	ug/L	ND	1.0	
Chlorobenzene	ug/L	ND	1.0	
Chloroethane	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	
cis-1,3-Dichloropropene	ug/L	ND	1.0	
Dibromochloromethane	ug/L	ND	1.0	
Dibromomethane	ug/L	ND	1.0	
Ethylbenzene	ug/L	ND	1.0	
Iodomethane	ug/L	ND	5.0	
m&p-Xylene	ug/L	ND	2.0	
Methylene Chloride	ug/L	ND	2.0	
o-Xylene	ug/L	ND	1.0	
Styrene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
Toluene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
trans-1,3-Dichloropropene	ug/L	ND	1.0	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

METHOD BLANK: 107347

Associated Lab Samples: 9217964001, 9217964002, 9217964003, 9217964004, 9217964005, 9217964009

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Trichlorofluoromethane	ug/L	ND	1.0	
Vinyl acetate	ug/L	ND	2.0	
Vinyl chloride	ug/L	ND	1.0	
Xylene (Total)	ug/L	ND	2.0	
1,2-Dichloroethane-d4 (S)	%	105	79-120	
4-Bromofluorobenzene (S)	%	103	87-109	
Dibromofluoromethane (S)	%	100	85-115	
Toluene-d8 (S)	%	98	70-120	

LABORATORY CONTROL SAMPLE: 107348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	55.2	110	83-125	
1,1,1-Trichloroethane	ug/L	50	54.0	108	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	53.6	107	73-127	
1,1,2-Trichloroethane	ug/L	50	53.1	106	77-123	
1,1-Dichloroethane	ug/L	50	50.4	101	76-129	
1,1-Dichloroethene	ug/L	50	50.4	101	78-146	
1,2,3-Trichloropropane	ug/L	50	54.8	110	72-125	
1,2-Dibromo-3-chloropropane	ug/L	50	54.5	109	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	54.6	109	81-125	
1,2-Dichlorobenzene	ug/L	50	53.5	107	82-126	
1,2-Dichloroethane	ug/L	50	55.0	110	72-126	
1,2-Dichloropropane	ug/L	50	49.7	99	80-127	
1,4-Dichlorobenzene	ug/L	50	52.4	105	79-125	
2-Butanone (MEK)	ug/L	100	87.5	88	50-134	
2-Hexanone	ug/L	100	102	102	58-138	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	70-131	
Acetone	ug/L	100	93.8	94	50-146	
Acrylonitrile	ug/L	250	253	101	66-124	
Benzene	ug/L	50	50.2	100	78-128	
Bromochloromethane	ug/L	50	54.0	108	73-124	
Bromodichloromethane	ug/L	50	55.3	111	81-125	
Bromoform	ug/L	50	51.1	102	71-125	
Bromomethane	ug/L	50	58.1	116	50-150	
Carbon disulfide	ug/L	50	50.6	101	54-150	
Carbon tetrachloride	ug/L	50	61.9	124	81-137	
Chlorobenzene	ug/L	50	52.1	104	82-126	
Chloroethane	ug/L	50	48.8	98	69-140	
Chloroform	ug/L	50	53.6	107	77-129	
Chloromethane	ug/L	50	48.1	96	54-139	
cis-1,2-Dichloroethene	ug/L	50	51.9	104	76-133	
cis-1,3-Dichloropropene	ug/L	50	52.9	106	76-127	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

LABORATORY CONTROL SAMPLE: 107348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	56.8	114	77-125	
Dibromomethane	ug/L	50	55.9	112	77-125	
Ethylbenzene	ug/L	50	51.8	104	80-127	
Iodomethane	ug/L	100	116	116	65-172	
m&p-Xylene	ug/L	100	105	105	82-127	
Methylene Chloride	ug/L	50	47.3	95	67-133	
o-Xylene	ug/L	50	53.3	107	83-124	
Styrene	ug/L	50	53.6	107	80-130	
Tetrachloroethene	ug/L	50	50.0	100	78-128	
Toluene	ug/L	50	50.8	102	76-126	
trans-1,2-Dichloroethene	ug/L	50	51.5	103	78-134	
trans-1,3-Dichloropropene	ug/L	50	54.6	109	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	54.3	109	51-140	
Trichloroethene	ug/L	50	53.3	107	79-127	
Trichlorofluoromethane	ug/L	50	54.2	108	76-148	
Vinyl acetate	ug/L	100	103	103	50-150	
Vinyl chloride	ug/L	50	50.7	101	67-143	
Xylene (Total)	ug/L	150	158	106	83-125	
1,2-Dichloroethane-d4 (S)	%			114	79-120	
4-Bromofluorobenzene (S)	%			104	87-109	
Dibromofluoromethane (S)	%			101	85-115	
Toluene-d8 (S)	%			99	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 107349 107350

Parameter	Units	9217964009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	64.1	61.8	128	124	60-150	4	
Benzene	ug/L	ND	50	50	57.8	57.0	116	114	74-136	1	
Chlorobenzene	ug/L	ND	50	50	59.0	59.3	118	119	79-135	.4	
Toluene	ug/L	ND	50	50	56.5	56.1	113	112	73-131	.7	
Trichloroethene	ug/L	ND	50	50	61.4	60.3	123	121	73-131	2	
1,2-Dichloroethane-d4 (S)	%						106	106	79-120		
4-Bromofluorobenzene (S)	%						104	105	87-109		
Dibromofluoromethane (S)	%						99	100	85-115		
Toluene-d8 (S)	%						98	98	70-120		

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: MSV/3243
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9217964010, 9217964011, 9217964012, 9217964013, 9217964014, 9217964015, 9217964016, 9217964017, 9217964018, 9217964019, 9217964020

METHOD BLANK: 107353
Associated Lab Samples: 9217964010, 9217964011, 9217964012, 9217964013, 9217964014, 9217964015, 9217964016, 9217964017, 9217964018, 9217964019, 9217964020

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,2-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,1-Dichloropropene	ug/L	ND	1.0	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	
1,2,3-Trichloropropane	ug/L	ND	1.0	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	
1,2,4-Trimethylbenzene	ug/L	ND	3.0	
1,2-Dibromo-3-chloropropane	ug/L	ND	1.0	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	
1,2-Dichlorobenzene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,2-Dichloropropane	ug/L	ND	1.0	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	
1,3-Dichlorobenzene	ug/L	ND	1.0	
1,3-Dichloropropane	ug/L	ND	1.0	
1,4-Dichlorobenzene	ug/L	ND	1.0	
2,2-Dichloropropane	ug/L	ND	5.0	
2-Butanone (MEK)	ug/L	ND	1.0	
2-Chlorotoluene	ug/L	ND	5.0	
2-Hexanone	ug/L	ND	1.0	
4-Chlorotoluene	ug/L	ND	5.0	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	
Acetone	ug/L	ND	10.0	
Acrylonitrile	ug/L	ND	1.0	
Benzene	ug/L	ND	1.0	
Bromobenzene	ug/L	ND	1.0	
Bromochloromethane	ug/L	ND	1.0	
Bromodichloromethane	ug/L	ND	1.0	
Bromoform	ug/L	ND	5.0	
Bromomethane	ug/L	ND	2.0	
Carbon disulfide	ug/L	ND	1.0	
Carbon tetrachloride	ug/L	ND	1.0	
Chlorobenzene	ug/L	ND	1.0	
Chloroethane	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

METHOD BLANK: 107353

Associated Lab Samples: 9217964010, 9217964011, 9217964012, 9217964013, 9217964014, 9217964015, 9217964016, 9217964017, 9217964018, 9217964019, 9217964020

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
cis-1,3-Dichloropropene	ug/L	ND	1.0	
Dibromochloromethane	ug/L	ND	1.0	
Dibromomethane	ug/L	ND	1.0	
Dichlorodifluoromethane	ug/L	ND	1.0	
Diisopropyl ether	ug/L	ND	1.0	
Ethylbenzene	ug/L	ND	1.0	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	
Iodomethane	ug/L	ND	5.0	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	
m&p-Xylene	ug/L	ND	2.0	
Methyl-tert-butyl ether	ug/L	ND	1.0	
Methylene Chloride	ug/L	ND	2.0	
n-Butylbenzene	ug/L	ND	1.0	
n-Propylbenzene	ug/L	ND	1.0	
Naphthalene	ug/L	ND	1.0	
o-Xylene	ug/L	ND	1.0	
p-Isopropyltoluene	ug/L	ND	1.0	
sec-Butylbenzene	ug/L	ND	1.0	
Styrene	ug/L	ND	1.0	
tert-Butylbenzene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
Toluene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
trans-1,3-Dichloropropene	ug/L	ND	1.0	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Trichlorofluoromethane	ug/L	ND	1.0	
Vinyl acetate	ug/L	ND	2.0	
Vinyl chloride	ug/L	ND	1.0	
Xylene (Total)	ug/L	ND	2.0	
1,2-Dichloroethane-d4 (S)	%	101	79-120	
4-Bromofluorobenzene (S)	%	106	87-109	
Dibromofluoromethane (S)	%	100	85-115	
Toluene-d8 (S)	%	98	70-120	

LABORATORY CONTROL SAMPLE: 107354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.9	96	83-125	
1,1,1-Trichloroethane	ug/L	50	55.8	112	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	54.5	109	73-127	
1,1,2-Trichloroethane	ug/L	50	53.6	107	77-123	
1,1-Dichloroethane	ug/L	50	52.7	105	76-129	
1,1-Dichloroethene	ug/L	50	51.1	102	78-146	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

LABORATORY CONTROL SAMPLE: 107354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloropropene	ug/L	50	53.7	107	79-134	
1,2,3-Trichlorobenzene	ug/L	50	55.3	111	70-150	
1,2,3-Trichloropropane	ug/L	50	53.3	107	72-125	
1,2,4-Trichlorobenzene	ug/L	50	54.8	110	68-127	
1,2,4-Trimethylbenzene	ug/L	50	57.2	114	78-138	
1,2-Dibromo-3-chloropropane	ug/L	50	52.0	104	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	54.6	109	81-125	
1,2-Dichlorobenzene	ug/L	50	49.8	100	82-126	
1,2-Dichloroethane	ug/L	50	49.7	99	72-126	
1,2-Dichloropropane	ug/L	50	50.3	101	80-127	
1,3,5-Trimethylbenzene	ug/L	50	52.4	105	73-118	
1,3-Dichlorobenzene	ug/L	50	50.8	102	82-124	
1,3-Dichloropropane	ug/L	50	50.3	101	79-124	
1,4-Dichlorobenzene	ug/L	50	50.5	101	79-125	
2,2-Dichloropropane	ug/L	50	57.5	115	58-140	
2-Butanone (MEK)	ug/L	100	102	102	50-134	
2-Chlorotoluene	ug/L	50	51.4	103	81-126	
2-Hexanone	ug/L	100	112	112	58-138	
4-Chlorotoluene	ug/L	50	49.8	100	82-126	
4-Methyl-2-pentanone (MIBK)	ug/L	100	107	107	70-131	
Acetone	ug/L	100	92.9	93	50-146	
Acrylonitrile	ug/L	250	182	73	66-124	
Benzene	ug/L	50	51.6	103	78-128	
Bromobenzene	ug/L	50	50.5	101	81-127	
Bromochloromethane	ug/L	50	54.3	109	73-124	
Bromodichloromethane	ug/L	50	55.9	112	81-125	
Bromoform	ug/L	50	48.5	97	71-125	
Bromomethane	ug/L	50	35.3	71	50-150	
Carbon disulfide	ug/L	50	49.0	98	54-150	
Carbon tetrachloride	ug/L	50	67.3	135	81-137	
Chlorobenzene	ug/L	50	49.8	100	82-126	
Chloroethane	ug/L	50	47.1	94	69-140	
Chloroform	ug/L	50	52.9	106	77-129	
Chloromethane	ug/L	50	46.6	93	54-139	
cis-1,2-Dichloroethene	ug/L	50	56.7	113	76-133	
cis-1,3-Dichloropropene	ug/L	50	55.8	112	76-127	
Dibromochloromethane	ug/L	50	48.9	98	77-125	
Dibromomethane	ug/L	50	53.1	106	77-125	
Dichlorodifluoromethane	ug/L	50	52.0	104	50-150	
Diisopropyl ether	ug/L	50	51.4	103	74-131	
Ethylbenzene	ug/L	50	50.7	101	80-127	
Hexachloro-1,3-butadiene	ug/L	50	49.6	99	78-145	
Iodomethane	ug/L	100	112	112	65-172	
Isopropylbenzene (Cumene)	ug/L	50	51.0	102	84-135	
m&p-Xylene	ug/L	100	101	101	82-127	
Methyl-tert-butyl ether	ug/L	50	53.6	107	71-130	
Methylene Chloride	ug/L	50	48.7	97	67-133	
n-Butylbenzene	ug/L	50	53.3	107	73-122	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

LABORATORY CONTROL SAMPLE: 107354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
n-Propylbenzene	ug/L	50	51.4	103	82-129	
Naphthalene	ug/L	50	63.2	126	52-136	
o-Xylene	ug/L	50	51.7	103	83-124	
p-Isopropyltoluene	ug/L	50	55.9	112	73-122	
sec-Butylbenzene	ug/L	50	51.5	103	82-131	
Styrene	ug/L	50	52.8	106	80-130	
tert-Butylbenzene	ug/L	50	55.9	112	80-130	
Tetrachloroethene	ug/L	50	50.1	100	78-128	
Toluene	ug/L	50	51.5	103	76-126	
trans-1,2-Dichloroethene	ug/L	50	51.8	104	78-134	
trans-1,3-Dichloropropene	ug/L	50	50.5	101	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	54.6	109	51-140	
Trichloroethene	ug/L	50	52.6	105	79-127	
Trichlorofluoromethane	ug/L	50	53.8	108	76-148	
Vinyl acetate	ug/L	100	143	143	50-150	
Vinyl chloride	ug/L	50	47.8	96	67-143	
Xylene (Total)	ug/L	150	153	102	83-125	
1,2-Dichloroethane-d4 (S)	%			109	79-120	
4-Bromofluorobenzene (S)	%			104	87-109	
Dibromofluoromethane (S)	%			105	85-115	
Toluene-d8 (S)	%			99	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 107363 107364

Parameter	Units	9217964020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	65.2	62.5	130	125	60-150	4	
Benzene	ug/L	ND	50	50	61.0	59.1	122	118	74-136	3	
Chlorobenzene	ug/L	ND	50	50	58.5	58.3	117	113	79-135	4	
Toluene	ug/L	ND	50	50	60.4	57.9	121	116	73-131	4	
Trichloroethene	ug/L	ND	50	50	60.1	57.8	120	116	73-131	4	
1,2-Dichloroethane-d4 (S)	%						107	104	79-120		
4-Bromofluorobenzene (S)	%						101	101	87-109		
Dibromofluoromethane (S)	%						103	102	85-115		
Toluene-d8 (S)	%						100	99	70-120		

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: MSV/3252 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9217964006, 9217964007, 9217964008, 9217964021, 9217964022, 9217964023, 9217964024, 9217964025, 9217964026

METHOD BLANK: 107526
Associated Lab Samples: 9217964006, 9217964007, 9217964008, 9217964021, 9217964022, 9217964023, 9217964024, 9217964025, 9217964026

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,2-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,1-Dichloropropene	ug/L	ND	1.0	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	
1,2,3-Trichloropropane	ug/L	ND	1.0	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	
1,2-Dibromo-3-chloropropane	ug/L	ND	3.0	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	
1,2-Dichlorobenzene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,2-Dichloropropane	ug/L	ND	1.0	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	
1,3-Dichlorobenzene	ug/L	ND	1.0	
1,3-Dichloropropane	ug/L	ND	1.0	
1,4-Dichlorobenzene	ug/L	ND	1.0	
2,2-Dichloropropane	ug/L	ND	1.0	
2-Butanone (MEK)	ug/L	ND	5.0	
2-Chlorotoluene	ug/L	ND	1.0	
2-Hexanone	ug/L	ND	5.0	
4-Chlorotoluene	ug/L	ND	1.0	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	
Acetone	ug/L	ND	25.0	
Acrylonitrile	ug/L	ND	10.0	
Benzene	ug/L	ND	1.0	
Bromobenzene	ug/L	ND	1.0	
Bromochloromethane	ug/L	ND	1.0	
Bromodichloromethane	ug/L	ND	1.0	
Bromoform	ug/L	ND	1.0	
Bromomethane	ug/L	ND	5.0	
Carbon disulfide	ug/L	ND	2.0	
Carbon tetrachloride	ug/L	ND	1.0	
Chlorobenzene	ug/L	ND	1.0	
Chloroethane	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

METHOD BLANK: 107526

Associated Lab Samples: 9217964006, 9217964007, 9217964008, 9217964021, 9217964022, 9217964023, 9217964024, 9217964025, 9217964026

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
cis-1,3-Dichloropropene	ug/L	ND	1.0	
Dibromochloromethane	ug/L	ND	1.0	
Dibromomethane	ug/L	ND	1.0	
Dichlorodifluoromethane	ug/L	ND	1.0	
Diisopropyl ether	ug/L	ND	1.0	
Ethylbenzene	ug/L	ND	1.0	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	
Iodomethane	ug/L	ND	5.0	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	
m&p-Xylene	ug/L	ND	2.0	
Methyl-tert-butyl ether	ug/L	ND	1.0	
Methylene Chloride	ug/L	ND	2.0	
n-Butylbenzene	ug/L	ND	1.0	
n-Propylbenzene	ug/L	ND	1.0	
Naphthalene	ug/L	ND	1.0	
o-Xylene	ug/L	ND	1.0	
p-Isopropyltoluene	ug/L	ND	1.0	
sec-Butylbenzene	ug/L	ND	1.0	
Styrene	ug/L	ND	1.0	
tert-Butylbenzene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
Toluene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
trans-1,3-Dichloropropene	ug/L	ND	1.0	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Trichlorofluoromethane	ug/L	ND	1.0	
Vinyl acetate	ug/L	ND	2.0	
Vinyl chloride	ug/L	ND	1.0	
Xylene (Total)	ug/L	ND	2.0	
1,2-Dichloroethane-d4 (S)	%	107	79-120	
4-Bromofluorobenzene (S)	%	102	87-109	
Dibromofluoromethane (S)	%	104	85-115	
Toluene-d8 (S)	%	99	70-120	

LABORATORY CONTROL SAMPLE: 107527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.5	103	83-125	
1,1,1-Trichloroethane	ug/L	50	57.8	116	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	58.7	117	73-127	
1,1,2-Trichloroethane	ug/L	50	57.5	115	77-123	
1,1-Dichloroethane	ug/L	50	56.5	113	76-129	
1,1-Dichloroethene	ug/L	50	53.5	107	78-146	

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QUALITY CONTROL DATA

Project: While Oak LF-April 08
Pace Project No.: 9217964

LABORATORY CONTROL SAMPLE: 107527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloropropene	ug/L	50	57.0	114	79-134	
1,2,3-Trichlorobenzene	ug/L	50	55.7	111	70-150	
1,2,3-Trichloropropane	ug/L	50	55.9	112	72-125	
1,2,4-Trichlorobenzene	ug/L	50	53.3	107	68-127	
1,2,4-Trimethylbenzene	ug/L	50	57.6	115	78-138	
1,2-Dibromo-3-chloropropane	ug/L	50	59.8	120	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	57.9	116	81-125	
1,2-Dichlorobenzene	ug/L	50	51.8	104	82-126	
1,2-Dichloroethane	ug/L	50	53.7	107	72-126	
1,2-Dichloropropane	ug/L	50	56.0	112	80-127	
1,3,5-Trimethylbenzene	ug/L	50	54.9	110	73-118	
1,3-Dichlorobenzene	ug/L	50	52.9	106	82-124	
1,3-Dichloropropane	ug/L	50	54.2	108	79-124	
1,4-Dichlorobenzene	ug/L	50	52.9	106	79-125	
2,2-Dichloropropane	ug/L	50	54.2	108	58-140	
2-Butanone (MEK)	ug/L	100	110	110	50-134	
2-Chlorotoluene	ug/L	50	53.9	108	81-126	
2-Hexanone	ug/L	100	120	120	58-138	
4-Chlorotoluene	ug/L	50	52.5	105	82-126	
4-Methyl-2-pentanone (MIBK)	ug/L	100	115	115	70-131	
Acetone	ug/L	100	101	101	50-146	
Acrylonitrile	ug/L	250	172	69	66-124	
Benzene	ug/L	50	55.1	110	78-128	
Bromobenzene	ug/L	50	53.4	107	81-127	
Bromochloromethane	ug/L	50	58.3	117	73-124	
Bromodichloromethane	ug/L	50	59.3	119	81-125	
Bromoform	ug/L	50	49.1	98	71-125	
Bromomethane	ug/L	50	46.3	93	50-150	
Carbon disulfide	ug/L	50	50.9	102	54-150	
Carbon tetrachloride	ug/L	50	55.9	112	81-137	
Chlorobenzene	ug/L	50	53.2	106	82-126	
Chloroethane	ug/L	50	54.9	110	69-140	
Chloroform	ug/L	50	56.0	112	77-129	
Chloromethane	ug/L	50	52.6	105	54-139	
cis-1,2-Dichloroethene	ug/L	50	55.4	111	76-133	
cis-1,3-Dichloropropene	ug/L	50	57.3	115	76-127	
Dibromochloromethane	ug/L	50	51.6	103	77-125	
Dibromomethane	ug/L	50	56.5	113	77-125	
Dichlorodifluoromethane	ug/L	50	54.4	109	50-150	
Diisopropyl ether	ug/L	50	55.3	111	74-131	
Ethylbenzene	ug/L	50	53.6	107	80-127	
Hexachloro-1,3-butadiene	ug/L	50	48.7	97	78-145	
Iodomethane	ug/L	100	120	120	65-172	
Isopropylbenzene (Cumene)	ug/L	50	54.5	109	84-135	
m&p-Xylene	ug/L	100	108	108	82-127	
Methyl-tert-butyl ether	ug/L	50	56.6	113	71-130	
Methylene Chloride	ug/L	50	52.8	106	67-133	
n-Butylbenzene	ug/L	50	52.3	105	73-122	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

LABORATORY CONTROL SAMPLE: 107527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
n-Propylbenzene	ug/L	50	53.8	108	82-129	
Naphthalene	ug/L	50	65.0	130	52-136	
o-Xylene	ug/L	50	55.5	111	83-124	
p-Isopropyltoluene	ug/L	50	57.3	115	73-122	
sec-Butylbenzene	ug/L	50	54.4	109	82-131	
Styrene	ug/L	50	56.3	113	80-130	
tert-Butylbenzene	ug/L	50	57.3	115	80-130	
Tetrachloroethene	ug/L	50	52.5	105	78-128	
Toluene	ug/L	50	54.8	110	76-126	
trans-1,2-Dichloroethene	ug/L	50	56.1	112	78-134	
trans-1,3-Dichloropropene	ug/L	50	53.2	106	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	58.3	117	51-140	
Trichloroethene	ug/L	50	54.4	109	79-127	
Trichlorofluoromethane	ug/L	50	56.1	112	76-148	
Vinyl acetate	ug/L	100	142	142	50-150	
Vinyl chloride	ug/L	50	56.5	113	67-143	
Xylene (Total)	ug/L	150	163	109	83-125	
1,2-Dichloroethane-d4 (S)	%			109	79-120	
4-Bromofluorobenzene (S)	%			103	87-109	
Dibromofluoromethane (S)	%			104	85-115	
Toluene-d8 (S)	%			100	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 107528 107529

Parameter	Units	9217964025 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	65.2	61.6	130	123	60-150	6	
Benzene	ug/L	ND	50	50	60.2	57.6	120	115	74-136	4	
Chlorobenzene	ug/L	ND	50	50	57.4	55.8	115	112	79-135	3	
Toluene	ug/L	ND	50	50	59.4	56.9	119	114	73-131	4	
Trichloroethene	ug/L	ND	50	50	60.3	58.0	121	116	73-131	4	
1,2-Dichloroethane-d4 (S)	%						106	107	79-120		
4-Bromofluorobenzene (S)	%						100	101	87-109		
Dibromofluoromethane (S)	%						102	104	85-115		
Toluene-d8 (S)	%						100	99	70-120		

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: WETA/2590
QC Batch Method: SM 5220D
Analysis Method: SM 5220D
Analysis Description: 5220D COD
Associated Lab Samples: 9217964024

METHOD BLANK: 108309
Associated Lab Samples: 9217964024

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	

LABORATORY CONTROL SAMPLE: 108310

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	792	106	90-110	

MATRIX SPIKE SAMPLE: 108311

Parameter	Units	9217785009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	750	815	109	75-125	

MATRIX SPIKE SAMPLE: 108314

Parameter	Units	9218337001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	1680	1500	2340	44	75-125	M2

SAMPLE DUPLICATE: 108313

Parameter	Units	9217852003 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	893	907	2	

SAMPLE DUPLICATE: 108669

Parameter	Units	9217789002 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	69.4	63.0	10	

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: MSV/3273
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9217964027

METHOD BLANK: 108462
Associated Lab Samples: 9217964027

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,2-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,2,3-Trichloropropane	ug/L	ND	1.0	
1,2-Dibromo-3-chloropropane	ug/L	ND	3.0	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	
1,2-Dichlorobenzene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,2-Dichloropropane	ug/L	ND	1.0	
1,4-Dichlorobenzene	ug/L	ND	1.0	
2-Butanone (MEK)	ug/L	ND	5.0	
2-Hexanone	ug/L	ND	5.0	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	
Acetone	ug/L	ND	25.0	
Acrylonitrile	ug/L	ND	10.0	
Benzene	ug/L	ND	1.0	
Bromochloromethane	ug/L	ND	1.0	
Bromodichloromethane	ug/L	ND	1.0	
Bromoform	ug/L	ND	1.0	
Bromomethane	ug/L	ND	5.0	
Carbon disulfide	ug/L	ND	2.0	
Carbon tetrachloride	ug/L	ND	1.0	
Chlorobenzene	ug/L	ND	1.0	
Chloroethane	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	
cis-1,3-Dichloropropene	ug/L	ND	1.0	
Dibromochloromethane	ug/L	ND	1.0	
Dibromomethane	ug/L	ND	1.0	
Ethylbenzene	ug/L	ND	1.0	
Iodomethane	ug/L	ND	5.0	
m&p-Xylene	ug/L	ND	2.0	
Methylene Chloride	ug/L	ND	2.0	
o-Xylene	ug/L	ND	1.0	
Styrene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
Toluene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
trans-1,3-Dichloropropene	ug/L	ND	1.0	

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www.pacelabs.com

Pace Analytical Services, Inc.
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Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

METHOD BLANK: 108462
Associated Lab Samples: 9217964027

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Trichlorofluoromethane	ug/L	ND	1.0	
Vinyl acetate	ug/L	ND	2.0	
Vinyl chloride	ug/L	ND	1.0	
Xylene (Total)	ug/L	ND	2.0	
1,2-Dichloroethane-d4 (S)	%	106	79-120	
4-Bromofluorobenzene (S)	%	103	87-109	
Dibromofluoromethane (S)	%	105	85-115	
Toluene-d8 (S)	%	101	70-120	

LABORATORY CONTROL SAMPLE: 108463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	49.9	100	83-125	
1,1,1-Trichloroethane	ug/L	50	56.9	114	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	56.1	112	73-127	
1,1,2-Trichloroethane	ug/L	50	53.5	107	77-123	
1,1-Dichloroethane	ug/L	50	54.4	109	76-129	
1,1-Dichloroethene	ug/L	50	51.5	103	78-146	
1,2,3-Trichloropropane	ug/L	50	53.9	108	72-125	
1,2-Dibromo-3-chloropropane	ug/L	50	56.6	113	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	56.0	112	81-125	
1,2-Dichlorobenzene	ug/L	50	48.4	97	82-126	
1,2-Dichloroethane	ug/L	50	52.4	105	72-126	
1,2-Dichloropropane	ug/L	50	52.3	105	80-127	
1,4-Dichlorobenzene	ug/L	50	52.4	105	79-125	
2-Butanone (MEK)	ug/L	100	112	112	50-134	
2-Hexanone	ug/L	100	121	121	58-138	
4-Methyl-2-pentanone (MIBK)	ug/L	100	110	110	70-131	
Acetone	ug/L	100	109	109	50-146	
Acrylonitrile	ug/L	250	223	89	66-124	
Benzene	ug/L	50	50.9	102	78-128	
Bromochloromethane	ug/L	50	50.2	100	73-124	
Bromodichloromethane	ug/L	50	55.3	111	81-125	
Bromoform	ug/L	50	48.0	96	71-125	
Bromomethane	ug/L	50	41.5	83	50-150	
Carbon disulfide	ug/L	50	51.2	102	54-150	
Carbon tetrachloride	ug/L	50	66.1	132	81-137	
Chlorobenzene	ug/L	50	51.0	102	82-126	
Chloroethane	ug/L	50	53.2	106	69-140	
Chloroform	ug/L	50	55.2	110	77-129	
Chloromethane	ug/L	50	48.3	97	54-139	
cis-1,2-Dichloroethene	ug/L	50	53.3	107	76-133	
cis-1,3-Dichloropropene	ug/L	50	56.0	112	76-127	

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

LABORATORY CONTROL SAMPLE: 108463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	49.9	100	77-125	
Dibromomethane	ug/L	50	49.3	99	77-125	
Ethylbenzene	ug/L	50	51.5	103	80-127	
Iodomethane	ug/L	100	88.4	88	65-172	
m&p-Xylene	ug/L	100	104	104	82-127	
Methylene Chloride	ug/L	50	51.0	102	67-133	
o-Xylene	ug/L	50	53.3	107	83-124	
Styrene	ug/L	50	53.8	108	80-130	
Tetrachloroethene	ug/L	50	49.8	100	78-128	
Toluene	ug/L	50	51.3	103	76-126	
trans-1,2-Dichloroethene	ug/L	50	53.8	108	78-134	
trans-1,3-Dichloropropene	ug/L	50	51.1	102	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	64.7	129	51-140	
Trichloroethene	ug/L	50	51.5	103	79-127	
Trichlorofluoromethane	ug/L	50	52.8	106	76-148	
Vinyl acetate	ug/L	100	154	154	50-150	L3
Vinyl chloride	ug/L	50	51.0	102	67-143	
Xylene (Total)	ug/L	150	157	105	83-125	
1,2-Dichloroethane-d4 (S)	%			104	79-120	
4-Bromofluorobenzene (S)	%			103	87-109	
Dibromofluoromethane (S)	%			106	85-115	
Toluene-d8 (S)	%			100	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 108464 108465

Parameter	Units	9218380001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	<0.56	50	50	74.6	74.4	149	149	60-150	.2	
Benzene	ug/L	<0.25	50	50	66.8	67.3	134	135	74-136	.7	
Chlorobenzene	ug/L	<0.23	50	50	63.8	66.5	128	133	79-135	4	
Toluene	ug/L	<0.26	50	50	65.7	66.4	131	133	73-131	1	M1
Trichloroethene	ug/L	<0.47	50	50	64.9	65.2	130	130	73-131	.3	
1,2-Dichloroethane-d4 (S)	%						107	109	79-120		
4-Bromofluorobenzene (S)	%						101	102	87-109		
Dibromofluoromethane (S)	%						104	103	85-115		
Toluene-d8 (S)	%						101	98	70-120		

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QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

QC Batch: MPRP/2281 — Analysis Method: EPA 6010 GW North Carolina
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 9217964016, 9217964017, 9217964018, 9217964019, 9217964020, 9217964021, 9217964022, 9217964023, 9217964025, 9217964027

METHOD BLANK: 108979
Associated Lab Samples: 9217964016, 9217964017, 9217964018, 9217964019, 9217964020, 9217964021, 9217964022, 9217964023, 9217964025, 9217964027

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Antimony	ug/L	ND	5.0	
Arsenic	ug/L	ND	5.0	
Barium	ug/L	ND	5.0	
Beryllium	ug/L	ND	1.0	
Cadmium	ug/L	ND	1.0	
Chromium	ug/L	ND	5.0	
Cobalt	ug/L	ND	5.0	
Copper	ug/L	ND	5.0	
Lead	ug/L	ND	5.0	
Nickel	ug/L	ND	5.0	
Selenium	ug/L	ND	10.0	
Silver	ug/L	ND	5.0	
Thallium	ug/L	ND	5.4	
Vanadium	ug/L	ND	5.0	
Zinc	ug/L	ND	10.0	

LABORATORY CONTROL SAMPLE: 108980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	451	90	80-120	
Arsenic	ug/L	500	455	91	80-120	
Barium	ug/L	500	449	90	80-120	
Beryllium	ug/L	500	454	91	80-120	
Cadmium	ug/L	500	465	93	80-120	
Chromium	ug/L	500	464	93	80-120	
Cobalt	ug/L	500	462	92	80-120	
Copper	ug/L	500	438	88	80-120	
Lead	ug/L	500	469	94	80-120	
Nickel	ug/L	500	465	93	80-120	
Selenium	ug/L	500	438	88	80-120	
Silver	ug/L	250	224	90	80-120	
Thallium	ug/L	500	444	89	80-120	
Vanadium	ug/L	500	448	90	80-120	
Zinc	ug/L	500	464	93	80-120	

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9800 Kincey Ave. Suite 100
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(704)875-9092

QUALITY CONTROL DATA

Project: White Oak LF-April 08
Pace Project No.: 9217964

MATRIX SPIKE SAMPLE: 108981

Parameter	Units	9217931001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	426	85	75-125	
Arsenic	ug/L	2.7J	500	436	87	75-125	
Barium	ug/L	103	500	505	80	75-125	
Beryllium	ug/L	ND	500	425	85	75-125	
Cadmium	ug/L	0.60J	500	433	86	75-125	
Chromium	ug/L	0.85J	500	433	86	75-125	
Cobalt	ug/L	3.1J	500	431	86	75-125	
Copper	ug/L	ND	500	413	83	75-125	
Lead	ug/L	ND	500	435	86	75-125	
Nickel	ug/L	ND	500	431	86	75-125	
Selenium	ug/L	9.4J	500	428	84	75-125	
Silver	ug/L	ND	250	210	84	75-125	
Thallium	ug/L	7.3	500	416	82	75-125	
Vanadium	ug/L	0.43J	500	420	84	75-125	
Zinc	ug/L	65.6	500	489	85	75-125	

SAMPLE DUPLICATE: 108989

Parameter	Units	9217931001 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND	0	
Arsenic	ug/L	2.7J	ND	99	
Barium	ug/L	103	98.2	5	
Beryllium	ug/L	ND	ND	7	
Cadmium	ug/L	0.60J	.58J	3	
Chromium	ug/L	0.85J	ND	74	
Cobalt	ug/L	3.1J	2J	42	
Copper	ug/L	ND	ND	156	
Lead	ug/L	ND	ND	6	
Nickel	ug/L	ND	ND	62	
Selenium	ug/L	9.4J	9.2J	2	
Silver	ug/L	ND	ND	0	
Thallium	ug/L	7.3	5.5	28	R1
Vanadium	ug/L	0.43J	.42J	2	
Zinc	ug/L	65.6	63.3	4	

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QUALIFIERS

Project: White Oak LF-April 08
Pace Project No.: 9217964

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
M0	Matrix spike recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M2	Matrix spike recovery was below QC limits due to sample dilution. Data acceptance based on laboratory control sample (LCS) recovery.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
R1	RPD value was outside control limits.

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Haywood

Pace Analytical Services, Inc.
Report Form
for
~~Buncombe~~ County Solid Waste Field Monitoring

SW's White OAK

Facility Permit #	Waste Unit #	Sample ID	Sampler(s)	Date of Sampling	Time of Sampling	Water Level Depth (Ft.)	Temperature (degrees C)	pH (units)	Specific Conductance (uhmos)	Turbidity (NTU)
		SW-1	MD	4.24.02	955		13.1	6.80	124	
		SW-2		4.24	1025		14.5	7.32	162	
		SW-3			1050		14.3	7.86	234	
		SW-~~4~~5			1410		16.5	7.20	426	
		SW 6			1145		15.2	7.56	48	
		SW-7			1215		15.6	7.00	42	
		Leachate			1115		21.4	8.56	8140	
		Seep Pond			1100		13.1	7.37	228	

Recommended Field Data Template for NC DENR EDD Reporting

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 3

1053465

Section A Required Client Information:

Company: Haywood Co Solid Waste

Address:

Email To:

Phone: Fax:

Requested Due Date/TAT:

Section B Required Project Information:

Report To: Stephen King

Copy To:

Purchase Order No.:

Project Name: White OAK

Project Number:

Section C Invoice Information:

Attention:

Company Name:

Address:

Pace Quote Reference:

Pace Project Manager:

Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☑ RCRA ☐ Other

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ MN ☐ NC ☐ OH ☐ SC ☐ WI ☐ OTHER

Section D Required Client Information

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis: Metals Spectro	Sulfate	Nitrate	Chloride	Residual Chlorine (Y/N)	Pace Project Number / Lab I.D
1	MW-1A					4-23-08	1410		4			1	3					X	X	X	X		
2	MW-2						1355		4			1	3					X	X	X	X		
3	MW-2D						1400		4			1	3					X	X	X	X		
4	MW-3						1310		4			1	3					X	X	X	X		
5	MW-3D						1315		4			1	3					X	X	X	X		
6	MW-8						1345		4			1	3					X	X	X	X		
7	MW-115						1430		4			1	3					X	X	X	X		
8	MW-11D						1435		4			1	3					X	X	X	X		
9	MW-14						1545		4			1	3					X	X	X	X		
10																							
11																							
12																							

Filtered (Y/N)

Requested Analysis:

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	4-23-08	1700	[signature]	4-23	1700
			[signature]	4/23/08	1700

SAMPLE CONDITION

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
2-8	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK P. SWANN

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 4-23-08

SEE REVERSE SIDE FOR INSTRUCTIONS

ORIGINAL

ALLQ020rev.3,31Mar05

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1053462

Section A Required Client Information:

Company: Haywood Co Solid Waste
Address: Clyde
Email To:
Phone: 627-8042 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Stephen King
Copy To:
Purchase Order No.:
Project Name: SWS Landfill White Oak
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☑ RCRA ☐ Other

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ MN ☑ NC ☐ OH ☐ SC ☐ WI ☐ OTHER

Section D Required Client Information

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / .-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested Analysis: pH Top Sporadic	Acid Hg 1631	Cod Top	Nitrate Nitrite	Soy	Residual Chlorine (Y/N)	Pace Project Number / Lab I.D. 921964
1	SW-1	GW	G			4-24	955		4			1	3					Y	X	X					
2	SW-2						1025		4			1	3					Y	X	X					
3	SW-3						1050		4			1	3					Y	X	X					
4	SW-5								4			1	3					X	X	X					
5	SW-6						1145		4			1	3					X	X	X					
6	SW-7						1215		4			1	3					X	X	X					
7	LEACHATE						1115		9	3	2	1	3					X	X	X	X	X	X	X	
8	SETT POND						1100		4			1	3					X	X	X					
9																									
10	TUL BIK	DI				4-23			2				2						X						
11	EQUIP BIK	DI				4-23			3			1	2						X	X					
12																									

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	4-24	1600	Mark Swann Pace	4-24	1600
Mark Swann Pace	4-24-02	1644	Tom RW	4/24/02	1644

SAMPLE CONDITION: Temp in °C 3.1; Received on Ice Y/N; Custody Sealed Cooler Y/N; Samples Intact Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK L. SWANN

SIGNATURE of SAMPLER: Mark Swann

DATE Signed (MM / DD / YY): 4-24-02

SEE REVERSE SIDE FOR INSTRUCTIONS

ORIGINAL

Pace Analytical®

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1053466

Section A Required Client Information:

Company	Haywood Co Solid Wst
Address	Clyde
Email To:	
Phone 627-8042	Fax
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Stephen King
Copy To:	
Purchase Order No.:	
Project Name:	White Oak LF
Project Number:	

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ Other_____

SITE LOCATION: ☐ QA ☐ IL ☐ IN ☐ MI ☐ MN ☑ NC ☐ OH ☐ SC ☐ WI ☐ OTHER _____

Section D Required Client Information

SAMPLE ID: One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N) / Requested Analysis: pH temp specond	Stabilized H2O	Metals Z VOA	Acetone Z VOA	Residual Chlorine (Y/N)	Pace Project Number / Lab I.D.
1	MW-4A	GW				4-24	1540		4			1	3					X	X	X	X		217964
2	MW-5A						1345		4			1	3					X	X	X	X		
3	MW-5D						1350		4			1	3					X	X	X	X		
4	MW-12						1445		4			1	3					X	X	X	X		
5	MW-13S						1425		4			1	3					X	X	X	X		
6	MW-13D						1430		4			1	3					X	X	X	X		
7	MW-9						1030		4			1	3					X	X	X	X		
8	MW-15						1155		4			1	3					X	X	X	X		
9																							
10																							
11																							
12																							

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITION			
	4-24-08	1600	[signature]	4/24	1600		Y/N	Y/N	Y/N
M. L. Swann	4-24	1644	[signature]	4/24/08	1644	3.1	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

Temp in °C | Received on Ice | Custody Sealed Cooler | Samples Intact

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark L. Swann

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 4-24-08

SEE REVERSE SIDE FOR INSTRUCTIONS

ORIGINAL

APPENDIX D

Statistical Calculations

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

COMPOUND	TOTAL	ND	DETECTED	%ND	STATISTICAL TEST
Total Antimony	248	242	6	97.6%	Poisson Prediction Limits
Total Arsenic	249	214	35	85.9%	Kruskal-Wallis
Total Barium	253	24	229	9.5%	ANOVA
Total Beryllium	249	196	53	78.7%	Kruskal-Wallis
Total Cadmium	251	196	55	78.1%	Kruskal-Wallis
Total Chromium	249	119	130	47.8%	Kruskal-Wallis
Total Cobalt	251	153	98	61.0%	Kruskal-Wallis
Total Copper	249	137	112	55.0%	Kruskal-Wallis
Total Lead	252	165	87	65.5%	Kruskal-Wallis
Total Nickel	250	130	120	52.0%	Kruskal-Wallis
Total Selenium	249	245	4	98.4%	Poisson Prediction Limits
Total Silver	249	246	3	98.8%	Poisson Prediction Limits
Total Thallium	249	228	21	91.6%	Poisson Prediction Limits
Total Vanadium	251	115	136	45.8%	Kruskal-Wallis
Total Zinc	251	54	197	21.5%	Kruskal-Wallis
Carbon Disulfide	168	159	9	94.6%	Poisson Prediction Limits

Sampling Event	# Detected
N 1	71
N 2	13
N 3	14
N 4	3
N 5	72
N 6	23
N 7	15
N 8	17
N 9	12
N 10	92
N 11	128
N 12	64
N 13	89
N 14	104
N 15	81
N 16	91
N 17	93
N 18	43
N 19	56
N 20	58
N 21	84
N22	72

LEGEND FOR THE FOLLOWING PAGES:

ND = *Not Detected* at the method detection limit
MCL = *Maximum Contaminant Level*; NCAC 2L Standard
NE = *Not Established*; NC has not established a MCL
NP = *Not Present* during sampling event
NS = *Not Sampled*
NT = *Not Tested*
NA = information *Not Available*
MDL = *Method Detection Limit*

Total Detected Concentrations (per compound) =	1295
Total Detected Concentrations (per event) =	1295
Are all accounted for ?	Yes
Statistical Package Prepared By:	IAI
Statistical Package Checked By:	MSP

White Oak Landfill
- Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Antimony
MCL (µg/l): Not Established
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	10
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	30
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	10
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	10
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	10
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	10
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	30
04/15/02	15	ND	NS	ND	ND	ND	NT	ND	ND	ND	ND	11	ND	ND	ND	ND	NS	10
09/26/02	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	98	10
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	ND	10
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	5
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	5
04/25/07	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5

1) If not detected (ND), use half of the detection limit.

04/24/00	5	-	-	5	5	5	5	5	5	5	5	5	5	-	-	-	-
06/26/00	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/26/00	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/09/01	5	5	-	5	5	5	5	5	5	5	5	5	5	-	-	-	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/15/02	15	5	-	5	5	5	-	5	5	5	5	11	5	5	5	5	-
09/26/02	5	5	5	12	5	5	5	5	5	5	5	5	5	5	5	5	98
04/28/03	5	5	5	5	5	5	5	5	5	5	5	5	5	-	-	-	5
10/30/03	2.5	2.5	-	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/20/04	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
10/21/04	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/18/05	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	12
10/13/05	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/25/06	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
10/20/06	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-	2.5	2.5	2.5	2.5	2.5	2.5
04/25/07	3	3	3	3	3	20	3	3	3	3	3	3	3	3	3	3	3
10/31/07	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/23/08				2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 16.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_a).

$n = 41$
$T_{a1} = 189$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{a1} + ct^2/2 + ct[T_{a1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 14$
$n = 41$
$T_{a1} = 189$
$t[40,.01] = 2.423$
$c = 0.3415$
$T_{a2} = 35$
$T^*_k = 88.1$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{a2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Arsenic
NC MCL (µg/l): 50
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	10
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	10
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	10
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11	ND	ND	NS	10
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	17	ND	ND	NS	10
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	10
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	ND	NS	10
04/15/02	ND	ND	NS	ND	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	10
09/26/02	ND	5.7	ND	ND	ND	ND	ND	ND	27	ND	ND	ND	ND	30	6.5	ND	68	5
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	24	5
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	6.2	ND	5.3	ND	6.3	ND	ND	81	5
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.4	ND	9.2	ND	ND	30	5
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	59	5
04/18/05	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	5.2	ND	21	ND	ND	65	5
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	53	9.9	ND	44	5
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	42	10
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	11	25	ND	13	5
04/25/07	ND	ND	ND	ND	ND	280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	5
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	42.8	11.4	ND	21.4	5
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	ND	ND	10.2	5
N_i	17	16	11	15	15	15	14	15	15	14	14	15	15	15	15	16	12	
sum of rank values (R_i)	1827.5	1830.5	1182.5	1730.0	1612.5	1754.0	1505.0	1612.5	1743.0	1616.5	1505.0	1944.5	1612.5	2966.5	2093.5	1720.0	2869.0	
avg rank value (Rbar)	107.5	114.4	107.5	115.3	107.5	116.9	107.5	107.5	116.2	115.5	107.5	129.6	107.5	197.8	139.6	107.5	239.1	

	Number of each rank value																	Rank Value
rank value of NDs =	17	15	11	14	15	14	14	15	14	13	14	12	15	4	11	16	0	107.5
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	215.5
rank value of 5.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	217
rank value of 5.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	218
rank value of 6.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	219
rank value of 6.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	220
rank value of 6.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	221
rank value of 7.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	222
rank value of 9.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	223
rank value of 9.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	224
rank value of 10s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	225
rank value of 10.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	226
rank value of 11s =	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	227.5
rank value of 11.4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	229
rank value of 12s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	230.5
rank value of 13s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	232
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	233
rank value of 21s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	234
rank value of 21.4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	235
rank value of 24s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	236
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	237
rank value of 27s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	238
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	239.5
rank value of 42s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	241
rank value of 42.8s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	242
rank value of 44s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	243
rank value of 53s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	244
rank value of 59s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	245
rank value of 65s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	246
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	247
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	248
rank value of 280s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	249

n =	17	16	11	15	15	15	14	15	15	14	14	15	15	15	15	16	12

Sum of rank value calculations

1827.5	1612.5	1182.5	1505	1612.5	1505	1505	1612.5	1505	1397.5	1505	1290	1612.5	430	1182.5	1720	0
0	0	0	0	0	0	0	0	0	0	0	215.5	0	215.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	217	0	0	0	0	0
0	218	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	219	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	220	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	221	0	0
0	0	0	0	0	0	0	0	0	0	0	222	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	223	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	224	0	0
0	0	0	225	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	226
0	0	0	0	0	0	0	0	0	0	0	0	0	455	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	229	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	230.5	0	0	230.5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	232
0	0	0	0	0	0	0	0	0	0	0	0	0	233	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	234	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	236
0	0	0	0	0	0	0	0	0	0	0	0	0	0	237	0	0
0	0	0	0	0	0	0	0	238	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	239.5	0	0	239.5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	241
0	0	0	0	0	0	0	0	0	0	0	0	0	242	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	243
0	0	0	0	0	0	0	0	0	0	0	0	0	244	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	247
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	248
0	0	0	0	0	249	0	0	0	0	0	0	0	0	0	0	0

sum of rank values (R_i)	1827.5	1830.5	1182.5	1730	1612.5	1754	1505	1612.5	1743	1616.5	1505	1944.5	1612.5	2966.5	2093.5	1720	2869

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} - 3(N+1)$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Ri^2/N_i =	532510.0	199527	173344	205101	161788	173344	202537	186648	161788	252072	173344	586675	292183	184900	685930

N_{bg} = 44
N = 249
H = 54.18

Adjust H for ties:

T_i = 1E+07 sum of T1..T4

$H' = H/(1-(T_i/(N^3-N)))$
H' = 148.36
Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 23.68 which is less than H' =148.36.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
N_{bg} = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	115.3	107.5	116.9	107.5	107.5	116.2	115.5	107.5	129.6	107.5	197.8	139.6	107.5	239.1
avg Rbar (background) =	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
Dx =	5.3	-2.5	6.9	-2.5	-2.5	6.2	5.5	-2.5	19.6	-2.5	87.8	29.6	-2.5	129.1
Cx =	50.2	50.2	50.2	51.5	50.2	50.2	51.5	51.5	50.2	50.2	50.2	50.2	49.0	54.7
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes
SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	No	-	-	No

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Arsenic averaged over these compliance wells
are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Arsenic
NC MCL (µg/l):	50
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-12	MDL
9/18/2001	11	10
10/29/2001	17	10
1/30/2002	ND	10
4/15/2002	ND	10
9/26/2002	30	5
10/30/2003	6.3	5
4/20/2004	9.2	5
10/21/2004	ND	5
4/18/2005	21	5
10/13/2005	53	5
4/25/2006	12	10
10/20/2006	11	5
4/25/2007	ND	5
10/31/2007	42.8	5
4/23/2008	5.2	5

If not detected (ND), use half of the detection limit.

	X_i values =
11	-95.2353
17	2.9447037
5	-1179.815
5	-1179.815
30	3006.768
6.3	-795.739
9.2	-258.0693
2.5	-2230.974
21	160.39804
53	52453.625
12	-45.37196
11	-95.2353
2.5	-2230.974
42.8	20197.723
5.2	-1114.083

X_{bar} = 15.566667
SD = 15.203133
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 4439.7431
γ_1 = 1.4012107

Since the Coefficient of Skewness of 1.40 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

	ln =	X_i values =
	2.3978953	0.0002323
	2.8332133	0.1226089
	1.6094379	-0.384215
	1.6094379	-0.384215
	3.4011974	1.2071856
	1.8405496	-0.12193
	2.2192035	-0.001611
	0.9162907	-2.864082
	3.0445224	0.355046
	3.9702919	4.3616665
	2.4849066	0.0032737
	2.3978953	0.0002323
	0.9162907	-2.864082
	3.7565381	2.8639906
	1.6486586	-0.325325

X_{bar} = 2.336422
SD = 0.9419215
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.1312518
γ_1 = 0.174183

Since the Coefficient of Skewness of 0.17 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-12	MDL	Data for Testing
9/18/2001	11	10	2.3978953
10/29/2001	17	10	2.8332133
1/30/2002	ND	10	1.6094379
4/15/2002	ND	10	1.6094379
9/26/2002	30	5	3.4011974
10/30/2003	6.3	5	1.8405496
4/20/2004	9.2	5	2.2192035
10/21/2004	ND	5	0.9162907
4/18/2005	21	5	3.0445224
10/13/2005	53	5	3.9702919
4/25/2006	12	10	2.4849066
10/20/2006	11	5	2.3978953
4/25/2007	ND	5	0.9162907
10/31/2007	42.8	5	3.7565381
4/23/2008	5.2	5	1.6486586

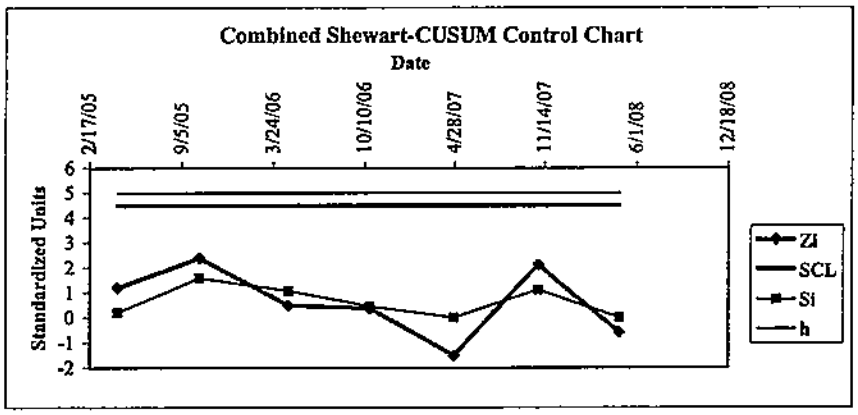
Compute the mean and standard deviation of the historical data:

2.1034032 = x_{mean} (Mean of N1-N8 historical data)
0.7822458 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	3.0445224	1.20309913	0.2030991	5	4.5
10/13/2005	3.9702919	2.3865756	1.5896747	5	4.5
4/25/2006	2.4849066	0.48770277	1.0773775	5	4.5
10/20/2006	2.3978953	0.37646999	0.4538475	5	4.5
4/25/2007	0.9162907	-1.5175697	0	5	4.5
10/31/2007	3.7565381	2.11331901	1.113319	5	4.5
4/23/2008	1.6486586	-0.5813321	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Arsenic
NC MCL (µg/l):	50
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	68	5
4/28/2003	24	5
10/30/2003	81	5
4/20/2004	30	5
10/21/2004	59	5
4/18/2005	65	5
10/13/2005	44	5
4/25/2006	42	10
10/20/2006	13	5
4/25/2007	12	5
10/31/2007	21.4	5
4/23/2008	10.2	5

If not detected (ND), use half of the detection limit.

	X_i values =
68	24054.144
24	-3465.802
81	73384.638
30	-761.8824
59	7841.0643
65	17306.984
44	115.2643
42	23.55763
13	-17847.79
12	-19976.04
21.4	-5576.621
10.2	-24221.19

X_{bar} = 39.133333
SD = 24.429838
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 4239.6941
γ_1 = 0.3313261

Since the Coefficient of Skewness of 0.33 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the real detected values shown above.

	X_i values =
ln = 4.2195077	0.4552692
3.1780538	-0.02016
4.3944492	0.8418481
3.4011974	-0.000118
4.0775374	0.2468678
4.1743873	0.3797683
3.7841896	0.0372499
3.7376696	0.0237515
2.5649494	-0.693788
2.4849066	-0.899505
3.0633909	-0.057883
2.3223877	-1.434605

X_{bar} = 3.4502189

$SD = 0.7267071$
$N = 12$
$1/N\Sigma_i(X_i-X_{bar})^3 = -0.093442$
$\gamma_1 = 0.2774258$

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	68	5	68
4/28/2003	24	5	24
10/30/2003	81	5	81
4/20/2004	30	5	30
10/21/2004	59	5	59
4/18/2005	65	5	65
10/13/2005	44	5	44
4/25/2006	42	10	42
10/20/2006	13	5	13
4/25/2007	12	5	12
10/31/2007	21.4	5	21.4
4/23/2008	10.2	5	10.2

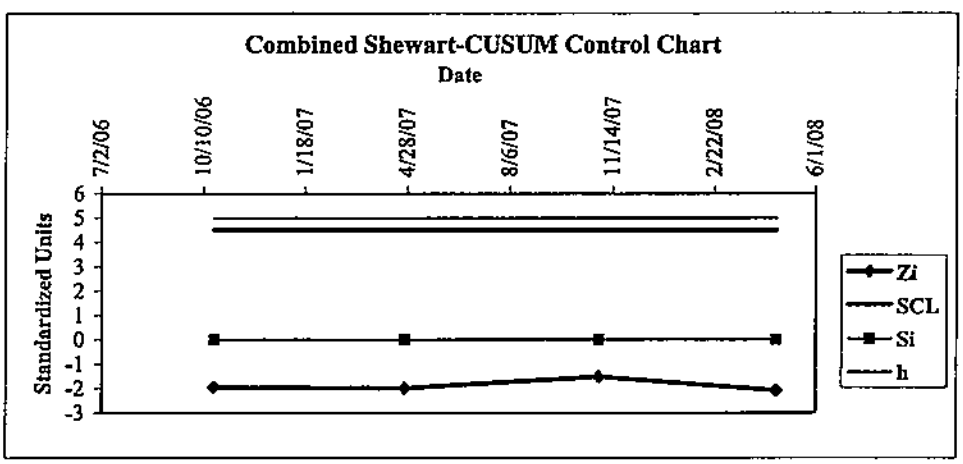
Compute the mean and standard deviation of the historical data:

51.625 = x_{mean} (Mean of N1-N8 historical data)
19.805753 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	13	-1.9501909	0	5	4.5
4/25/2007	12	-2.0006813	0	5	4.5
10/31/2007	21.4	-1.5260717	0	5	4.5
4/23/2008	10.2	-2.091564	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

Compound: Total Barium
NC MCL (µg/l): 2000
Method: ANOVA
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	250	NS	NS	240	420	200	63	300	93	81	170	130	ND	NS	NS	NS	NS	5
06/26/00	300	67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
07/26/00	330	30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
09/18/00	NS	NS	NS	330	92	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	500
04/09/01	1300	380	NS	180	330	120	80	290	360	80	140	970	130	NS	NS	NS	NS	5
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1800	4700	90	NS	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3000	450	27	NS	5
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	980	360	41	NS	5
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	NS	1300	NS	500
04/15/02	1300	41	NS	ND	ND	160	23	190	460	180	250	1400	810	540	820	38	NS	5
09/26/02	330	500	750	4200	120	230	93	410	910	130	328	1400	140	2600	1600	46	11000	5
04/22/03	600	66	220	1800	160	140	110	92	340	95	140	800	140	NT	NT	NT	2800	5
10/30/03	328	100	NT	210	310	130	95	110	1200	580	190	270	130	920	320	29	4900	5
04/20/04	320	56	120	410	460	170	140	210	62	85	170	940	150	1600	860	36	2000	5
10/21/04	320	40	200	300	310	140	140	130	12	100	320	900	110	2700	1700	29	4900	5
04/18/05	480	55	160	7200	630	180	160	140	12	78	150	1000	140	2000	1800	31	3700	5
10/13/05	770	37	160	1700	870	250	160	140	27	110	290	810	150	5500	4400	37	2700	5
04/25/06	650	ND	ND	ND	1100	ND	ND	ND	ND	820	ND	750	ND	ND	1700	ND	2700	500
10/20/06	410	22	180	470	1100	ND	ND	ND	160	NS	NS	ND	ND	1800	1400	ND	650	5
04/25/07	290	ND	200	240	1300	1500	130	190	ND	240	250	ND	160	160	120	ND	600	100
10/31/07	501	31.5	223	198	1350	591	184	208	62.4	86.7	149	516	201	2000	1400	30.1	872	5
04/23/08	194	30.8	253	160	1130	661	216	202	61.8	257	256	151	185	171	169	24.1	361	5

If not detected (ND), use the natural log of half of the detection limit.

ln =	5.52146			5.48064	6.04025	5.29832	4.14313	5.70378	4.5326	4.39445	5.1358	5.43808	0.91629					
	5.70378	4.20469																
	5.79909	3.4012																
				5.79909	4.52179													
	7.17012	5.94017		5.19296	5.79909	4.78749	4.38203	5.66988	5.8861	4.38203	4.94164	6.8773	4.86753					
														7.49554	8.45532	4.49981		
														8.00637	6.10925	3.29584		
														6.88755	5.8861	3.71357		
														1.09861		7.17012		
	7.17012	3.71357		0.91629	0.91629	5.07517	3.13549	5.24702	6.13123	5.19296	5.52146	7.24423	4.70048	6.29157	6.7093	3.63759		
	5.79909	6.21461	6.62007	8.34284	4.78749	5.43808	4.5326	6.01616	6.81344	4.86753	5.76832	7.24423	4.94164	9.05952	7.37776	3.82864	9.30565	
	6.39693	4.18965	5.39363	7.49554	5.07517	4.94164	4.70048	4.52179	5.8861	4.55388	4.94164	6.68461	4.94164				7.93737	
	5.76832	4.60517		5.34711	5.73657	4.86753	4.55388	4.70048	7.09008	6.36303	5.24702	5.59842	4.86753	6.82437	5.76832	3.3673	8.49699	
	5.76832	4.02535	4.78749	6.01616	6.13123	5.1358	4.94164	5.34711	4.12713	4.44265	5.1358	6.84588	5.01064	7.37776	6.75693	3.58352	7.6009	
	5.76832	3.68888	5.29832	5.70378	5.73657	4.94164	4.94164	4.86753	2.48491	4.60517	5.76832	6.80239	4.70048	7.90101	7.43838	3.3673	8.49699	
	6.17379	4.00733	5.07517	7.43838	6.76849	5.52146	5.07517	4.94164	3.29584	4.70048	5.66988	6.69703	5.01064	8.6125	8.38936	3.29584	7.90101	
	6.64639	3.61092	5.07517	7.43838	6.76849	5.52146	5.07517	4.94164	2.48491	4.35671	5.01064	6.90776	4.94164	7.6009	6.90776	3.43399	8.21609	
	6.47697	5.52146	5.52146	5.52146	7.00307	5.52146	5.52146	5.52146	5.52146	6.7093	5.52146	6.62007	5.52146	5.52146	7.43838	5.52146	7.90101	
	6.01616	3.09104	5.19296	6.15273	7.00307	0.91629	0.91629	0.91629	5.07517			0.91629	0.91629	7.49554	7.24423	0.91629	6.47697	
	5.66988	3.91202	5.29832	5.48064	7.17012	7.31322	4.86753	5.19296	3.91202	5.48064	5.52146	3.91202	5.07517	5.07517	4.78749	3.91202	6.39693	
	6.21661	3.44999	5.40717	5.22827	7.20786	6.38182	5.21494	5.30754	4.13357	4.46245	5.00395	6.24611	5.3033	7.6009	7.24423	3.40453	6.77079	
	5.26786	3.47751	5.53339	5.12396	7.11477	6.49375	5.37574	5.30527	4.1239	5.54908	5.56518	5.01778	5.22036	5.14166	5.1299	3.18221	5.88888	

n_i =	17	16	11	16	16	15	15	15	15	14	14	15	15	16	15	16	12	
X_i =	103.333	67.0036	59.2032	94.1817	93.4253	77.8266	67.3767	74.2336	71.4985	70.8604	74.7326	89.0517	66.9351	107.99	101.643	60.13	91.3896	1370.01 = $X_{..}$
$Xi.bar$ =	6.07842	4.18772	5.3821	5.88636	5.83908	5.18844	4.49178	4.9489	4.76656	5.00431	5.33804	5.93678	4.46234	6.7494	6.77618	3.75813	7.6158	5.42 = $X_{..}bar$
std dev =	0.543	0.93158	0.46556	1.77029	1.5702	1.37818	1.14632	1.18492	1.44433	0.76325	0.30976	1.6698	1.45554	1.89268	1.07035	1.28446	1.0231	
$ni*(Xi.bar-X_{..}bar)^2$ =	7.48047	24.1024	0.01196	3.55364	2.87645	0.77046	12.7871	3.25978	6.30855	2.36222	0.08309	4.08259	13.6156	28.4868	27.789	43.9279	58.118	
$(Xi.^2/n_i)$ =	628.103	280.592	318.638	554.387	545.518	403.799	302.642	367.375	340.602	350.604	398.926	528.68	298.687	728.871	688.749	225.976	696.005	

	SS	df	MS F	Fc
SSw	239.616	16	14.976 9	1.67
SS_error	381.295	236	1.61565	
SSt	620.911	252		

The calculated F statistic is 9.27. The tabulated Fc value with 16 and 236 degrees of freedom and the α=0.05 level is 1.67 (Table 2 of IPG). Since the calculated value of F exceeds the tabulated value of Fc, the hypothesis of equal means must be rejected, and post hoc comparisons are necessary (see below).

Bonferroni statistics

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
$Xbar_i$ = avg per well =	5.88636	5.83908	5.18844	4.49178	4.9489	4.76656	5.00431	5.33804	5.93678	4.46234	6.7494	6.77618	3.75813	7.6158
D_{ij} = $Xbar_i$ - $Xbar_{bg}$ =	0.66954	0.62226	-0.0284	-0.725	-0.2679	-0.4503	-0.2125	0.12122	0.71996	-0.7545	1.53259	1.55936	-1.4587	2.39898
= [MS-error*($1/n_{bg}$ + $1/n_i$)]^0.5 =	0.47167	0.47167	0.48306	0.48306	0.48306	0.48306	0.49576	0.49576	0.48306	0.48306	0.47167	0.48306	0.47167	0.52617
D_{ij} = SE_i * t_{ij} =	1.09899	1.09899	1.12553	1.12553	1.12553	1.12553	1.15512	1.15512	1.12553	1.12553	1.09899	1.12553	1.09899	1.22597
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	No	No	-	No

44 = n_{bg}
5.21681688 = $Xbar_{bg}$ (average background: MW-11S, MW-11D, & MW-14)
1.61565496 = MS_error
236 = degrees of freedom
14 = m (number of compliance wells)
2.33 = t_{ij} (from Table 3 of IPG)

The F test was significant at the 5% level. The Bonferroni multiple comparisons procedure was then used to determine for which wells there was statistically significant evidence of contamination.
If the calculated D_{ij} value exceeds the corresponding D_i value, it can be concluded that there is significant evidence of contamination.
Significant evidence of contamination is present in the 3 monitoring wells indicated above.
Perform a Shewart-CUSUM Control Chart evaluation to determine if intrawell statistical significance is present.

Compound: Total Barium
AL MCL (µg/l): 2000
Method: Levene's Test for Homogeneity
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
4/24/2000	250	NS	NS	240	420	200	63	300	93	81	170	230	ND	NS	NS	NS	NS	5
6/26/2000	300	67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
7/26/2000	330	30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
9/18/2000	NS	NS	NS	330	92	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	500
4/9/2001	1300	380	NS	180	330	120	80	290	360	80	140	970	130	NS	NS	NS	NS	5
9/18/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1800	4700	90	NS	5
10/29/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3000	450	27	NS	5
1/30/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	980	360	41	NS	5
2/28/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	NS	1300	NS	500
4/15/2002	1300	41	NS	ND	ND	160	23	190	460	180	250	1400	110	540	820	38	NS	5
9/26/2002	330	500	750	4200	120	230	93	410	910	130	320	1400	140	8600	1600	46	11000	5
4/28/2003	600	66	220	1800	160	140	110	92	360	95	140	800	140	NT	NT	NT	2800	5
10/30/2003	320	100	NT	210	310	130	95	110	1200	580	190	270	130	920	320	29	4900	5
4/20/2004	320	56	120	410	460	170	140	210	62	85	170	940	150	1600	860	36	2000	5
10/21/2004	320	40	200	300	310	140	140	130	12	100	320	900	110	2700	1700	29	4900	5
4/18/2005	480	55	160	7200	610	180	160	140	12	78	150	1000	140	2000	1000	31	3700	5
10/13/2005	770	37	160	1700	870	250	160	140	27	110	290	810	150	5500	4400	27	2700	5
4/25/2006	650	ND	ND	ND	1100	ND	ND	ND	ND	820	ND	750	ND	ND	1700	ND	2700	500
10/20/2006	410	22	180	470	1100	ND	ND	ND	160	NS	NS	ND	ND	1800	1400	ND	650	5
4/25/2007	290	ND	200	240	1300	1500	130	180	ND	240	250	ND	160	160	120	ND	600	100
10/31/2007	501	31.5	223	198	1350	591	184	208	62.4	86.7	149	516	201	2000	1400	30.1	872	5
4/23/2008	194	30.8	253	168	1230	661	216	202	61.8	257	256	151	185	171	169	24.1	361	5

If not detected (ND), use half of the detection limit.

	250			240	420	200	63	300	93	81	170	230	2.5				
	300	67															
	330	30															
				330	92												
	1300	380		180	330	120	80	290	360	80	140	970	130				
														1800	4700	90	
														3000	450	27	
														980	360	41	
														3		1300	
	1300	41		2.5	2.5	160	23	190	460	180	250	1400	110	540	820	38	
	330	500	750	4200	120	230	93	410	910	130	320	1400	140	8600	1600	46	11000
	600	66	220	1800	160	140	110	92	360	95	140	800	140				2800
	320	100		210	310	130	95	110	1200	580	190	270	130	920	320	29	4900
	320	56	120	410	460	170	140	210	62	85	170	940	150	1600	860	36	2000
	320	40	200	300	310	140	140	130	12	100	320	900	110	2700	1700	29	4900
	480	55	160	7200	610	180	160	140	12	78	150	1000	140	2000	1000	31	3700
	770	37	160	1700	870	250	160	140	27	110	290	810	150	5500	4400	27	2700
	650	250	250	250	1100	250	250	250	250	820	250	750	250	250	1700	250	2700
	410	22	180	470	1100	2.5	2.5	2.5	160			2.5	2.5	1800	1400	2.5	650
	290	50	200	240	1300	1500	130	180	50	240	250	50	160	160	120	50	600
	501	31.5	223	198	1350	591	184	208	62.4	86.7	149	516	201	2000	1400	30.1	872
	194	30.8	253	168	1230	661	216	202	61.8	257	256	151	185	171	169	24.1	361
$n =$	17	16	11	16	16	15	15	15	15	14	14	15	15	16	15	16	12
bar $x_i =$	509.71	109.77	246.91	1118.7	610.28	314.97	123.1	190.3	272.01	208.76	217.5	679.3	133.4	2001.5	1399.9	128.17	3098.6
$z_{ij} =$	259.71			878.66	190.28	114.97	60.1	109.7	179.01	127.76	47.5	449.3	130.9				
	209.71	42.769															
	179.71	79.769															
				788.66	518.28												
	790.29	270.23		938.66	280.28	194.97	43.1	99.7	87.987	128.76	77.5	290.7	3.4				
														201.5	3300.1	38.169	
														998.5	949.93	101.17	
														1021.5	1039.9	87.169	
														1998.5		1171.8	
	790.29	68.769		1116.2	607.78	154.97	100.1	0.3	187.99	28.764	32.5	720.7	23.4	1461.5	579.93	90.169	
	179.71	390.23	503.09	3081.3	490.28	84.967	30.1	219.7	637.99	78.764	102.5	720.7	6.6	6598.5	200.07	82.169	7901.4
	90.294	43.769	26.909	681.34	450.28	174.97	13.1	98.3	87.987	113.76	77.5	120.7	6.6				298.58
	189.71	9.7688		908.66	300.28	184.97	28.1	80.3	927.99	371.24	27.5	409.3	3.4	1081.5	1079.9	99.169	1801.4
	189.71	53.769	126.91	708.66	150.28	144.97	16.9	19.7	210.01	123.76	47.5	260.7	16.6	401.5	539.93	92.169	1098.6
	189.71	69.769	46.909	818.66	300.28	174.97	16.9	60.3	260.01	108.76	102.5	220.7	23.4	698.5	300.07	99.169	1801.4
	29.706	54.769	86.909	6081.3	0.2813	134.97	36.9	50.3	260.01	130.76	67.5	320.7	6.6	1.5	399.93	97.169	601.42
	260.29	72.769	86.909	581.34	259.72	64.967	36.9	50.3	245.01	98.764	72.5	130.7	16.6	3498.5	3000.1	101.17	398.58
	140.29	140.23	3.0909	868.66	489.72	64.967	126.9	59.7	22.013	611.24	32.5	70.7	116.6	1751.5	300.07	121.83	398.58
	99.706	87.769	66.909	648.66	489.72	312.47	120.6	187.8	112.01			676.8	130.9	201.5	0.0667	125.67	2448.6
	219.71	59.769	46.909	878.66	689.72	1185	6.9	10.3	222.01	31.236	32.5	629.3	26.6	1841.5	1279.9	78.169	2498.6
	8.7059	78.269	23.909	920.66	739.72	276.03	60.9	17.7	209.61	122.06	68.5	163.3	67.6	1.5	0.0667	98.069	2226.6
	315.71	78.969	6.0909	950.66	619.72	346.03	92.9	11.7	210.21	48.236	38.5	528.3	51.6	1830.5	1230.9	104.07	2737.6
bar $z_i =$	243.7	100.09	93.14	1303.2	411.04	240.95	52.693	71.72	257.32	151.71	59.071	380.84	42.053	1474.3	946.73	161.71	2017.6
n_i * bar $z_i^2 =$	1E+06	160278	95427	3E+07	3E+06	870829	41649	77156	993238	322206	48852	2E+06	26527	3E+07	1E+07	418391	5E+07

bar z = 471.05
N = 253

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	8E+07	16	5E+06	4.71	1.67
Error	2E+08	236	1E+06		
Total	3E+08	252			

Since the F-ratio = 4.71 exceeds the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 16 and 236 df, the assumption of equal variances should be rejected.
Re-test the data set using the natural log of the above values.

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
ln=	5.5215			5.4806	6.0403	5.2983	4.1431	5.7038	4.5326	4.3944	5.1358	5.4381	0.9163				
	5.7038	4.2047															
	5.7991	3.4012															
				5.7991	4.5218												
	7.1701	5.9402		5.193	5.7991	4.7875	4.382	5.6699	5.8861	4.382	4.9416	6.8773	4.8675				
														7.4955	8.4553	4.4998	
														8.0064	6.1092	3.2958	
														6.8876	5.8861	3.7136	
														1.0986		7.1701	
	7.1701	3.7136		0.9163	0.9163	5.0752	3.1355	5.247	6.1312	5.193	5.5215	7.2442	4.7005	6.2916	6.7093	3.6376	
	5.7991	6.2146	6.6201	8.3428	4.7875	5.4381	4.5326	6.0162	6.8134	4.8675	5.7683	7.2442	4.9416	9.0595	7.3778	3.8286	9.3057
	6.3969	4.1897	5.3936	7.4955	5.0752	4.9416	4.7005	4.5218	5.8861	4.5539	4.9416	6.6846	4.9416				7.9374
	5.7683	4.6052		5.3471	5.7366	4.8675	4.5539	4.7005	7.0901	6.363	5.247	5.5984	4.8675	6.8244	5.7683	3.3673	8.497
	5.7683	4.0254	4.7875	6.0162	6.1312	5.1358	4.9416	5.3471	4.1271	4.4427	5.1358	6.8459	5.0106	7.3778	6.7569	3.5835	7.6009
	5.7683	3.6889	5.2983	5.7038	5.7366	4.9416	4.9416	4.8675	2.4849	4.6052	5.7683	6.8024	4.7005	7.901	7.4384	3.3673	8.497
	6.1738	4.0073	5.0752	8.8818	6.4135	5.193	5.0752	4.9416	2.4849	4.3567	5.0106	6.9078	4.9416	7.6009	6.9078	3.434	8.2161
	6.6464	3.6109	5.0752	7.4384	6.7685	5.5215	5.0752	4.9416	3.2958	4.7005	5.6699	6.697	5.0106	8.6125	8.3894	3.2958	7.901
	6.477	5.5215	5.5215	5.5215	7.0031	5.5215	5.5215	5.5215	5.5215	6.7093	5.5215	6.6201	5.5215	5.5215	7.4384	5.5215	7.901
	6.0162	3.091	5.193	6.1527	7.0031	0.9163	0.9163	0.9163	5.0752			0.9163	0.9163	7.4955	7.2442	0.9163	6.477
	5.6699	3.912	5.2983	5.4806	7.1701	7.3132	4.8675	5.193	3.912	5.4806	5.5215	3.912	5.0752	5.0752	4.7875	3.912	6.3969
	6.2166	3.45	5.4072	5.2883	7.2079	6.3818	5.2149	5.3375	4.1336	4.4625	5.0039	6.2461	5.3033	7.6009	7.2442	3.4045	6.7708
	5.2679	3.4275	5.5334	5.124	7.1148	6.4938	5.3753	5.3083	4.1239	5.5491	5.5452	5.0173	5.2204	5.1417	5.1299	3.1822	5.8889
n =	17	16	11	16	16	15	15	15	15	14	14	15	15	16	15	16	12
bar x_i =	6.0784	4.1877	5.3821	5.8864	5.8391	5.1884	4.4918	4.9489	4.7666	5.0043	5.338	5.9368	4.4623	6.7494	6.7762	3.7581	7.6158
z_{ij} =	0.557			0.4057	0.2012	0.1099	0.3486	0.7549	0.234	0.6099	0.2022	0.4987	3.546				
	0.3746	0.017															
	0.2793	0.7865															
				0.0873	1.3173												
	1.0917	1.7524		0.6934	0.04	0.401	0.1098	0.721	1.1195	0.6223	0.3964	0.9405	0.4052				
														0.7461	1.6791	0.7417	
														1.257	0.6669	0.4623	
														0.1381	0.8901	0.0446	
														5.6508		3.412	
	1.0917	0.4742		4.9701	4.9228	0.1133	1.3563	0.2981	1.3647	0.1886	0.1834	1.3074	0.2381	0.4578	0.0669	0.1205	
	0.2793	2.0269	1.238	2.4565	1.0516	0.2496	0.0408	1.0673	2.0469	0.1368	0.4303	1.3074	0.4793	2.3101	0.6016	0.0705	1.6899
	0.3185	0.0019	0.0115	1.6092	0.7639	0.2468	0.2087	0.4271	1.1195	0.4504	0.3964	0.7478	0.4793				0.3216
	0.3101	0.4174		0.5392	0.1025	0.3209	0.0621	0.2484	2.3235	1.3587	0.091	0.3384	0.4052	0.075	1.0079	0.3908	0.8812
	0.3101	0.1624	0.5946	0.1298	0.2921	0.0526	0.4499	0.3982	0.6394	0.5617	0.2022	0.9091	0.5483	0.6284	0.0192	0.1746	0.0149
	0.3101	0.4988	0.0838	0.1826	0.1025	0.2468	0.4499	0.0814	2.2817	0.3991	0.4303	0.8656	0.2381	1.1516	0.6622	0.3908	0.8812
	0.0954	0.1804	0.3069	2.9955	0.5744	0.0045	0.5834	0.0073	2.2817	0.6476	0.3274	0.971	0.4793	0.8515	0.1316	0.3241	0.6003
	0.568	0.5768	0.3069	1.552	0.9294	0.333	0.5834	0.0073	1.4707	0.3038	0.3318	0.7603	0.5483	1.8631	1.6132	0.4623	0.2852
	0.3985	1.3337	0.1394	0.3649	1.164	0.333	1.0297	0.5726	0.7549	1.705	0.1834	0.6833	1.0591	1.2279	0.6622	1.7633	0.2852
	0.0623	1.0967	0.1891	0.2664	1.164	4.2722	3.5755	4.0326	0.3086			5.0205	3.546	0.7461	0.468	2.8418	1.1388
	0.4035	0.2757	0.0838	0.4057	1.331	2.1248	0.3758	0.2441	0.8545	0.4763	0.1834	2.0248	0.6128	1.6742	1.9887	0.1539	1.2189
	0.1382	0.7377	0.0251	0.5981	1.3688	1.1934	0.7232	0.3886	0.633	0.5419	0.3341	0.3093	0.841	0.8515	0.468	0.3536	0.845
	0.8106	0.7602	0.1513	0.7624	1.2757	1.3053	0.8835	0.3594	0.6427	0.5448	0.2071	0.9195	0.758	1.6077	1.6463	0.5759	1.7269
bar z_i =	0.4355	0.6937	0.2846	1.1262	1.0376	0.7538	0.7187	0.6405	1.205	0.6105	0.2785	1.1736	0.9456	1.3273	0.8381	0.7677	0.8241
n_i * bar z_i^2 =	3.2246	7.699	0.8909	20.292	17.225	8.5233	7.7478	6.1544	21.781	5.2178	1.0862	20.659	13.413	28.188	10.537	9.4293	8.1494

bar z = 0.8036
N = 253

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	26.84	16	1.68	1.37	1.67
Error	288.69	236	1.22		
Total	315.53	252			

Since the F-ratio = 1.37 does not exceed the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 16 and 236 df, the assumption of equal means should be accepted.
Proceed with further statistical tests using the log-transformed values shown above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Barium
NC MCL (µg/l): 2000
Method: Skewness Test for Normality
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
4/24/00	250	NS	NS	240	420	200	63	300	93	81	170	230	ND	NS	NS	NS	NS	5
6/26/00	300	67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
7/26/00	330	30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
9/18/00	NS	NS	NS	330	92	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	500
4/9/01	1300	380	NS	180	330	120	80	290	360	80	140	970	130	NS	NS	NS	NS	5
9/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1800	4700	90	NS	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3000	450	27	NS	5
1/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	980	360	41	NS	5
2/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	NS	1300	NS	500
4/15/02	1300	41	NS	ND	ND	160	23	190	460	180	250	1400	110	540	820	38	NS	5
9/26/02	330	500	750	4200	120	230	93	410	910	130	320	1400	140	8600	1600	46	11000	5
4/28/03	600	66	220	1800	160	140	110	92	360	95	140	800	140	NT	NT	NT	2800	5
10/30/03	320	100	NT	210	310	130	95	110	1200	580	190	270	130	920	320	29	4900	5
4/20/04	320	56	120	410	460	170	140	210	62	85	170	940	150	1600	860	36	2000	5
10/21/04	320	40	200	300	310	140	140	130	12	100	320	900	110	2700	1700	29	4900	5
4/18/05	480	55	160	7200	610	180	160	140	12	78	150	1000	140	2000	1000	31	3700	5
10/13/05	770	37	160	1700	870	250	160	140	27	110	290	810	150	5500	4400	27	2700	5
4/25/06	650	ND	ND	ND	1100	ND	ND	ND	ND	820	ND	750	ND	ND	1700	ND	2700	500
10/20/06	410	22	180	470	1100	ND	ND	ND	160	NS	NS	ND	ND	1800	1400	ND	650	5
4/25/07	290	ND	200	240	1300	1500	130	180	ND	240	250	ND	160	160	120	ND	600	100
10/31/07	501	31.5	223	198	1350	591	184	208	62.4	86.7	149	516	201	2000	1400	30.1	872	5
4/23/08	194	30.8	253	168	1230	661	216	202	61.8	257	256	151	185	171	169	24.1	361	5

If not detected (ND), use half of the detection limit.

	250			240	420	200	63	300	93	81	170	230	2.5				
	300	67															
	330	30															
				330	92												
	1300	380		180	330	120	80	290	360	80	140	970	130				
														1800	4700	90	
														3000	450	27	
														980	360	41	
														3		1300	
	1300	41		2.5	2.5	160	23	190	460	180	250	1400	110	540	820	38	
	330	500	750	4200	120	230	93	410	910	130	320	1400	140	8600	1600	46	11000
	600	66	220	1800	160	140	110	92	360	95	140	800	140				2800
	320	100		210	310	130	95	110	1200	580	190	270	130	920	320	29	4900
	320	56	120	410	460	170	140	210	62	85	170	940	150	1600	860	36	2000
	320	40	200	300	310	140	140	130	12	100	320	900	110	2700	1700	29	4900
	480	55	160	7200	610	180	160	140	12	78	150	1000	140	2000	1000	31	3700
	770	37	160	1700	870	250	160	140	27	110	290	810	150	5500	4400	27	2700
	650	250	250	250	1100	250	250	250	250	820	250	750	250	250	1700	250	2700
	410	22	180	470	1100	2.5	2.5	2.5	160			2.5	2.5	1800	1400	2.5	650
	290	50	200	240	1300	1500	130	180	50	240	250	50	160	160	120	50	600
	501	31.5	223	198	1350	591	184	208	62.4	86.7	149	516	201	2000	1400	30.1	872
	194	30.8	253	168	1230	661	216	202	61.8	257	256	151	185	171	169	24.1	361

X_i values =	-6E+07			-7E+07	-1E+07	-9E+07	-2E+08	-4E+07	-2E+08	-2E+08	-1E+08	-7E+07	-3E+08				
	-4E+07	-2E+08															
	-3E+07	-2E+08															
				-3E+07	-2E+08												
	3E+08	-2E+07		-1E+08	-3E+07	-1E+08	-2E+08	-5E+07	-2E+07	-2E+08	-1E+08	3E+07	-1E+08				
														2E+09	7E+10	-2E+08	
														1E+10	-8E+06	-2E+08	
														4E+07	-2E+07	-2E+08	
														-3E+08		3E+08	
	3E+08	-2E+08		-3E+08	-3E+08	-1E+08	-2E+08	-1E+08	-7E+06	-1E+08	-6E+07	4E+08	-2E+08	-1E+06	5E+06	-2E+08	
	-3E+07	-3E+06	968220	4E+10	-1E+08	-7E+07	-2E+08	-1E+08	2E+07	-1E+08	-4E+07	4E+08	-1E+08	5E+11	9E+08	-2E+08	1E+12
	-1E+05	-2E+08	-8E+07	2E+09	-1E+08	-1E+08	-2E+08	-2E+08	-2E+07	-2E+08	-1E+08	3E+06	-1E+08				1E+10
	-4E+07	-2E+08		-9E+07	-4E+07	-1E+08	-2E+08	-2E+08	2E+08	-4E+05	-1E+08	-6E+07	-1E+08	2E+07	-4E+07	-2E+08	8E+10
	-4E+07	-2E+08	-1E+08	-1E+07	-7E+06	-1E+08	-1E+08	-9E+07	-2E+08	-2E+08	-1E+08	2E+07	-1E+08	9E+08	9E+06	-2E+08	2E+09
	-4E+07	-2E+08	-9E+07	-4E+07	-4E+07	-1E+08	-1E+08	-1E+08	-3E+08	-2E+08	-4E+07	2E+07	-2E+08	9E+09	1E+09	-2E+08	8E+10
	-5E+06	-2E+08	-1E+08	3E+11	-69278	-1E+08	-1E+08	-1E+08	-3E+08	-2E+08	-1E+08	4E+07	-1E+08	2E+09	4E+07	-2E+08	3E+10
	2E+06	-2E+08	-1E+08	1E+09	1E+07	-6E+07	-1E+08	-1E+08	-2E+08	-2E+08	-5E+07	4E+06	-1E+08	1E+11	5E+10	-2E+08	9E+09
	-1.228	-6E+07	-6E+07	-6E+07	9E+07	-6E+07	-6E+07	-6E+07	-6E+07	5E+06	-6E+07	968220	-6E+07	-6E+07	1E+09	-6E+07	9E+09
	-1E+07	-2E+08	-1E+08	-6E+06	9E+07	-3E+08	-3E+08	-3E+08	-1E+08			-3E+08	-3E+08	2E+09	4E+08	-3E+08	-1.228
	-5E+07	-2E+08	-9E+07	-7E+07	3E+08	6E+08	-1E+08	-1E+08	-2E+08	-7E+07	-6E+07	-2E+08	-1E+08	-1E+08	-1E+08	-2E+08	-1E+05
	-3E+06	-2E+08	-8E+07	-9E+07	3E+08	-2E+05	-1E+08	-9E+07	-2E+08	-2E+08	-1E+08	-2E+06	-9E+07	2E+09	4E+08	-2E+08	1E+07
	-1E+08	-2E+08	-6E+07	-1E+08	2E+08	978.92	-8E+07	-9E+07	-2E+08	-6E+07	-6E+07	-1E+08	-1E+08	-1E+08	-1E+08	-2E+08	-2E+07

X_{bar} = 651.07
SD = 1282.6
N = 253
$1/N\Sigma_i(X_i-X_{bar})^3$ = 9E+09
γ_1 = 4.5185

Since the Coefficient of Skewness of 4.52 is greater than 1.0, the data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
ln =	5.5215			5.4806	6.0403	5.2983	4.1431	5.7038	4.5326	4.3944	5.1358	5.4381	0.9163				
	5.7038	4.2047															
	5.7991	3.4012															
				5.7991	4.5218												
	7.1701	5.9402		5.193	5.7991	4.7875	4.382	5.6699	5.8861	4.382	4.9416	6.8773	4.8675				
														7.4955	8.4553	4.4998	
														8.0064	6.1092	3.2958	
														6.8876	5.8861	3.7136	
														1.0986		7.1701	
	7.1701	3.7136		0.9163	0.9163	5.0752	3.1355	5.247	6.1312	5.193	5.5215	7.2442	4.7005	6.2916	6.7093	3.6376	
	5.7991	6.2146	6.6201	8.3428	4.7875	5.4381	4.5326	6.0162	6.8134	4.8675	5.7683	7.2442	4.9416	9.0595	7.3778	3.8286	9.3057
	6.3969	4.1897	5.3936	7.4955	5.0752	4.9416	4.7005	4.5218	5.8861	4.5539	4.9416	6.6846	4.9416				7.9374
	5.7683	4.6052		5.3471	5.7366	4.8675	4.5539	4.7005	7.0901	6.363	5.247	5.5984	4.8675	6.8244	5.7683	3.3673	8.497
	5.7683	4.0254	4.7875	6.0162	6.1312	5.1358	4.9416	5.3471	4.1271	4.4427	5.1358	6.8459	5.0106	7.3778	6.7569	3.5835	7.6009
	5.7683	3.6889	5.2983	5.7038	5.7366	4.9416	4.9416	4.8675	2.4849	4.6052	5.7683	6.8024	4.7005	7.901	7.4384	3.3673	8.497
	6.1738	4.0073	5.0752	8.8818	6.4135	5.193	5.0752	4.9416	2.4849	4.3567	5.0106	6.9078	4.9416	7.6009	6.9078	3.434	8.2161
	6.6464	3.6109	5.0752	7.4384	6.7685	5.5215	5.0752	4.9416	3.2958	4.7005	5.6699	6.697	5.0106	8.6125	8.3894	3.2958	7.901
	6.477	5.5215	5.5215	5.5215	7.0031	5.5215	5.5215	5.5215	5.5215	6.7093	5.5215	6.6201	5.5215	5.5215	7.4384	5.5215	7.901
	6.0162	3.091	5.193	6.1527	7.0031	0.9163	0.9163	0.9163	5.0752			0.9163	0.9163	7.4955	7.2442	0.9163	6.477
	5.6699	3.912	5.2983	5.4806	7.1701	7.3132	4.8675	5.193	3.912	5.4806	5.5215	3.912	5.0752	5.0752	4.7875	3.912	6.3969
	6.2166	3.45	5.4072	5.2883	7.2079	6.3818	5.2149	5.3375	4.1336	4.4625	5.0039	6.2461	5.3033	7.6009	7.2442	3.4045	6.7708
	5.2679	3.4275	5.5334	5.124	7.1148	6.4938	5.3753	5.3083	4.1239	5.5491	5.5452	5.0173	5.2204	5.1417	5.1299	3.1822	5.8889

X_i values =	0.0012			0.0003	0.2443	-0.002	-2.058	0.0241	-0.687	-1.063	-0.022	1E-05	-91.05				
	0.0241	-1.773															
	0.0566	-8.168															
				0.0566	-0.713												
	5.4058	0.1448		-0.011	0.0566	-0.247	-1.102	0.0165	0.1045	-1.102	-0.106	3.1263	-0.164				
														9.0049	28.101	-0.767	
														17.4	0.3345	-9.518	
														3.1926	0.1045	-4.926	
														-80.42		5.4058	
	5.4058	-4.926		-91.05	-91.05	-0.039	-11.85	-0.005	0.3673	-0.011	0.0012	6.1199	-0.365	0.6734	2.1679	-5.616	
	0.0566	0.5111	1.7497	25.096	-0.247	1E-05	-0.687	0.2172	2.7344	-0.164	0.0441	6.1199	-0.106	48.405	7.5605	-3.993	58.89
	0.9465	-1.84	-1E-05	9.0049	-0.039	-0.106	-0.365	-0.713	0.1045	-0.639	-0.106	2.0461	-0.106				16.047
	0.0441	-0.531		-3E-04	0.0332	-0.164	-0.639	-0.365	4.6994	0.8518	-0.005	0.0062	-0.164	2.799	0.0441	-8.587	29.273
	0.0441	-2.684	-0.247	0.2172	0.3673	-0.022	-0.106	-3E-04	-2.136	-0.92	-0.022	2.9291	-0.066	7.5605	2.4161	-6.144	10.443
	0.0441	-5.144	-0.002	0.0241	0.0332	-0.106	-0.106	-0.164	-25.16	-0.531	0.0441	2.6701	-0.365	15.363	8.2829	-8.587	29.273
	0.4367	-2.79	-0.039	41.665	0.9951	-0.011	-0.039	-0.106	-25.16	-1.186	-0.066	3.3258	-0.106	10.443	3.3258	-7.775	21.976
	1.8668	-5.873	-0.039	8.2829	2.4791	0.0012	-0.039	-0.106	-9.518	-0.365	0.0165	2.1068	-0.066	32.689	26.312	-9.518	15.363
	1.1974	0.0012	0.0012	0.0012	4.0044	0.0012	0.0012	0.0012	0.0012	2.1679	0.0012	1.7497	0.0012	0.0012	8.2829	0.0012	15.363
	0.2172	-12.55	-0.011	0.4014	4.0044	-91.05	-91.05	-91.05	-0.039			-91.05	-91.05	9.0049	6.1199	-91.05	1.1974
	0.0165	-3.396	-0.002	0.0003	5.4058	6.8389	-0.164	-0.011	-3.396	0.0003	0.0012	-3.396	-0.039	-0.039	-0.247	-3.396	0.9465
	0.5149	-7.588	-5E-07	-0.002	5.7621	0.9035	-0.008	-5E-04	-2.105	-0.865	-0.069	0.5739	-0.001	10.443	6.1199	-8.127	2.4917
	-0.003	-7.852	0.0017	-0.025	4.9103	1.2551	-6E-05	-0.001	-2.153	0.0024	0.0022	-0.063	-0.007	-0.02	-0.023	-11.13	0.1064

X_{bar} = 5.4151
SD = 1.5697
N = 253
$1/N\Sigma_i(X_i-X_{bar})^3$ = -1.98
γ_1 = 0.5149

Since the Coefficient of Skewness of 0.51 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	**Total Barium**
NC MCL (µg/l):	2000
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-12	MDL
9/18/2001	1800	5
10/29/2001	3000	5
1/30/2002	980	5
4/15/2002	540	5
9/26/2002	8600	5
10/30/2003	920	5
4/20/2004	1600	5
10/21/2004	2700	5
4/18/2005	2000	5
10/13/2005	5500	5
4/25/2006	ND	500
10/20/2006	1800	5
4/25/2007	160	100
10/31/2007	2000	5
4/23/2008	171	5

If not detected (ND), use half of the detection limit.

	X_i values =
1800	-37505666
3000	647813390
980	-1.54E+09
540	-4.06E+09
8600	2.702E+11
920	-1.79E+09
1600	-1.53E+08
2700	180617626
2000	-2445824
5500	3.811E+10
250	-6.69E+09
1800	-37505666
160	-7.7E+09
2000	-2445824
171	-7.57E+09

X_{bar} = 2134.7333
SD = 2258.3092
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 1.864E+10
γ_1 = 1.7948837

Since the Coefficient of Skewness of 1.79 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
7.4955419	0.050415
8.0063676	0.6820416
6.8875526	-0.013578
6.2915691	-0.581249
9.0595175	7.2270622
6.8243737	-0.027475
7.3777589	0.0159338
7.9010071	0.4652765
7.6009025	0.107023
8.6125034	3.2839033
5.5214609	-4.131905
7.4955419	0.050415
5.0751738	-8.627091
7.6009025	0.107023
5.1416636	-7.814952

X_{bar} = 7.1261225
SD = 1.1854345
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.61381
γ_1 = 0.4086452

Since the Coefficient of Skewness of 0.41 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-12	MDL	Data for Testing
9/18/2001	1800	5	7.4955419
10/29/2001	3000	5	8.0063676
1/30/2002	980	5	6.8875526
4/15/2002	540	5	6.2915691
9/26/2002	8600	5	9.0595175
10/30/2003	920	5	6.8243737
4/20/2004	1600	5	7.3777589
10/21/2004	2700	5	7.9010071
4/18/2005	2000	5	7.6009025
10/13/2005	5500	5	8.6125034
4/25/2006	ND	500	5.5214609
10/20/2006	1800	5	7.4955419
4/25/2007	160	100	5.0751738
10/31/2007	2000	5	7.6009025
4/23/2008	171	5	5.1416636

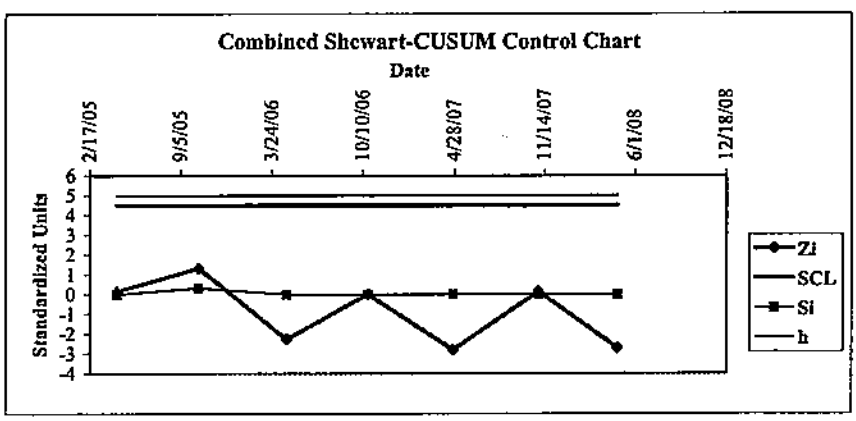
Compute the mean and standard deviation of the historical data:

7.480461 = x_{mean} (Mean of N1-N8 historical data)
0.8579948 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	7.6009025	0.14037546	0	5	4.5
10/13/2005	8.6125034	1.31940458	0.3194046	5	4.5
4/25/2006	5.5214609	-2.2832306	0	5	4.5
10/20/2006	7.4955419	0.01757691	0	5	4.5
4/25/2007	5.0751738	-2.8033819	0	5	4.5
10/31/2007	7.6009025	0.14037546	0	5	4.5
4/23/2008	5.1416636	-2.7258876	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	**Total Barium**
NC MCL (µg/l):	2000
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-13S	MDL
9/18/2001	4700	5
10/29/2001	450	5
1/30/2002	360	5
4/15/2002	820	5
9/26/2002	1600	5
10/30/2003	320	5
4/20/2004	860	5
10/21/2004	1700	5
4/18/2005	1000	5
10/13/2005	4400	5
4/25/2006	1700	500
10/20/2006	1400	5
4/25/2007	120	100
10/31/2007	1400	5
4/23/2008	169	5

If not detected (ND), use half of the detection limit.

		X_i values =
	4700	3.594E+10
	450	-8.57E+08
	360	-1.12E+09
	820	-1.95E+08
	1600	8008002.7
	320	-1.26E+09
	860	-1.57E+08
	1700	27018004
	1000	-63968005
	4400	2.7E+10
	1700	27018004
	1400	0.0002963
	120	-2.1E+09
	1400	0.0002963
	169	-1.87E+09

X_{bar} = 1399.9333
SD = 1393.922
N = 15
$1/NE_i(X_i-X_{bar})^3$ = 3.692E+09
γ_1 = 1.5118801

Since the Coefficient of Skewness of 1.51 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

		X_i values =
ln =	8.4553178	4.7343275
	6.1092476	-0.296652
	5.886104	-0.705152
	6.7093043	-0.000299
	7.3777589	0.2177087
	5.768321	-1.023766
	6.7569324	-7.13E-06
	7.4383835	0.290384
	6.9077553	0.0022778
	8.3893598	4.19805
	7.4383835	0.290384
	7.2442275	0.1025339
	4.7874917	-7.865036
	7.2442275	0.1025339
	5.1298987	-4.461828

X_{bar} = 6.7761809
SD = 1.0703473
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.294303
γ_1 = 0.2661736

Since the Coefficient of Skewness of 0.27 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-13S	MDL	Data for Testing
9/18/2001	4700	5	8.4553178
10/29/2001	450	5	6.1092476
1/30/2002	360	5	5.886104
4/15/2002	820	5	6.7093043
9/26/2002	1600	5	7.3777589
10/30/2003	320	5	5.768321
4/20/2004	860	5	6.7569324
10/21/2004	1700	5	7.4383835
4/18/2005	1000	5	6.9077553
10/13/2005	4400	5	8.3893598
4/25/2006	1700	500	7.4383835
10/20/2006	1400	5	7.2442275
4/25/2007	120	100	4.7874917
10/31/2007	1400	5	7.2442275
4/23/2008	169	5	5.1298987

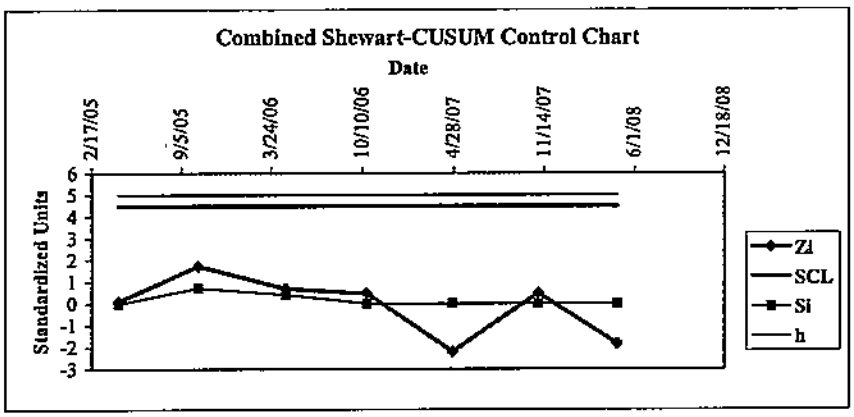
Compute the mean and standard deviation of the historical data:

6.8126712 = x_{mean} (Mean of N1-N8 historical data)
0.915495 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	6.9077553	0.10386084	0	5	4.5
10/13/2005	8.3893598	1.72222519	0.7222252	5	4.5
4/25/2006	7.4383835	0.68346884	0.405694	5	4.5
10/20/2006	7.2442275	0.47139121	0	5	4.5
4/25/2007	4.7874917	-2.2121141	0	5	4.5
10/31/2007	7.2442275	0.47139121	0	5	4.5
4/23/2008	5.1298987	-1.8381011	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Barium
NC MCL (µg/l): 2000
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	11000	5
4/28/2003	2800	5
10/30/2003	4900	5
4/20/2004	2000	5
10/21/2004	4900	5
4/18/2005	3700	5
10/13/2005	2700	5
4/25/2006	2700	500
10/20/2006	650	5
4/25/2007	600	100
10/31/2007	872	5
4/23/2008	361	5

If not detected (ND), use half of the detection limit.

	X_i values =
11000	4.933E+11
2800	-26619303
4900	5.846E+09
2000	-1.33E+09
4900	5.846E+09
3700	217533615
2700	-63322405
2700	-63322405
650	-1.47E+10
600	-1.56E+10
872	-1.1E+10
361	-2.05E+10

X_{bar} = 3098.5833
SD = 2947.8587
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3.683E+10
γ_1 = 1.6379689

Since the Coefficient of Skewness of 1.64 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
9.3056506	4.8255427
7.9373747	0.0332546
8.4969905	0.6842453
7.6009025	-3.31E-06
8.4969905	0.6842453
8.2160881	0.2163131
7.9010071	0.0232
7.9010071	0.0232
6.4769724	-1.476971
6.3969297	-1.810801
6.7707894	-0.60337
5.888878	-5.150115

X_{bar} = 7.6157984

SD = 1.0231026
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.212605
γ_1 = 0.2262033

Since the Coefficient of Skewness of 0.23 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	11000	5	9.3056506
4/28/2003	2800	5	7.9373747
10/30/2003	4900	5	8.4969905
4/20/2004	2000	5	7.6009025
10/21/2004	4900	5	8.4969905
4/18/2005	3700	5	8.2160881
10/13/2005	2700	5	7.9010071
4/25/2006	2700	500	7.9010071
10/20/2006	650	5	6.4769724
4/25/2007	600	100	6.3969297
10/31/2007	872	5	6.7707894
4/23/2008	361	5	5.888878

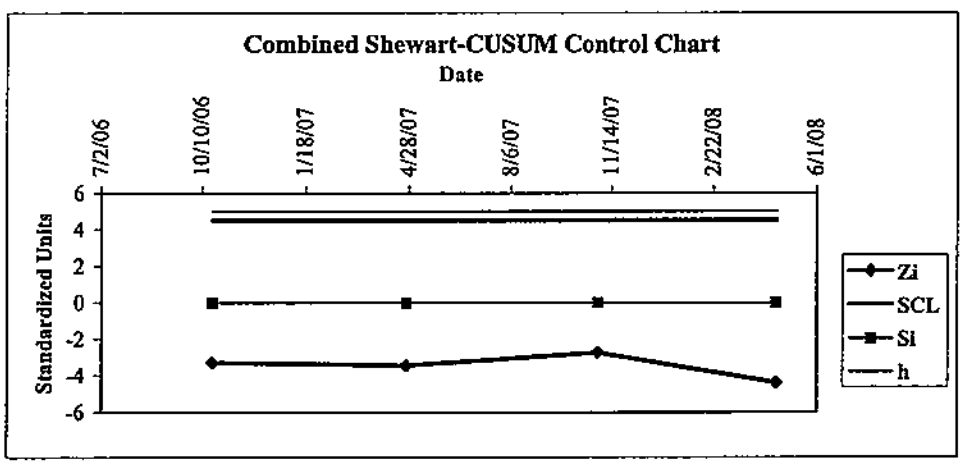
Compute the mean and standard deviation of the historical data:

8.2320014 = x_{mean} (Mean of N1-N8 historical data)
0.5342043 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	6.4769724	-3.2853144	0	5	4.5
4/25/2007	6.3969297	-3.4351498	0	5	4.5
10/31/2007	6.7707894	-2.7353056	0	5	4.5
4/23/2008	5.888878	-4.3861937	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Beryllium
NC MCL (µg/l):	Not Established
Method:	Kruskal-Wallis
Background:	MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	4.4	NS	NS	ND	2	ND	2.2	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	2
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	2
04/09/01	2.3	7	NS	ND	ND	ND	ND	ND	2.4	ND	ND	4.8	ND	NS	NS	NS	NS	2
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	5.3	ND	NS	2
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.2	ND	ND	NS	2
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.5	ND	ND	NS	2
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	2
04/15/02	2.1	ND	NS	ND	ND	ND	ND	ND	2.5	ND	ND	5	ND	2.1	2.2	ND	NS	2
09/26/02	ND	7	2.1	5.1	ND	ND	ND	ND	8.5	ND	ND	4.7	ND	13	3.6	ND	95	2
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	2.2	ND	NT	NT	NT	20	2
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND	ND	ND	33	1
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	1
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	1.4	1.2	ND	28	1
04/18/05	ND	ND	ND	7.2	ND	ND	ND	ND	ND	ND	ND	3.8	ND	3	1.5	ND	26	1
10/13/05	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	3.4	ND	11	9.5	ND	21	1
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND	17	2
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	2.9	2.4	ND	5.7	1
04/25/07	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.9	1
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	1
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	1
N_i	17	16	11	15	15	15	15	15	15	14	14	15	15	15	15	15	12	
sum of rank values (R_i)	2018.5	1848.0	1189.5	1866.0	1580.5	1620.0	1587.0	1477.5	2168.0	1379.0	1379.0	2317.5	1477.5	2568.5	2295.0	1477.5	2876.0	
avg rank value (Rbar)	118.7	115.5	108.1	124.4	105.4	108.0	105.8	98.5	144.5	98.5	98.5	154.5	98.5	171.2	153.0	98.5	239.7	

	Number of each rank value																	Rank Value
rank value of NDs =	14	14	10	12	14	14	14	15	9	14	14	8	15	6	8	15	0	98.5
rank value of 1.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	197
rank value of 1.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	198.5
rank value of 1.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	200
rank value of 2s =	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	201.5
rank value of 2.1s =	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	204.5
rank value of 2.2s =	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	208
rank value of 2.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210
rank value of 2.4s =	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	212
rank value of 2.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	214.5
rank value of 2.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	216
rank value of 3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	218
rank value of 3.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	220
rank value of 3.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	221
rank value of 3.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	222
rank value of 4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	223
rank value of 4.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	224
rank value of 4.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	225
rank value of 4.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	226
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	227
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	228
rank value of 4.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	229
rank value of 5.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	230
rank value of 5.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	231
rank value of 5.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	232
rank value of 6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	233
rank value of 7s =	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234.5
rank value of 7.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	236
rank value of 8.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	237
rank value of 9.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	238
rank value of 11s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	239
rank value of 13s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	240
rank value of 14s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	241
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	242
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	243
rank value of 21s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	244.5

rank value of 26s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	246
rank value of 28s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	247
rank value of 33s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	248
rank value of 95s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	249
n =	17	16	11	15	15	15	15	15	15	14	14	15	15	15	15	15	12	

Sum of rank value calculations

1379	1379	985	1182	1379	1379	1379	1477.5	886.5	1379	1379	788	1477.5	591	788	1477.5	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	197	0	0
0	0	0	0	0	0	0	0	0	0	0	198.5	0	198.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	0
0	0	0	0	201.5	0	0	0	201.5	0	0	0	0	0	0	0	0
204.5	0	204.5	0	0	0	0	0	204.5	0	0	0	0	204.5	0	0	0
0	0	0	0	0	0	208	0	0	0	0	208	0	0	208	0	0
210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	424	0	0	0	0	0	212	0	0
0	0	0	0	0	0	0	0	214.5	0	0	0	0	214.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	216	0	0	0
0	0	0	218	0	0	0	0	0	0	0	0	0	218	0	0	218
0	0	0	0	0	0	0	0	0	0	0	220	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	221	0	0
0	0	0	0	0	0	0	0	0	0	0	222	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	223	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	224	0	0	0
225	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	226	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	227	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	228	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229
0	0	0	230	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	231	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	232
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233
0	469	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	236	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	237	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	238	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	239	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	240	0	0	0
0	0	0	0	0	241	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	243
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	489
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	247
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	248
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	249
sum of rank values (R_i)	2018.5	1848	1189.5	1866	1580.5	1620	1587	1477.5	2168	1379	1379	2317.5	1477.5	2568.5	2295	1477.5	2876

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} - 3(N+1)$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
R_i^2/N_i =	580980.4	232130	166532	174960	167905	145534	313348	135832	135832	358054	145534	439813	351135	145534	689281

N_{bg} = 44

N = 249

H = 56.25

Adjust H for ties:

T_i = 8E+06 - sum of T1..T8

$H' = H/(1-(T_i/(N^3-N)))$

H' = 109.80

Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 23.68 which is less than H' =109.80.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{bk}+1/N_x)^{0.5}$

P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG

N = total sample size

N_{bk} = total samples (N_i) of background data

N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	124.4	105.4	108.0	105.8	98.5	144.5	98.5	98.5	154.5	98.5	171.2	153.0	98.5	239.7
avg Rbar (background) =	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9	114.9
Dx =	9.5	-9.5	-6.9	-9.1	-16.4	29.6	-16.4	-16.4	39.6	-16.4	56.3	38.1	-16.4	124.8
Cx =	50.2	50.2	50.2	50.2	50.2	50.2	51.5	51.5	50.2	50.2	50.2	50.2	50.2	54.7
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes
SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	NE	-	-	NE

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Beryllium averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Beryllium
NC MCL (µg/l):	Not Established
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-12	MDL
9/18/2001	4	2
10/29/2001	4.2	2
1/30/2002	2.5	2
4/15/2002	2.1	2
9/26/2002	13	2
10/30/2003	ND	1
4/20/2004	ND	1
10/21/2004	1.4	1
4/18/2005	3	1
10/13/2005	11	1
4/25/2006	ND	2
10/20/2006	2.9	1
4/25/2007	ND	1
10/31/2007	ND	1
4/23/2008	ND	1

If not detected (ND), use half of the detection limit.

	X_i values =
4	0.5649256
4.2	1.0821523
2.5	-0.305274
2.1	-1.236528
13	948.89613
0.5	-19.10554
0.5	-19.10554
1.4	-5.576621
3	-0.005208
11	479.43586
1	-10.26547
2.9	-0.020421
0.5	-19.10554
0.5	-19.10554
0.5	-19.10554

X_{bar} = 3.1733333
SD = 3.8253789
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 87.802789
γ_1 = 1.7395214

Since the Coefficient of Skewness of 1.74 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

	X_i values =
ln = 1.3862944	0.5537793
1.4350845	0.6584662
0.9162907	0.0433138
0.7419373	0.0055299
2.5649494	7.9981837
-0.693147	-1.992043
-0.693147	-1.992043
0.3364722	-0.011951
1.0986123	0.1518558
2.3978953	6.1566058
0	-0.180459
1.0647107	0.1247077
-0.693147	-1.992043
-0.693147	-1.992043
-0.693147	-1.992043

X_{bar} = 0.5651007
SD = 1.1265041
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.3693213
γ_1 = 0.2865173

Since the Coefficient of Skewness of 0.29 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-12	MDL	Data for Testing
9/18/2001	4	2	1.3862944
10/29/2001	4.2	2	1.4350845
1/30/2002	2.5	2	0.9162907
4/15/2002	2.1	2	0.7419373
9/26/2002	13	2	2.5649494
10/30/2003	ND	1	-0.693147
4/20/2004	ND	1	-0.693147
10/21/2004	1.4	1	0.3364722
4/18/2005	3	1	1.0986123
10/13/2005	11	1	2.3978953
4/25/2006	ND	2	0
10/20/2006	2.9	1	1.0647107
4/25/2007	ND	1	-0.693147
10/31/2007	ND	1	-0.693147
4/23/2008	ND	1	-0.693147

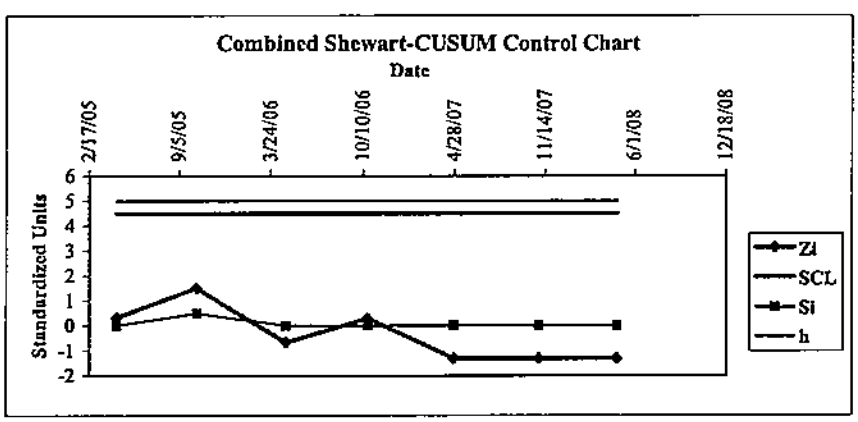
Compute the mean and standard deviation of the historical data:

0.7493418 = x_{mean} (Mean of N1-N8 historical data)
1.1040393 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	1.0986123	0.31635696	0	5	4.5
10/13/2005	2.3978953	1.49320183	0.4932018	5	4.5
4/25/2006	0	-0.6787274	0	5	4.5
10/20/2006	1.0647107	0.28565012	0	5	4.5
4/25/2007	-0.693147	-1.3065558	0	5	4.5
10/31/2007	-0.693147	-1.3065558	0	5	4.5
4/23/2008	-0.693147	-1.3065558	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	**Total Beryllium**
NC MCL (µg/l):	Not Established
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	95	2
4/28/2003	20	2
10/30/2003	33	1
4/20/2004	21	1
10/21/2004	28	1
4/18/2005	26	1
10/13/2005	21	1
4/25/2006	17	2
10/20/2006	5.7	1
4/25/2007	4.9	1
10/31/2007	6	1
4/23/2008	3	1

If not detected (ND), use half of the detection limit.

95	X_i values =	367318.08
20		-38.72883
33		889.352
21		-13.538
28		98.397838
26		17.916171
21		-13.538
17		-260.1013
5.7		-5529.583
4.9		-6314.528
6		-5252.9
3		-8468.873

X_{bar} = 23.383333
SD = 24.652377
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 28535.997
γ_1 = 2.1701986

Since the Coefficient of Skewness of 2.17 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	4.5538769	X_i values = 6.0515966
	2.9957323	0.0184353
	3.4965076	0.4476008
	3.0445224	0.0306525
	3.3322045	0.2166942
	3.2580965	0.1459754
	3.0445224	0.0306525
	2.8332133	0.0010503
	1.7404662	-0.973526
	1.5892352	-1.490636
	1.7917595	-0.830062
	1.0986123	-4.354304

X_{bar} = 2.7315624

SD = 0.9842822
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.058823
γ_1 = 0.0702858

Since the Coefficient of Skewness of 0.07 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	95	2	4.5538769
4/28/2003	20	2	2.9957323
10/30/2003	33	1	3.4965076
4/20/2004	21	1	3.0445224
10/21/2004	28	1	3.3322045
4/18/2005	26	1	3.2580965
10/13/2005	21	1	3.0445224
4/25/2006	17	2	2.8332133
10/20/2006	5.7	1	1.7404662
4/25/2007	4.9	1	1.5892352
10/31/2007	6	1	1.7917595
4/23/2008	3	1	1.0986123

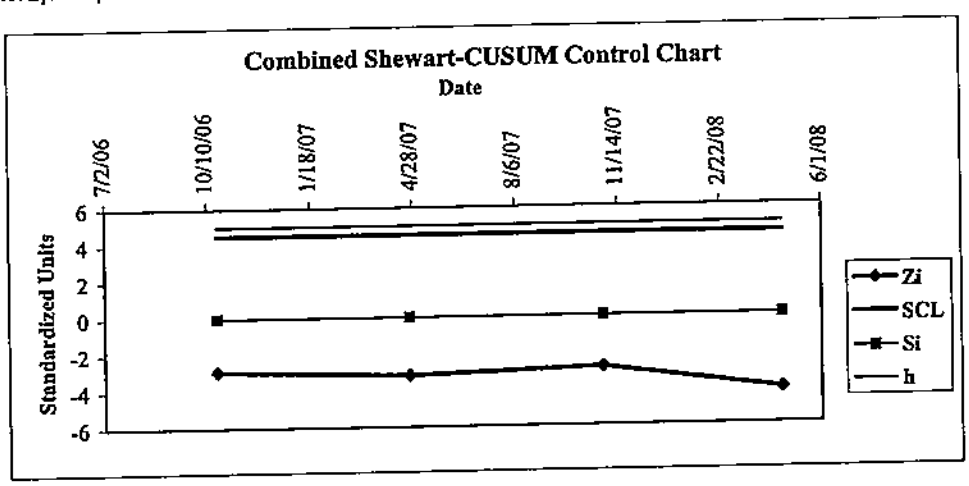
Compute the mean and standard deviation of the historical data:

3.3198345 = x_{mean} (Mean of N1-N8 historical data)
0.5413573 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	1.7404662	-2.9174229	0	5	4.5
4/25/2007	1.5892352	-3.1967781	0	5	4.5
10/31/2007	1.7917595	-2.8226735	0	5	4.5
4/23/2008	1.0986123	-4.103061	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

Compound: Total Cadmium
NC MCL (µg/l): 1.75
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	2	NS	NS	ND	1.3	1.2	1.3	2.1	ND	ND	ND	5.4	ND	NS	NS	NS	NS	1
06/26/00	1.6	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1
07/26/00	1.1	3.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	1
04/09/01	130	2	NS	ND	ND	ND	1.7	1.8	2.7	ND	ND	19	ND	NS	NS	NS	NS	1
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10	8.9	ND	NS	1
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	ND	ND	NS	1
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.9	ND	ND	NS	1
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4300	NS	2.5	NS	1
04/15/02	13	ND	NS	ND	ND	ND	4	ND	5.5	1.2	ND	19	ND	2.3	2.2	ND	NS	10
09/26/02	ND	ND	4.2	21	ND	10	ND	2.3	4.2	ND	ND	19	ND	27	5.4	ND	180	1
04/28/03	3.6	ND	ND	6	ND	ND	ND	ND	2.9	ND	ND	16	ND	NT	NT	NT	20	1
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8	ND	3.7	1.2	ND	8.9	1
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	1
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
10/20/06	3.8	ND	ND	ND	ND	ND	ND	ND	1.5	NS	NS	ND	ND	4.6	4.7	ND	5.2	1
04/25/07	ND	ND	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	ND	1
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	1
N_i	17	16	11	15	15	15	15	15	15	14	14	15	15	16	15	16	12	
sum of rank values (R_i)	2530.5	1809.5	1211.5	1761.5	1580.5	1833.0	1816.0	1818.5	2084.5	1479.5	1379.0	2326.5	1477.5	2656.5	2203.5	1801.0	1857.0	
avg rank value (Rbar)	148.9	113.1	110.1	117.4	105.4	122.2	121.1	121.2	139.0	105.7	98.5	155.1	98.5	166.0	146.9	112.6	154.8	

	Number of each rank value																	Rank Value
rank value of NDs =	10	14	10	13	14	12	12	12	10	13	14	9	15	8	9	14	7	98.5
rank value of 1.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	197
rank value of 1.2s =	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	199
rank value of 1.3s =	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	201.5
rank value of 1.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	203
rank value of 1.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	205
rank value of 1.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	207.5
rank value of 1.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	209
rank value of 2s =	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210.5
rank value of 2.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	212
rank value of 2.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	213.5
rank value of 2.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	215.5
rank value of 2.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	217
rank value of 2.7s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	218
rank value of 2.9s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	219
rank value of 3.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	220
rank value of 3.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221
rank value of 3.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	222
rank value of 3.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	223
rank value of 3.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	224
rank value of 4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	225
rank value of 4.2s =	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	226.5
rank value of 4.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	228
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	229
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	230
rank value of 5.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	231.5
rank value of 5.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	233
rank value of 6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	234
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	235
rank value of 8.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	236.5
rank value of 10s =	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	238.5
rank value of 13s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	241.5
rank value of 19s =	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	244
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	246
rank value of 21s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	247

rank value of 27s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	248
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	249
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	250
rank value of 4300s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	251
n =	17	16	11	15	15	15	15	15	15	14	14	15	15	16	15	16	12	

Sum of rank value calculations

985	1379	985	1280.5	1379	1182	1182	1182	985	1280.5	1379	886.5	1477.5	788	886.5	1379	689.5
197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	199	0	0	0	199	0	0	0	0	199	0	0
0	0	0	0	201.5	0	201.5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	203	0	0	0	0	0	0	0	0
205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	205	205
0	0	0	0	0	0	207.5	0	0	0	0	0	0	0	207.5	0	0
0	0	0	0	0	0	0	209	0	0	0	0	0	0	0	0	0
210.5	210.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	212	0	0	0	0	0	0	0	0	0
0	0	0	0	0	213.5	0	0	0	0	0	0	0	0	213.5	0	0
0	0	0	0	0	0	0	215.5	0	0	0	0	0	215.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	217	0
0	0	0	0	0	0	0	0	218	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	219	0	0	0	0	0	0	0	0
0	220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
221	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	222	0	0	0
223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	224	0	0	0
0	0	0	0	0	0	225	0	0	0	0	0	0	0	0	0	0
0	0	226.5	0	0	0	0	0	226.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	228	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	229	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230
0	0	0	0	0	0	0	0	0	0	0	231.5	0	0	231.5	0	0
0	0	0	0	0	0	0	0	233	0	0	0	0	0	0	0	0
0	0	0	234	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	235	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	236.5	0	236.5
0	0	0	0	0	238.5	0	0	0	0	0	0	0	238.5	0	0	0
240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	241.5	0	241.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	732	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
0	0	0	247	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	248	0	0	0
249	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	250
0	0	0	0	0	0	0	0	0	0	0	0	0	251	0	0	0
sum of rank values (R_i)	2530.5	1809.5	1211.5	1761.5	1580.5	1833	1816	1818.5	2084.5	1479.5	1379	2326.5	1477.5	2656.5	2203.5	1801	1857

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2/N_i)] - 3(N+1)$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
R_i^2/N_i =	700435.3	206859	166532	223993	219857	220463	289676	156351	135832	360840	145534	441062	323694	202725	287371

N_{bkg} = 44
N = 251
H = 18.28

Adjust H for ties:

T_i = 8E+06 sum of T1..T8

Cadmium (K-W)

$H' = H/(1-(T_j/(N^3-N)))$
$H' = 34.89$
Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 23.68 which is less than H' =34.89.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i_{bg}}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i_{bg}}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	117.4	105.4	122.2	121.1	121.2	139.0	105.7	98.5	155.1	98.5	166.0	146.9	112.6	154.8
avg Rbar (background) =	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2
Dx =	-8.7	-20.8	-4.0	-5.1	-4.9	12.8	-20.5	-27.7	28.9	-27.7	39.9	20.7	-13.6	28.6
Cx =	50.6	50.6	50.6	50.6	50.6	50.6	51.9	51.9	50.6	50.6	49.4	50.6	49.4	55.1
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No	No	No	No	No
SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number 308-1957-04

Compound: Total Chromium
NC MCL (µg/l): 50
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	15	NS	NS	18	17	11	ND	26	5.4	ND	ND	50	ND	NS	NS	NS	NS	5
06/26/00	22	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
07/26/00	29	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	10
04/09/01	130	ND	NS	11	8.4	ND	ND	20	27	ND	ND	160	ND	NS	NS	NS	NS	5
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	51	66	5.4	NS	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	82	ND	ND	NS	5
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	21	ND	ND	NS	5
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	10
04/15/02	170	ND	NS	ND	ND	5.7	7	10	56	13	7.1	180	ND	9.2	12	ND	NS	5
09/26/02	33	5.4	33	510	ND	5.2	ND	37	36	5.5	9.1	230	ND	180	52	ND	770	5
04/28/03	ND	ND	ND	89	ND	ND	ND	ND	ND	ND	ND	110	ND	NT	NT	NT	37	5
10/30/03	30	ND	NT	ND	6.2	ND	ND	ND	31	83	ND	4.6	ND	22	3.9	ND	140	2
04/20/04	33	ND	2.1	45	13	ND	ND	11	3.5	ND	2.9	190	ND	50	12	ND	68	2
10/21/04	21	ND	2.8	16	2	ND	ND	ND	ND	ND	5.5	120	ND	14	21	ND	140	2
04/18/05	49	12	8.3	680	2.9	ND	ND	3.2	ND	ND	2.4	210	ND	36	18	ND	100	2
10/13/05	52	ND	3.7	230	4.7	ND	ND	ND	ND	5.3	6.8	150	ND	130	130	ND	88	2
04/25/06	65	ND	16	ND	ND	ND	ND	ND	16	200	ND	100	ND	ND	20	ND	93	10
10/20/06	50	ND	11	24	ND	ND	ND	ND	17	NS	NS	ND	ND	43	31	ND	27	5
04/25/07	20	ND	ND	16	ND	410	ND	ND	ND	31	ND	ND	ND	ND	ND	ND	17	10
10/31/07	40.9	ND	11.9	10.9	7.8	ND	ND	ND	5.1	ND	ND	75.5	ND	40.7	52.3	ND	33.7	5
04/23/08	10.7	ND	16.8	7.8	ND	ND	ND	ND	7.6	ND	ND	7.3	ND	ND	ND	ND	14.9	5
N_i	17	16	11	15	15	15	15	15	15	14	14	15	15	15	15	15	12	
sum of rank values (R_i)	3246.5	1258.5	1501.0	2519.0	1573.5	1336.5	983.0	1550.0	1993.0	1578.0	1302.0	2954.5	900.0	2600.5	2312.5	976.0	2540.5	
avg rank value ($\bar{R}_{ibar}$)	191.0	78.7	136.5	167.9	104.9	89.1	65.5	103.3	132.9	112.7	93.0	197.0	60.0	173.4	154.2	65.1	211.7	

	Number of each rank value																	Rank Value
rank value of ND$_2$ =	1	13	2	3	7	11	14	9	5	8	8	2	15	3	4	14	0	60
rank value of 2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	120
rank value of 2.1$_1$ =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	121
rank value of 2.4$_1$ =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	122
rank value of 2.8$_1$ =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	123
rank value of 2.9$_1$ =	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	124.5
rank value of 3.2$_1$ =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	126
rank value of 3.5$_1$ =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	127
rank value of 3.7$_1$ =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128
rank value of 3.9$_1$ =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	129
rank value of 4.6$_1$ =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	130
rank value of 4.7$_1$ =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	131
rank value of 5.1$_1$ =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	132
rank value of 5.2$_1$ =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	133
rank value of 5.3$_1$ =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	134
rank value of 5.4$_1$ =	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	136
rank value of 5.5$_1$ =	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	138.5
rank value of 5.7$_1$ =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	140
rank value of 6.2$_1$ =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	141
rank value of 6.8$_1$ =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	142
rank value of 7$_1$ =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	143
rank value of 7.1$_1$ =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	144
rank value of 7.3$_1$ =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	145
rank value of 7.6$_1$ =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	146
rank value of 7.8$_1$ =	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	147.5
rank value of 8.3$_1$ =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149
rank value of 8.4$_1$ =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	150
rank value of 9.1$_1$ =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	151
rank value of 9.2$_1$ =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	152
rank value of 10$_1$ =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	153
rank value of 10.7$_1$ =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	154
rank value of 10.9$_1$ =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	155
rank value of 11$_1$ =	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	157.5
rank value of 11.9$_1$ =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160
rank value of 12$_1$ =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	162
rank value of 13$_1$ =	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	164.5
rank value of 14$_1$ =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	166
rank value of 14.9$_1$ =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	167
rank value of 15$_1$ =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	168
rank value of 16$_1$ =	0	0	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	170.5
rank value of 16.8$_1$ =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	173
rank value of 17$_1$ =	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	175
rank value of 18$_1$ =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	177.5
rank value of 20$_1$ =	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	180.5
rank value of 21$_1$ =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	184
rank value of 22$_1$ =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	186.5
rank value of 24$_1$ =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	188
rank value of 26$_1$ =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	189
rank value of 27$_1$ =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	191
rank value of 29$_1$ =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193
rank value of 30$_1$ =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194
rank value of 31$_1$ =	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	196
rank value of 33$_1$ =	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	199
rank value of 33.7$_1$ =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	201
rank value of 36$_1$ =	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	202.5

rank value of 37s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	204
rank value of 40.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	205
rank value of 40.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	206
rank value of 43s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	207
rank value of 45s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	208
rank value of 49s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	209
rank value of 50s =	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	211
rank value of 51s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	213
rank value of 52s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	214.5
rank value of 52.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	216
rank value of 56s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	217
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	218
rank value of 66s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	219
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	220
rank value of 75.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	221
rank value of 82s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	222
rank value of 83s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	223
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	224
rank value of 89s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	225
rank value of 93s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	226
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	227.5
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	229
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	230
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	232
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	234.5
rank value of 150s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	236
rank value of 160s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	237
rank value of 170s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	238
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	239.5
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	241
rank value of 200s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	242
rank value of 210s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	243
rank value of 230s =	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	244.5
rank value of 410s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	246
rank value of 510s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	247
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	248
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	249
n =	17	16	11	15	15	15	15	15	15	14	14	15	15	15	15	15	12	

Sum of rank value calculations

60	780	120	180	420	660	840	540	300	480	480	120	900	180	240	840	0
0	0	0	0	120	0	0	0	0	0	0	0	0	0	0	0	0
0	0	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	122	0	0	0	0	0	0
0	0	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	124.5	0	0	0	0	0	124.5	0	0	0	0	0	0
0	0	0	0	0	0	0	126	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	127	0	0	0	0	0	0	0	0
0	0	128	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	129	0	0
0	0	0	0	0	0	0	0	0	0	0	130	0	0	0	0	0
0	0	0	0	131	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	132	0	0	0	0	0	0	0	0
0	0	0	0	0	133	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	134	0	0	0	0	0	0	0
0	136	0	0	0	0	0	0	136	0	0	0	0	0	0	136	0
0	0	0	0	0	0	0	0	0	138.5	138.5	0	0	0	0	0	0
0	0	0	0	0	140	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	141	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	142	0	0	0	0	0	0
0	0	0	0	0	0	143	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	144	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	145	0	0	0	0	0
0	0	0	0	0	0	0	0	146	0	0	0	0	0	0	0	0
0	0	0	147.5	147.5	0	0	0	0	0	0	0	0	0	0	0	0
0	0	149	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	150	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	151	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	152	0	0	0
0	0	0	0	0	0	0	153	0	0	0	0	0	0	0	0	0
154	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	155	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	157.5	157.5	0	157.5	0	157.5	0	0	0	0	0	0	0	0	0
0	0	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	162	0	0	0	0	0	0	0	0	0	0	0	0	324	0	0
0	0	0	0	164.5	0	0	0	0	164.5	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	166	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167
168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	170.5	341	0	0	0	0	170.5	0	0	0	0	0	0	0	0
0	0	173	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	175	0	0	0	175	0	0	0	0	0	0	0	175
0	0	0	177.5	0	0	0	0	0	0	0	0	0	0	177.5	0	0
180.5	180.5	0	0	0	0	0	180.5	0	0	0	0	0	0	180.5	0	0
184	0	0	0	0	0	0	0	0	0	0	0	0	184	184	0	0
186.5	0	0	0	0	0	0	0	0	0	0	0	0	186.5	0	0	0
0	0	0	188	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	189	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	191	0	0	0	0	0	0	0	382
193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	196	196	0	0	0	0	196	0	0

198	0	199	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	201
0	0	0	0	0	0	0	0	202.5	0	0	0	0	202.5	0	0	0
0	0	0	0	0	0	0	204	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	205	0	0	0
206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	207	0	0	0
0	0	0	208	0	0	0	0	0	0	0	0	0	0	0	0	0
209	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
211	0	0	0	0	0	0	0	0	0	0	211	0	211	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	213	0	0	0
214.5	0	0	0	0	0	0	0	0	0	0	0	0	0	214.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	216	0	0
0	0	0	0	0	0	0	0	217	0	0	0	0	0	0	0	0
218	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	219	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	220
0	0	0	0	0	0	0	0	0	0	0	221	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	222	0	0	0
0	0	0	0	0	0	0	0	0	223	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	224
0	0	0	225	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	226
0	0	0	0	0	0	0	0	0	0	0	227.5	0	0	0	0	227.5
0	0	0	0	0	0	0	0	0	0	0	229	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	230	0	0	0	0	0
232	0	0	0	0	0	0	0	0	0	0	0	0	232	232	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	469
0	0	0	0	0	0	0	0	0	0	0	236	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	237	0	0	0	0	0
238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	239.5	0	239.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	241	0	0	0	0	0
0	0	0	0	0	0	0	0	0	242	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	243	0	0	0	0	0
0	0	0	244.5	0	0	0	0	0	0	0	244.5	0	0	0	0	0
0	0	0	0	0	246	0	0	0	0	0	0	0	0	0	0	0
0	0	0	247	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	248	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	249
sum of rank values (R_i)	3146.5	1258.5	1501	1519	1573.5	1336.5	983	1550	1993	1578	1382	2954.5	900	2600.5	2312.5	976	2540.5

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma_{i=1}^{K} (R_i^2/N_i)]\} - 3(N+1)$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
R_i^2/N_i =	819819.0	423024	165060	119082	64419	160167	264803	177863	121086	581938	54000	450840	356510	63505	537845

N_{bg} = 44
N = 249
H = 90.47

Adjust H for ties:

T_i = 2E+06 sum of T1..T2

$H' = H/(1-(T_i/(N^3-N)))$
H' = 101.56
Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 23.68 which is less than H' =101.56.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
N_{bg} = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (D_x) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	167.9	104.9	89.1	65.5	103.3	132.9	112.7	93.0	197.0	60.0	173.4	154.2	65.1	211.7
avg Rbar (background) =	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5
Dx =	31.4	-31.6	-47.4	-71.0	-33.2	-3.6	-23.8	-43.5	60.5	-76.5	36.9	17.7	-71.4	75.2
Cx =	50.2	50.2	50.2	50.2	50.2	50.2	51.5	51.5	50.2	50.2	50.2	50.2	50.2	54.7
Statistical Significance ?	No	No	No	No	No	No	No	No	Yes	No	No	No	No	Yes
SSI, is current event above MCL?	-	-	-	-	-	-	-	-	No	-	-	-	-	No

Compare each difference (D_x) with the corresponding critical value (C_x).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Chromium averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Chromium
NC MCL (µg/l):	50
Method:	Shewhart-CUSUM Control Chart

Part I: Check for Normality

	MW-8	MDL
4/24/2000	50	5
4/9/2001	160	5
4/15/2002	180	5
9/26/2002	230	5
4/28/2003	110	5
10/30/2003	5	2
4/20/2004	190	2
10/21/2004	120	2
4/18/2005	210	2
10/13/2005	150	2
4/25/2006	100	10
10/20/2006	ND	5
4/25/2007	ND	10
10/31/2007	76	5
4/23/2008	7	5

If not detected (ND), use half of the detection limit.

	X_i values =
50	-178707.2
160	154623.57
180	399881.18
230	1891595.2
110	49.565674
4.6	-1052700
190	585815.98
120	2556.367
210	1114297.6
150	83300.771
100	-253.2357
2.5	-1119249
5	-1040330
75.5	-29294.07
7.3	-971083.3

X_{bar} = 106.32667
SD = 79.653513
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -10633.11
γ_1 = 0.0233341

Since the Coefficient of Skewness of 0.02 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the real detected values shown above.

ln =	X_i values =
3.912023	-0.000296
5.0751738	1.318377
5.1929569	1.7904911
5.4380793	3.1084095
4.7004804	0.3760826
1.5260563	-14.7531
5.2470241	2.0404664
4.7874917	0.5291404
5.3471075	2.5626086
5.0106353	1.0990186
4.6051702	0.245912
0.9162907	-28.71929
1.6094379	-13.29899
4.3241327	0.0412318
1.9878743	-7.889964

X_{bar} = 3.9786623
SD = 1.60389
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -3.43666
γ_1 = 0.9237567

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-8	MDL	Data for Testing
4/24/2000	50	5	50
4/9/2001	160	5	160
4/15/2002	180	5	180
9/26/2002	230	5	230
4/28/2003	110	5	110
10/30/2003	4.6	2	4.6
4/20/2004	190	2	190
10/21/2004	120	2	120
4/18/2005	210	2	210
10/13/2005	150	2	150
4/25/2006	100	10	100
10/20/2006	ND	5	2.5
4/25/2007	ND	10	5
10/31/2007	75.5	5	75.5
4/23/2008	7.3	5	7.3

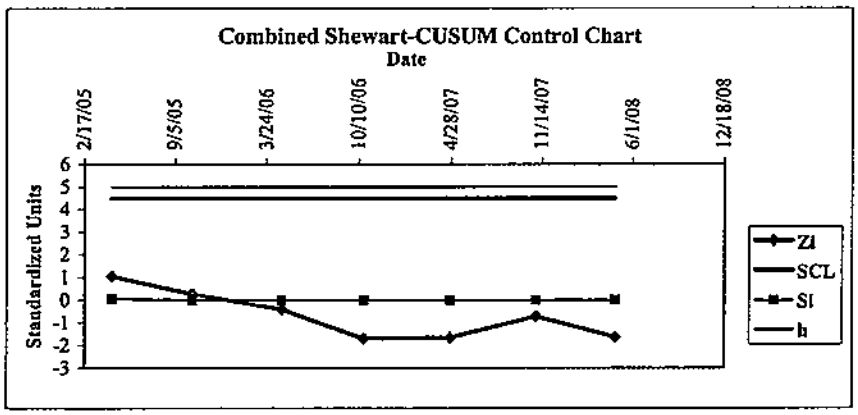
Compute the mean and standard deviation of the historical data:

130.575 = x_{mean} (Mean of N1-N8 historical data)
75.235359 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	210	1.05568712	0.0556871	5	4.5
10/13/2005	150	0.25818977	0	5	4.5
4/25/2006	100	-0.4063914	0	5	4.5
10/20/2006	2.5	-1.7023246	0	5	4.5
4/25/2007	5	-1.6690955	0	5	4.5
10/31/2007	75.5	-0.7320361	0	5	4.5
4/23/2008	7.3	-1.6385248	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Chromium
NC MCL (µg/l):	50
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	770	5
4/28/2003	27	5
10/30/2003	140	2
4/20/2004	68	2
10/21/2004	140	2
4/18/2005	100	2
10/13/2005	88	2
4/25/2006	93	10
10/20/2006	27	5
4/25/2007	17	10
10/31/2007	33.7	5
4/23/2008	14.9	5

If not detected (ND), use half of the detection limit.

	X_i values =
770	266406254
27	-986560.7
140	2433.1386
68	-200715.4
140	2433.1386
100	-18715.16
88	-57289.25
93	-37763.96
27	-986560.7
17	-1314732
33.7	-800471.2
14.9	-1391798

X_{bar} = 126.55
SD = 207.59289
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 21718043
γ_1 = 2.7660889

Since the Coefficient of Skewness of 2.77 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
6.6463905	15.235548
3.2958369	-0.661914
4.9416424	0.4642352
4.2195077	0.000142
4.9416424	0.4642352
4.6051702	0.0839321
4.4773368	0.0297911
4.5325995	0.0487324
3.2958369	-0.661914
2.8332133	-2.374584
3.5174978	-0.27442
2.7013612	-3.150502

X_{bar} = 4.1673363

SD = 1.1135132
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.7669401
γ_1 = 0.6329337

Since the Coefficient of Skewness of 0.63 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	770	5	6.6463905
4/28/2003	27	5	3.2958369
10/30/2003	140	2	4.9416424
4/20/2004	68	2	4.2195077
10/21/2004	140	2	4.9416424
4/18/2005	100	2	4.6051702
10/13/2005	88	2	4.4773368
4/25/2006	93	10	4.5325995
10/20/2006	27	5	3.2958369
4/25/2007	17	10	2.8332133
10/31/2007	33.7	5	3.5174978
4/23/2008	14.9	5	2.7013612

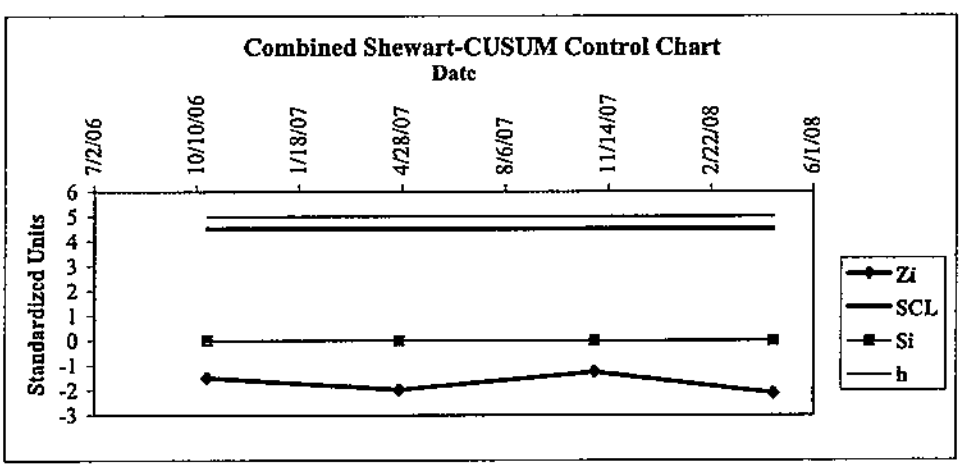
Compute the mean and standard deviation of the historical data:

4.7075158 = x_{mean} (Mean of N1-N8 historical data)
0.9406614 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	3.2958369	-1.5007301	0	5	4.5
4/25/2007	2.8332133	-1.9925367	0	5	4.5
10/31/2007	3.5174978	-1.2650864	0	5	4.5
4/23/2008	2.7013612	-2.1327063	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

Compound: Total Cobalt
NC MCL (µg/l): Not Established
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	ND	NS	NS	ND	8.2	5.4	ND	14	ND	ND	ND	16	ND	NS	NS	NS	NS	5
06/26/00	10	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
07/26/00	9.9	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	10
04/09/01	54	ND	NS	ND	ND	ND	13	12	13	ND	ND	59	8.1	NS	NS	NS	NS	5
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	54	53	ND	NS	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	87	ND	ND	NS	5
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	28	5.7	ND	NS	5
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.1	NS	15	NS	10
04/15/02	58	ND	NS	ND	ND	ND	18	8	21	ND	ND	82	6.8	13	12	ND	NS	5
09/26/02	13	5.4	16	100	ND	16	7.4	21	19	ND	ND	85	7.7	200	30	ND	560	5
04/28/03	21	ND	ND	37	ND	ND	6.9	ND	17	ND	ND	50	ND	NT	NT	NT	81	5
10/30/03	9	ND	NT	ND	ND	ND	5.7	ND	52	11	ND	8.8	ND	28	ND	ND	110	5
04/20/04	9.5	ND	ND	7.7	5.2	ND	13	6.4	ND	ND	ND	43	ND	47	7.4	ND	50	5
10/21/04	6.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31	ND	42	12	ND	120	5
04/18/05	12	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	36	ND	82	9.3	ND	70	5
10/13/05	21	ND	ND	32	ND	ND	5.1	ND	ND	ND	ND	29	ND	150	48	ND	56	5
04/25/06	16	ND	ND	ND	ND	ND	ND	ND	ND	22	ND	25	ND	170	12	ND	57	10
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	13	ND	ND	5
04/25/07	ND	ND	ND	ND	ND	260	ND	ND	ND	ND	10	ND	ND	92	ND	ND	ND	10
10/31/07	16.8	ND	ND	ND	10.6	ND	ND	ND	ND	ND	ND	ND	ND	147	102	ND	17.6	5
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5	ND	ND	ND	115	ND	ND	22.3	5
N_i	17	16	11	15	15	15	15	15	15	14	14	15	15	16	15	16	12	
sum of rank values (R_i)	2814.0	1312.5	966.5	1855.0	1431.5	1528.0	1843.5	1687.0	1793.0	1395.0	1179.5	2680.5	1426.5	3458.0	2454.5	1349.0	2452.0	
avg rank value (Rbar)	165.5	82.0	87.9	123.7	95.4	101.9	122.9	112.5	119.5	99.6	84.3	178.7	95.1	216.1	163.6	84.3	204.3	

	Number of each rank value																	Rank Value
rank value of NDs =	4	15	10	10	12	12	8	10	10	11	13	4	12	1	4	15	2	77
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	154.5
rank value of 5.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	156
rank value of 5.4s =	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	157.5
rank value of 5.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	159
rank value of 5.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	160.5
rank value of 6.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	162
rank value of 6.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	163
rank value of 6.8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	164
rank value of 6.9s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	165
rank value of 7.4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	166.5
rank value of 7.7s =	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	168.5
rank value of 8.1s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	170
rank value of 8.2s =	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	171.5
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	173
rank value of 9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174
rank value of 9.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	175
rank value of 9.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177
rank value of 10s =	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	178.5
rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	180
rank value of 11s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	181
rank value of 12s =	1	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	184
rank value of 13s =	1	0	0	0	0	0	2	0	1	0	0	0	0	1	1	0	0	189.5
rank value of 14s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	193
rank value of 15s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	194
rank value of 16s =	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	196.5
rank value of 16.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	199
rank value of 17s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	200
rank value of 17.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	201
rank value of 18s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	202
rank value of 19s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	203
rank value of 21s =	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	205.5
rank value of 22s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	208
rank value of 22.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	209
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	210
rank value of 28s =	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	211.5
rank value of 29s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	213
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	214
rank value of 31s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	215
rank value of 32s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	216
rank value of 36s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	217
rank value of 37s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	218
rank value of 42s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	219
rank value of 43s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	220
rank value of 47s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	221

rank value of 48s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	222
rank value of 50s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	223.5
rank value of 52s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	225
rank value of 53s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	226
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	227.5
rank value of 56s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	229
rank value of 57s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	230
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	231
rank value of 59s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	232
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	233
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	234
rank value of 82s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	235.5
rank value of 85s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	237
rank value of 87s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	238
rank value of 92s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	239
rank value of 100s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	240
rank value of 102s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	241
rank value of 110s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	242.5
rank value of 115s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	244
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	245
rank value of 147s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	246
rank value of 150s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	247
rank value of 170s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	248
rank value of 200s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	249
rank value of 260s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	250
rank value of 560s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	251
n =	17	16	11	15	15	15	15	15	15	14	14	15	15	16	15	16	12	

Sum of rank value calculations

308	1155	770	770	924	924	616	770	770	847	1001	308	924	77	308	1155	154
0	0	0	0	0	0	154.5	0	0	0	0	0	0	154.5	0	0	0
0	0	0	0	156	0	0	0	0	0	0	0	0	0	0	0	0
0	157.5	0	0	0	157.5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	159	0	0	0	0	0	0	0
0	0	0	0	0	0	160.5	0	0	0	0	0	0	0	160.5	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	163	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	164	0	0	0	0
0	0	0	0	0	0	165	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	166.5	0	0	0	0	0	0	0	166.5	0	0
0	0	0	168.5	0	0	0	0	0	0	0	0	168.5	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	170	0	0	0	0
0	0	0	0	171.5	0	0	171.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	173	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	175	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178.5	0	0	0	0	0	0	0	0	0	178.5	0	0	0	0	0	0
0	0	0	0	180	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	181	0	0	0	0	0	0	0
184	0	0	0	0	0	0	184	0	0	0	0	0	0	552	0	0
189.5	0	0	0	0	0	379	0	189.5	0	0	0	0	189.5	189.5	0	0
0	0	0	0	0	0	0	193	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194	0
196.5	0	196.5	0	0	196.5	0	0	0	0	0	196.5	0	0	0	0	0
199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	201
0	0	0	0	0	0	202	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	203	0	0	0	0	0	0	0	0
411	0	0	0	0	0	0	205.5	205.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	208	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	209
0	0	0	0	0	0	0	0	0	0	0	210	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	423	0	0	0
0	0	0	0	0	0	0	0	0	0	0	213	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0
0	0	0	0	0	0	0	0	0	0	0	215	0	0	0	0	0
0	0	0	216	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	217	0	0	0	0	0
0	0	0	218	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	219	0	0	0
0	0	0	0	0	0	0	0	0	0	0	220	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	221	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	222	0	0

0	0	0	0	0	0	0	0	0	0	0	223.5	0	0	0	0	223.5
0	0	0	0	0	0	0	0	225	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	226	0	0
227.5	0	0	0	0	0	0	0	0	0	0	0	0	227.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230
231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	232	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234
0	0	0	0	0	0	0	0	0	0	0	235.5	0	235.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	237	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	238	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	239	0	0	0
0	0	0	240	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	241	0	0
0	0	0	242.5	0	0	0	0	0	0	0	0	0	0	0	0	242.5
0	0	0	0	0	0	0	0	0	0	0	0	0	244	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245
0	0	0	0	0	0	0	0	0	0	0	0	0	246	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	247	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	248	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	249	0	0	0
0	0	0	0	0	250	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251

sum of rank values (R_i)	2814	1312.5	966.5	1855	1431.5	1528	1843.5	1687	1793	1395	1179.5	2680.5	1426.5	3458	2454.5	1349	2452

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2/N_i)] -3(N+1)\}$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Ri^2/N_i =	589514.8	229402	136613	155652	226566	189731	214323	139002	99373	479005	135660	747360	401638	113738	501025

N_{bkg} = 44
N = 251
H = 70.90

Adjust H for ties:

T_i = 4E+06 sum of T1..T7

$H' = H/(1-(T_i/(N^3-N)))$
H' = 91.67
Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 23.68 which is less than H' =91.67.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{bkg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
N_{bkg} = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	123.7	95.4	101.9	122.9	112.5	119.5	99.6	84.3	178.7	95.1	216.1	163.6	84.3	204.3
avg Rbar (background) =	115.8	115.8	115.8	115.8	115.8	115.8	115.8	115.8	115.8	115.8	115.8	115.8	115.8	115.8
Dx =	7.9	-20.3	-13.9	7.2	-3.3	3.8	-16.1	-31.5	63.0	-20.7	100.4	47.9	-31.4	88.6
Cx =	50.6	50.6	50.6	50.6	50.6	50.6	51.9	51.9	50.6	50.6	49.4	50.6	49.4	55.1
Statistical Significance ?	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes
SSI, is current event above MCL?	-	-	-	-	-	-	-	-	NE	-	NE	-	-	NE

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Cobalt averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Cobalt
NC MCL (µg/l):	Not Established
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-8	MDL
4/24/2000	16	5
4/9/2001	59	5
4/15/2002	82	5
9/26/2002	85	5
4/28/2003	50	5
10/30/2003	9	5
4/20/2004	43	5
10/21/2004	31	5
4/18/2005	36	5
10/13/2005	29	5
4/25/2006	25	10
10/20/2006	ND	5
4/25/2007	ND	10
10/31/2007	ND	5
4/23/2008	ND	5

If not detected (ND), use half of the detection limit.

16	X_i values =	-3959.309
59		20079.29
82		126354.87
85		150399.02
50		6008.7154
8.8		-12198.77
43		1397.415
31		-0.551368
36		73.034632
29		-22.42577
25		-317.2146
2.5		-25205.3
5		-19291.96
2.5		-25205.3
2.5		-25205.3

X_{bar} =	31.82
SD =	27.63474
N =	15
$1/N\Sigma_i(X_i-X_{bar})^3$ =	12860.414
γ_1 =	0.675824

Since the Coefficient of Skewness of 0.68 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the real detected values shown above.

ln =	2.7725887	X_i values = -0.002099
	4.0775374	1.630145
	4.4067192	3.4162652
	4.4426513	3.6666592
	3.912023	1.034568
	2.1747517	-0.382466
	3.7612001	0.6373204
	3.4339872	0.1517235
	3.5835189	0.3184557
	3.3672958	0.1016287
	3.2188758	0.0322319
	0.9162907	-7.813546
	1.6094379	-2.152649
	0.9162907	-7.813546
	0.9162907	-7.813546

X_{bar} = 2.9006306
SD = 1.2786121
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.999257
γ_1 = 0.5301584

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-8	MDL	Data for Testing
4/24/2000	16	5	16
4/9/2001	59	5	59
4/15/2002	82	5	82
9/26/2002	85	5	85
4/28/2003	50	5	50
10/30/2003	8.8	5	8.8
4/20/2004	43	5	43
10/21/2004	31	5	31
4/18/2005	36	5	36
10/13/2005	29	5	29
4/25/2006	25	10	25
10/20/2006	ND	5	2.5
4/25/2007	ND	10	5
10/31/2007	ND	5	2.5
4/23/2008	ND	5	2.5

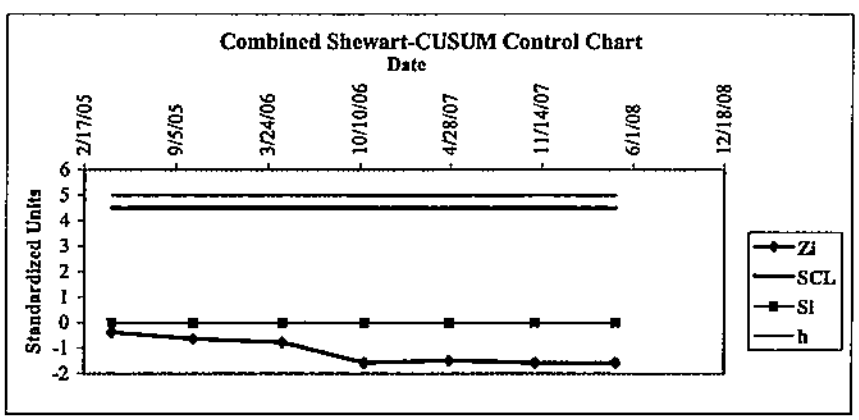
Compute the mean and standard deviation of the historical data:

46.85 = x_{mean} (Mean of N1-N8 historical data)
28.066401 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	36	-0.3865832	0	5	4.5
10/13/2005	29	-0.6359918	0	5	4.5
4/25/2006	25	-0.7785109	0	5	4.5
10/20/2006	2.5	-1.5801812	0	5	4.5
4/25/2007	5	-1.4911068	0	5	4.5
10/31/2007	2.5	-1.5801812	0	5	4.5
4/23/2008	2.5	-1.5801812	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Cobalt
NC MCL (µg/l):	Not Established
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-12	MDL
9/18/2001	54	5
10/29/2001	87	5
1/30/2002	28	5
4/15/2002	13	5
9/26/2002	200	5
10/30/2003	28	5
4/20/2004	47	5
10/21/2004	42	5
4/18/2005	82	5
10/13/2005	150	5
4/25/2006	170	10
10/20/2006	ND	5
4/25/2007	92	10
10/31/2007	147	5
4/23/2008	115	5

If not detected (ND), use half of the detection limit.

		X_i values =
	54	-26552.5
	87	31.75463
	28	-174052.7
	13	-355396.4
	200	1567633.7
	28	-174052.7
	47	-49971.58
	42	-73209.5
	82	-6.162037
	150	289679.5
	170	639761.17
	2.5	-538029
	92	544.6713
	147	252036.75
	115	30274.088

X_{bar} = 83.833333
SD = 61.063687
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 92579.407
γ_1 = 0.4509311

Since the Coefficient of Skewness of 0.45 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the real detected values shown above.

		X_i values =
ln =	3.988984	-2.93E-05
	4.4659081	0.0887818
	3.3322045	-0.325085
	2.5649494	-3.079315
	5.2983174	2.0898788
	3.3322045	-0.325085
	3.8501476	-0.004883
	3.7376696	-0.022457
	4.4067192	0.0579249
	5.0106353	0.9727606
	5.1357984	1.3899275
	0.9162907	-29.89225
	4.5217886	0.1264983
	4.9904326	0.9144631
	4.7449321	0.3812884

X_{bar} = 4.0197988
SD = 1.156773
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -1.841839
γ_1 = 1.3196295

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-12	MDL	Data for Testing
9/18/2001	54	5	54
10/29/2001	87	5	87
1/30/2002	28	5	28
4/15/2002	13	5	13
9/26/2002	200	5	200
10/30/2003	28	5	28
4/20/2004	47	5	47
10/21/2004	42	5	42
4/18/2005	82	5	82
10/13/2005	150	5	150
4/25/2006	170	10	170
10/20/2006	ND	5	2.5
4/25/2007	92	10	92
10/31/2007	147	5	147
4/23/2008	115	5	115

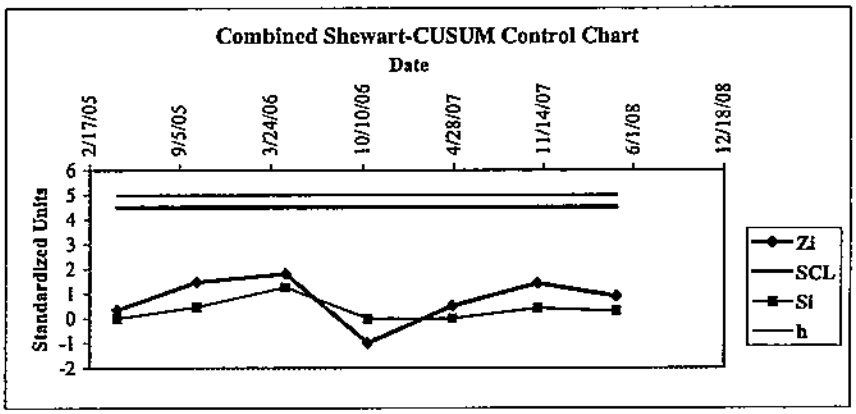
Compute the mean and standard deviation of the historical data:

62.375 = x_{mean} (Mean of N1-N8 historical data)
59.844889 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	82	0.3279311	0	5	4.5
10/13/2005	150	1.4642019	0.4642019	5	4.5
4/25/2006	170	1.7983992	1.2626011	5	4.5
10/20/2006	2.5	-1.0005032	0	5	4.5
4/25/2007	92	0.49502974	0	5	4.5
10/31/2007	147	1.41407231	0.4140723	5	4.5
4/23/2008	115	0.87935663	0.2934289	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	**Total Cobalt**
NC MCL (µg/l):	Not Established
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	560	5
4/28/2003	81	5
10/30/2003	110	5
4/20/2004	50	5
10/21/2004	120	5
4/18/2005	70	5
10/13/2005	56	5
4/25/2006	57	10
10/20/2006	ND	5
4/25/2007	ND	10
10/31/2007	17.6	5
4/23/2008	22.3	5

If not detected (ND), use half of the detection limit.

	X_i values =
560	99929642
81	-3341.362
110	2773.5051
50	-97018.94
120	13910.58
70	-17474.79
56	-63760.3
57	-59091.14
2.5	-816089.7
5	-752329.5
17.6	-480968.9
22.3	-399501.4

X_{bar} = 95.95
SD = 150.99894
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 8104729.2
γ_1 = 2.6822526

Since the Coefficient of Skewness of 2.68 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
6.3279368	17.236405
4.3944492	0.2741918
4.7004804	0.8728711
3.912023	0.0046769
4.7874917	1.1336497
4.2484952	0.1277987
4.0253517	0.0220841
4.0430513	0.026533
0.9162907	-22.62918
1.6094379	-9.736641
2.8678989	-0.674277
3.1045867	-0.262395

X_{bar} = 3.7447911

SD = 1.4548843
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = -1.13369
γ_1= 0.4194612

Since the Coefficient of Skewness of 0.42 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	560	5	6.3279368
4/28/2003	81	5	4.3944492
10/30/2003	110	5	4.7004804
4/20/2004	50	5	3.912023
10/21/2004	120	5	4.7874917
4/18/2005	70	5	4.2484952
10/13/2005	56	5	4.0253517
4/25/2006	57	10	4.0430513
10/20/2006	ND	5	0.9162907
4/25/2007	ND	10	1.6094379
10/31/2007	17.6	5	2.8678989
4/23/2008	22.3	5	3.1045867

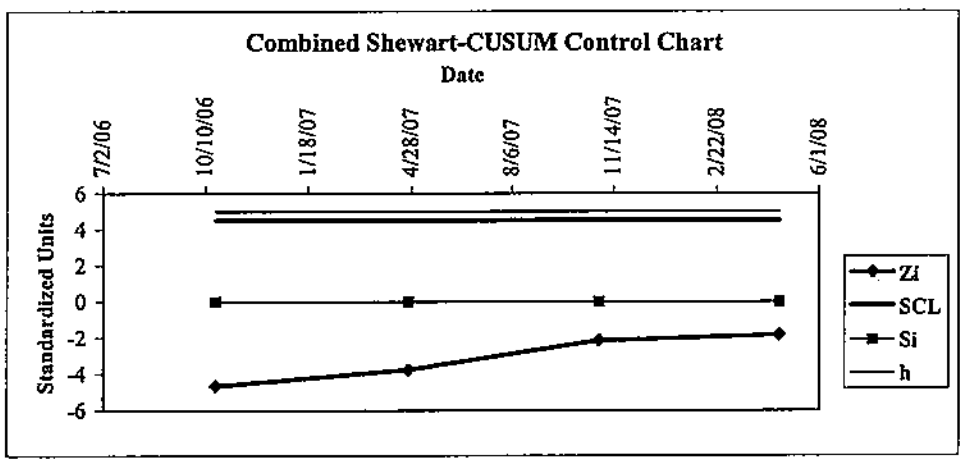
Compute the mean and standard deviation of the historical data:

4.5549099 = x_{mean} (Mean of N1-N8 historical data)
0.7832425 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	0.9162907	-4.6455844	0	5	4.5
4/25/2007	1.6094379	-3.7606131	0	5	4.5
10/31/2007	2.8678989	-2.1538808	0	5	4.5
4/23/2008	3.1045867	-1.8516912	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Copper
NC MCL (µg/l): 1000
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	12	NS	NS	ND	ND	13	ND	27	ND	ND	ND	22	ND	NS	NS	NS	NS	5
06/26/00	17	6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
07/26/00	12	6.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	200
04/09/01	77	8.4	NS	ND	ND	5.4	ND	26	38	ND	ND	110	ND	NS	NS	NS	NS	5
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	35	44	ND	NS	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	47	ND	ND	NS	5
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	ND	ND	NS	5
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	200
04/15/02	69	ND	NS	ND	ND	ND	ND	13	68	4.4	5.1	120	4.7	5.6	8.4	ND	NS	2
09/26/02	20	10	31	220	ND	ND	2.6	42	88	3.3	7.4	150	6.8	100	31	ND	450	2
04/28/03	24	ND	2.6	40	ND	ND	ND	ND	28	ND	ND	94	ND	NT	NT	NT	71	2
10/30/03	18	ND	NT	ND	2.3	2.6	ND	3	85	26	ND	4.4	2.9	16	2.7	ND	150	2
04/20/04	18	ND	2.8	12	5.3	2.3	4.3	13	7.4	ND	2.2	100	2.3	27	8	ND	89	2
10/21/04	11	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	63	ND	11	14	ND	140	2
04/18/05	29	ND	ND	240	ND	ND	ND	3.8	ND	ND	ND	120	ND	25	12	ND	130	2
10/13/05	31	2.6	3.5	70	ND	ND	ND	ND	3	4.6	3.8	82	ND	75	72	ND	96	2
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200
10/20/06	26	ND	ND	9.6	ND	ND	ND	ND	20	NS	NS	ND	ND	ND	ND	ND	25	5
04/25/07	15	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26	10
10/31/07	29.2	ND	ND	ND	ND	ND	ND	ND	6.3	ND	ND	40.3	ND	42.2	35.6	ND	47.4	5
04/23/08	7.2	ND	ND	ND	ND	ND	ND	ND	7.2	ND	ND	ND	ND	ND	ND	ND	17	5
N_i	17	16	11	15	15	15	15	15	15	14	14	15	15	15	15	15	12	
sum of rank values (R_i)	3225.5	1586.0	1139.5	1982.5	1200.0	1571.5	1197.5	1853.0	2310.0	1361.0	1316.0	2738.5	1377.0	2522.0	2150.0	1035.0	2560.0	
avg rank value ($\bar{R}_{ni}$)	189.7	99.1	103.6	132.2	80.0	104.8	79.8	123.5	154.0	97.2	94.0	182.6	91.8	168.1	143.3	69.0	213.3	

	Number of each rank value																	Rank Value
rank value of NDs =	1	11	7	8	13	10	13	8	5	10	10	4	11	4	6	15	1	69
rank value of 2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	138
rank value of 2.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	139
rank value of 2.3s =	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	141
rank value of 2.6s =	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	144.5
rank value of 2.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	147
rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148
rank value of 2.9s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	149
rank value of 3s =	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	150.5
rank value of 3.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	152
rank value of 3.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	153
rank value of 3.8s =	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	154.5
rank value of 4.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	156
rank value of 4.4s =	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	157.5
rank value of 4.6s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	159
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	160
rank value of 5.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	161
rank value of 5.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	162
rank value of 5.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	163
rank value of 5.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	164
rank value of 6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	165
rank value of 6.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166
rank value of 6.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	167
rank value of 6.8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	168
rank value of 7.2s =	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	169.5
rank value of 7.4s =	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	171.5
rank value of 8s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	173
rank value of 8.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	174.5
rank value of 9.6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	176
rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177
rank value of 11s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	178.5
rank value of 12s =	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	181.5
rank value of 13s =	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	185
rank value of 14s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	187
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	188
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	189.5
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	191.5
rank value of 18s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193.5
rank value of 20s =	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	195.5
rank value of 22s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	197
rank value of 24s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	198
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	199.5
rank value of 26s =	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	202.5
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	205.5
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	207
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	208
rank value of 29.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	209
rank value of 31s =	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	211

rank value of 35s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	213
rank value of 35.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	214
rank value of 38s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	215
rank value of 40s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	216
rank value of 40.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	217
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	218
rank value of 42.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	219
rank value of 44s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	220
rank value of 47s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	221
rank value of 47.4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	222
rank value of 63s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	223
rank value of 68s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	224
rank value of 69s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	225
rank value of 70s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	226
rank value of 71s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	227
rank value of 72s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	228
rank value of 75s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	229
rank value of 77s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230
rank value of 82s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	231
rank value of 85s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	232
rank value of 88s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	233
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	234
rank value of 94s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	235
rank value of 96s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	236
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	237.5
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	239
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	240.5
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	242
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	243
rank value of 150s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	244.5
rank value of 220s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	246
rank value of 240s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	247
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	248
rank value of 450s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	249
n =	17	16	11	15	15	15	15	15	15	14	14	15	15	15	15	15	12	

Sum of rank value calculations

69	759	483	552	897	690	897	552	345	690	690	276	759	276	414	1035	69
0	0	0	138	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	139	0	0	0	0	0	0
0	0	0	0	141	141	0	0	0	0	0	0	141	0	0	0	0
0	144.5	144.5	0	0	144.5	144.5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	147	0	0
0	0	148	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	149	0	0	0	0
0	0	0	0	0	0	0	150.5	150.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	152	0	0	0	0	0	0	0
0	0	153	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	154.5	0	0	154.5	0	0	0	0	0	0
0	0	0	0	0	0	156	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	157.5	0	157.5	0	0	0	0	0
0	0	0	0	0	0	0	0	0	159	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	160	0	0	0	0
0	0	0	0	0	0	0	0	0	0	161	0	0	0	0	0	0
0	0	0	0	162	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	163	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	164	0	0	0
0	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	167	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	168	0	0	0	0
169.5	0	0	0	0	0	0	0	169.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	171.5	0	171.5	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	173	0	0
0	174.5	0	0	0	0	0	0	0	0	0	0	0	0	174.5	0	0
0	0	0	176	0	0	0	0	0	0	0	0	0	0	0	0	0
0	177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178.5	0	0	0	0	0	0	0	0	0	0	0	0	178.5	0	0	0
363	0	0	181.5	0	0	0	0	0	0	0	0	0	0	181.5	0	0
0	0	0	0	0	185	0	370	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	187	0	0
188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	379	0	0	0
191.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191.5
387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
195.5	0	0	0	0	0	0	0	195.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	197	0	0	0	0	0
198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	199.5	0	0	199.5
202.5	0	0	0	0	0	0	202.5	0	202.5	0	0	0	0	0	0	202.5
0	0	0	0	0	0	0	205.5	0	0	0	0	0	205.5	0	0	0
0	0	0	0	0	0	0	0	207	0	0	0	0	0	0	0	0
208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
209	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
211	0	211	0	0	0	0	0	0	0	0	0	0	0	211	0	0

0	0	0	0	0	0	0	0	0	0	0	0	0	213	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0
0	0	0	0	0	0	0	0	215	0	0	0	0	0	0	0	0
0	0	0	216	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	217	0	0	0	0	0
0	0	0	0	0	0	0	218	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	219	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	220	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	221	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	222
0	0	0	0	0	0	0	0	0	0	0	223	0	0	0	0	0
0	0	0	0	0	0	0	0	224	0	0	0	0	0	0	0	0
225	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	226	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	227
0	0	0	0	0	0	0	0	0	0	0	0	0	0	228	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	229	0	0	0
230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	231	0	0	0	0	0
0	0	0	0	0	0	0	0	232	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	233	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234
0	0	0	0	0	0	0	0	0	0	0	235	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	236
0	0	0	0	0	0	0	0	0	0	0	237.5	0	237.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	239	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	481	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	243
0	0	0	0	0	0	0	0	0	0	0	244.5	0	0	0	0	244.5
0	0	0	246	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	247	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	248	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	249
sum of rank values (R_i) 3225.5	1586	1139.5	1982.5	1200	1571.5	1197.5	1853	2310	1361	1316	2738.5	1377	2522	2150	1035	2560

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * (\Sigma^{K}_{i=1} (R_i^2/N_i)\} -3(N+1)$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Ri^2/N_i =	804672.8	262020	96000	164641	95600	228907	355740	132309	123704	499959	126409	424032	308167	71415	546133

$N_{i_{bg}}$ = 44
N = 249
H = 67.33

Adjust H for ties:

T_i = 3E+06 sum of T1..T6

$H' = H/(1-(T_i/(N^3-N)))$
H' = 80.79
Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 23.68 which is less than H' =80.79.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i_{bg}}+1/N_i)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i_{bg}}$ = total samples (N_i) of background data
N_i = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	132.2	80.0	104.8	79.8	123.5	154.0	97.2	94.0	182.6	91.8	163.1	143.3	69.0	213.3
avg Rbar (background) =	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3	135.3
Dx =	-3.1	-55.3	-30.5	-55.4	-11.7	18.8	-38.0	-41.3	47.3	-43.5	32.9	8.1	-66.3	78.1
Cx =	50.2	50.2	50.2	50.2	50.2	50.2	51.5	51.5	50.2	50.2	50.2	50.2	50.2	54.7
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
ISL is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-	-	No

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Copper averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Copper
NC MCL (µg/l):	1000
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	450	2
4/28/2003	71	2
10/30/2003	150	2
4/20/2004	89	2
10/21/2004	140	2
4/18/2005	130	2
10/13/2005	96	2
4/25/2006	ND	200
10/20/2006	25	5
4/25/2007	26	10
10/31/2007	47.4	5
4/23/2008	17	5

If not detected (ND), use half of the detection limit.

	X_i values =
450	38688778
71	-67834.11
150	55815.962
89	-11826.38
140	22465.554
130	6045.1452
96	-3931.843
100	-1636.08
25	-653595.4
26	-631260.7
47.4	-266882.7
17	-851522.1

X_{bar} = 111.78333
SD = 115.82455
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3023718
γ_1 = 2.2172886

Since the Coefficient of Skewness of 2.22 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

	X_i values =
ln = 6.1092476	5.586272
4.2626799	-0.000377
5.0106353	0.3085642
4.4886364	0.0036341
4.9416424	0.2233729
4.8675345	0.151115
4.5643482	0.0120809
4.6051702	0.0197439
3.2188758	-1.389989
3.2580965	-1.248531
3.8586222	-0.108034
2.8332133	-3.386343

X_{bar} = 4.3348919

SD = 0.9193983
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.0142925
γ_1 = 0.0209546

Since the Coefficient of Skewness of 0.02 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	450	2	6.1092476
4/28/2003	71	2	4.2626799
10/30/2003	150	2	5.0106353
4/20/2004	89	2	4.4886364
10/21/2004	140	2	4.9416424
4/18/2005	130	2	4.8675345
10/13/2005	96	2	4.5643482
4/25/2006	ND	200	4.6051702
10/20/2006	25	5	3.2188758
4/25/2007	26	10	3.2580965
10/31/2007	47.4	5	3.8586222
4/23/2008	17	5	2.8332133

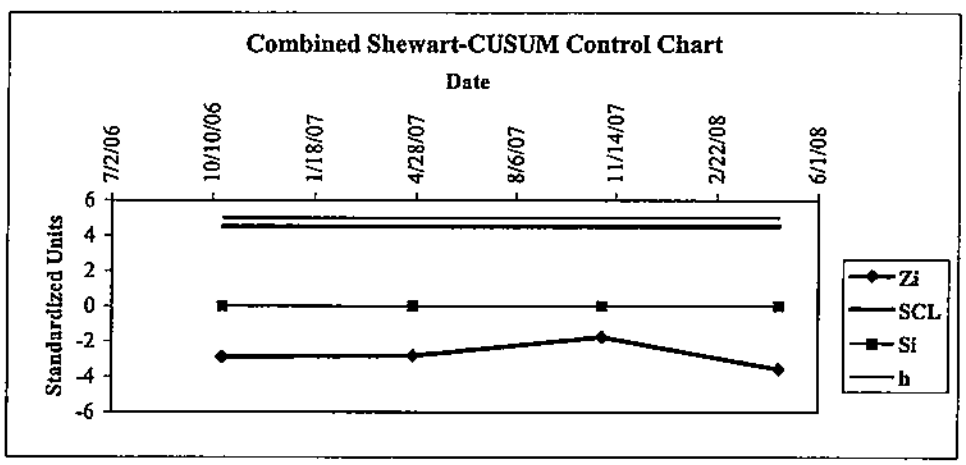
Compute the mean and standard deviation of the historical data:

4.8562368 = x_{mean} (Mean of N1-N8 historical data)
0.5653027 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	3.2188758	-2.8964323	0	5	4.5
4/25/2007	3.2580965	-2.8270522	0	5	4.5
10/31/2007	3.8586222	-1.764744	0	5	4.5
4/23/2008	2.8332133	-3.5786552	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Lead
NC MCL (µg/l): 15
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	35	NS	NS	ND	ND	ND	ND	11	ND	10	ND	ND	ND	NS	NS	NS	NS	10
06/26/00	ND	10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	NS	NS	NS	NS	NS	NS	10
04/09/01	ND	59	NS	ND	ND	ND	ND	ND	18	ND	ND	2.5	ND	NS	NS	NS	NS	10
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	27	ND	ND	NS	10
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	43	ND	ND	NS	10
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	26	ND	ND	NS	10
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11	NS	17	NS	10
04/15/02	13	ND	NS	ND	ND	ND	ND	ND	13	ND	ND	29	ND	14	10	ND	NS	10
09/26/02	ND	76	29	ND	ND	ND	ND	ND	150	ND	ND	20	ND	81	ND	ND	740	10
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	ND	ND	ND	NT	NT	NT	300	10
10/30/03	8.7	12	NT	ND	ND	ND	ND	ND	39	25	ND	7.4	ND	29	ND	ND	640	5
04/20/04	7.2	7	5.2	6.4	5.4	ND	ND	ND	12	ND	ND	39	ND	43	12	ND	250	5
10/21/04	7.2	5.6	5.7	ND	ND	ND	ND	ND	ND	ND	5.6	24	ND	18	16	ND	430	5
04/18/05	13	8	5.2	73	ND	ND	ND	ND	ND	ND	ND	39	ND	40	13	ND	380	5
10/13/05	14	6.9	ND	20	ND	ND	ND	ND	ND	ND	ND	29	ND	110	62	ND	290	5
04/25/06	15	ND	ND	ND	ND	ND	ND	ND	53	34	ND	19	ND	ND	18	ND	300	10
10/20/06	20	ND	ND	ND	ND	ND	ND	ND	32	NS	NS	ND	ND	30	37	ND	89	5
04/25/07	ND	ND	ND	ND	ND	96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	69	10
10/31/07	17.5	8.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.3	ND	46.5	23.1	ND	123	5
04/23/08	ND	ND	8.4	ND	ND	ND	ND	ND	5.8	ND	ND	ND	ND	ND	ND	ND	50.2	5
N_i	17	16	11	15	15	15	15	15	16	14	14	15	15	16	15	16	12	
sum of rank values (R_i)	2537.5	2310.5	1404.5	1615.0	1331.0	1403.0	1245.0	1349.5	2479.0	1532.5	1249.5	2464.0	1245.0	3103.5	2223.5	1446.0	2939.0	
avg rank value (Rbar)	149.3	144.4	127.7	107.7	88.7	93.5	83.0	90.0	154.9	109.5	89.3	164.3	83.0	194.0	148.2	90.4	244.9	

	Number of each rank value																	Rank Value
rank value of NDs =	7	7	6	12	14	14	15	14	7	11	13	5	15	3	7	15	0	83
rank value of 2.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	166
rank value of 5.2s =	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167.5
rank value of 5.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	169
rank value of 5.6s =	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	170.5
rank value of 5.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172
rank value of 5.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	173
rank value of 6.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	174
rank value of 6.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175
rank value of 7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176
rank value of 7.2s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177.5
rank value of 7.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	179
rank value of 8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180
rank value of 8.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181
rank value of 8.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182
rank value of 8.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	183
rank value of 10s =	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	185
rank value of 11s =	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	187.5
rank value of 12s =	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	190
rank value of 12.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	192
rank value of 13s =	2	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	194.5
rank value of 14s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	197.5
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	199
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	200
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	201
rank value of 17.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202
rank value of 18s =	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	204
rank value of 19s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	206
rank value of 20s =	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	208
rank value of 23.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	210
rank value of 24s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	211
rank value of 25s =	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	212.5
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	214
rank value of 27s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	215
rank value of 29s =	0	0	1	0	0	0	0	0	0	0	0	2	0	1	0	0	0	217.5
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	220

rank value of 32s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	221
rank value of 34s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	222
rank value of 35s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	223
rank value of 37s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	224
rank value of 39s =	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	226
rank value of 40s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	228
rank value of 43s =	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	229.5
rank value of 46.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	231
rank value of 50.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	232
rank value of 53s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	233
rank value of 59s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234
rank value of 62s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	235
rank value of 69s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	236
rank value of 73s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	237
rank value of 76s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	238
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	239
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	240
rank value of 96s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	241
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	242
rank value of 123s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	243
rank value of 150s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	244
rank value of 250s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	245
rank value of 290s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	246
rank value of 300s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	247.5
rank value of 380s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	249
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	250
rank value of 640s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	251
rank value of 740s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	252
n =	17	16	11	15	15	15	15	15	16	14	14	15	15	16	15	16	12	

Sum of rank value calculations

581	581	498	996	1162	1162	1245	1162	581	913	1079	415	1245	249	581	1245	0
0	0	0	0	0	0	0	0	0	0	0	166	0	0	0	0	0
0	0	335	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	169	0	0	0	0	0	0	0	0	0	0	0	0
0	170.5	0	0	0	0	0	0	0	0	170.5	0	0	0	0	0	0
0	0	172	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	173	0	0	0	0	0	0	0	0
0	0	0	174	0	0	0	0	0	0	0	0	0	0	0	0	0
0	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
355	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	179	0	0	0	0	0
0	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	182	0	0	0	0	0	0	0	0	0	0	0	0	0	0
183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	185	0	0	0	0	0	0	0	185	0	0	0	0	185	0	0
0	0	0	0	0	0	0	187.5	0	0	0	0	0	187.5	0	0	0
0	190	0	0	0	0	0	0	190	0	0	0	0	0	190	0	0
0	0	0	0	0	0	0	0	0	0	0	192	0	0	0	0	0
389	0	0	0	0	0	0	0	194.5	0	0	0	0	0	194.5	0	0
197.5	0	0	0	0	0	0	0	0	0	0	0	0	197.5	0	0	0
199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	201	0
202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	204	0	0	0	0	204	204	0	0
0	0	0	0	0	0	0	0	0	0	0	206	0	0	0	0	0
208	0	0	208	0	0	0	0	0	0	0	208	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	210	0	0
0	0	0	0	0	0	0	0	0	0	0	211	0	0	0	0	0
0	0	0	0	0	0	0	0	212.5	212.5	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	215	0	0	0
0	0	217.5	0	0	0	0	0	0	0	0	435	0	217.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	220	0	0	0
0	0	0	0	0	0	0	0	221	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	222	0	0	0	0	0	0	0
223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	224	0	0
0	0	0	0	0	0	0	0	226	0	0	452	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	228	0	0	0

0	0	0	0	0	0	0	0	0	0	0	0	0	459	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	231	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	232
0	0	0	0	0	0	0	0	233	0	0	0	0	0	0	0	0
0	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	235	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	236
0	0	0	237	0	0	0	0	0	0	0	0	0	0	0	0	0
0	238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	239	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240
0	0	0	0	0	241	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	242	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	243
0	0	0	0	0	0	0	0	244	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	495
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	249
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	250
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	252
sum of rank values (R_i)	2537.5	2310.5	1404.5	1615	1331	1403	1245	1349.5	2479	1532.5	1249.5	2464	1245	3103.5	2223.5	1446	2939

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)\} * [\Sigma^{K}_{i=1} (R_i^2/N_i)] -3(N+1)$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Ri^2/N_i =	888494.5	173882	118104	131227	103335	121410	384090	167754	111518	404753	103335	601982	329597	130682	719810

$N_{i_{bk}}$ = 44
N = 252
H = 86.09

Adjust H for ties:

T_i = 4E+06 sum of T1..T4

$H' = H/(1-(T_i/(N^3-N)))$
H' = 119.69
Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 23.68 which is less than H' =119.69.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i_{bk}}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i_{bk}}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	107.7	88.7	93.5	83.0	90.0	154.9	109.5	89.3	164.3	83.0	194.0	148.2	90.4	244.9
avg Rbar (background) =	142.1	142.1	142.1	142.1	142.1	142.1	142.1	142.1	142.1	142.1	142.1	142.1	142.1	142.1
Dx =	-34.4	-53.4	-48.6	-59.1	-52.1	12.8	-32.6	-52.9	22.2	-59.1	51.9	6.1	-51.7	102.8
Cx =	50.8	50.8	50.8	50.8	50.8	49.6	52.1	52.1	50.8	50.8	49.6	50.8	49.6	55.3
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes
SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	No	-	-	Yes

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Lead averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Lead
NC MCL (µg/l): 15
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-12	MDL
9/18/2001	27	10
10/29/2001	43	10
1/30/2002	26	10
4/15/2002	14	10
9/26/2002	81	10
10/30/2003	29	5
4/20/2004	43	5
10/21/2004	18	5
4/18/2005	40	5
10/13/2005	110	5
4/25/2006	ND	10
10/20/2006	30	5
4/25/2007	ND	10
10/31/2007	46.5	5
4/23/2008	ND	5

If not detected (ND), use half of the detection limit.

	X_i values =
27	-450.6296
43	578.7037
26	-650.963
14	-8826.963
81	99467.37
29	-181.963
43	578.7037
18	-4629.63
40	151.7037
110	427525.04
5	-26109.96
30	-101.6296
5	-26109.96
46.5	1656.9954
2.5	-33282.67

X_{bar} = 34.666667
SD = 29.052703
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 28640.943
γ_1 = 1.2953065

Since the Coefficient of Skewness of 1.30 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
3.2958369	0.003628
3.7612001	0.237201
3.2580965	0.0015576
2.6390573	-0.127356
4.3944492	1.9637861
3.3672958	0.0114084
3.7612001	0.237201
2.8903718	-0.015966
3.6888795	0.1633987
4.7004804	3.7840287
1.6094379	-3.600861
3.4011974	0.0173777
1.6094379	-3.600861
3.8394523	0.3390075
0.9162907	-11.02834

X_{bar} = 3.1421789
SD = 1.0580458
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.774319
γ_1 = 0.7250224

Since the Coefficient of Skewness of 0.73 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-12	MDL	Data for Testing
9/18/2001	27	10	3.2958369
10/29/2001	43	10	3.7612001
1/30/2002	26	10	3.2580965
4/15/2002	14	10	2.6390573
9/26/2002	81	10	4.3944492
10/30/2003	29	5	3.3672958
4/20/2004	43	5	3.7612001
10/21/2004	18	5	2.8903718
4/18/2005	40	5	3.6888795
10/13/2005	110	5	4.7004804
4/25/2006	ND	10	1.6094379
10/20/2006	30	5	3.4011974
4/25/2007	ND	10	1.6094379
10/31/2007	46.5	5	3.8394523
4/23/2008	ND	5	0.9162907

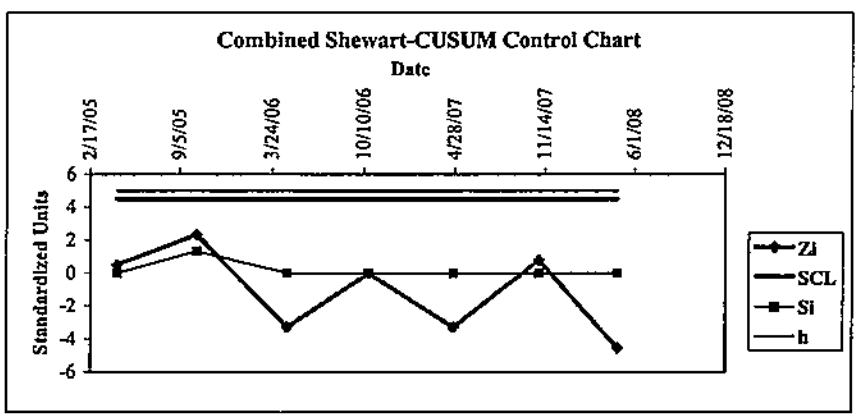
Compute the mean and standard deviation of the historical data:

3.4209385 = x_{mean} (Mean of N1-N8 historical data)
0.5499563 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	3.6888795	0.48720414	0	5	4.5
10/13/2005	4.7004804	2.32662463	1.3266246	5	4.5
4/25/2006	1.6094379	-3.293899	0	5	4.5
10/20/2006	3.4011974	-0.0358957	0	5	4.5
4/25/2007	1.6094379	-3.293899	0	5	4.5
10/31/2007	3.8394523	0.76099472	0	5	4.5
4/23/2008	0.9162907	-4.5542667	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	**Total Lead**
NC MCL (µg/l):	15
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	740	10
4/28/2003	300	10
10/30/2003	640	5
4/20/2004	250	5
10/21/2004	430	5
4/18/2005	380	5
10/13/2005	290	5
4/25/2006	300	10
10/20/2006	89	5
4/25/2007	69	10
10/31/2007	123	5
4/23/2008	50.2	5

If not detected (ND), use half of the detection limit.

	X_i values =
740	82256121
300	-132.651
640	37561718
250	-167284.2
430	1948441.2
380	420189.75
290	-3442.951
300	-132.651
89	-10091699
69	-13160972
123	-6038511
50.2	-16561875

X_{bar} = 305.1
SD = 218.75659
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 6346868.3
γ_1 = 0.6908104

Since the Coefficient of Skewness of 0.69 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the real detected values shown above.

	X_i values =
ln = 6.6066502	1.6422936
5.7037825	0.0212437
6.4614682	1.1075652
5.5214609	0.0008475
6.0637852	0.258424
5.9401713	0.1352777
5.6698809	0.0143585
5.7037825	0.0212437
4.4886364	-0.825797
4.2341065	-1.696743
4.8121844	-0.232203
3.916015	-3.448508

X_{bar} = 5.426827

SD = 0.8694965
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.250166
γ_1 = 0.4336191

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	740	10	740
4/28/2003	300	10	300
10/30/2003	640	5	640
4/20/2004	250	5	250
10/21/2004	430	5	430
4/18/2005	380	5	380
10/13/2005	290	5	290
4/25/2006	300	10	300
10/20/2006	89	5	89
4/25/2007	69	10	69
10/31/2007	123	5	123
4/23/2008	50.2	5	50.2

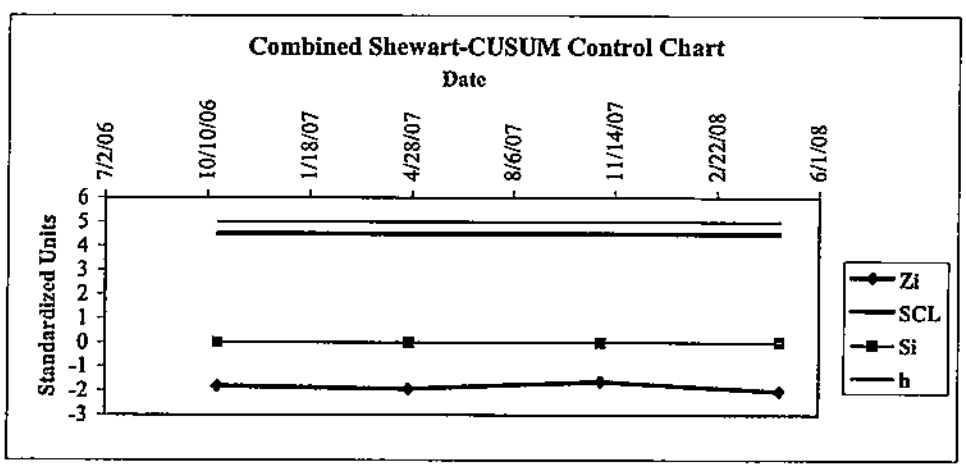
Compute the mean and standard deviation of the historical data:

416.25 = x_{mean} (Mean of N1-N8 historical data)
180.07439 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	89	-1.8173045	0	5	4.5
4/25/2007	69	-1.9283697	0	5	4.5
10/31/2007	123	-1.6284937	0	5	4.5
4/23/2008	50.2	-2.032771	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Nickel
NC MCL (µg/l): 100
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	15	NS	NS	17	12	8.3	ND	24	6.7	ND	5.6	22	ND	NS	NS	NS	NS	5
06/26/00	15	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
07/26/00	16	9.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
09/18/00	NS	NS	NS	8.8	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	50
04/09/01	76	7.2	NS	9.6	5.3	ND	ND	18	28	ND	ND	6.1	7.3	NS	NS	NS	NS	5
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	97	59	ND	NS	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	120	ND	ND	NS	5
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	49	5.5	ND	NS	5
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	50
04/15/02	74	ND	NS	ND	ND	ND	6	9	44	7.1	8.7	68	6.9	20	13	ND	NS	5
09/26/02	16	6.8	31	400	ND	ND	ND	27	40	ND	6.5	78	5.6	180	27	ND	430	5
04/28/03	ND	ND	ND	90	ND	ND	ND	ND	ND	ND	ND	26	ND	NT	NT	NT	70	5
10/30/03	19	ND	NT	6.9	6.9	ND	ND	ND	48	22	ND	ND	7.7	34	ND	ND	190	5
04/20/04	20	ND	ND	30	7.3	ND	ND	12	5.3	ND	ND	49	12	36	8.4	ND	110	5
10/21/04	12	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	35	ND	23	14	ND	160	5
04/18/05	29	9.6	17	460	ND	ND	5.5	5.4	ND	ND	ND	59	ND	61	12	ND	170	5
10/13/05	29	ND	ND	160	6.8	ND	ND	6.1	ND	ND	ND	46	ND	160	72	ND	100	5
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	88	50
10/20/06	22	ND	8.3	25	ND	ND	ND	ND	13	NS	NS	ND	ND	ND	ND	ND	24	5
04/25/07	ND	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
10/31/07	24	ND	8	8.4	13.8	ND	5.8	9.8	ND	ND	ND	20.2	ND	73.1	30.3	ND	36.2	5
04/23/08	7.3	ND	12.9	6.3	10.8	5.7	ND	11.3	5.3	ND	6.2	ND	7.2	17.2	ND	ND	19	5
N_i	17	16	11	16	15	15	15	15	15	14	14	15	15	15	15	15	12	
sum of rank values (R_i)	2952.5	1427.5	1297.0	2754.0	1643.5	1333.5	1205.0	1958.0	1920.5	1138.0	1247.0	2419.0	1524.5	2861.5	2109.0	982.5	2602.0	
avg rank value ($\bar{R}_{bar}$)	173.7	89.2	117.9	172.1	109.6	88.9	80.3	130.5	128.0	81.3	89.1	161.3	101.6	190.8	140.6	65.5	216.8	

	Number of each rank value																	Rank Value
rank value of NDs =	3	12	6	3	8	12	12	6	7	12	10	5	9	3	6	15	1	65.5
rank value of 5.3s =	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	132
rank value of 5.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	134
rank value of 5.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	135.5
rank value of 5.6s =	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	137.5
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	139
rank value of 5.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	140
rank value of 6.1s =	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	141.5
rank value of 6.2s =	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	143.5
rank value of 6.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 6.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	146
rank value of 6.7s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	147
rank value of 6.8s =	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	148.5
rank value of 6.9s =	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	151
rank value of 7.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	153
rank value of 7.2s =	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	154.5
rank value of 7.3s =	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	157
rank value of 7.7s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	159
rank value of 8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160
rank value of 8.3s =	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	161.5
rank value of 8.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	163.5
rank value of 8.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	165
rank value of 8.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	166
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	167
rank value of 9.6s =	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	168.5
rank value of 9.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170
rank value of 9.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	171
rank value of 10.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	172
rank value of 11.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	173
rank value of 12s =	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1	0	0	176
rank value of 12.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	179
rank value of 13s =	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	181
rank value of 13.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	183
rank value of 14s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	184
rank value of 15s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	185.5
rank value of 16s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	187.5
rank value of 17s =	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	189.5
rank value of 17.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	191
rank value of 18s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	192
rank value of 19s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	193.5
rank value of 20s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	195.5
rank value of 20.2s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	197
rank value of 22s =	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	199
rank value of 23s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	201
rank value of 24s =	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	203
rank value of 25s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	205
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	206
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	207.5
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	209
rank value of 29s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210.5

rank value of 30s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	212
rank value of 30.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	213
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214
rank value of 34s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	215
rank value of 35s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	216
rank value of 36s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	217
rank value of 36.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	218
rank value of 40s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	219
rank value of 44s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	220
rank value of 46s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	221
rank value of 48s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	222
rank value of 49s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	223.5
rank value of 59s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	225.5
rank value of 61s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	227
rank value of 63s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	228
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	229
rank value of 72s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	230
rank value of 73.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	231
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	232
rank value of 76s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233
rank value of 78s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	234
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	235
rank value of 90s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	236
rank value of 97s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	237
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	238
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	239
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	240
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	242
rank value of 170s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	244
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	245
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	246
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	247
rank value of 400s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	248
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	249
rank value of 460s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	250
n =	17	16	11	16	15	15	15	15	15	14	14	15	15	15	15	15	12	

Sum of rank value calculations

196.5	786	393	196.5	524	786	786	393	458.5	786	655	327.5	589.5	196.5	393	982.5	65.5
0	0	0	0	132	0	0	0	264	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	134	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	135.5	0	0	0	0	0	0	0	135.5	0	0
0	0	0	0	0	0	0	0	0	0	137.5	0	137.5	0	0	0	0
0	0	0	0	0	139	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	140	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	141.5	0	0	0	141.5	0	0	0	0	0
0	0	0	0	0	0	143.5	0	0	0	143.5	0	0	0	0	0	0
0	0	0	145	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	146	0	0	0	0	0	0
0	0	0	0	0	0	0	0	147	0	0	0	0	0	0	0	0
0	148.5	0	0	148.5	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	151	151	0	0	0	0	0	0	0	151	0	0	0	0
0	0	0	0	0	0	0	0	0	153	0	0	0	0	0	0	0
0	154.5	0	0	0	0	0	0	0	0	0	0	154.5	0	0	0	0
157	0	0	0	157	0	0	0	0	0	0	0	157	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	159	0	0	0	0
0	0	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	161.5	0	0	161.5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	163.5	0	0	0	0	0	0	0	0	0	0	163.5	0	0
0	0	0	0	0	0	0	0	0	0	165	0	0	0	0	0	0
0	0	0	166	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	167	0	0	0	0	0	0	0	0	0
0	168.5	0	168.5	0	0	0	0	0	0	0	0	0	0	0	0	0
0	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	171	0	0	0	0	0	0	0	0	0
0	0	0	0	172	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	173	0	0	0	0	0	0	0	0	0
176	0	0	0	176	0	0	176	0	0	0	0	176	0	176	0	0
0	0	179	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	181	0	0	0	0	181	0	0	0	0	0	181	0	0
0	0	0	0	183	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	184	0	0
371	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	189.5	189.5	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	191	0	0	0
0	0	0	0	0	0	0	192	0	0	0	0	0	0	0	0	0
193.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193.5
195.5	0	0	0	0	0	0	0	0	0	0	0	0	195.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	197	0	0	0	0	0
199	0	0	0	0	0	0	0	0	199	0	199	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	201	0	0	0
203	0	0	0	0	0	0	203	0	0	0	0	0	0	0	0	203
0	0	0	205	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	206	0	0	0	0	0
0	0	0	0	0	0	0	207.5	0	0	0	0	0	0	207.5	0	0
0	0	0	0	0	0	0	0	209	0	0	0	0	0	0	0	0
421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	0	0	0	212	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	213	0	0
	0	0	214	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	215	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	216	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	217	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	218
	0	0	0	0	0	0	0	0	219	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	220	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	221	0	0	0	0	0
	0	0	0	0	0	0	0	0	222	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	223.5	0	223.5	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	225.5	0	0	225.5	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	227	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	228	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	231	0	0	0
	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	234	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235
	0	0	0	236	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	237	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	238
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	239
	0	0	0	0	0	0	0	0	0	0	0	0	0	240	0	0	0
	0	0	0	242	0	0	0	0	0	0	0	0	0	242	0	0	242
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	244
	0	0	0	0	0	0	0	0	0	0	0	0	0	245	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
	0	0	0	0	0	247	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	248	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	249
	0	0	0	250	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	2952.5	1427.5	1297	2754	1643.5	1333.5	1205	1958	1920.5	1138	1247	2419	1524.5	2861.5	2109	982.5	2602

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} - 3(N+1)$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Ri^2/N_i =	732462.0	474032	180073	118548	96802	255584	245888	92503	111072	390104	154940	545879	296525	64354	564200

N_{bkg} = 44
N = 250
H = 73.70

Adjust H for ties:

T_i = 2E+06 sum of T1..T8

$H' = H/(1-(T_i/(N^3-N)))$
H' = 85.76
Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 23.68 which is less than H' =85.76.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{bkg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
N_{bkg} = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	172.1	109.6	88.9	80.3	130.5	128.0	81.3	89.1	161.3	101.6	190.8	140.6	65.5	216.8
avg Rbar (background) =	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
Dx =	43.1	-19.5	-40.1	-48.7	1.5	-1.0	-47.7	-40.0	32.2	-27.4	61.7	11.6	-63.5	87.8
Cx =	49.2	50.4	50.4	50.4	50.4	50.4	51.7	51.7	50.4	50.4	50.4	50.4	50.4	54.9
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No	Yes	No	No	Yes
SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	No	-	-	No

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Nickel averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	**Total Nickel**
NC MCL (µg/l):	100
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-12	MDL
9/18/2001	97	5
10/29/2001	120	5
1/30/2002	49	5
4/15/2002	20	5
9/26/2002	180	5
10/30/2003	34	5
4/20/2004	36	5
10/21/2004	23	5
4/18/2005	61	5
10/13/2005	160	5
4/25/2006	ND	50
10/20/2006	ND	5
4/25/2007	ND	50
10/31/2007	73.1	5
4/23/2008	17.2	5

If not detected (ND), use half of the detection limit.

	X_i values =
97	44663.303
120	199996.36
49	-1962.515
20	-71576.76
180	1663164.2
34	-20842.28
36	-16620.42
23	-57155.61
61	-0.140608
160	955089.61
25	-48707.1
2.5	-205587.9
25	-48707.1
73.1	1552.8363
17.2	-87056.11

X_{bar} = 61.52
SD = 54.403942
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 153750.02
γ_1 = 1.0589341

Since the Coefficient of Skewness of 1.06 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
4.574711	0.6901432
4.7874917	1.3183264
3.8918203	0.0080995
2.9957323	-0.336082
5.1929569	3.3882649
3.5263605	-0.004462
3.5835189	-0.001241
3.1354942	-0.171416
4.1108739	0.0740243
5.0751738	2.6520231
3.2188758	-0.105233
0.9162907	-21.36239
3.2188758	-0.105233
4.2918284	0.2169021
2.8449094	-0.605678

X_{bar} = 3.6909942
SD = 1.083117
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.956263
γ_1 = 0.8346342

Since the Coefficient of Skewness of 0.83 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-12	MDL	Data for Testing
9/18/2001	97	5	4.574711
10/29/2001	120	5	4.7874917
1/30/2002	49	5	3.8918203
4/15/2002	20	5	2.9957323
9/26/2002	180	5	5.1929569
10/30/2003	34	5	3.5263605
4/20/2004	36	5	3.5835189
10/21/2004	23	5	3.1354942
4/18/2005	61	5	4.1108739
10/13/2005	160	5	5.0751738
4/25/2006	ND	50	3.2188758
10/20/2006	ND	5	0.9162907
4/25/2007	ND	50	3.2188758
10/31/2007	73.1	5	4.2918284
4/23/2008	17.2	5	2.8449094

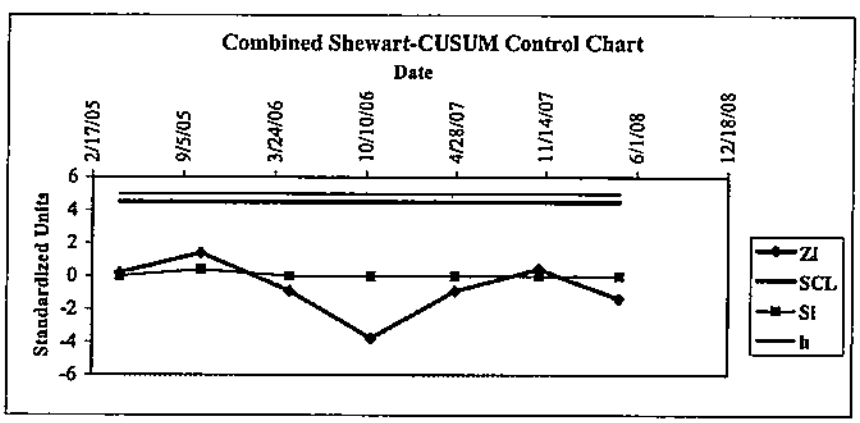
Compute the mean and standard deviation of the historical data:

3.9610107 = x_{mean} (Mean of N1-N8 historical data)
0.8041711 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	4.1108739	0.18635727	0	5	4.5
10/13/2005	5.0751738	1.38548011	0.3854801	5	4.5
4/25/2006	3.2188758	-0.9228569	0	5	4.5
10/20/2006	0.9162907	-3.7861594	0	5	4.5
4/25/2007	3.2188758	-0.9228569	0	5	4.5
10/31/2007	4.2918284	0.41137717	0	5	4.5
4/23/2008	2.8449094	-1.3878904	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	**Total Nickel**
NC MCL (µg/l):	100
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	430	5
4/28/2003	70	5
10/30/2003	190	5
4/20/2004	110	5
10/21/2004	160	5
4/18/2005	170	5
10/13/2005	100	5
4/25/2006	88	50
10/20/2006	24	5
4/25/2007	ND	50
10/31/2007	36.2	5
4/23/2008	19	5

If not detected (ND), use half of the detection limit.

	X_i values =
430	30220695
70	-114201.8
190	365270.32
110	-617.7446
160	71387.297
170	136458.31
100	-6348.753
88	-28419.16
24	-844355.2
25	-817837.6
36.2	-557780.5
19	-985570

X_{bar} = 118.51667
SD = 114.63858
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 2286556.6
γ_1 = 1.7293084

Since the Coefficient of Skewness of 1.73 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

	X_i values =
ln = 6.0637852	4.8280448
4.2484952	-0.00196
5.2470241	0.6662149
4.7004804	0.0349143
5.0751738	0.3452582
5.1357984	0.442725
4.6051702	0.0124113
4.4773368	0.001115
3.1780538	-1.709007
3.2188758	-1.539859
3.5890591	-0.482964
2.944439	-2.919314

X_{bar} = 4.373641
SD = 0.9676758
N = 12

$1/N\Sigma_i(X_i-X_{bar})^3 = -0.026868$

$\gamma_1 = 0.0337858$

Since the Coefficient of Skewness of 0.03 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	430	5	6.0637852
4/28/2003	70	5	4.2484952
10/30/2003	190	5	5.2470241
4/20/2004	110	5	4.7004804
10/21/2004	160	5	5.0751738
4/18/2005	170	5	5.1357984
10/13/2005	100	5	4.6051702
4/25/2006	88	50	4.4773368
10/20/2006	24	5	3.1780538
4/25/2007	ND	50	3.2188758
10/31/2007	36.2	5	3.5890591
4/23/2008	19	5	2.944439

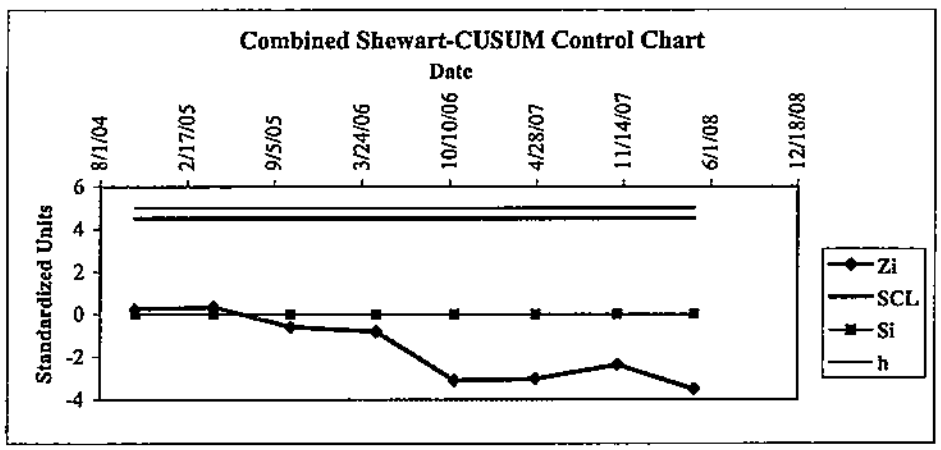
Compute the mean and standard deviation of the historical data:

4.944158 = x_{mean} (Mean of N1-N8 historical data)
0.5701309 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/21/2004	5.0751738	0.22979952	0	5	4.5
4/18/2005	5.1357984	0.33613409	0	5	4.5
10/13/2005	4.6051702	-0.594579	0	5	4.5
4/25/2006	4.4773368	-0.8187966	0	5	4.5
10/20/2006	3.1780538	-3.0977172	0	5	4.5
4/25/2007	3.2188758	-3.0261161	0	5	4.5
10/31/2007	3.5890591	-2.3768208	0	5	4.5
4/23/2008	2.944439	-3.5074738	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Selenium
MCL (µg/l): 50
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	20
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	20
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	20
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	20
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	20
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	20
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	20
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	20
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	20
04/15/02	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	20
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	ND	20
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
04/20/04	ND	ND	ND	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	10
04/25/07	12	ND	ND	ND	ND	460	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18	10
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10

1) If not detected (ND), use half of the detection limit.

04/24/00	10	-	-	10	10	10	10	10	10	10	10	10	10	-	-	-	-
06/26/00	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/26/00	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/09/01	10	10	-	10	10	10	10	10	10	10	10	10	10	-	-	-	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/15/02	10	10	-	10	10	10	10	10	10	10	10	10	10	10	10	10	-
09/26/02	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
04/28/03	10	10	10	10	10	10	10	10	10	10	10	10	10	-	-	-	10
10/30/03	2.5	2.5	-	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/20/04	2.5	2.5	2.5	2.5	2.5	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
10/21/04	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/18/05	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
10/13/05	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/25/06	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
10/20/06	5	5	5	5	5	5	5	5	5	-	-	5	5	5	5	5	5
04/25/07	12	5	5	5	5	460	5	5	5	5	5	5	5	5	5	5	18
10/31/07	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
04/23/08				5	5	5	5	5	5	5	5	5	5	5	5	5	5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 16.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 41$
$T_{n1} = 267$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 14$
$n = 41$
$T_{n1} = 267$
$t[40,.01] = 2.423$
$c = 0.3415$
$T_{n2} = 70$
$T^*_k = 119.0$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Silver
MCL (µg/l): 17.5
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	3.7	NS	NS	ND	ND	ND	6.9	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	2
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	10
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	2
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	2
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	2
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	2
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	10
04/15/02	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	2
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	ND	2
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
10/13/05	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	5
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5

1) If not detected (ND), use half of the detection limit.

04/24/00	3.7	-	-	1	1	1	6.9	1	1	1	1	1	1	-	-	-	-
06/26/00	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/26/00	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/09/01	1	1	-	1	1	1	1	1	1	1	1	1	1	-	-	-	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/15/02	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1	1	-
09/26/02	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
04/28/03	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	1
10/30/03	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1
04/20/04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10/21/04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
04/18/05	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10/13/05	2.9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
04/25/06	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
10/20/06	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-	2.5	2.5	2.5	2.5	2.5	2.5
04/25/07	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
10/31/07	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
04/23/08				2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 16.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_a).

$n = 41$
$T_{a1} = 78.6$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{a1} + ct^2/2 + ct[T_{a1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 14$
$n = 41$
$T_{a1} = 78.6$
$t[40,.01] = 2.423$
$c = 0.3415$
$T_{a2} = 35$
$T^*_k = 42.4$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{a2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Total Thallium
MCL (µg/l): Not Established
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	2	NS	NS	ND	3	2	4	ND	2	ND	3	5	ND	NS	NS	NS	NS	2
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	20
04/09/01	40	ND	NS	ND	ND	ND	ND	ND	ND	30	ND	ND	ND	NS	NS	NS	NS	2
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	2
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	2
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	ND	NS	2
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	20
04/15/02	40	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	2
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	65	2
04/28/03	ND	ND	ND	1.6	ND	ND	ND	ND	1.4	ND	ND	ND	1	NT	NT	NT	15	1
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
10/13/05	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	10
04/25/07	ND	ND	ND	ND	ND	35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5
10/31/07	11.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.5	ND	12.3	10.5	ND	ND	5.5
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5

1) If not detected (ND), use half of the detection limit.

04/24/00	2	-	-	1	3	2	4	1	2	1	3	5	1	-	-	-	-
06/26/00	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/26/00	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/09/01	40	1	-	1	1	1	1	1	1	30	1	1	1	-	-	-	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/15/02	40	1	-	1	1	1	1	1	1	1	1	1	1	1	1	1	-
09/26/02	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	65
04/28/03	0.5	0.5	0.5	1.6	0.5	0.5	0.5	0.5	1.4	0.5	0.5	0.5	1	-	-	-	15
10/30/03	5	5	-	5	5	5	5	5	5	5	5	5	5	5	5	5	5
04/20/04	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
10/21/04	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
04/18/05	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
10/13/05	22	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
04/25/06	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
10/20/06	5	5	5	5	5	5	5	5	5	-	-	5	5	5	5	5	5
04/25/07	2.75	2.75	2.75	2.75	2.75	35	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
10/31/07	11.6	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	9.5	2.75	12.3	10.5	2.75	2.75
04/23/08				2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 16.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_a).

$n = 41$
$T_{a1} = 234.9$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{a1} + ct^2/2 + ct[T_{a1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 14$
$n = 41$
$T_{a1} = 234.9$
$t[40,.01] = 2.423$
$c = 0.3415$
$T_{a2} = 38.5$
$T^*_k = 106.3$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{a2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Compound: Total Vanadium
NC MCL (µg/l): Not Established
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	17	NS	NS	19	32	21	ND	29	8.9	ND	ND	78	ND	NS	NS	NS	NS	5
06/26/00	40	6.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
07/26/00	45	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	40
04/09/01	250	1.4	NS	13	19	9.3	ND	24	41	ND	ND	230	8	NS	NS	NS	NS	5
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	160	170	6.4	NS	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	250	9.2	ND	NS	5
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	83	12	ND	NS	5
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	200	NS	58	NS	40
04/15/02	240	ND	NS	ND	ND	11	21	14	69	17	12	260	ND	37	37	ND	NS	5
09/26/02	58	16	44	640	ND	ND	ND	42	50	8.7	17	310	8.8	530	130	ND	1000	5
04/28/03	89	ND	9.6	170	6.8	6.8	ND	ND	37	ND	ND	230	ND	NT	NT	NT	130	5
10/30/03	54	ND	NT	6.6	16	ND	ND	ND	92	82	5.9	14	ND	82	13	ND	200	5
04/20/04	55	ND	ND	45	25	ND	ND	13	5.1	ND	5.6	240	ND	140	33	ND	88	5
10/21/04	41	ND	ND	18	ND	ND	ND	ND	ND	ND	10	160	ND	46	59	ND	210	5
04/18/05	85	ND	ND	680	5.4	ND	ND	ND	ND	ND	ND	240	ND	100	44	ND	110	5
10/13/05	82	ND	ND	210	8.9	ND	ND	ND	ND	ND	5.7	170	ND	330	310	ND	82	5
04/25/06	110	ND	ND	ND	ND	ND	ND	ND	ND	160	ND	120	ND	ND	54	ND	85	40
10/20/06	79	ND	ND	28	ND	ND	ND	ND	23	NS	NS	ND	ND	120	100	ND	30	5
04/25/07	43	ND	ND	ND	ND	300	ND	ND	ND	33	ND	ND	ND	ND	ND	ND	26	25
10/31/07	89	ND	8.8	14.7	20	ND	ND	ND	8.6	ND	ND	103	ND	176	146	ND	48.2	5
04/23/08	26.1	ND	11.4	9.7	10.1	ND	ND	5.1	9.7	ND	8.6	10	ND	7.2	6.1	ND	23.1	5
N	17	16	11	15	15	15	15	15	15	14	14	15	15	16	15	16	12	
sum of rank values (R_i)	3396.0	1150.5	1015.0	2396.0	1705.0	1402.0	977.5	1472.0	1953.5	1422.0	1351.5	2944.0	1018.5	3110.5	2691.5	1134.5	2486.0	
avg rank value (Rbar)	199.8	71.9	92.3	159.7	113.7	93.5	65.2	98.1	130.2	101.6	96.5	196.3	67.9	194.4	179.4	70.9	207.2	

	Number of each rank value																	Rank Value
rank value of NDs =	0	13	7	3	6	10	14	9	5	9	7	2	13	2	1	14	0	58
rank value of 1.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116
rank value of 5.1s =	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	117.5
rank value of 5.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	119
rank value of 5.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	120
rank value of 5.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	121
rank value of 5.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	122
rank value of 6.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	123
rank value of 6.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124
rank value of 6.4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	125
rank value of 6.6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	126
rank value of 6.8s =	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	127.5
rank value of 7.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	129
rank value of 8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	130
rank value of 8.6s =	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	131.5
rank value of 8.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	133
rank value of 8.8s =	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	134.5
rank value of 8.9s =	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	136.5
rank value of 9.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	138
rank value of 9.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	139
rank value of 9.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140
rank value of 9.7s =	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	141.5
rank value of 10s =	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	143.5
rank value of 10.1s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	146
rank value of 11.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147
rank value of 12s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	148.5
rank value of 13s =	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	151
rank value of 14s =	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	153.5
rank value of 14.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	155
rank value of 16s =	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	156.5
rank value of 17s =	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	159
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	161
rank value of 19s =	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	162.5
rank value of 20s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	164
rank value of 21s =	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	165.5
rank value of 23s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	167
rank value of 23.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	168
rank value of 24s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	169
rank value of 25s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	170
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	171
rank value of 26.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172
rank value of 28s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	173
rank value of 29s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	174
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	175
rank value of 32s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	176
rank value of 33s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	177.5
rank value of 37s =	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	180
rank value of 40s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182
rank value of 41s =	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	183.5
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	185
rank value of 43s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	186
rank value of 44s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	187.5
rank value of 45s =	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	189.5
rank value of 46s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	191

rank value of 48.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	192
rank value of 50s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	193
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	194.5
rank value of 55s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	196
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	197.5
rank value of 59s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	199
rank value of 69s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	200
rank value of 78s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	201
rank value of 79s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202
rank value of 82s =	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	204.5
rank value of 83s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	207
rank value of 85s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	208.5
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	210
rank value of 89s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	211.5
rank value of 92s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	213
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	214.5
rank value of 103s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	216
rank value of 110s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	217.5
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	219.5
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	221.5
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	223
rank value of 146s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	224
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	226
rank value of 170s =	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	229
rank value of 176s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	231
rank value of 200s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	232.5
rank value of 210s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	234.5
rank value of 230s =	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	236.5
rank value of 240s =	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	239
rank value of 250s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	241.5
rank value of 260s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	243
rank value of 300s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	244
rank value of 310s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	245.5
rank value of 330s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	247
rank value of 530s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	248
rank value of 640s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	249
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	250
rank value of 1000s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	251
n =	17	16	11	15	15	15	15	15	15	14	14	15	15	16	15	16	12	

Sum of rank value calculations

0	754	406	174	348	580	812	522	290	522	406	116	754	116	58	812	0
0	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	117.5	117.5	0	0	0	0	0	0	0	0
0	0	0	0	119	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	120	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	121	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	122	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	123	0	0
0	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	125	0
0	0	0	126	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	127.5	127.5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	129	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	130	0	0	0	0
0	0	0	0	0	0	0	0	131.5	0	131.5	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	133	0	0	0	0	0	0	0
0	0	134.5	0	0	0	0	0	0	0	0	0	134.5	0	0	0	0
0	0	0	0	136.5	0	0	0	136.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	138	0	0
0	0	0	0	0	139	0	0	0	0	0	0	0	0	0	0	0
0	0	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	141.5	0	0	0	0	141.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	143.5	143.5	0	0	0	0	0
0	0	0	0	145	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	146	0	0	0	0	0	0	0	0	0	0	0
0	0	147	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	148.5	0	0	0	148.5	0	0
0	0	0	151	0	0	0	151	0	0	0	0	0	0	151	0	0
0	0	0	0	0	0	0	153.5	0	0	0	153.5	0	0	0	0	0
0	0	0	155	0	0	0	0	0	0	0	0	0	0	0	0	0
0	156.5	0	0	156.5	0	0	0	0	0	0	0	0	0	0	0	0
159	0	0	0	0	0	0	0	0	159	159	0	0	0	0	0	0
0	0	0	161	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	162.5	162.5	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	164	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	165.5	165.5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	167	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	168
0	0	0	0	0	0	0	169	0	0	0	0	0	0	0	0	0
0	0	0	0	170	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	171
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	173	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	174	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175
0	0	0	0	176	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	177.5	0	0	0	0	177.5	0	0
0	0	0	0	0	0	0	0	180	0	0	0	0	180	180	0	0
182	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
183.5	0	0	0	0	0	0	0	183.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	185	0	0	0	0	0	0	0	0	0

186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	187.5	0	0	0	0	0	0	0	0	0	0	0	187.5	0	0
189.5	0	0	189.5	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	191	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	192
0	0	0	0	0	0	0	0	193	0	0	0	0	0	0	0	0
194.5	0	0	0	0	0	0	0	0	0	0	0	0	0	194.5	0	0
196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
197.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	197.5	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	199	0	0
0	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	201	0	0	0	0	0
202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
204.5	0	0	0	0	0	0	0	0	204.5	0	0	0	204.5	0	0	204.5
0	0	0	0	0	0	0	0	0	0	0	0	0	207	0	0	0
208.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	208.5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210
423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	213	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	214.5	214.5	0	0
0	0	0	0	0	0	0	0	0	0	0	216	0	0	0	0	0
217.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	217.5
0	0	0	0	0	0	0	0	0	0	0	219.5	0	219.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	221.5	0	221.5
0	0	0	0	0	0	0	0	0	0	0	0	0	223	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	224	0	0
0	0	0	0	0	0	0	0	0	226	0	226	0	226	0	0	0
0	0	0	229	0	0	0	0	0	0	0	229	0	0	229	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	231	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	232.5	0	0	232.5
0	0	0	234.5	0	0	0	0	0	0	0	0	0	0	0	0	234.5
0	0	0	0	0	0	0	0	0	0	0	473	0	0	0	0	0
239	0	0	0	0	0	0	0	0	0	0	478	0	0	0	0	0
241.5	0	0	0	0	0	0	0	0	0	0	0	0	241.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	243	0	0	0	0	0
0	0	0	0	0	244	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	245.5	0	0	245.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	247	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	248	0	0	0
0	0	0	249	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	250	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251
sum of rank values (R_i)	3396	1150.5	1015	2396	1705	1402	977.5	1472	1953.5	1422	1351.5	2944	1818.5	3110.5	2691.5	1134.5	2486

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2/N_i)] - 3(N+1)\}$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Ri^2/N_i =	702961.0	382721	193502	131040	63700	144452	254411	144435	130468	577809	69156	604701	482945	80443	515016

N_{bg} = 44
N = 251
H = 93.57

Adjust H for ties:

T_i = 2E+06 sum of T1..T4

$H' = H/(1-(T_i/(N^3-N)))$
H' = 103.52
Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 23.68 which is less than H' =103.52.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P[N(N+1)/12]^{0.5} * (1/N_{bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
N_{bg} = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	159.7	113.7	93.5	65.2	98.1	130.2	101.6	96.5	196.3	67.9	194.4	179.4	70.9	207.2
avg Rbar (background) =	126.4	126.4	126.4	126.4	126.4	126.4	126.4	126.4	126.4	126.4	126.4	126.4	126.4	126.4
Dx =	33.3	-12.7	-32.9	-61.2	-28.3	3.8	-24.8	-29.9	69.9	-58.5	68.0	53.0	-55.5	80.8
Cx =	50.6	50.6	50.6	50.6	50.6	50.6	51.9	51.9	50.6	50.6	49.4	50.6	49.4	55.1
Statistical Significance ?	No	No	No	No	No	No	No	No	Yes	No	Yes	Yes	No	Yes
SSI, is current event above MCL?	-	-	-	-	-	-	-	-	NE	-	NE	NE	-	NE

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Vanadium averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Vanadium
NC MCL (µg/l):	Not Established
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-8	MDL
4/24/2000	78	5
4/9/2001	230	5
4/15/2002	260	5
9/26/2002	310	5
4/28/2003	230	5
10/30/2003	14	5
4/20/2004	240	5
10/21/2004	160	5
4/18/2005	240	5
10/13/2005	170	5
4/25/2006	120	40
10/20/2006	ND	5
4/25/2007	ND	25
10/31/2007	103	5
4/23/2008	10	5

If not detected (ND), use half of the detection limit.

78	X_i values =	-305274.4
230		606928.3
260		1507688.3
310		4464955
230		606928.3
14		-2265296
240		848381.63
160		3154.963
240		848381.63
170		15008.296
120		-16258.37
2.5		-2913994
12.5		-2343804
103		-75866.04
10		-2478645

X_{bar} =	145.33333
SD =	104.85529
N =	15
$1/N\Sigma_i(X_i-X_{bar})^3$ =	-99847.41
γ_1 =	0.0960529

Since the Coefficient of Skewness of 0.10 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the real detected values shown above.

ln =	4.3567088	X_i values = -1.16E-06
	5.4380793	1.2280074
	5.5606816	1.699921
	5.7365723	2.567725
	5.4380793	1.2280074
	2.6390573	-5.16121
	5.4806389	1.3803187
	5.0751738	0.3548301
	5.4806389	1.3803187
	5.1357984	0.4540146
	4.7874917	0.0742335
	0.9162907	-41.09671
	2.5257286	-6.244632
	4.634729	0.0191439
	2.3025851	-8.800916

X_{bar} = 4.3672169
SD = 1.5109561
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -3.394463
γ_1 = 1.0913407

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-8	MDL	Data for Testing
4/24/2000	78	5	78
4/9/2001	230	5	230
4/15/2002	260	5	260
9/26/2002	310	5	310
4/28/2003	230	5	230
10/30/2003	14	5	14
4/20/2004	240	5	240
10/21/2004	160	5	160
4/18/2005	240	5	240
10/13/2005	170	5	170
4/25/2006	120	40	120
10/20/2006	ND	5	2.5
4/25/2007	ND	25	12.5
10/31/2007	103	5	103
4/23/2008	10	5	10

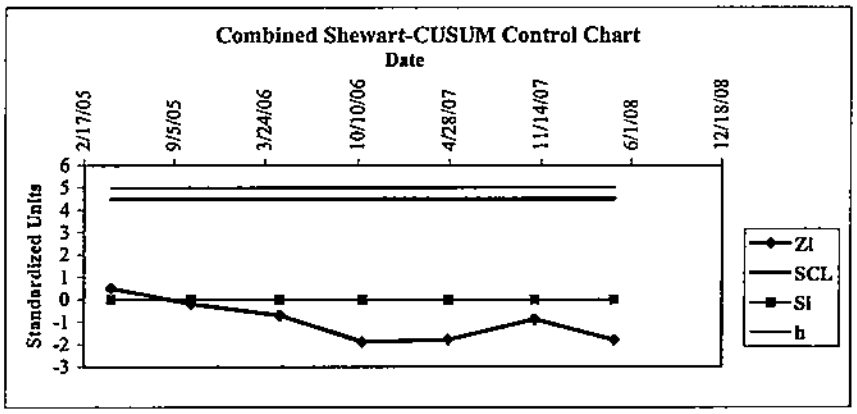
Compute the mean and standard deviation of the historical data:

190.25 = x_{mean} (Mean of N1-N8 historical data)
99.584494 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	240	0.49957577	0	5	4.5
10/13/2005	170	-0.2033449	0	5	4.5
4/25/2006	120	-0.7054311	0	5	4.5
10/20/2006	2.5	-1.8853337	0	5	4.5
4/25/2007	12.5	-1.7849164	0	5	4.5
10/31/2007	103	-0.8761404	0	5	4.5
4/23/2008	10	-1.8100207	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Vanadium
NC MCL (µg/l):	Not Established
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-12	MDL
9/18/2001	160	5
10/29/2001	250	5
1/30/2002	83	5
4/15/2002	37	5
9/26/2002	530	5
10/30/2003	82	5
4/20/2004	140	5
10/21/2004	46	5
4/18/2005	100	5
10/13/2005	330	5
4/25/2006	ND	40
10/20/2006	120	5
4/25/2007	ND	25
10/31/2007	176	5
4/23/2008	7.2	5

If not detected (ND), use half of the detection limit.

	X_i values =
160	8514.6581
250	1346304.3
83	-181129.4
37	-1079414
530	59510852
82	-190904
140	0.074088
46	-819500.3
100	-62005.09
330	6904586.6
20	-1709919
120	-7506.51
12.5	-2052256
176	48308.085
7.2	-2319889

X_{bar} =	139.58
SD =	141.00239
N =	15
$1/N\Sigma_i(X_i-X_{bar})^3$ =	3959736.2
γ_1 =	1.5665045

Since the Coefficient of Skewness of 1.57 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
5.0751738	0.3138362
5.5214609	1.4270858
4.4188406	1.255E-05
3.6109179	-0.483156
6.272877	6.6158034
4.4067192	1.373E-06
4.9416424	0.1628061
3.8286414	-0.182248
4.6051702	0.0092038
5.7990927	2.7645669
2.9957323	-2.743243
4.7874917	0.0601847
2.5257286	-6.537891
5.170484	0.4652689
1.974081	-14.19926

X_{bar} = 4.3956036
SD = 1.2123497
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.821802
γ_1 = 0.5114793

Since the Coefficient of Skewness of 0.51 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-12	MDL	Data for Testing
9/18/2001	160	5	5.0751738
10/29/2001	250	5	5.5214609
1/30/2002	83	5	4.4188406
4/15/2002	37	5	3.6109179
9/26/2002	530	5	6.272877
10/30/2003	82	5	4.4067192
4/20/2004	140	5	4.9416424
10/21/2004	46	5	3.8286414
4/18/2005	100	5	4.6051702
10/13/2005	330	5	5.7990927
4/25/2006	ND	40	2.9957323
10/20/2006	120	5	4.7874917
4/25/2007	ND	25	2.5257286
10/31/2007	176	5	5.170484
4/23/2008	7.2	5	1.974081

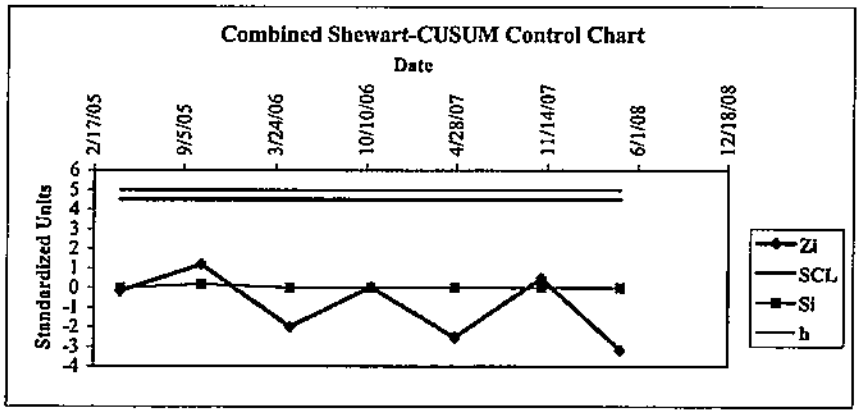
Compute the mean and standard deviation of the historical data:

4.7595342 = x_{mean} (Mean of N1-N8 historical data)
0.8807433 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	4.6051702	-0.1752656	0	5	4.5
10/13/2005	5.7990927	1.18031944	0.1803194	5	4.5
4/25/2006	2.9957323	-2.0026287	0	5	4.5
10/20/2006	4.7874917	0.03174316	0	5	4.5
4/25/2007	2.5257286	-2.536273	0	5	4.5
10/31/2007	5.170484	0.46659431	0	5	4.5
4/23/2008	1.974081	-3.1626162	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Vanadium
NC MCL (µg/l):	Not Established
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-13S	MDL
9/18/2001	170	5
10/29/2001	9.2	5
1/30/2002	12	5
4/15/2002	37	5
9/26/2002	130	5
10/30/2003	13	5
4/20/2004	33	5
10/21/2004	59	5
4/18/2005	44	5
10/13/2005	310	5
4/25/2006	54	40
10/20/2006	100	5
4/25/2007	ND	25
10/31/2007	146	5
4/23/2008	6.1	5

If not detected (ND), use half of the detection limit.

	X_i values =
170	838028.37
9.2	-294345
12	-258718.4
37	-58050.51
130	159926.16
13	-246727.8
33	-77963.93
59	-4674.216
44	-31915.34
310	12858954
54	-10246.59
100	14313.507
12.5	-252675.7
146	347132.49
6.1	-337444.3

X_{bar} = 75.72
SD = 83.919742
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 843039.52
γ_1 = 1.5819777

Since the Coefficient of Skewness of 1.58 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
5.1357984	2.8020605
2.2192035	-3.421037
2.4849066	-1.91164
3.6109179	-0.001524
4.8675345	1.4875618
2.5649494	-1.565113
3.4965076	-0.012086
4.0775374	0.0434451
3.7841896	0.0001971
5.7365723	8.1276239
3.988984	0.0181896
4.6051702	0.6795621
2.5257286	-1.729142
4.9836066	1.9890315
1.8082888	-7.052529

X_{bar} = 3.725993
SD = 1.2019817
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.03636
γ_1 = 0.0232207

Since the Coefficient of Skewness of 0.02 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-13S	MDL	Data for Testing
9/18/2001	170	5	5.1357984
10/29/2001	9.2	5	2.2192035
1/30/2002	12	5	2.4849066
4/15/2002	37	5	3.6109179
9/26/2002	130	5	4.8675345
10/30/2003	13	5	2.5649494
4/20/2004	33	5	3.4965076
10/21/2004	59	5	4.0775374
4/18/2005	44	5	3.7841896
10/13/2005	310	5	5.7365723
4/25/2006	54	40	3.988984
10/20/2006	100	5	4.6051702
4/25/2007	ND	25	2.5257286
10/31/2007	146	5	4.9836066
4/23/2008	6.1	5	1.8082888

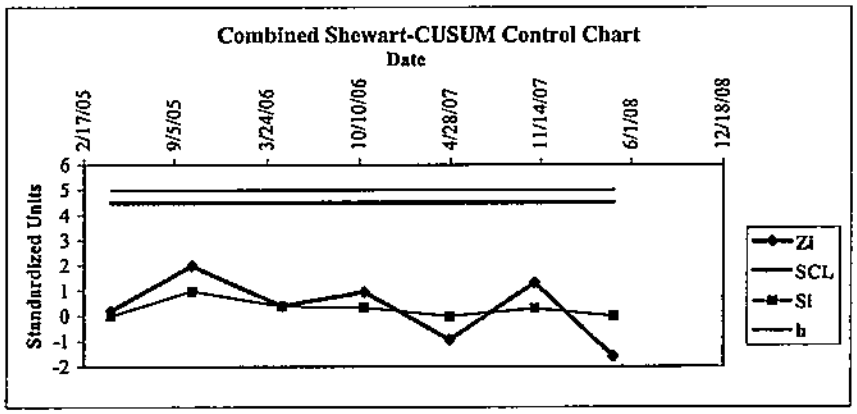
Compute the mean and standard deviation of the historical data:

3.5571694 = x_{mean} (Mean of N1-N8 historical data)
1.0961542 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	3.7841896	0.20710609	0	5	4.5
10/13/2005	5.7365723	1.9882265	0.9882265	5	4.5
4/25/2006	3.988984	0.39393602	0.3821625	5	4.5
10/20/2006	4.6051702	0.95607055	0.3382331	5	4.5
4/25/2007	2.5257286	-0.9409632	0	5	4.5
10/31/2007	4.9836066	1.30131068	0.3013107	5	4.5
4/23/2008	1.8082888	-1.5954695	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	**Total Vanadium**
NC MCL (µg/l):	Not Established
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	1000	5
4/28/2003	130	5
10/30/2003	200	5
4/20/2004	88	5
10/21/2004	210	5
4/18/2005	110	5
10/13/2005	82	5
4/25/2006	85	40
10/20/2006	30	5
4/25/2007	26	25
10/31/2007	48.2	5
4/23/2008	23.1	5

If not detected (ND), use half of the detection limit.

	X_i values =
1000	573114158
130	-60969.14
200	28769.82
88	-538525.3
210	67129.673
110	-209143.8
82	-666673.2
85	-600321.6
30	-2706443
26	-2946245
48.2	-1778525
23.1	-3128685

X_{bar} = 169.35833
SD = 268.84245
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 46714544
γ_1 = 2.7393114

Since the Coefficient of Skewness of 2.74 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

	X_i values =
ln = 6.9077553	13.781816
4.8675345	0.0456277
5.2983174	0.4895244
4.4773368	-3.55E-05
5.3471075	0.5861841
4.7004804	0.0068895
4.4067192	-0.001108
4.4426513	-0.000308
3.4011974	-1.363944
3.2580965	-1.962997
3.875359	-0.255854
3.1398326	-2.573416

X_{bar} = 4.510199

SD = 1.0586715
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.7293648
γ_1= 0.7003965

Since the Coefficient of Skewness of 0.70 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	1000	5	6.9077553
4/28/2003	130	5	4.8675345
10/30/2003	200	5	5.2983174
4/20/2004	88	5	4.4773368
10/21/2004	210	5	5.3471075
4/18/2005	110	5	4.7004804
10/13/2005	82	5	4.4067192
4/25/2006	85	40	4.4426513
10/20/2006	30	5	3.4011974
4/25/2007	26	25	3.2580965
10/31/2007	48.2	5	3.875359
4/23/2008	23.1	5	3.1398326

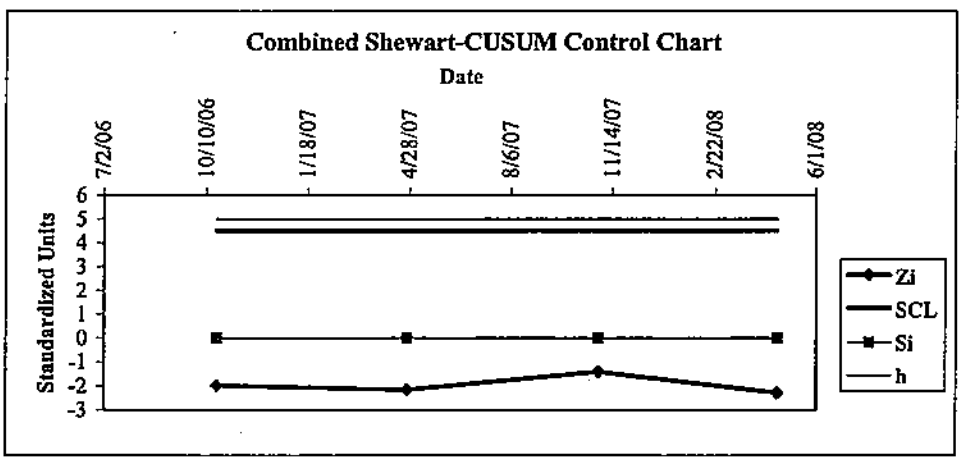
Compute the mean and standard deviation of the historical data:

5.0559878 = x_{mean} (Mean of N1-N8 historical data)
0.8338367 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	3.4011974	-1.9845497	0	5	4.5
4/25/2007	3.2580965	-2.1561671	0	5	4.5
10/31/2007	3.875359	-1.4158992	0	5	4.5
4/23/2008	3.1398326	-2.2979981	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

Compound: Total Zinc
NC MCL (µg/l): 1050
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-12S	MW-12D	MW-15	MDL
04/24/00	150	NS	NS	35	48	36	12	43	28	12	14	68	ND	NS	NS	NS	NS	10
06/26/00	37	12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
07/26/00	65	64	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	50
04/09/01	230	130	NS	12	24	18	17	33	75	ND	ND	200	3	NS	NS	NS	NS	10
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	130	220	ND	NS	10
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	200	17	ND	NS	10
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	62	16	11	NS	10
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	180	NS	58	NS	50
04/15/02	230	16	NS	ND	ND	13	33	38	120	37	31	230	52	51	79	ND	NS	10
09/26/02	57	120	110	580	ND	20	ND	56	250	17	20	200	43	510	110	15	4300	10
04/28/03	86	14	31	160	16	ND	ND	ND	81	ND	ND	190	240	NT	NT	NT	800	10
10/30/03	55	22	NT	17	26	18	ND	ND	140	100	12	26	64	61	24	13	1800	10
04/20/04	55	18	ND	44	30	11	14	19	23	ND	ND	220	160	120	36	15	770	10
10/21/04	29	ND	ND	17	ND	14	ND	12	15	11	11	78	55	27	31	15	1200	10
04/18/05	83	ND	ND	780	ND	30	13	10	ND	ND	13	240	200	96	38	14	1200	10
10/13/05	92	13	12	230	19	25	ND	ND	14	23	36	170	81	330	280	11	800	10
04/25/06	130	ND	88	ND	ND	ND	ND	ND	110	180	ND	120	120	ND	54	ND	780	50
10/20/06	74	ND	28	37	ND	ND	ND	ND	55	NS	NS	ND	82	118	75	ND	280	10
04/25/07	55	21	30	30	22	850	22	15	18	39	21	12	74	37	28	12	200	10
10/31/07	86	ND	66.2	14	37.4	33.3	12	ND	11.6	ND	14.2	91.1	66.9	169	148	ND	336	10
04/23/08	27.3	ND	50.3	12.2	24.4	36.9	ND	18.3	17.5	27.9	22.2	38.8	123	32.7	12.1	ND	138	10
N	17	16	11	15	15	15	15	15	15	14	14	15	15	16	15	16	12	
sum of rank values (R)	3048.0	1379.5	1266.5	2011.0	1302.0	1526.0	889.5	1176.5	2075.0	1344.5	1127.5	2729.5	2566.0	2899.0	2361.0	1012.0	2872.5	
avg rank value (Rbar)	181.6	86.2	115.1	134.1	86.8	101.7	59.3	78.4	138.3	96.0	80.5	182.0	171.1	181.2	157.4	63.3	239.4	

	Number of each rank value																	Rank Value
rank value of NDs =	0	6	3	2	6	3	8	6	1	5	4	1	1	1	0	7	0	27.5
rank value of 3s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	55
rank value of 10s =	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	57.5
rank value of 10.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	60
rank value of 11s =	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	2	0	63
rank value of 11.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	66
rank value of 12s =	0	1	1	1	0	0	2	1	0	1	1	1	0	0	0	1	0	71.5
rank value of 12.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	77
rank value of 12.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	78
rank value of 13s =	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	1	0	81
rank value of 14s =	0	1	0	1	0	1	1	0	1	0	1	0	0	0	0	1	0	87
rank value of 14.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	91
rank value of 15s =	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	0	94
rank value of 16s =	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	98
rank value of 17s =	0	0	0	2	0	0	1	0	0	1	0	0	0	0	1	0	0	102
rank value of 17.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	105
rank value of 18s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	106
rank value of 19s =	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	107.5
rank value of 20s =	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	0	0	110.5
rank value of 21s =	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	113.5
rank value of 22s =	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	116
rank value of 22.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	118
rank value of 23s =	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	119.5
rank value of 24s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	121.5
rank value of 24.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	123
rank value of 25s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	124
rank value of 26s =	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	125.5
rank value of 27s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	127
rank value of 27.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128
rank value of 27.9s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	129
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	130
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	131
rank value of 30s =	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	133.5
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	137
rank value of 32.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	139
rank value of 33s =	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	140.5
rank value of 33.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	142
rank value of 35s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	143
rank value of 36s =	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	145
rank value of 36.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	147
rank value of 37s =	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	149.5
rank value of 37.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	152
rank value of 38s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	153.5
rank value of 38.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	155
rank value of 39s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	156
rank value of 43s =	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	157.5
rank value of 44s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	159
rank value of 48s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	160
rank value of 50.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161
rank value of 51s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	162
rank value of 52s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	163
rank value of 55s =	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	166
rank value of 56s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	169.5
rank value of 57s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	171
rank value of 58s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	172
rank value of 61s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	173
rank value of 62s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	174
rank value of 64s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	175
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176
rank value of 66s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177
rank value of 66.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178
rank value of 66.9s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	179
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	180
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	181

rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	182.5
rank value of 75s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	184.5
rank value of 79s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	186
rank value of 81s =	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	187.5
rank value of 82s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	189
rank value of 83s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	190
rank value of 86s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191.5
rank value of 88s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193
rank value of 91.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	194
rank value of 92s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	195
rank value of 96s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	196
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	197
rank value of 110s =	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1	0	0	199.5
rank value of 120s =	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	204
rank value of 123s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	207
rank value of 130s =	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	209
rank value of 138s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	211
rank value of 140s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	212
rank value of 148s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	213
rank value of 150s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	215.5
rank value of 169s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	217
rank value of 170s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	218
rank value of 180s =	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	219.5
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	221
rank value of 200s =	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2	224
rank value of 220s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	227.5
rank value of 230s =	2	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	230.5
rank value of 240s =	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	233.5
rank value of 250s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	235
rank value of 280s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	236.5
rank value of 330s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	238
rank value of 356s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	239
rank value of 510s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	240
rank value of 580s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	241
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	242
rank value of 780s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	243.5
rank value of 800s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	245.5
rank value of 830s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	247
rank value of 1200s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	248.5
rank value of 1800s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	250
rank value of 4400s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	251
n =	17	16	11	15	15	15	15	15	15	14	14	15	15	16	15	16	12	

Sum of rank value calculations

0	165	82.5	55	165	82.5	220	165	27.5	137.5	110	27.5	27.5	0	192.5	0
0	0	0	0	0	0	0	0	0	0	0	0	55	0	0	0	0
0	57.5	0	0	0	57.5	0	57.5	57.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0
0	0	0	0	0	63	0	0	0	63	63	0	0	0	0	126	0
0	0	0	0	0	0	0	0	66	0	0	0	0	0	0	0	0
0	71.5	71.5	71.5	0	0	143	71.5	0	71.5	71.5	71.5	0	0	0	71.5	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	77	0	0
0	0	0	78	0	0	0	0	0	0	0	0	0	0	0	0	0
0	81	0	0	0	81	81	0	0	0	81	0	0	0	0	81	0
0	87	0	87	0	87	87	0	87	0	87	0	0	0	0	87	0
0	0	0	0	0	0	0	0	0	0	91	0	0	0	0	0	0
0	0	0	0	0	0	0	94	94	0	0	0	0	0	0	282	0
0	98	0	0	98	0	0	0	0	0	0	0	0	0	98	0	0
0	0	0	204	0	0	102	0	0	102	0	0	0	0	102	0	0
0	0	0	0	0	0	0	0	105	0	0	0	0	0	0	0	0
0	0	0	0	0	106	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	107.5	0	0	107.5	0	0	0	0	0	0	0	0	0
0	0	110.5	0	0	110.5	0	0	0	0	110.5	0	0	0	110.5	0	0
0	113.5	0	0	0	0	0	0	0	0	113.5	0	0	0	0	0	0
0	116	0	0	116	0	116	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	118	0	0	0	0	0	0
0	0	0	0	0	0	0	0	119.5	119.5	0	0	0	0	0	0	0
0	0	0	0	121.5	0	0	0	0	0	0	0	0	0	121.5	0	0
0	0	0	0	123	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	124	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	125.5	0	0	0	0	0	0	125.5	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	127	0	0	0
128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	129	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	130	0	0	0	0	0	0	0	0
131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	133.5	133.5	133.5	133.5	0	0	0	0	0	0	0	0	0	0	0
0	0	137	0	0	0	0	0	0	0	137	0	0	0	137	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	139	0	0	0
0	0	0	0	0	0	140.5	140.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	142	0	0	0	0	0	0	0	0	0	0	0
0	0	0	143	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	145	0	0	0	0	145	0	0	0	145	0	0
0	0	0	0	0	147	0	0	0	0	0	0	0	0	0	0	0
149.5	0	0	149.5	0	0	0	0	0	149.5	0	0	0	149.5	0	0	0
0	0	0	0	152	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	153.5	0	0	0	0	0	0	153.5	0	0
0	0	0	0	0	0	0	0	0	0	0	155	0	0	0	0	0
0	0	0	0	0	0	0	0	0	156	0	0	0	0	0	0	0
0	0	0	0	0	0	0	157.5	0	0	0	0	157.5	0	0	0	0
0	0	0	159	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	160	0	0	0	0	0	0	0	0	0	0	0	0
0	0	161	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	162	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	163	0	0	0	0
498	0	0	0	0	0	0	0	166	0	0	0	166	0	0	0	0
0	0	0	0	0	0	0	169.5	0	0	0	0	0	0	169.5	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172	0
0	0	0	0	0	0	0	0	0	0	0	0	0	173	0	0	0

0	0	0	0	0	0	0	0	0	0	0	0	0	174	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	175	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	178	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	179	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	180	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	181	0	0	0	0	0
182.5	0	0	0	0	0	0	0	0	0	0	0	182.5	0	0	0	0
0	0	0	0	0	0	0	0	184.5	0	0	0	0	0	184.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	186	0	0
0	0	0	0	0	0	0	0	187.5	0	0	0	187.5	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	189	0	0	0	0
190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	194	0	0	0	0	0
195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	196	0	0	0
0	0	0	0	0	0	0	0	0	197	0	0	0	0	0	0	0
0	0	199.5	0	0	0	0	0	199.5	0	0	0	0	199.5	199.5	0	0
0	204	0	0	0	0	0	0	204	0	0	204	204	204	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	207	0	0	0	0
209	209	0	0	0	0	0	0	0	0	0	0	0	209	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	212
0	0	0	0	0	0	0	0	212	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	213	0	0
214	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	215.5	0	0	0	0	0	0	0	0	215.5	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	217	0	0	0
0	0	0	0	0	0	0	0	0	0	0	218	0	0	0	0	0
0	0	0	0	0	0	0	0	0	219.5	0	0	0	219.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	221	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	224	224	224	0	0	448
0	0	0	0	0	0	0	0	0	0	0	227.5	0	0	227.5	0	0
461	0	0	230.5	0	0	0	0	0	0	0	230.5	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	233.5	233.5	0	0	0	0
0	0	0	0	0	0	0	0	235	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	236.5	0	0	236.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	238	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	239
0	0	0	0	0	0	0	0	0	0	0	0	0	240	0	0	0
0	0	0	241	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242
0	0	0	243.5	0	0	0	0	0	0	0	0	0	0	0	0	243.5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	491
0	0	0	0	0	247	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	497
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	250
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	251
sum of rank values (R_i) 3088	1379.5	1266.5	2811	1302	1526	889.5	1176.5	2075	1344.5	1127.5	2729.5	2544	2899	2361	1011	2872.5

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2/N_i)]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
R_i^2/N_i =	747244.5	269608	113014	155245	52747	92277	287042	129120	90804	496678	438957	525263	171621	64009	687605
N_{bg} = 44															
N = 251															
H = 101.76															

Adjust H for ties:

T_i = 160182 sum of T1...T9

$H' = H/(1-(T_i/(N^3-N)))$

H' = 102.80

Chi-square = 23.68

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17 *df* at the 5% significance level from Table 1 of the IPG. The value is 23.68 which is less than H' = 102.80.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

$$\text{Critical Value } (C_x) = P[N(N+1)/12]^{0.5} * (1/N_{bg}+1/N_x)^{0.5}$$

P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IPG
N = total sample size
N_{bg} = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15
Rbar (well x) =	134.1	86.8	101.7	59.3	78.4	138.3	96.0	80.5	182.0	171.1	181.2	157.4	63.3	239.4
avg Rbar (background) =	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3
Dx =	3.7	-43.5	-28.6	-71.0	-51.9	8.0	-34.3	-49.8	51.6	40.7	50.9	27.1	-67.1	109.1
Cx =	50.6	50.6	50.6	50.6	50.6	50.6	51.9	51.9	50.6	50.6	49.4	50.6	49.4	55.1
Statistical Significance ?	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes
SSL is correct even above MCL?	-	-	-	-	-	-	-	-	No	-	No	-	-	No

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Zinc averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Zinc
NC MCL (µg/l):	1050
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-8	MDL
4/24/2000	68	10
4/9/2001	200	10
4/15/2002	230	10
9/26/2002	280	10
4/28/2003	190	10
10/30/2003	26	10
4/20/2004	220	10
10/21/2004	70	10
4/18/2005	240	10
10/13/2005	170	10
4/25/2006	120	50
10/20/2006	ND	10
4/25/2007	12	10
10/31/2007	91	10
4/23/2008	39	10

If not detected (ND), use half of the detection limit.

68	X_i values =	-246806.5
200		332428.51
230		978358.03
280		3326187.2
190		208246.66
26		-1148608
220		711484.19
70		-223943.4
240		1304795.9
170		60574.982
120		-1234.225
5		-1987386
12		-1673574
91.1		-62224.67
38.8		-776827.4

X_{bar} = 130.72667
SD = 92.786902
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 53431.445
γ_1 = 0.0741791

Since the Coefficient of Skewness of 0.07 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the real detected values shown above.

ln = 4.2195077	X_i values =	-0.008947
5.2983174		0.6612576
5.4380793		1.0332827
5.6347896		1.7614064
5.2470241		0.5512029
3.2580965		-1.597548
5.3936275		0.9028897
4.2484952		-0.005698
5.4806389		1.1693497
5.1357984		0.3559373
4.7874917		0.0468062
1.6094379		-22.37018
2.4849066		-7.326244
4.5119578		0.0006109
3.6584202		-0.454199

X_{bar} = 4.4271059
SD = 1.2053189
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = -1.685338
γ_1 = 1.067397

Use the real values (not log-transformed) indicated in the previous section.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-8	MDL	Data for Testing
4/24/2000	68	10	68
4/9/2001	200	10	200
4/15/2002	230	10	230
9/26/2002	280	10	280
4/28/2003	190	10	190
10/30/2003	26	10	26
4/20/2004	220	10	220
10/21/2004	70	10	70
4/18/2005	240	10	240
10/13/2005	170	10	170
4/25/2006	120	50	120
10/20/2006	ND	10	5
4/25/2007	12	10	12
10/31/2007	91.1	10	91.1
4/23/2008	38.8	10	38.8

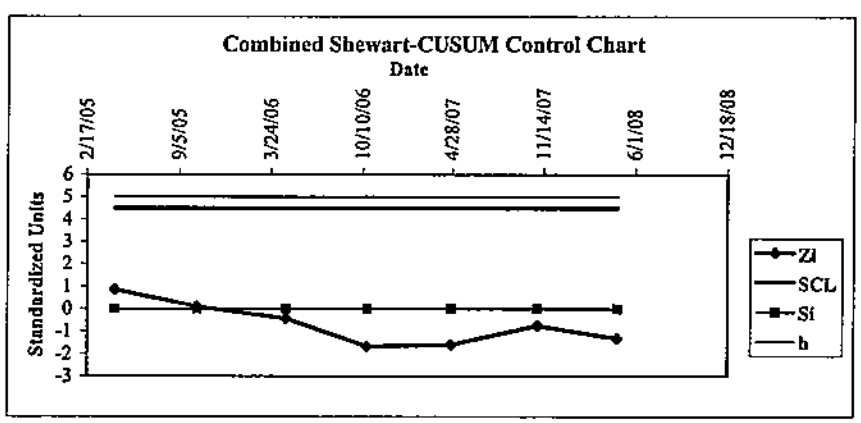
Compute the mean and standard deviation of the historical data:

160.5 = x_{mean} (Mean of N1-N8 historical data)
92.518724 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	240	0.85928552	0	5	4.5
10/13/2005	170	0.10268192	0	5	4.5
4/25/2006	120	-0.4377492	0	5	4.5
10/20/2006	5	-1.6807409	0	5	4.5
4/25/2007	12	-1.6050805	0	5	4.5
10/31/2007	91.1	-0.7501184	0	5	4.5
4/23/2008	38.8	-1.3154094	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	Total Zinc
NC MCL (µg/l):	1050
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-12	MDL
9/18/2001	130	10
10/29/2001	200	10
1/30/2002	62	10
4/15/2002	51	10
9/26/2002	510	10
10/30/2003	61	10
4/20/2004	120	10
10/21/2004	27	10
4/18/2005	96	10
10/13/2005	330	10
4/25/2006	ND	50
10/20/2006	110	10
4/25/2007	37	10
10/31/2007	169	10
4/23/2008	32.7	10

If not detected (ND), use half of the detection limit.

	X_i values =
130	-0.362976
200	332620.49
62	-324431.5
51	-506515.7
510	54563564
61	-338803.2
120	-1229.628
27	-1115588
96	-41830.11
330	7914704.9
25	-1181379
110	-8886.894
37	-823008.2
169	56123.232
32.7	-941576.2

X_{bar} = 130.71333
SD = 133.0536
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3838917.6
γ_1 = 1.8074809

Since the Coefficient of Skewness of 1.81 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
4.8675345	0.0592765
5.2983174	0.5527606
4.1271344	-0.043057
3.9318256	-0.162594
6.2344107	5.421937
4.1108739	-0.049331
4.7874917	0.0297519
3.2958369	-1.650524
4.5643482	0.0006522
5.7990927	2.3076347
3.2188758	-1.994437
4.7004804	0.0110676
3.6109179	-0.65106
5.1298987	0.2775137
3.4873751	-0.971042

X_{bar} = 4.4776276
SD = 0.9065199
N = 15
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.2092367
γ_1 = 0.3114946

Since the Coefficient of Skewness of 0.31 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-12	MDL	Data for Testing
9/18/2001	130	10	4.8675345
10/29/2001	200	10	5.2983174
1/30/2002	62	10	4.1271344
4/15/2002	51	10	3.9318256
9/26/2002	510	10	6.2344107
10/30/2003	61	10	4.1108739
4/20/2004	120	10	4.7874917
10/21/2004	27	10	3.2958369
4/18/2005	96	10	4.5643482
10/13/2005	330	10	5.7990927
4/25/2006	ND	50	3.2188758
10/20/2006	110	10	4.7004804
4/25/2007	37	10	3.6109179
10/31/2007	169	10	5.1298987
4/23/2008	32.7	10	3.4873751

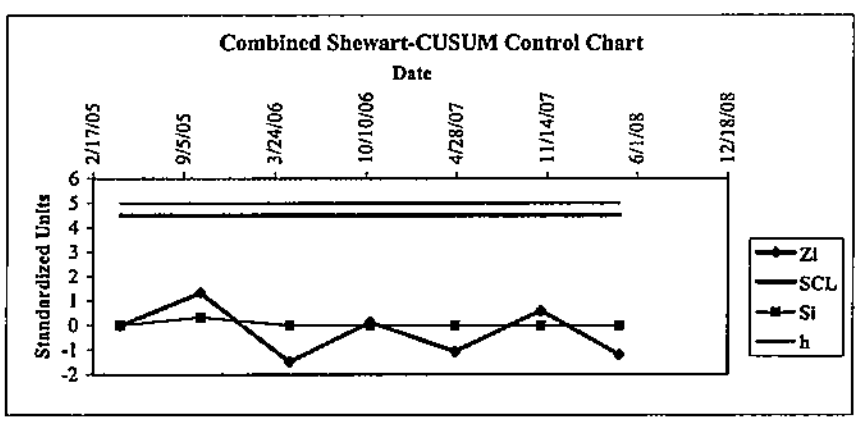
Compute the mean and standard deviation of the historical data:

4.5816781 = x_{mean} (Mean of N1-N8 historical data)
0.9159798 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/2005	4.5643482	-0.0189196	0	5	4.5
10/13/2005	5.7990927	1.32908451	0.3290845	5	4.5
4/25/2006	3.2188758	-1.4878083	0	5	4.5
10/20/2006	4.7004804	0.12969963	0	5	4.5
4/25/2007	3.6109179	-1.0598053	0	5	4.5
10/31/2007	5.1298987	0.59850731	0	5	4.5
4/23/2008	3.4873751	-1.1946804	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h. The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound:	**Total Zinc**
NC MCL (µg/l):	1050
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/2002	4800	10
4/28/2003	800	10
10/30/2003	1800	10
4/20/2004	770	10
10/21/2004	1200	10
4/18/2005	1200	10
10/13/2005	800	10
4/25/2006	780	50
10/20/2006	200	10
4/25/2007	200	10
10/31/2007	336	10
4/23/2008	138	10

If not detected (ND), use half of the detection limit.

4800	X_i values =	5.126E+10
800		-23230445
1800		365014888
770		-31355205
1200		1507688.3
1200		1507688.3
800		-23230445
780		-28465752
200		-6.94E+08
200		-6.94E+08
336		-4.21E+08
138		-8.5E+08

X_{bar} = 1085.3333
SD = 1269.1392
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 4.072E+09
γ_1 = 2.269517

Since the Coefficient of Skewness of 2.27 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln = 8.4763712	X_i values =	7.5569214
6.6846117		0.0049664
7.4955419		0.9456478
6.6463905		0.0023206
7.0900768		0.1911816
7.0900768		0.1911816
6.6846117		0.0049664
6.6592939		0.0030673
5.2983174		-1.796629
5.2983174		-1.796629
5.8171112		-0.338444
4.9272537		-3.995036

X_{bar} = 6.5139979

SD = 1.0239893
N = 12
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.0811263
γ_1 = 0.0860911

Since the Coefficient of Skewness of 0.09 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/2002	4800	10	8.4763712
4/28/2003	800	10	6.6846117
10/30/2003	1800	10	7.4955419
4/20/2004	770	10	6.6463905
10/21/2004	1200	10	7.0900768
4/18/2005	1200	10	7.0900768
10/13/2005	800	10	6.6846117
4/25/2006	780	50	6.6592939
10/20/2006	200	10	5.2983174
4/25/2007	200	10	5.2983174
10/31/2007	336	10	5.8171112
4/23/2008	138	10	4.9272537

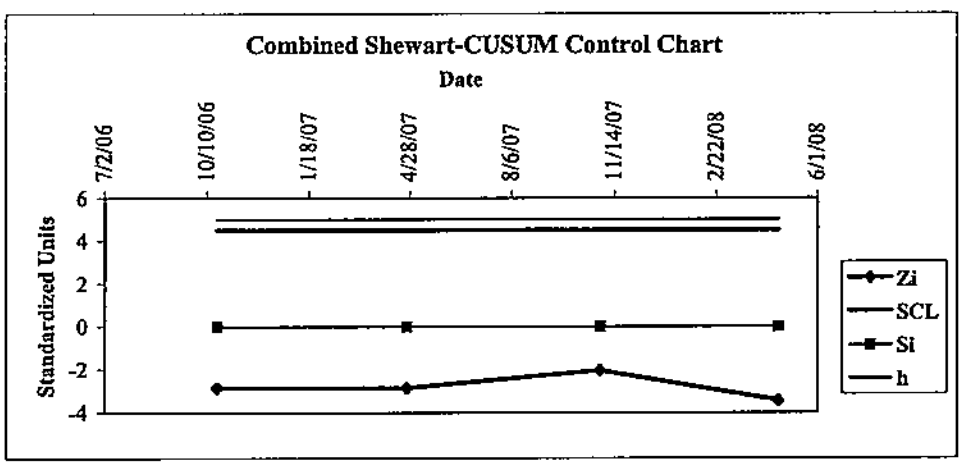
Compute the mean and standard deviation of the historical data:

7.1033718 = x_{mean} (Mean of N1-N8 historical data)
0.6320076 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

Compute the standardized mean (Z_i) and the cumulative sum (S_i) for each concentration.

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/2006	5.2983174	-2.8560645	0	5	4.5
4/25/2007	5.2983174	-2.8560645	0	5	4.5
10/31/2007	5.8171112	-2.0351981	0	5	4.5
4/23/2008	4.9272537	-3.4431835	0	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
The limits were not exceeded and do not indicate statistically significant evidence of contamination at the site.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J08-1957-04

Compound: Carbon Disulfide
MCL (µg/l): 700
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-5A	MW-5D	MW-8	MW-9	MW-12	MW-13S	MW-13D	MW-15	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	100
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	100
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	100
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NS	NS	NS	NS	NS	NS	100
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NS	NS	NS	100
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	100
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	100
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NS	100
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NT	NS	NT	NS	100
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	100
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	100
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	100
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	28	15	ND	ND	ND	ND	ND	ND	10
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
10/21/04	ND	24	ND	ND	ND	ND	ND	ND	15	14	19	ND	ND	ND	ND	ND	ND	10
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	53	17	ND	ND	ND	ND	16	ND	10
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	10
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2

1) If not detected (ND), use half of the detection limit.

04/24/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06/26/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/26/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/18/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/09/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/18/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/29/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01/30/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/28/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/15/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/26/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04/28/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/30/03	5	5	5	5	5	5	5	5	5	28	15	5	5	5	5	5	5
04/20/04	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
10/21/04	5	24	5	5	5	5	5	5	15	14	19	5	5	5	5	5	5
04/18/05	5	5	5	5	5	5	5	5	5	53	17	5	5	5	5	16	5
10/13/05	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
04/25/06	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
10/20/06	5	5	5	5	5	5	5	5	5	-	-	5	5	5	5	5	5
04/25/07	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
10/31/07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
04/23/08				1	1	1	1	1	1	1	1	1	1	1	1	1	1

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 9.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 27$
$T_{n1} = 142$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 14$
$n = 27$
$T_{n1} = 142$
$t[26,.01] = 2.479$
$c = 0.5185$
$T_{n2} = 14$
$T^*_k = 101.5$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.