BLE INC.

BUNNELL-LAMMONS ENGINEERING, INC.

GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

REPORT OF GROUNDWATER QUALITY RESULTS & STATISTICAL ANALYSIS

SECOND SEMI-ANNUAL SAMPLING EVENT OF 2007

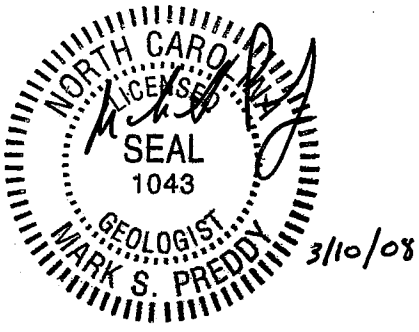
WHITE OAK LANDFILL
PERMIT NUMBER: 44-07
HAYWOOD COUNTY, NORTH CAROLINA

Prepared for:

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

Prepared By:

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



March 7, 2008

BLE Project Number J07-1957-03

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

March 7, 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**
Second Semi-Annual Sampling Event of 2007
White Oak Landfill
Permit Number: 44-07
Haywood County, North Carolina
BLE Project Number J07-1957-03

Dear Mr. King:

As authorized, Bunnell-Lammons Engineering, Inc. (BLE) has performed the statistical analysis of groundwater quality data obtained during the second semi-annual sampling event of 2007 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.

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

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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, 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 2007. 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 (October 2007).

This report presents data from the second semi-annual sampling event in 2007 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 second semi-annual sampling event of 2007 by personnel from Pace Analytical Services, Inc. (Pace) of Asheville, North Carolina on October 31 and November 1, 2007. 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, and leachate lagoon sampling point. The settling pond sampling point was inaccessible during this event and was not sampled. 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 leachate sample was also analyzed for BOD, COD, sulfate, nitrogen, TSS, total phosphorus, and total phenolics. 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 (three wells), total barium (17 wells), total beryllium (one well), total cadmium (one well), total chromium (nine wells), total cobalt (five wells), total copper (six wells), total lead (six wells), total nickel (ten wells), total thallium (four wells), total vanadium (nine wells), and total zinc (13 wells) were detected in the groundwater monitoring wells during the current sampling event. Concentrations of total chromium (MW-8 and MW-13S) and total lead (MW-11S, MW-12, MW-13S, and 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.

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

Total barium was detected in each of the six surface water samples during the current sampling event; but North Carolina has not established a surface water[2] MCL for this constituent. Additionally, total chromium (SW-1), total cobalt (SW-1), total copper (SW-1 and SW-6), total nickel (SW-1), total thallium (SW-1), total vanadium (SW-1, SW-5, SW-6), and total zinc (SW-1 through SW-6) were detected in the surface water samples during event N21; 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);

[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.

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 copper, total lead, total nickel, total vanadium, and total zinc. However, the Kruskal-Wallis tests calculates a SSI for cobalt in MW-12; and

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. Concentrations of total chromium (MW-8 and MW-13S) and total lead (MW-11S, MW-12, MW-13S, and 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. Only the concentration of total cobalt in MW-12 was detected as a statistically significant concentration, but North Carolina has not established a MCL for this metal.

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 J07-1957-03

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

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: TJB
Checked By: MSP

TABLE 2

GROUNDWATER FLOW DATA
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J07-1957-03

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	0.0710	0.114	0.26	96.66
MW-2	1.50E-04	2.95E-04	4.31E+00	0.0710	0.114	2.68	978.66
MW-3	1.50E-04	2.95E-04	4.31E+00	0.0710	0.114	2.68	978.66
MW-4A	1.49E-04	2.93E-04	4.28E+00	0.0710	0.05	6.07	2,216.46
MW-5A	1.50E-04	2.95E-04	4.31E+00	0.0916	0.114	3.46	1,262.09
MW-8	1.50E-04	2.95E-04	4.31E+00	0.0710	0.114	2.68	978.66
MW-11S	2.40E-06	4.72E-06	6.89E-02	0.0795	0.114	0.05	17.53
MW-12	1.36E-04	2.68E-04	3.90E+00	0.0916	0.17	2.10	767.35
MW-13S	3.76E-04	7.40E-04	1.08E+01	0.0916	0.17	5.81	2,121.50
MW-14	1.38E-05	2.72E-05	3.96E-01	0.0526	0.17	0.12	44.72
MW-15	2.10E-05	4.13E-05	6.03E-01	0.0526	0.17	0.19	68.05

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 October 2007 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

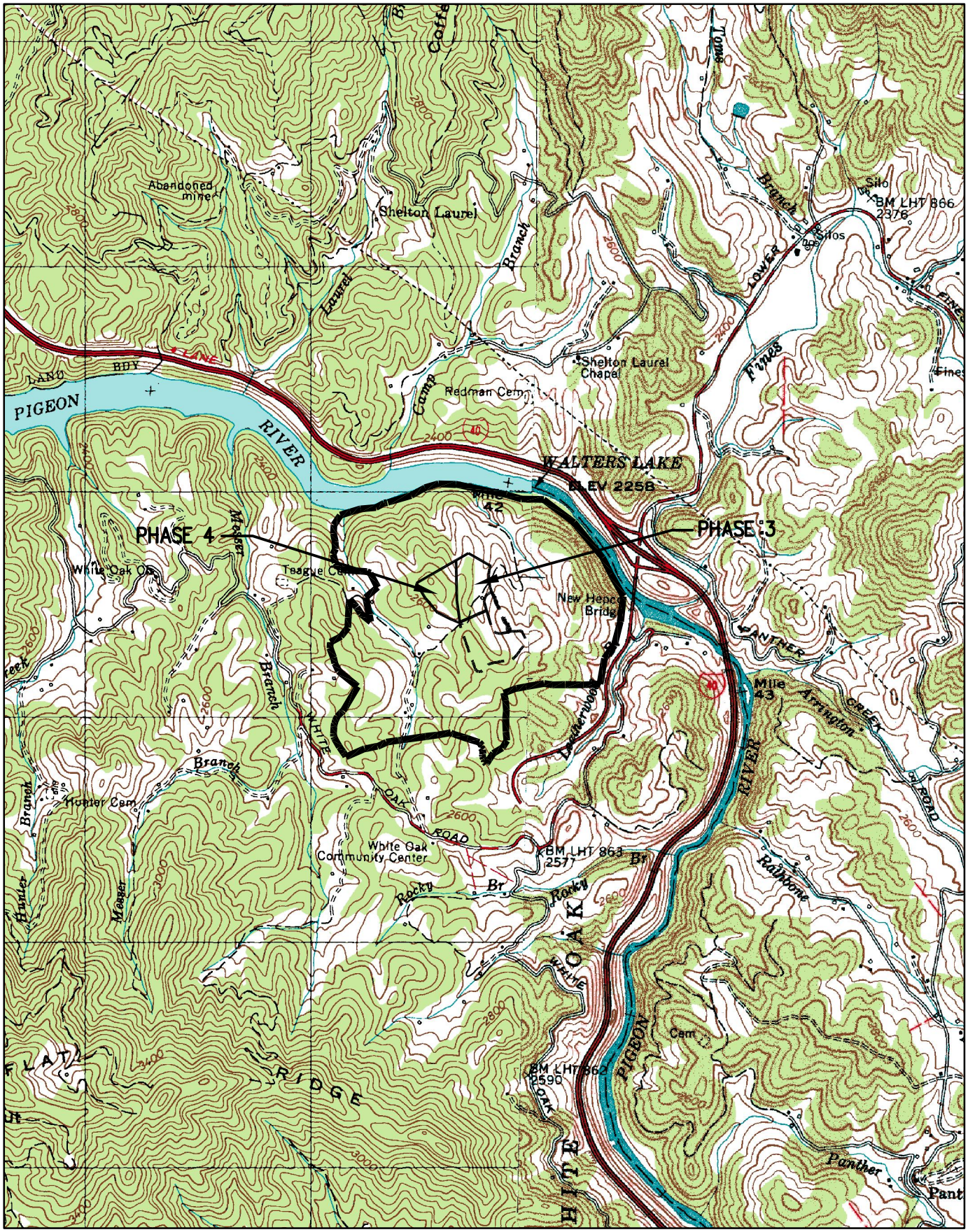
TABLE 3

SUMMARY OF STATISTICAL ANALYSIS RESULTS
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J07-1957-03

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	97%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Arsenic	86%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Barium	10%	ANOVA	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Beryllium	78%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Cadmium	77%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Chromium	47%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Cobalt	59%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Fail	MW-12	No	MCL Not Established
Total Copper	53%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Lead	64%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Nickel	53%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Selenium	98%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Silver	99%	Poisson Prediction Limits	Fail	Wilcoxon	Pass	-	-	-
Total Thallium	91%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Vanadium	47%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Zinc	22%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Carbon Disulfide	94%	Poisson Prediction Limits	Pass	-	-	-	-	-

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

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. BUNNELL-LAMMONS ENGINEERING, INC. 6004 PONDERS COURT GREENVILLE, SOUTH CAROLINA 29615 PHONE: (864)288-1265 FAX: (864)288-4430	FIGURE 1
CHECKED: TDL	CAD: WHITEOAK-03SLM	SITE LOCATION MAP WHITE OAK LANDFILL HAYWOOD COUNTY, NORTH CAROLINA	
APPROVED:	JOB NO: J07-1957-03		

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

REVISIONS		
No.	DESCRIPTION	BY

DRAWN:	AEH
CHECKED:	TJB
APPROVED:	

DATE:	03-07-08
CAD FILE:	HCWOLF-POT103107
JOB NO:	J07-1957-03

BLE INC.

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GROUNDWATER ELEVATION CONTOUR MAP – 10/31/07
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	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	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	NT
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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NP = Not Present during sampling event
Shaded cells indicated exceedances of MCLs.

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	1200	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	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 (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	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	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	0.025	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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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	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	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	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 (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	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	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	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 (4-12-1995)

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:
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 (9-13-1995)

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	NT
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	8	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	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	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	NT
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:
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MDL = Laboratory Method Detection Limit
ND = Not Detected at the method detection limit
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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 (9-23-1996)

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	7	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:
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 (4-29-1997)

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	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	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	160	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	0.025	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 (9-4-1997)

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-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	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	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 (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)	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	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	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

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MDL = Laboratory Method Detection Limit
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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 (9-14-1998)

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	6.2	6.2	7.5	5.2	6.1	5.8	6.6	NS	NS	NS	NS	NT
Specific Conductance	µmhos/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	1200	100	100	ND	100	100	ND	300	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:
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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 (4-26-1999)

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	80	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; 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

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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	µmhos/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	66	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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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	53	ND	NS	NS	NS	NS	NS
Total Chromium (Cr)	µg/l	5	50	15	NS	NS	18	17	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	35	NS	NS	ND	ND	ND	ND	11	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	15	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	ND
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	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	330	30	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	20	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	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

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	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	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	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 (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	1300	380	NS	180	330	120	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	2.4	ND	ND	4.8	ND	NS	NS	NS	NS	ND
Total Cadmium (Cd)	µg/l	1	5	130	2	NS	ND	ND	ND	1.7	1.8	2.7	ND	ND	19	ND	NS	NS	NS	NS	ND
Total Chromium (Cr)	µg/l	5	50	130	ND	NS	11	8.4	ND	ND	20	27	ND	ND	160	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	59	NS	ND	ND	ND	ND	ND	18	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	9.3	ND	24	41	ND	ND	230	8	NS	NS	NS	NS	ND
Total Zinc (Zn)	µg/l	10	2100	230	130	NS	12	24	18	17	33	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	15	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	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	12	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	43	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	28	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	0.025	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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Shaded cells indicated exceedances of MCLs.

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	µmhos/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	25	0.025	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	5.2	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	11	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	1.2	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	150
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	11	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	51	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	5	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	4200	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	32	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	10	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	58	16	44	640	ND	ND	ND	42	50	8.7	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	4800	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	55	91	110	99	150	114	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	1800	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	6	ND	ND	ND	ND	2.9	ND	ND	16	ND	NT	NT	NT	20	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	89	ND	ND	ND	ND	ND	ND	ND	110	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	50	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	25	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 (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

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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	6.58	6.9	6.73	6.57	6.26	6.44	6.33	6.27	7.7	4.82	5.81	6.18	6.54	5.59	5.71	6.5	6.46	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	29	39	58	82	119	110	140	115	105	40	80	149	112	50	88	51	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	5.3	ND	6.3	ND	ND	81	ND
Total Barium (Ba)	µg/l	5	1000	320	100	NT	210	310	130	95	110	1200	580	190	270	130	920	320	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	6.2	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

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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	2.2	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	11	14	19	23	ND	ND	220	160	120	36	15	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-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT
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	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:
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 (10-21-2004)

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	5.75	6.03	7.84	5.38	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	14.2	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	28	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	21	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	24	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	11	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	24	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:
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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
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	138	NT
Temperature	°C (on-site)	-	NE	14.2	15.6	15	13.5	15	17.7	13	13.5	16.2	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	5.2	ND	21	ND	ND	68	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	49	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	73	ND	ND	ND	ND	ND	ND	ND	39	ND	40	13	ND	380	ND
Total Nickel (Ni)	µg/l	5	100	29	9.6	17	460	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	30	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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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 (10-13-2005)

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	6.36	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	130	ND	88	ND
Total Cobalt (Co)	µg/l	5	NE	21	ND	ND	32	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	29	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

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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	6.02	5.97	5.77	6.55	5.83	NT
Specific Conductance	umhos/cm (on-site)	1	NE	53	48	52	106	105	383	301	236	136	90	101	251	157	170	70	53	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	12.2	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	1	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	65	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	16	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	110	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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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 (10-20-2006)

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	µmhos/cm (on-site)	1	NE	229	48	53	108	876	564	149	200	12.8	NS	NS	330	229	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	22	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	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	11	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	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

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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	8.02	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	2.2	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	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	18	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	22	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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ND = Not Detected at the method detection limit
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NT = Not Tested
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Shaded cells indicated exceedances of MCLs.

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	6.6	6.8	6.3	6.22	5.9	6	5.5	5.9	7.99	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	198	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	20.2	ND	73.1	30.3	ND	36.2	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

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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 (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	ND	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	**0.65**	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 (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
Bromofrom	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
Bromofrom	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	67	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	11	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:
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 (4-24-2000)

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	0.3	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.
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NS = Not Sampled
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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.
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NS = Not Sampled
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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 (10-30-2003)

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.
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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:

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 (10-21-2004)

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	2.1	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
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 (4-18-2005)

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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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.

APPENDIX C

Laboratory Analytical Results

Sampling Event
October 31, 2007

Pace Analytical®
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Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

March 07, 2008

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

RE: Project: White Oak 10/31/07
Pace Project No.: 926859

Dear Mr. King:
Enclosed are the analytical results for sample(s) received by the laboratory on November 01, 2007. 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 R. Williams

Tom Williams

tom.williams@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: White Oak 10/31/07
Pace Project No.: 926859

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 10/31/07
Pace Project No.: 926859

Sample: WO MW-2 10/31/07 **Lab ID: 926859001** Collected: 10/31/07 13:20 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:19		
Collected Date	**10/31/07**			1		11/14/07 17:19		
Collected Time	**13:20**			1		11/14/07 17:19		
Field pH	**5.90**	Std. Units		1		11/14/07 17:19		
Field Temperature	**17.5**	deg C		1		11/14/07 17:19		
Static Water Level	**31.60**	feet		1		11/14/07 17:19		
Field Specific Conductance	**1475**	umhos/cm		1		11/14/07 17:19		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7440-38-2	
Barium	**1350**	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/02/07 17:45	11/04/07 20:54	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/02/07 17:45	11/04/07 20:54	7440-43-9	
Chromium	**7.8**	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7440-47-3	
Cobalt	**10.6**	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7440-48-4	
Copper	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7440-50-8	
Lead	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7439-92-1	
Nickel	**13.8**	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/02/07 17:45	11/04/07 20:54	7782-49-2	
Silver	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/02/07 17:45	11/04/07 20:54	7440-28-0	
Vanadium	**20.0**	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:54	7440-62-2	
Zinc	**37.4**	ug/L	10.0	1	11/02/07 17:45	11/04/07 20:54	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 19:05	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 19:05	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 19:05	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 19:05	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 19:05	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 19:05	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 19:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 19:05	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 19:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 19:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 19:05	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 19:05	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 19:05	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 19:05	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 19:05	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 19:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 19:05	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 19:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 19:05	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 19:05	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-2 10/31/07 **Lab ID: 926859001** Collected: 10/31/07 13:20 Received: 11/01/07 08:00 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		11/02/07 19:05	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 19:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 19:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 19:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 19:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 19:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 19:05	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 19:05	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 19:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 19:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 19:05	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 19:05	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 19:05	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 19:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 19:05	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 19:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 19:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 19:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 19:05	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 19:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 19:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 19:05	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 19:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 19:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 19:05	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 19:05	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 19:05	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 19:05	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 19:05	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 19:05	95-47-6	
4-Bromofluorobenzene (S)	100	%	87-109	1		11/02/07 19:05	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		11/02/07 19:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	79-120	1		11/02/07 19:05	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/02/07 19:05	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-2 D 10/31/07 **Lab ID: 926859002** Collected: 10/31/07 13:25 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:20		
Collected Date	**10/31/07**			1		11/14/07 17:20		
Collected Time	**13:25**			1		11/14/07 17:20		
Field pH	**6.0**	Std. Units		1		11/14/07 17:20		
Field Temperature	**17.6**	deg C		1		11/14/07 17:20		
Static Water Level	**31.60**	feet		1		11/14/07 17:20		
Field Specific Conductance	**911**	umhos/cm		1		11/14/07 17:20		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7440-38-2	
Barium	**591**	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/02/07 17:45	11/04/07 20:58	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/02/07 17:45	11/04/07 20:58	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7440-48-4	
Copper	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7440-50-8	
Lead	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/02/07 17:45	11/04/07 20:58	7782-49-2	
Silver	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/02/07 17:45	11/04/07 20:58	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 20:58	7440-62-2	
Zinc	**33.3**	ug/L	10.0	1	11/02/07 17:45	11/04/07 20:58	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 19:29	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 19:29	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 19:29	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 19:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 19:29	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 19:29	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 19:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 19:29	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 19:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 19:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 19:29	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 19:29	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 19:29	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 19:29	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 19:29	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 19:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 19:29	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 19:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 19:29	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 19:29	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-2 D 10/31/07 **Lab ID: 926859002** Collected: 10/31/07 13:25 Received: 11/01/07 08:00 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		11/02/07 19:29	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 19:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 19:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 19:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 19:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 19:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 19:29	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 19:29	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 19:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 19:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 19:29	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 19:29	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 19:29	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 19:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 19:29	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 19:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 19:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 19:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 19:29	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 19:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 19:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 19:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 19:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 19:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 19:29	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 19:29	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 19:29	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 19:29	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 19:29	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 19:29	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109	1		11/02/07 19:29	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		11/02/07 19:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	79-120	1		11/02/07 19:29	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		11/02/07 19:29	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-3 10/31/07 **Lab ID: 926859003** Collected: 10/31/07 14:30 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:21		
Collected Date	**10/31/07**			1		11/14/07 17:21		
Collected Time	**14:30**			1		11/14/07 17:21		
Field pH	**5.50**	Std. Units		1		11/14/07 17:21		
Field Temperature	**17.5**	deg C		1		11/14/07 17:21		
Static Water Level	**10.76**	feet		1		11/14/07 17:21		
Field Specific Conductance	**346**	umhos/cm		1		11/14/07 17:21		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7440-38-2	
Barium	**184**	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/02/07 17:45	11/04/07 21:01	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/02/07 17:45	11/04/07 21:01	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7440-48-4	
Copper	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7440-50-8	
Lead	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7439-92-1	
Nickel	**5.8**	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/02/07 17:45	11/04/07 21:01	7782-49-2	
Silver	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/02/07 17:45	11/04/07 21:01	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/02/07 17:45	11/04/07 21:01	7440-62-2	
Zinc	**12.0**	ug/L	10.0	1	11/02/07 17:45	11/04/07 21:01	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 19:53	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 19:53	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 19:53	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 19:53	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 19:53	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 19:53	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 19:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 19:53	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 19:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 19:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 19:53	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 19:53	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 19:53	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 19:53	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 19:53	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 19:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 19:53	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 19:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 19:53	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 19:53	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-3 10/31/07 **Lab ID: 926859003** Collected: 10/31/07 14:30 Received: 11/01/07 08:00 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		11/02/07 19:53	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 19:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 19:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 19:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 19:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 19:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 19:53	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 19:53	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 19:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 19:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 19:53	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 19:53	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 19:53	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 19:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 19:53	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 19:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 19:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 19:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 19:53	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 19:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 19:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 19:53	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 19:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 19:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 19:53	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 19:53	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 19:53	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 19:53	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 19:53	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 19:53	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109	1		11/02/07 19:53	460-00-4	
Dibromofluoromethane (S)	103	%	85-115	1		11/02/07 19:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	79-120	1		11/02/07 19:53	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/02/07 19:53	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-3D 10/31/07 **Lab ID: 926859004** Collected: 10/31/07 14:40 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:22		
Collected Date	**10/31/07**			1		11/14/07 17:22		
Collected Time	**14:40**			1		11/14/07 17:22		
Field pH	**5.90**	Std. Units		1		11/14/07 17:22		
Field Temperature	**17.2**	deg C		1		11/14/07 17:22		
Static Water Level	**17.62**	feet		1		11/14/07 17:22		
Field Specific Conductance	**300**	umhos/cm		1		11/14/07 17:22		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7440-38-2	
Barium	**208**	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 20:46	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 20:46	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7439-92-1	
Nickel	**9.8**	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 20:46	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 20:46	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:46	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 20:46	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 20:17	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 20:17	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 20:17	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 20:17	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 20:17	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 20:17	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 20:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 20:17	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 20:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 20:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 20:17	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 20:17	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 20:17	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 20:17	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 20:17	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 20:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 20:17	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 20:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 20:17	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 20:17	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-3D 10/31/07 **Lab ID: 926859004** Collected: 10/31/07 14:40 Received: 11/01/07 08:00 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		11/02/07 20:17	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 20:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 20:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 20:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 20:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 20:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 20:17	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 20:17	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 20:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 20:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 20:17	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 20:17	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 20:17	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 20:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 20:17	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 20:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 20:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 20:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 20:17	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 20:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 20:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 20:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 20:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 20:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 20:17	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 20:17	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 20:17	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 20:17	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 20:17	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 20:17	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109	1		11/02/07 20:17	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		11/02/07 20:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	79-120	1		11/02/07 20:17	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		11/02/07 20:17	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-4A 10/31/07 **Lab ID: 926859005** Collected: 10/31/07 12:30 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:23		
Collected Date	**10/31/07**			1		11/14/07 17:23		
Collected Time	**12:30**			1		11/14/07 17:23		
Field pH	**7.99**	Std. Units		1		11/14/07 17:23		
Field Temperature	**14.8**	deg C		1		11/14/07 17:23		
Static Water Level	**50.82**	feet		1		11/14/07 17:23		
Field Specific Conductance	**132**	umhos/cm		1		11/14/07 17:23		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7440-38-2	
Barium	**62.4**	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 20:54	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 20:54	7440-43-9	
Chromium	**5.1**	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7440-48-4	
Copper	**6.3**	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 20:54	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 20:54	7440-28-0	
Vanadium	**8.6**	ug/L	5.0	1	11/07/07 20:00	11/09/07 20:54	7440-62-2	
Zinc	**11.6**	ug/L	10.0	1	11/07/07 20:00	11/09/07 20:54	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 20:41	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 20:41	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 20:41	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 20:41	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 20:41	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 20:41	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 20:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 20:41	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 20:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 20:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 20:41	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 20:41	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 20:41	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 20:41	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 20:41	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 20:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 20:41	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 20:41	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 20:41	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 20:41	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-4A 10/31/07 **Lab ID: 926859005** Collected: 10/31/07 12:30 Received: 11/01/07 08:00 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		11/02/07 20:41	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 20:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 20:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 20:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 20:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 20:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 20:41	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 20:41	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 20:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 20:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 20:41	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 20:41	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 20:41	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 20:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 20:41	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 20:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 20:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 20:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 20:41	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 20:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 20:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 20:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 20:41	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 20:41	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 20:41	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 20:41	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 20:41	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 20:41	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 20:41	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 20:41	95-47-6	
4-Bromofluorobenzene (S)	100	%	87-109	1		11/02/07 20:41	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		11/02/07 20:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	111	%	79-120	1		11/02/07 20:41	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		11/02/07 20:41	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-8 10/31/07 **Lab ID: 926859006** Collected: 10/31/07 14:45 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:24		
Collected Date	**10/31/07**			1		11/14/07 17:24		
Collected Time	**14:45**			1		11/14/07 17:24		
Field pH	**5.50**	Std. Units		1		11/14/07 17:24		
Field Temperature	**15.6**	deg C		1		11/14/07 17:24		
Static Water Level	**32.42**	feet		1		11/14/07 17:24		
Field Specific Conductance	**543**	umhos/cm		1		11/14/07 17:24		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7440-38-2	
Barium	**516**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/12/07 16:00	11/13/07 19:35	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/12/07 16:00	11/13/07 19:35	7440-43-9	
Chromium	**75.5**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7440-48-4	
Copper	**40.3**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7440-50-8	
Lead	**12.3**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7439-92-1	
Nickel	**20.2**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/12/07 16:00	11/13/07 19:35	7782-49-2	
Silver	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7440-22-4	
Thallium	**9.5**	ug/L	5.5	1	11/12/07 16:00	11/13/07 19:35	7440-28-0	
Vanadium	**103**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:35	7440-62-2	
Zinc	**91.1**	ug/L	10.0	1	11/12/07 16:00	11/13/07 19:35	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 21:04	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 21:04	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 21:04	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 21:04	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 21:04	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 21:04	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 21:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 21:04	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 21:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 21:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 21:04	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 21:04	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 21:04	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 21:04	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 21:04	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 21:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 21:04	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 21:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 21:04	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 21:04	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-8 10/31/07 **Lab ID: 926859006** Collected: 10/31/07 14:45 Received: 11/01/07 08:00 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		11/02/07 21:04	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 21:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 21:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 21:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 21:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 21:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 21:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 21:04	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 21:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 21:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 21:04	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 21:04	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 21:04	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 21:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 21:04	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 21:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 21:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 21:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 21:04	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 21:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 21:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 21:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 21:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 21:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 21:04	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 21:04	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 21:04	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 21:04	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 21:04	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 21:04	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109	1		11/02/07 21:04	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		11/02/07 21:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	79-120	1		11/02/07 21:04	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/02/07 21:04	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-11S 10/31/07 **Lab ID: 926859007** Collected: 10/31/07 15:25 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:25		
Collected Date	**10/31/07**			1		11/14/07 17:25		
Collected Time	**15:25**			1		11/14/07 17:25		
Field pH	**6.60**	Std. Units		1		11/14/07 17:25		
Field Temperature	**13.8**	deg C		1		11/14/07 17:25		
Static Water Level	**82.0**	feet		1		11/14/07 17:25		
Field Specific Conductance	**28**	umhos/cm		1		11/14/07 17:25		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7440-38-2	
Barium	**501**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:09	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:09	7440-43-9	
Chromium	**40.9**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7440-47-3	
Cobalt	**16.8**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7440-48-4	
Copper	**29.2**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7440-50-8	
Lead	**17.5**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7439-92-1	
Nickel	**24.0**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:09	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7440-22-4	
Thallium	**11.6**	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:09	7440-28-0	
Vanadium	**89.0**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:09	7440-62-2	
Zinc	**86.0**	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:09	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 21:28	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 21:28	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 21:28	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 21:28	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 21:28	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 21:28	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 21:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 21:28	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 21:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 21:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 21:28	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 21:28	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 21:28	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 21:28	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 21:28	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 21:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 21:28	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 21:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 21:28	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 21:28	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-11S 10/31/07 **Lab ID: 926859007** Collected: 10/31/07 15:25 Received: 11/01/07 08:00 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		11/02/07 21:28	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 21:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 21:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 21:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 21:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 21:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 21:28	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 21:28	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 21:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 21:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 21:28	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 21:28	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 21:28	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 21:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 21:28	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 21:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 21:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 21:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 21:28	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 21:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 21:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 21:28	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 21:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 21:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 21:28	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 21:28	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 21:28	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 21:28	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 21:28	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 21:28	95-47-6	
4-Bromofluorobenzene (S)	100	%	87-109	1		11/02/07 21:28	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		11/02/07 21:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	79-120	1		11/02/07 21:28	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/02/07 21:28	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-11D 10/31/07 **Lab ID: 926859008** Collected: 10/31/07 15:15 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:26		
Collected Date	**10/31/07**			1		11/14/07 17:26		
Collected Time	**15:15**			1		11/14/07 17:26		
Field pH	**6.80**	Std. Units		1		11/14/07 17:26		
Field Temperature	**16**	deg C		1		11/14/07 17:26		
Static Water Level	**82.90**	feet		1		11/14/07 17:26		
Field Specific Conductance	**61**	umhos/cm		1		11/14/07 17:26		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina		Preparation Method: EPA 3010					
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7440-38-2	
Barium	**31.5**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:13	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:13	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7440-50-8	
Lead	**8.1**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:13	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:13	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:13	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:13	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 21:52	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 21:52	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 21:52	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 21:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 21:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 21:52	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 21:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 21:52	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 21:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 21:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 21:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 21:52	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 21:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 21:52	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 21:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 21:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 21:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 21:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 21:52	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 21:52	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-11D 10/31/07 **Lab ID: 926859008** Collected: 10/31/07 15:15 Received: 11/01/07 08:00 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		11/02/07 21:52	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 21:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 21:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 21:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 21:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 21:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 21:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 21:52	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 21:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 21:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 21:52	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 21:52	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 21:52	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 21:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 21:52	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 21:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 21:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 21:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 21:52	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 21:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 21:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 21:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 21:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 21:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 21:52	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 21:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 21:52	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 21:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 21:52	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 21:52	95-47-6	
4-Bromofluorobenzene (S)	102	%	87-109	1		11/02/07 21:52	460-00-4	
Dibromofluoromethane (S)	103	%	85-115	1		11/02/07 21:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	79-120	1		11/02/07 21:52	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/02/07 21:52	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-14 10/31/07 **Lab ID: 926859009** Collected: 10/31/07 16:30 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:27		
Collected Date	**10/31/07**			1		11/14/07 17:27		
Collected Time	**16:30**			1		11/14/07 17:27		
Field pH	**6.30**	Std. Units		1		11/14/07 17:27		
Field Temperature	**16.1**	deg C		1		11/14/07 17:27		
Static Water Level	**103.38**	feet		1		11/14/07 17:27		
Field Specific Conductance	**45**	umhos/cm		1		11/14/07 17:27		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7440-38-2	
Barium	**223**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:17	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:17	7440-43-9	
Chromium	**11.9**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7439-92-1	
Nickel	**8.0**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:17	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:17	7440-28-0	
Vanadium	**8.8**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:17	7440-62-2	
Zinc	**66.2**	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:17	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 22:16	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 22:16	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 22:16	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 22:16	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 22:16	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 22:16	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 22:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 22:16	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 22:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 22:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 22:16	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 22:16	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 22:16	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 22:16	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 22:16	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 22:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 22:16	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 22:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 22:16	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 22:16	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-14 10/31/07 **Lab ID: 926859009** Collected: 10/31/07 16:30 Received: 11/01/07 08:00 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		11/02/07 22:16	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 22:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 22:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 22:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 22:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 22:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 22:16	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 22:16	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 22:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 22:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 22:16	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 22:16	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 22:16	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 22:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 22:16	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 22:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 22:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 22:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 22:16	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 22:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 22:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 22:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 22:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 22:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 22:16	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 22:16	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 22:16	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 22:16	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 22:16	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 22:16	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109	1		11/02/07 22:16	460-00-4	
Dibromofluoromethane (S)	100	%	85-115	1		11/02/07 22:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	79-120	1		11/02/07 22:16	17060-07-0	
Toluene-d8 (S)	101	%	70-120	1		11/02/07 22:16	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-15 10/31/07 **Lab ID: 926859010** Collected: 10/31/07 15:35 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:28		
Collected Date	**10/31/07**			1		11/14/07 17:28		
Collected Time	**15:35**			1		11/14/07 17:28		
Field pH	**5.90**	Std. Units		1		11/14/07 17:28		
Field Temperature	**17.2**	deg C		1		11/14/07 17:28		
Static Water Level	**9.83**	feet		1		11/14/07 17:28		
Field Specific Conductance	**36**	umhos/cm		1		11/14/07 17:28		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7440-36-0	
Arsenic	**21.4**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7440-38-2	
Barium	**872**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7440-39-3	
Beryllium	**6.0**	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:20	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:20	7440-43-9	
Chromium	**33.7**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7440-47-3	
Cobalt	**17.6**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7440-48-4	
Copper	**47.4**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7440-50-8	
Lead	**123**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7439-92-1	
Nickel	**36.2**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:20	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:20	7440-28-0	
Vanadium	**48.2**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:20	7440-62-2	
Zinc	**336**	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:20	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/02/07 22:39	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/02/07 22:39	107-13-1	
Benzene	ND	ug/L	1.0	1		11/02/07 22:39	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/02/07 22:39	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/02/07 22:39	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/02/07 22:39	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/02/07 22:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/02/07 22:39	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/02/07 22:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/02/07 22:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/02/07 22:39	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/02/07 22:39	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/02/07 22:39	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/02/07 22:39	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/02/07 22:39	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/02/07 22:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/02/07 22:39	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/02/07 22:39	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 22:39	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/02/07 22:39	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO MW-15 10/31/07 **Lab ID: 926859010** Collected: 10/31/07 15:35 Received: 11/01/07 08:00 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		11/02/07 22:39	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/02/07 22:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/02/07 22:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/02/07 22:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 22:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/02/07 22:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/02/07 22:39	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/02/07 22:39	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 22:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/02/07 22:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/02/07 22:39	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/02/07 22:39	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/02/07 22:39	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/02/07 22:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/02/07 22:39	108-10-1	
Styrene	ND	ug/L	1.0	1		11/02/07 22:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 22:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/02/07 22:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/02/07 22:39	127-18-4	
Toluene	ND	ug/L	1.0	1		11/02/07 22:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/02/07 22:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/02/07 22:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/02/07 22:39	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/02/07 22:39	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/02/07 22:39	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/02/07 22:39	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/02/07 22:39	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/02/07 22:39	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/02/07 22:39	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/02/07 22:39	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109	1		11/02/07 22:39	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		11/02/07 22:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	79-120	1		11/02/07 22:39	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		11/02/07 22:39	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO SW-1 10/31/07 13:05 **Lab ID: 926859011** Collected: 10/31/07 15:35 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:29		
Collected Date	**10/31/07**			1		11/14/07 17:29		
Collected Time	**13:05**			1		11/14/07 17:29		
Field pH	**7.04**	Std. Units		1		11/14/07 17:29		
Field Temperature	**16.5**	deg C		1		11/14/07 17:29		
Field Specific Conductance	**156**	umhos/cm		1		11/14/07 17:29		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina				Preparation Method: EPA 3010			
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7440-38-2	
Barium	**583**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:25	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:25	7440-43-9	
Chromium	**25.7**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7440-47-3	
Cobalt	**10.5**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7440-48-4	
Copper	**18.4**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7439-92-1	
Nickel	**18.1**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:25	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7440-22-4	
Thallium	**6.3**	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:25	7440-28-0	
Vanadium	**56.2**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:25	7440-62-2	
Zinc	**135**	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:25	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/03/07 05:00	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/03/07 05:00	107-13-1	
Benzene	ND	ug/L	1.0	1		11/03/07 05:00	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/03/07 05:00	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/03/07 05:00	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/03/07 05:00	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/03/07 05:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/03/07 05:00	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/03/07 05:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/03/07 05:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/03/07 05:00	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/03/07 05:00	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/03/07 05:00	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/03/07 05:00	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/03/07 05:00	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/03/07 05:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/03/07 05:00	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/03/07 05:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/03/07 05:00	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/03/07 05:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/03/07 05:00	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO SW-1 10/31/07 13:05 **Lab ID: 926859011** Collected: 10/31/07 15:35 Received: 11/01/07 08:00 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		11/03/07 05:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/03/07 05:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/03/07 05:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/03/07 05:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/03/07 05:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/03/07 05:00	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/03/07 05:00	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/03/07 05:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/03/07 05:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/03/07 05:00	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/03/07 05:00	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/03/07 05:00	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/03/07 05:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/03/07 05:00	108-10-1	
Styrene	ND	ug/L	1.0	1		11/03/07 05:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/03/07 05:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/03/07 05:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/03/07 05:00	127-18-4	
Toluene	ND	ug/L	1.0	1		11/03/07 05:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/03/07 05:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/03/07 05:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/03/07 05:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/03/07 05:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/03/07 05:00	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/03/07 05:00	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/03/07 05:00	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/03/07 05:00	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/03/07 05:00	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/03/07 05:00	95-47-6	
4-Bromofluorobenzene (S)	100	%	87-109	1		11/03/07 05:00	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		11/03/07 05:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	79-120	1		11/03/07 05:00	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		11/03/07 05:00	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO SW-6 10/31/07 **Lab ID: 926859012** Collected: 10/31/07 11:25 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:30		
Collected Date	**101/31/07**			1		11/14/07 17:30		
Collected Time	**11:25**			1		11/14/07 17:30		
Field pH	**6.35**	Std. Units		1		11/14/07 17:30		
Field Temperature	**11.5**	deg C		1		11/14/07 17:30		
Field Specific Conductance	**61**	umhos/cm		1		11/14/07 17:30		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7440-38-2	
Barium	**111**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:29	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:29	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7440-48-4	
Copper	**8.3**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:29	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:29	7440-28-0	
Vanadium	**11.4**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:29	7440-62-2	
Zinc	**20.4**	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:29	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/03/07 05:23	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/03/07 05:23	107-13-1	
Benzene	ND	ug/L	1.0	1		11/03/07 05:23	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/03/07 05:23	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/03/07 05:23	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/03/07 05:23	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/03/07 05:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/03/07 05:23	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/03/07 05:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/03/07 05:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/03/07 05:23	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/03/07 05:23	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/03/07 05:23	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/03/07 05:23	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/03/07 05:23	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/03/07 05:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/03/07 05:23	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/03/07 05:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/03/07 05:23	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/03/07 05:23	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/03/07 05:23	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO SW-6 10/31/07 **Lab ID: 926859012** Collected: 10/31/07 11:25 Received: 11/01/07 08:00 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		11/03/07 05:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/03/07 05:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/03/07 05:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/03/07 05:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/03/07 05:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/03/07 05:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/03/07 05:23	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/03/07 05:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/03/07 05:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/03/07 05:23	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/03/07 05:23	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/03/07 05:23	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/03/07 05:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/03/07 05:23	108-10-1	
Styrene	ND	ug/L	1.0	1		11/03/07 05:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/03/07 05:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/03/07 05:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/03/07 05:23	127-18-4	
Toluene	ND	ug/L	1.0	1		11/03/07 05:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/03/07 05:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/03/07 05:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/03/07 05:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/03/07 05:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/03/07 05:23	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/03/07 05:23	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/03/07 05:23	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/03/07 05:23	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/03/07 05:23	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/03/07 05:23	95-47-6	
4-Bromofluorobenzene (S)	103	%	87-109	1		11/03/07 05:23	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		11/03/07 05:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	79-120	1		11/03/07 05:23	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/03/07 05:23	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO SW-7 10/31/07 **Lab ID: 926859013** Collected: 10/31/07 11:10 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:30		
Collected Date	**10/31/07**			1		11/14/07 17:30		
Collected Time	**11:10**			1		11/14/07 17:30		
Field pH	**6.74**	Std. Units		1		11/14/07 17:30		
Field Temperature	**9.0**	deg C		1		11/14/07 17:30		
Field Specific Conductance	**40**	umhos/cm		1		11/14/07 17:30		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7440-38-2	
Barium	**30.3**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:34	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:34	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:34	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:34	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:34	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:34	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/03/07 05:47	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/03/07 05:47	107-13-1	
Benzene	ND	ug/L	1.0	1		11/03/07 05:47	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/03/07 05:47	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/03/07 05:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/03/07 05:47	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/03/07 05:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/03/07 05:47	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/03/07 05:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/03/07 05:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/03/07 05:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/03/07 05:47	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/03/07 05:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/03/07 05:47	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/03/07 05:47	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/03/07 05:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/03/07 05:47	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/03/07 05:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/03/07 05:47	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/03/07 05:47	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/03/07 05:47	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO SW-7 10/31/07 **Lab ID: 926859013** Collected: 10/31/07 11:10 Received: 11/01/07 08:00 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		11/03/07 05:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/03/07 05:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/03/07 05:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/03/07 05:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/03/07 05:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/03/07 05:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/03/07 05:47	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/03/07 05:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/03/07 05:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/03/07 05:47	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/03/07 05:47	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/03/07 05:47	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/03/07 05:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/03/07 05:47	108-10-1	
Styrene	ND	ug/L	1.0	1		11/03/07 05:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/03/07 05:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/03/07 05:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/03/07 05:47	127-18-4	
Toluene	ND	ug/L	1.0	1		11/03/07 05:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/03/07 05:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/03/07 05:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/03/07 05:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/03/07 05:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/03/07 05:47	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/03/07 05:47	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/03/07 05:47	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/03/07 05:47	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/03/07 05:47	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/03/07 05:47	95-47-6	
4-Bromofluorobenzene (S)	101	%	87-109	1		11/03/07 05:47	460-00-4	
Dibromofluoromethane (S)	103	%	85-115	1		11/03/07 05:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	111	%	79-120	1		11/03/07 05:47	17060-07-0	
Toluene-d8 (S)	101	%	70-120	1		11/03/07 05:47	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO CD-2 10/31/07 **Lab ID: 926859014** Collected: 10/31/07 11:10 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/15/07 10:54		
Collected Date	**10/31/07**			1		11/15/07 10:54		
Collected Time	**16:35**			1		11/15/07 10:54		
Static Water Level	**113.40**	feet		1		11/15/07 10:54		

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: WO CD-6 10/31/07 **Lab ID: 926859015** Collected: 10/31/07 11:10 Received: 11/01/07 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/15/07 10:55		
Collected Date	**10/31/07**			1		11/15/07 10:55		
Collected Time	**11:05**			1		11/15/07 10:55		
Static Water Level	**19.35**	feet		1		11/15/07 10:55		

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-1A **Lab ID: 926859016** Collected: 11/01/07 11:55 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:18		
Collected Date	**11/1/07**			1		11/14/07 17:18		
Collected Time	**11:55**			1		11/14/07 17:18		
Field pH	**6.22**	Std. Units		1		11/14/07 17:18		
Field Temperature	**14.8**	deg C		1		11/14/07 17:18		
Static Water Level	**24.69**	feet		1		11/14/07 17:18		
Field Specific Conductance	**94**	umhos/cm		1		11/14/07 17:18		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7440-38-2	
Barium	**198**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:40	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:40	7440-43-9	
Chromium	**10.9**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7439-92-1	
Nickel	**8.4**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:40	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:40	7440-28-0	
Vanadium	**14.7**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:40	7440-62-2	
Zinc	**14.0**	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:40	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/04/07 23:47	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/04/07 23:47	107-13-1	
Benzene	ND	ug/L	1.0	1		11/04/07 23:47	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/04/07 23:47	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/04/07 23:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/04/07 23:47	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/04/07 23:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/04/07 23:47	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/04/07 23:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/04/07 23:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/04/07 23:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/04/07 23:47	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/04/07 23:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/04/07 23:47	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/04/07 23:47	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/04/07 23:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/04/07 23:47	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/04/07 23:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/04/07 23:47	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/04/07 23:47	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-1A **Lab ID: 926859016** Collected: 11/01/07 11:55 Received: 11/01/07 16:00 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		11/04/07 23:47	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/04/07 23:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/04/07 23:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/04/07 23:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/07 23:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/07 23:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/04/07 23:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/04/07 23:47	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/07 23:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/07 23:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/04/07 23:47	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/04/07 23:47	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/04/07 23:47	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/04/07 23:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/04/07 23:47	108-10-1	
Styrene	ND	ug/L	1.0	1		11/04/07 23:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/07 23:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/07 23:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/04/07 23:47	127-18-4	
Toluene	ND	ug/L	1.0	1		11/04/07 23:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/04/07 23:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/04/07 23:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/04/07 23:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/04/07 23:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/04/07 23:47	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/04/07 23:47	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/04/07 23:47	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/04/07 23:47	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/04/07 23:47	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/04/07 23:47	95-47-6	
4-Bromofluorobenzene (S)	99	%	87-109	1		11/04/07 23:47	460-00-4	
Dibromofluoromethane (S)	97	%	85-115	1		11/04/07 23:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	79-120	1		11/04/07 23:47	17060-07-0	
Toluene-d8 (S)	101	%	70-120	1		11/04/07 23:47	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-5A **Lab ID: 926859017** Collected: 11/01/07 14:20 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:32		
Collected Date	**11/1/07**			1		11/14/07 17:32		
Collected Time	**14:20**			1		11/14/07 17:32		
Field pH	**5.58**	Std. Units		1		11/14/07 17:32		
Field Temperature	**19.2**	deg C		1		11/14/07 17:32		
Static Water Level	**6.55**	feet		1		11/14/07 17:32		
Field Specific Conductance	**84**	umhos/cm		1		11/14/07 17:32		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7440-38-2	
Barium	**86.7**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:44	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:44	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:44	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:44	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:44	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:44	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 00:10	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 00:10	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 00:10	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 00:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 00:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 00:10	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 00:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 00:10	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 00:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 00:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 00:10	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 00:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 00:10	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 00:10	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 00:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 00:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 00:10	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 00:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 00:10	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 00:10	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-5A **Lab ID: 926859017** Collected: 11/01/07 14:20 Received: 11/01/07 16:00 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		11/05/07 00:10	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/05/07 00:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 00:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 00:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 00:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 00:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 00:10	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 00:10	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 00:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 00:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 00:10	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 00:10	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 00:10	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 00:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 00:10	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 00:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 00:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 00:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 00:10	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 00:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 00:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 00:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 00:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 00:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 00:10	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 00:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 00:10	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 00:10	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 00:10	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 00:10	95-47-6	
4-Bromofluorobenzene (S)	99	%	87-109	1		11/05/07 00:10	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		11/05/07 00:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	93	%	79-120	1		11/05/07 00:10	17060-07-0	
Toluene-d8 (S)	101	%	70-120	1		11/05/07 00:10	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-5D **Lab ID: 926859018** Collected: 11/01/07 14:15 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:32		
Collected Date	**11/1/07**			1		11/14/07 17:32		
Collected Time	**14:15**			1		11/14/07 17:32		
Field pH	**5.96**	Std. Units		1		11/14/07 17:32		
Field Temperature	**18.6**	deg C		1		11/14/07 17:32		
Static Water Level	**6.81**	feet		1		11/14/07 17:32		
Field Specific Conductance	**105**	umhos/cm		1		11/14/07 17:32		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7440-38-2	
Barium	**149**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:55	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:55	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:55	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:55	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:55	7440-62-2	
Zinc	**14.2**	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:55	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 00:34	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 00:34	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 00:34	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 00:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 00:34	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 00:34	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 00:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 00:34	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 00:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 00:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 00:34	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 00:34	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 00:34	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 00:34	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 00:34	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 00:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 00:34	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 00:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 00:34	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 00:34	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-5D **Lab ID: 926859018** Collected: 11/01/07 14:15 Received: 11/01/07 16:00 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		11/05/07 00:34	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/05/07 00:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 00:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 00:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 00:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 00:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 00:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 00:34	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 00:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 00:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 00:34	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 00:34	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 00:34	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 00:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 00:34	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 00:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 00:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 00:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 00:34	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 00:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 00:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 00:34	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 00:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 00:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 00:34	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 00:34	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 00:34	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 00:34	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 00:34	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 00:34	95-47-6	
4-Bromofluorobenzene (S)	99	%	87-109	1		11/05/07 00:34	460-00-4	
Dibromofluoromethane (S)	97	%	85-115	1		11/05/07 00:34	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	79-120	1		11/05/07 00:34	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/05/07 00:34	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-9 **Lab ID: 926859019** Collected: 11/01/07 11:05 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:33		
Collected Date	**11/1/07**			1		11/14/07 17:33		
Collected Time	**11:05**			1		11/14/07 17:33		
Field pH	**6.20**	Std. Units		1		11/14/07 17:33		
Field Temperature	**12.5**	deg C		1		11/14/07 17:33		
Static Water Level	**9.68**	feet		1		11/14/07 17:33		
Field Specific Conductance	**351**	umhos/cm		1		11/14/07 17:33		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7440-38-2	
Barium	**201**	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:59	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 21:59	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:59	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 21:59	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 21:59	7440-62-2	
Zinc	**66.9**	ug/L	10.0	1	11/07/07 20:00	11/09/07 21:59	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 00:58	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 00:58	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 00:58	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 00:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 00:58	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 00:58	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 00:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 00:58	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 00:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 00:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 00:58	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 00:58	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 00:58	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 00:58	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 00:58	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 00:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 00:58	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 00:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 00:58	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 00:58	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-9 **Lab ID: 926859019** Collected: 11/01/07 11:05 Received: 11/01/07 16:00 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		11/05/07 00:58	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/05/07 00:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 00:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 00:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 00:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 00:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 00:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 00:58	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 00:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 00:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 00:58	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 00:58	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 00:58	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 00:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 00:58	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 00:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 00:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 00:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 00:58	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 00:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 00:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 00:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 00:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 00:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 00:58	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 00:58	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 00:58	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 00:58	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 00:58	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 00:58	95-47-6	
4-Bromofluorobenzene (S)	98	%	87-109	1		11/05/07 00:58	460-00-4	
Dibromofluoromethane (S)	97	%	85-115	1		11/05/07 00:58	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	79-120	1		11/05/07 00:58	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/05/07 00:58	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-12 **Lab ID: 926859020** Collected: 11/01/07 13:25 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:34		
Collected Date	**11/1/07**			1		11/14/07 17:34		
Collected Time	**13:25**			1		11/14/07 17:34		
Field pH	**6.00**	Std. Units		1		11/14/07 17:34		
Field Temperature	**17.2**	deg C		1		11/14/07 17:34		
Static Water Level	**12.77**	feet		1		11/14/07 17:34		
Field Specific Conductance	**146**	umhos/cm		1		11/14/07 17:34		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7440-36-0	
Arsenic	**42.8**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7440-38-2	
Barium	**2000**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:03	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:03	7440-43-9	
Chromium	**40.7**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7440-47-3	
Cobalt	**147**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7440-48-4	
Copper	**42.2**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7440-50-8	
Lead	**46.5**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7439-92-1	
Nickel	**73.1**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:03	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7440-22-4	
Thallium	**12.3**	ug/L	5.5	1	11/07/07 20:00	11/09/07 22:03	7440-28-0	
Vanadium	**176**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:03	7440-62-2	
Zinc	**169**	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:03	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 01:22	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 01:22	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 01:22	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 01:22	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 01:22	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 01:22	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 01:22	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 01:22	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 01:22	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 01:22	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 01:22	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 01:22	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 01:22	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 01:22	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 01:22	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 01:22	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 01:22	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 01:22	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 01:22	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 01:22	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-12 **Lab ID: 926859020** Collected: 11/01/07 13:25 Received: 11/01/07 16:00 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		11/05/07 01:22	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/05/07 01:22	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 01:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 01:22	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 01:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 01:22	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 01:22	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 01:22	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 01:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 01:22	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 01:22	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 01:22	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 01:22	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 01:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 01:22	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 01:22	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 01:22	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 01:22	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 01:22	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 01:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 01:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 01:22	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 01:22	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 01:22	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 01:22	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 01:22	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 01:22	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 01:22	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 01:22	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 01:22	95-47-6	
4-Bromofluorobenzene (S)	98	%	87-109	1		11/05/07 01:22	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		11/05/07 01:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	79-120	1		11/05/07 01:22	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/05/07 01:22	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-13S **Lab ID: 926859021** Collected: 11/01/07 13:15 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:35		
Collected Date	**11/1/07**			1		11/14/07 17:35		
Collected Time	**13:25**			1		11/14/07 17:35		
Field pH	**5.70**	Std. Units		1		11/14/07 17:35		
Field Temperature	**16.9**	deg C		1		11/14/07 17:35		
Static Water Level	**13.75**	feet		1		11/14/07 17:35		
Field Specific Conductance	**76**	umhos/cm		1		11/14/07 17:35		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina				Preparation Method: EPA 3010			
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7440-36-0	
Arsenic	**11.4**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7440-38-2	
Barium	**1400**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:07	7440-41-7	
Cadmium	**1.7**	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:07	7440-43-9	
Chromium	**52.3**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7440-47-3	
Cobalt	**102**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7440-48-4	
Copper	**35.6**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7440-50-8	
Lead	**23.1**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7439-92-1	
Nickel	**30.3**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:07	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7440-22-4	
Thallium	**10.5**	ug/L	5.5	1	11/07/07 20:00	11/09/07 22:07	7440-28-0	
Vanadium	**146**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:07	7440-62-2	
Zinc	**148**	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:07	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 01:46	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 01:46	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 01:46	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 01:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 01:46	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 01:46	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 01:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 01:46	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 01:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 01:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 01:46	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 01:46	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 01:46	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 01:46	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 01:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 01:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 01:46	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 01:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 01:46	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 01:46	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-13S **Lab ID: 926859021** Collected: 11/01/07 13:15 Received: 11/01/07 16:00 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		11/05/07 01:46	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/05/07 01:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 01:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 01:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 01:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 01:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 01:46	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 01:46	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 01:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 01:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 01:46	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 01:46	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 01:46	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 01:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 01:46	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 01:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 01:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 01:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 01:46	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 01:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 01:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 01:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 01:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 01:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 01:46	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 01:46	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 01:46	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 01:46	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 01:46	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 01:46	95-47-6	
4-Bromofluorobenzene (S)	98	%	87-109	1		11/05/07 01:46	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		11/05/07 01:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	79-120	1		11/05/07 01:46	17060-07-0	
Toluene-d8 (S)	101	%	70-120	1		11/05/07 01:46	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-13D **Lab ID: 926859022** Collected: 11/01/07 13:10 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/14/07 17:36		
Collected Date	**11/1/07**			1		11/14/07 17:36		
Collected Time	**13:10**			1		11/14/07 17:36		
Field pH	**6.56**	Std. Units		1		11/14/07 17:36		
Field Temperature	**16.9**	deg C		1		11/14/07 17:36		
Static Water Level	**13.44**	feet		1		11/14/07 17:36		
Field Specific Conductance	**53**	umhos/cm		1		11/14/07 17:36		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7440-38-2	
Barium	**30.1**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:12	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:12	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:12	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 22:12	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:12	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:12	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 02:10	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 02:10	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 02:10	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 02:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 02:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 02:10	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 02:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 02:10	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 02:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 02:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 02:10	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 02:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 02:10	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 02:10	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 02:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 02:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 02:10	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 02:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 02:10	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 02:10	106-46-7	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: MW-13D **Lab ID: 926859022** Collected: 11/01/07 13:10 Received: 11/01/07 16:00 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		11/05/07 02:10	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/05/07 02:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 02:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 02:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 02:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 02:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 02:10	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 02:10	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 02:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 02:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 02:10	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 02:10	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 02:10	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 02:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 02:10	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 02:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 02:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 02:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 02:10	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 02:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 02:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 02:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 02:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 02:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 02:10	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 02:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 02:10	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 02:10	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 02:10	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 02:10	95-47-6	
4-Bromofluorobenzene (S)	99	%	87-109	1		11/05/07 02:10	460-00-4	
Dibromofluoromethane (S)	97	%	85-115	1		11/05/07 02:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	79-120	1		11/05/07 02:10	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		11/05/07 02:10	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: TVL BLK **Lab ID: 926859023** Collected: 10/31/07 00:00 Received: 11/01/07 16:00 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		11/05/07 02:33	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 02:33	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 02:33	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 02:33	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 02:33	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 02:33	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 02:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 02:33	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 02:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 02:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 02:33	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 02:33	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 02:33	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 02:33	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 02:33	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 02:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 02:33	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 02:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 02:33	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 02:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/05/07 02:33	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/05/07 02:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 02:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 02:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 02:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 02:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 02:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 02:33	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 02:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 02:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 02:33	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 02:33	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 02:33	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 02:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 02:33	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 02:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 02:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 02:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 02:33	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 02:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 02:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 02:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 02:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 02:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 02:33	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 02:33	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 02:33	75-01-4	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: TVL BLK **Lab ID: 926859023** Collected: 10/31/07 00:00 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 02:33	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 02:33	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 02:33	95-47-6	
4-Bromofluorobenzene (S)	98	%	87-109	1		11/05/07 02:33	460-00-4	
Dibromofluoromethane (S)	97	%	85-115	1		11/05/07 02:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	79-120	1		11/05/07 02:33	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/05/07 02:33	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: EQUIP BLK **Lab ID: 926859024** Collected: 10/31/07 00:00 Received: 11/01/07 16:00 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	11/07/07 20:00	11/09/07 22:15	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:15	7440-38-2	
Barium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:15	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:15	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:15	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:15	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:15	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:15	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:15	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:15	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:15	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:15	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 22:15	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:15	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:15	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 02:57	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 02:57	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 02:57	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 02:57	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 02:57	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 02:57	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 02:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 02:57	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 02:57	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 02:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 02:57	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 02:57	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 02:57	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 02:57	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 02:57	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 02:57	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 02:57	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 02:57	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 02:57	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 02:57	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/05/07 02:57	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/05/07 02:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 02:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 02:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 02:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 02:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 02:57	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 02:57	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 02:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 02:57	10061-02-6	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: EQUIP BLK **Lab ID: 926859024** Collected: 10/31/07 00:00 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 02:57	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 02:57	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 02:57	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 02:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 02:57	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 02:57	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 02:57	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 02:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 02:57	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 02:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 02:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 02:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 02:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 02:57	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 02:57	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 02:57	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 02:57	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 02:57	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 02:57	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 02:57	95-47-6	
4-Bromofluorobenzene (S)	98	%	87-109	1		11/05/07 02:57	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		11/05/07 02:57	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	79-120	1		11/05/07 02:57	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/05/07 02:57	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: SW-2 **Lab ID: 926859025** Collected: 11/01/07 10:55 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/15/07 10:47		
Collected Date	**11/1/07**			1		11/15/07 10:47		
Collected Time	**10:55**			1		11/15/07 10:47		
Field pH	**7.11**	Std. Units		1		11/15/07 10:47		
Field Temperature	**13.4**	deg C		1		11/15/07 10:47		
Field Specific Conductance	**150**	umhos/cm		1		11/15/07 10:47		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina				Preparation Method: EPA 3010			
Antimony	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7440-38-2	
Barium	**154**	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:18	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/07/07 20:00	11/09/07 22:18	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7440-48-4	
Copper	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7440-50-8	
Lead	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:18	7782-49-2	
Silver	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/07/07 20:00	11/09/07 22:18	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/07/07 20:00	11/09/07 22:18	7440-62-2	
Zinc	**71.9**	ug/L	10.0	1	11/07/07 20:00	11/09/07 22:18	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 03:21	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 03:21	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 03:21	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 03:21	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 03:21	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 03:21	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 03:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 03:21	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 03:21	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 03:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 03:21	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 03:21	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 03:21	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 03:21	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 03:21	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 03:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 03:21	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 03:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 03:21	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 03:21	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/05/07 03:21	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: SW-2 **Lab ID: 926859025** Collected: 11/01/07 10:55 Received: 11/01/07 16:00 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		11/05/07 03:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 03:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 03:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 03:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 03:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 03:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 03:21	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 03:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 03:21	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 03:21	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 03:21	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 03:21	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 03:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 03:21	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 03:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 03:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 03:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 03:21	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 03:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 03:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 03:21	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 03:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 03:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 03:21	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 03:21	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 03:21	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 03:21	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 03:21	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 03:21	95-47-6	
4-Bromofluorobenzene (S)	100	%	87-109	1		11/05/07 03:21	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		11/05/07 03:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	79-120	1		11/05/07 03:21	17060-07-0	
Toluene-d8 (S)	101	%	70-120	1		11/05/07 03:21	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: SW-3 **Lab ID: 926859026** Collected: 11/01/07 11:35 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/15/07 10:49		
Collected Date	**11/1/07**			1		11/15/07 10:49		
Collected Time	**11:35**			1		11/15/07 10:49		
Field pH	**6.80**	Std. Units		1		11/15/07 10:49		
Field Temperature	**12.7**	deg C		1		11/15/07 10:49		
Field Specific Conductance	**266**	umhos/cm		1		11/15/07 10:49		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7440-38-2	
Barium	**162**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/12/07 16:00	11/13/07 19:43	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/12/07 16:00	11/13/07 19:43	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7440-48-4	
Copper	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7440-50-8	
Lead	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/12/07 16:00	11/13/07 19:43	7782-49-2	
Silver	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/12/07 16:00	11/13/07 19:43	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:43	7440-62-2	
Zinc	**60.0**	ug/L	10.0	1	11/12/07 16:00	11/13/07 19:43	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 03:45	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 03:45	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 03:45	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 03:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 03:45	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 03:45	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 03:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 03:45	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 03:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 03:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 03:45	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 03:45	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 03:45	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 03:45	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 03:45	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 03:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 03:45	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 03:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 03:45	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 03:45	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/05/07 03:45	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: SW-3 **Lab ID: 926859026** Collected: 11/01/07 11:35 Received: 11/01/07 16:00 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		11/05/07 03:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 03:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 03:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 03:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 03:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 03:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 03:45	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 03:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 03:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 03:45	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 03:45	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 03:45	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 03:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 03:45	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 03:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 03:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 03:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 03:45	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 03:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 03:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 03:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 03:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 03:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 03:45	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 03:45	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 03:45	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 03:45	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 03:45	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 03:45	95-47-6	
4-Bromofluorobenzene (S)	99	%	87-109	1		11/05/07 03:45	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		11/05/07 03:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	79-120	1		11/05/07 03:45	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/05/07 03:45	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: LEACHATE **Lab ID: 926859027** Collected: 11/01/07 10:20 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/15/07 10:46		
Collected Date	**11/1/07**			1		11/15/07 10:46		
Collected Time	**10:20**			1		11/15/07 10:46		
Field pH	**8.03**	Std. Units		1		11/15/07 10:46		
Field Temperature	**14.3**	deg C		1		11/15/07 10:46		
Field Specific Conductance	**1282 m/s**	umhos/cm		1		11/15/07 10:46		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7440-36-0	
Arsenic	**24.6**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7440-38-2	
Barium	**436**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/12/07 16:00	11/13/07 19:51	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/12/07 16:00	11/13/07 19:51	7440-43-9	
Chromium	**74.1**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7440-47-3	
Cobalt	**12.0**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7440-48-4	
Copper	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7440-50-8	
Lead	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7439-92-1	
Nickel	**81.2**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/12/07 16:00	11/13/07 19:51	7782-49-2	
Silver	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/12/07 16:00	11/13/07 19:51	7440-28-0	
Vanadium	**23.9**	ug/L	5.0	1	11/12/07 16:00	11/13/07 19:51	7440-62-2	
Zinc	**76.7**	ug/L	10.0	1	11/12/07 16:00	11/13/07 19:51	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 04:09	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 04:09	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 04:09	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 04:09	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 04:09	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 04:09	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 04:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 04:09	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 04:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 04:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 04:09	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 04:09	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 04:09	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 04:09	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 04:09	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 04:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 04:09	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 04:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 04:09	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 04:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/05/07 04:09	110-57-6	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: LEACHATE **Lab ID: 926859027** Collected: 11/01/07 10:20 Received: 11/01/07 16:00 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		11/05/07 04:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 04:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 04:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 04:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 04:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 04:09	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 04:09	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 04:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 04:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 04:09	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 04:09	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 04:09	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 04:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 04:09	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 04:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 04:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 04:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 04:09	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 04:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 04:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 04:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 04:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 04:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 04:09	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 04:09	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 04:09	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 04:09	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 04:09	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 04:09	95-47-6	
4-Bromofluorobenzene (S)	95	%	87-109	1		11/05/07 04:09	460-00-4	
Dibromofluoromethane (S)	99	%	85-115	1		11/05/07 04:09	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	79-120	1		11/05/07 04:09	17060-07-0	
Toluene-d8 (S)	102	%	70-120	1		11/05/07 04:09	2037-26-5	
5210B BOD, Low Level	Analytical Method: SM 5210B							
BOD, 5 day	**221**	mg/L	2.0	1	11/02/07 15:45	11/07/07 21:00		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
Nitrogen, NO2 plus NO3	**0.53**	mg/L	0.10	1		11/02/07 08:31		
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**968**	mg/L	100	1		11/09/07 11:00		
ASTM D516-9002 Sulfate Water	Analytical Method: ASTM D516-90,02							
Sulfate	**3010**	mg/L	500	1		11/03/07 17:21	14808-79-8	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: SW-5 **Lab ID: 926859028** Collected: 11/01/07 13:40 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**MPS**			1		11/16/07 11:12		
Collected Date	**11/1/07**			1		11/16/07 11:12		
Collected Time	**13:40**			1		11/16/07 11:12		
Field pH	**7.50**	Std. Units		1		11/16/07 11:12		
Field Temperature	**17.2**	deg C		1		11/16/07 11:12		
Field Specific Conductance	**320**	umhos/cm		1		11/16/07 11:12		
6010 ICP Groundwater	Analytical Method: EPA 6010 GW North Carolina			Preparation Method: EPA 3010				
Antimony	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7440-36-0	
Arsenic	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7440-38-2	
Barium	**85.0**	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/12/07 16:00	11/13/07 20:05	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/12/07 16:00	11/13/07 20:05	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7440-48-4	
Copper	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7440-50-8	
Lead	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/12/07 16:00	11/13/07 20:05	7782-49-2	
Silver	ND	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7440-22-4	
Thallium	ND	ug/L	5.5	1	11/12/07 16:00	11/13/07 20:05	7440-28-0	
Vanadium	**6.8**	ug/L	5.0	1	11/12/07 16:00	11/13/07 20:05	7440-62-2	
Zinc	**41.3**	ug/L	10.0	1	11/12/07 16:00	11/13/07 20:05	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470			Preparation Method: EPA 7470				
Mercury	ND	ug/L	0.20	1	11/12/07 11:14	11/12/07 13:21	7439-97-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/05/07 04:33	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/05/07 04:33	107-13-1	
Benzene	ND	ug/L	1.0	1		11/05/07 04:33	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/05/07 04:33	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/05/07 04:33	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/05/07 04:33	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/05/07 04:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/05/07 04:33	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/05/07 04:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/05/07 04:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/05/07 04:33	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/05/07 04:33	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/05/07 04:33	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/05/07 04:33	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	3.0	1		11/05/07 04:33	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/05/07 04:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/05/07 04:33	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/05/07 04:33	74-95-3	

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ANALYTICAL RESULTS

Project: White Oak 10/31/07
Pace Project No.: 926859

Sample: SW-5 **Lab ID: 926859028** Collected: 11/01/07 13:40 Received: 11/01/07 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 04:33	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/05/07 04:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/05/07 04:33	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/05/07 04:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/05/07 04:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/05/07 04:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 04:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/05/07 04:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/05/07 04:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/05/07 04:33	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 04:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/05/07 04:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/05/07 04:33	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/05/07 04:33	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/05/07 04:33	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		11/05/07 04:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/05/07 04:33	108-10-1	
Styrene	ND	ug/L	1.0	1		11/05/07 04:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 04:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/05/07 04:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/05/07 04:33	127-18-4	
Toluene	ND	ug/L	1.0	1		11/05/07 04:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/05/07 04:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/05/07 04:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/05/07 04:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/05/07 04:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/05/07 04:33	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/05/07 04:33	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/05/07 04:33	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/05/07 04:33	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/05/07 04:33	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		11/05/07 04:33	95-47-6	
4-Bromofluorobenzene (S)	98	%	87-109	1		11/05/07 04:33	460-00-4	
Dibromofluoromethane (S)	99	%	85-115	1		11/05/07 04:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	79-120	1		11/05/07 04:33	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		11/05/07 04:33	2037-26-5	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: WETA/1505
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 926859027

METHOD BLANK: 35457
Associated Lab Samples: 926859027

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

LABORATORY CONTROL SAMPLE: 35458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	5	4.8	95	90-110	

MATRIX SPIKE SAMPLE: 35459

Parameter	Units	926882001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	5	4.8	97	75-125	

SAMPLE DUPLICATE: 35461

Parameter	Units	926882002 Result	Dup Result	RPD	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	ND	0	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: MPRP/1394 Analysis Method: EPA 6010 GW North Carolina
QC Batch Method: EPA 3010 Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 926859001, 926859002, 926859003

METHOD BLANK: 35490
Associated Lab Samples: 926859001, 926859002, 926859003

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	5.5	
Vanadium	ug/L	ND	5.0	
Zinc	ug/L	ND	10.0	

LABORATORY CONTROL SAMPLE: 35491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	508	102	80-120	
Arsenic	ug/L	500	519	104	80-120	
Barium	ug/L	500	496	99	80-120	
Beryllium	ug/L	500	498	100	80-120	
Cadmium	ug/L	500	511	102	80-120	
Chromium	ug/L	500	518	104	80-120	
Cobalt	ug/L	500	505	101	80-120	
Copper	ug/L	500	507	101	80-120	
Lead	ug/L	500	507	101	80-120	
Nickel	ug/L	500	512	102	80-120	
Selenium	ug/L	500	511	102	80-120	
Silver	ug/L	250	251	100	80-120	
Thallium	ug/L	500	488	98	80-120	
Vanadium	ug/L	500	508	102	80-120	
Zinc	ug/L	500	494	99	80-120	

MATRIX SPIKE SAMPLE: 35492

Parameter	Units	926474001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	464	93	75-125	
Arsenic	ug/L	ND	500	474	95	75-125	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

MATRIX SPIKE SAMPLE: 35492

Parameter	Units	926474001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	142	500	583	88	75-125	
Beryllium	ug/L	ND	500	449	90	75-125	
Cadmium	ug/L	ND	500	467	93	75-125	
Chromium	ug/L	ND	500	465	93	75-125	
Cobalt	ug/L	21.4	500	471	90	75-125	
Copper	ug/L	ND	500	456	91	75-125	
Lead	ug/L	ND	500	460	92	75-125	
Nickel	ug/L	ND	500	463	92	75-125	
Selenium	ug/L	ND	500	472	94	75-125	
Silver	ug/L	ND	250	234	94	75-125	
Thallium	ug/L	5.5	500	455	90	75-125	
Vanadium	ug/L	ND	500	460	92	75-125	
Zinc	ug/L	13.3	500	462	90	75-125	

SAMPLE DUPLICATE: 35493

Parameter	Units	926474002 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND	23	
Barium	ug/L	134	130	3	
Beryllium	ug/L	ND	ND	29	
Cadmium	ug/L	ND	ND	129	
Chromium	ug/L	ND	1.2J	10	
Cobalt	ug/L	23.8	23.2	3	
Copper	ug/L	ND	ND		
Lead	ug/L	ND	ND		
Nickel	ug/L	29.5	28.6	3	
Selenium	ug/L	ND	ND	129	
Silver	ug/L	ND	.46J	17	
Thallium	ug/L	ND	ND	46	
Vanadium	ug/L	ND	.57J	7	
Zinc	ug/L	ND	7.2J	32	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: MSV/1683 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 926859001, 926859002, 926859003, 926859004, 926859005, 926859006, 926859007, 926859008, 926859009, 926859010

METHOD BLANK: 35533
Associated Lab Samples: 926859001, 926859002, 926859003, 926859004, 926859005, 926859006, 926859007, 926859008, 926859009, 926859010

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	
1,3-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	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

METHOD BLANK: 35533

Associated Lab Samples: 926859001, 926859002, 926859003, 926859004, 926859005, 926859006, 926859007, 926859008, 926859009, 926859010

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
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)	%	105	79-120	
4-Bromofluorobenzene (S)	%	100	87-109	
Dibromofluoromethane (S)	%	103	85-115	
Toluene-d8 (S)	%	99	70-120	

LABORATORY CONTROL SAMPLE: 35534

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.8	102	83-125	
1,1,1-Trichloroethane	ug/L	50	55.3	111	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	43.2	86	73-127	
1,1,2-Trichloroethane	ug/L	50	50.2	100	77-123	
1,1-Dichloroethane	ug/L	50	51.1	102	76-129	
1,1-Dichloroethene	ug/L	50	59.2	118	78-146	
1,2,3-Trichloropropane	ug/L	50	51.3	103	72-125	
1,2-Dibromo-3-chloropropane	ug/L	50	37.1	74	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	45.1	90	81-125	
1,2-Dichlorobenzene	ug/L	50	48.0	96	82-126	
1,2-Dichloroethane	ug/L	50	53.6	107	72-126	
1,2-Dichloropropane	ug/L	50	48.4	97	80-127	
1,3-Dichloropropane	ug/L	50	48.2	96	79-124	
1,4-Dichlorobenzene	ug/L	50	48.4	97	79-125	
2-Butanone (MEK)	ug/L	100	80.2	80	50-134	
2-Hexanone	ug/L	100	72.5	73	58-138	
4-Methyl-2-pentanone (MIBK)	ug/L	100	76.9	77	70-131	
Acetone	ug/L	100	85.1	85	50-146	
Acrylonitrile	ug/L	250	185	74	66-124	
Benzene	ug/L	50	50.9	102	78-128	
Bromochloromethane	ug/L	50	47.0	94	73-124	
Bromodichloromethane	ug/L	50	54.3	109	81-125	
Bromoform	ug/L	50	48.4	97	71-125	
Bromomethane	ug/L	50	68.4	137	50-150	
Carbon disulfide	ug/L	50	48.3	97	54-150	
Carbon tetrachloride	ug/L	50	56.7	113	81-137	
Chlorobenzene	ug/L	50	50.6	101	82-126	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

LABORATORY CONTROL SAMPLE: 35534

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroethane	ug/L	50	45.2	90	69-140	
Chloroform	ug/L	50	52.5	105	77-129	
Chloromethane	ug/L	50	37.5	75	54-139	
cis-1,2-Dichloroethene	ug/L	50	51.7	103	76-133	
cis-1,3-Dichloropropene	ug/L	50	49.8	100	76-127	
Dibromochloromethane	ug/L	50	49.2	98	77-125	
Dibromomethane	ug/L	50	42.0	84	77-125	
Ethylbenzene	ug/L	50	51.9	104	80-127	
Iodomethane	ug/L	100	89.0	89	65-172	
m&p-Xylene	ug/L	100	107	107	82-127	
Methylene Chloride	ug/L	50	38.5	77	67-133	
o-Xylene	ug/L	50	50.9	102	83-124	
Styrene	ug/L	50	49.7	99	80-130	
Tetrachloroethene	ug/L	50	52.2	104	78-128	
Toluene	ug/L	50	51.0	102	76-126	
trans-1,2-Dichloroethene	ug/L	50	52.6	105	78-134	
trans-1,3-Dichloropropene	ug/L	50	51.9	104	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	44.8	90	51-140	
Trichloroethene	ug/L	50	53.1	106	79-127	
Trichlorofluoromethane	ug/L	50	62.6	125	76-148	
Vinyl acetate	ug/L	100	84.3	84	50-150	
Vinyl chloride	ug/L	50	55.4	111	67-143	
Xylene (Total)	ug/L	150	161	107	83-125	
1,2-Dichloroethane-d4 (S)	%			104	79-120	
4-Bromofluorobenzene (S)	%			102	87-109	
Dibromofluoromethane (S)	%			105	85-115	
Toluene-d8 (S)	%			100	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 39169 39170

Parameter	Units	926942004 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	64.5	61.1	129	122	60-150	6	
Benzene	ug/L	ND	50	50	57.6	58.6	115	117	74-136	2	
Chlorobenzene	ug/L	ND	50	50	57.9	60.0	116	120	79-135	4	
Toluene	ug/L	ND	50	50	55.8	56.3	112	113	73-131	1	
Trichloroethene	ug/L	ND	50	50	57.5	57.8	115	116	73-131	.5	
1,2-Dichloroethane-d4 (S)	%						94	93	79-120		
4-Bromofluorobenzene (S)	%						98	97	87-109		
Dibromofluoromethane (S)	%						98	97	85-115		
Toluene-d8 (S)	%						100	98	70-120		

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: MSV/1692 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 926859011, 926859012, 926859013

METHOD BLANK: 35765
Associated Lab Samples: 926859011, 926859012, 926859013

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	
1,3-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	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

METHOD BLANK: 35765

Associated Lab Samples: 926859011, 926859012, 926859013

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
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)	%	100	87-109	
Dibromofluoromethane (S)	%	102	85-115	
Toluene-d8 (S)	%	98	70-120	

LABORATORY CONTROL SAMPLE: 35766

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	54.5	109	83-125	
1,1,1-Trichloroethane	ug/L	50	58.2	116	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	49.5	99	73-127	
1,1,2-Trichloroethane	ug/L	50	53.5	107	77-123	
1,1-Dichloroethane	ug/L	50	54.3	109	76-129	
1,1-Dichloroethene	ug/L	50	62.8	126	78-146	
1,2,3-Trichloropropane	ug/L	50	57.9	116	72-125	
1,2-Dibromo-3-chloropropane	ug/L	50	42.4	85	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	48.6	97	81-125	
1,2-Dichlorobenzene	ug/L	50	50.9	102	82-126	
1,2-Dichloroethane	ug/L	50	57.9	116	72-126	
1,2-Dichloropropane	ug/L	50	50.9	102	80-127	
1,3-Dichloropropane	ug/L	50	52.6	105	79-124	
1,4-Dichlorobenzene	ug/L	50	50.7	101	79-125	
2-Butanone (MEK)	ug/L	100	87.7	88	50-134	
2-Hexanone	ug/L	100	85.1	85	58-138	
4-Methyl-2-pentanone (MIBK)	ug/L	100	90.2	90	70-131	
Acetone	ug/L	100	92.6	93	50-146	
Acrylonitrile	ug/L	250	201	80	66-124	
Benzene	ug/L	50	52.5	105	78-128	
Bromochloromethane	ug/L	50	51.2	102	73-124	
Bromodichloromethane	ug/L	50	57.2	114	81-125	
Bromoform	ug/L	50	54.9	110	71-125	
Bromomethane	ug/L	50	85.4	171	50-150	L3
Carbon disulfide	ug/L	50	50.7	101	54-150	
Carbon tetrachloride	ug/L	50	60.2	120	81-137	
Chlorobenzene	ug/L	50	53.3	107	82-126	
Chloroethane	ug/L	50	49.3	99	69-140	
Chloroform	ug/L	50	54.9	110	77-129	
Chloromethane	ug/L	50	38.7	77	54-139	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

LABORATORY CONTROL SAMPLE: 35766

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	56.0	112	76-133	
cis-1,3-Dichloropropene	ug/L	50	51.5	103	76-127	
Dibromochloromethane	ug/L	50	53.7	107	77-125	
Dibromomethane	ug/L	50	47.1	94	77-125	
Ethylbenzene	ug/L	50	55.2	110	80-127	
Iodomethane	ug/L	100	129	129	65-172	
m&p-Xylene	ug/L	100	113	113	82-127	
Methylene Chloride	ug/L	50	42.1	84	67-133	
o-Xylene	ug/L	50	53.8	108	83-124	
Styrene	ug/L	50	53.2	106	80-130	
Tetrachloroethene	ug/L	50	53.2	106	78-128	
Toluene	ug/L	50	53.8	108	76-126	
trans-1,2-Dichloroethene	ug/L	50	55.4	111	78-134	
trans-1,3-Dichloropropene	ug/L	50	54.4	109	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	48.9	98	51-140	
Trichloroethene	ug/L	50	55.2	110	79-127	
Trichlorofluoromethane	ug/L	50	66.1	132	76-148	
Vinyl acetate	ug/L	100	90.5	91	50-150	
Vinyl chloride	ug/L	50	59.0	118	67-143	
Xylene (Total)	ug/L	150	170	113	83-125	
1,2-Dichloroethane-d4 (S)	%			107	79-120	
4-Bromofluorobenzene (S)	%			103	87-109	
Dibromofluoromethane (S)	%			106	85-115	
Toluene-d8 (S)	%			100	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 35767 35768

Parameter	Units	926859013 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	57.0	52.9	114	106	60-150	7	
Benzene	ug/L	ND	50	50	52.2	49.2	104	98	74-136	6	
Chlorobenzene	ug/L	ND	50	50	53.7	51.0	107	102	79-135	5	
Toluene	ug/L	ND	50	50	52.7	49.3	105	98	73-131	7	
Trichloroethene	ug/L	ND	50	50	54.4	50.9	109	102	73-131	7	
1,2-Dichloroethane-d4 (S)	%						103	103	79-120		
4-Bromofluorobenzene (S)	%						101	101	87-109		
Dibromofluoromethane (S)	%						101	101	85-115		
Toluene-d8 (S)	%						99	99	70-120		

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: WET/1957
QC Batch Method: SM 5210B
Analysis Method: SM 5210B
Analysis Description: 5210B BOD, Low Level
Associated Lab Samples: 926859027

METHOD BLANK: 35983
Associated Lab Samples: 926859027

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

LABORATORY CONTROL SAMPLE: 35984

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	185	93	84-115	

SAMPLE DUPLICATE: 35985

Parameter	Units	926884002 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	17.1	19.6	14	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: WETA/1511
QC Batch Method: ASTM D516-90,02
Analysis Method: ASTM D516-90,02
Analysis Description: ASTM D516-9002 Sulfate Water
Associated Lab Samples: 926859027

METHOD BLANK: 36123
Associated Lab Samples: 926859027

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

LABORATORY CONTROL SAMPLE: 36124

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.6	98	90-110	

MATRIX SPIKE SAMPLE: 36125

Parameter	Units	926928010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	58.4	20	75.3	85	75-125	

SAMPLE DUPLICATE: 36126

Parameter	Units	926928011 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	21.5	22.7	5	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: MSV/1698 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 926859016, 926859017, 926859018, 926859019, 926859020, 926859021, 926859022, 926859023, 926859024, 926859025, 926859026, 926859027, 926859028

METHOD BLANK: 36149
Associated Lab Samples: 926859016, 926859017, 926859018, 926859019, 926859020, 926859021, 926859022, 926859023, 926859024, 926859025, 926859026, 926859027, 926859028

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	
1,3-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	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

METHOD BLANK: 36149

Associated Lab Samples: 926859016, 926859017, 926859018, 926859019, 926859020, 926859021, 926859022, 926859023, 926859024, 926859025, 926859026, 926859027, 926859028

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
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)	%	94	79-120	
4-Bromofluorobenzene (S)	%	99	87-109	
Dibromofluoromethane (S)	%	97	85-115	
Toluene-d8 (S)	%	101	70-120	

LABORATORY CONTROL SAMPLE: 36150

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	44.4	89	83-125	
1,1,1-Trichloroethane	ug/L	50	42.8	86	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	46.7	93	73-127	
1,1,2-Trichloroethane	ug/L	50	46.0	92	77-123	
1,1-Dichloroethane	ug/L	50	44.2	88	76-129	
1,1-Dichloroethene	ug/L	50	41.3	83	78-146	
1,2,3-Trichloropropane	ug/L	50	46.8	94	72-125	
1,2-Dibromo-3-chloropropane	ug/L	50	43.8	88	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	44.5	89	81-125	
1,2-Dichlorobenzene	ug/L	50	43.6	87	82-126	
1,2-Dichloroethane	ug/L	50	43.6	87	72-126	
1,2-Dichloropropane	ug/L	50	44.0	88	80-127	
1,3-Dichloropropane	ug/L	50	44.3	89	79-124	
1,4-Dichlorobenzene	ug/L	50	42.1	84	79-125	
2-Butanone (MEK)	ug/L	100	94.7	95	50-134	
2-Hexanone	ug/L	100	93.3	93	58-138	
4-Methyl-2-pentanone (MIBK)	ug/L	100	95.7	96	70-131	
Acetone	ug/L	100	95.2	95	50-146	
Acrylonitrile	ug/L	250	232	93	66-124	
Benzene	ug/L	50	42.4	85	78-128	
Bromochloromethane	ug/L	50	41.1	82	73-124	
Bromodichloromethane	ug/L	50	43.2	86	81-125	
Bromoform	ug/L	50	48.1	96	71-125	
Bromomethane	ug/L	50	50.0	100	50-150	
Carbon disulfide	ug/L	50	41.5	83	54-150	
Carbon tetrachloride	ug/L	50	42.3	85	81-137	
Chlorobenzene	ug/L	50	43.0	86	82-126	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

LABORATORY CONTROL SAMPLE: 36150

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroethane	ug/L	50	48.1	96	69-140	
Chloroform	ug/L	50	41.8	84	77-129	
Chloromethane	ug/L	50	45.7	91	54-139	
cis-1,2-Dichloroethene	ug/L	50	42.6	85	76-133	
cis-1,3-Dichloropropene	ug/L	50	43.8	88	76-127	
Dibromochloromethane	ug/L	50	46.2	92	77-125	
Dibromomethane	ug/L	50	45.1	90	77-125	
Ethylbenzene	ug/L	50	42.4	85	80-127	
Iodomethane	ug/L	100	103	103	65-172	
m&p-Xylene	ug/L	100	84.0	84	82-127	
Methylene Chloride	ug/L	50	41.9	84	67-133	
o-Xylene	ug/L	50	42.8	86	83-124	
Styrene	ug/L	50	45.3	91	80-130	
Tetrachloroethene	ug/L	50	43.8	88	78-128	
Toluene	ug/L	50	42.7	85	76-126	
trans-1,2-Dichloroethene	ug/L	50	42.6	85	78-134	
trans-1,3-Dichloropropene	ug/L	50	45.3	91	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	41.6	83	51-140	
Trichloroethene	ug/L	50	43.2	86	79-127	
Trichlorofluoromethane	ug/L	50	46.6	93	76-148	
Vinyl acetate	ug/L	100	88.8	89	50-150	
Vinyl chloride	ug/L	50	53.0	106	67-143	
Xylene (Total)	ug/L	150	132	88	83-125	
1,2-Dichloroethane-d4 (S)	%			97	79-120	
4-Bromofluorobenzene (S)	%			100	87-109	
Dibromofluoromethane (S)	%			101	85-115	
Toluene-d8 (S)	%			101	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 36151 36152

Parameter	Units	926859025 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	63.5	65.5	127	131	60-150	3	
Benzene	ug/L	ND	50	50	58.1	57.4	116	115	74-136	1	
Chlorobenzene	ug/L	ND	50	50	57.8	57.8	116	116	79-135	.1	
Toluene	ug/L	ND	50	50	53.6	56.5	107	113	73-131	5	
Trichloroethene	ug/L	ND	50	50	56.8	57.4	114	115	73-131	1	
1,2-Dichloroethane-d4 (S)	%						104	104	79-120		
4-Bromofluorobenzene (S)	%						95	97	87-109		
Dibromofluoromethane (S)	%						101	99	85-115		
Toluene-d8 (S)	%						96	101	70-120		

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: MPRP/1426
QC Batch Method: EPA 3010
Analysis Method: EPA 6010 GW North Carolina
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 926859004, 926859005, 926859007, 926859008, 926859009, 926859010, 926859011, 926859012, 926859013, 926859016, 926859017, 926859018, 926859019, 926859020, 926859021, 926859022, 926859024, 926859025

METHOD BLANK: 38090

Associated Lab Samples: 926859004, 926859005, 926859007, 926859008, 926859009, 926859010, 926859011, 926859012, 926859013, 926859016, 926859017, 926859018, 926859019, 926859020, 926859021, 926859022, 926859024, 926859025

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	5.5	
Vanadium	ug/L	ND	5.0	
Zinc	ug/L	ND	10.0	

LABORATORY CONTROL SAMPLE: 38091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	553	111	80-120	
Arsenic	ug/L	500	544	109	80-120	
Barium	ug/L	500	544	109	80-120	
Beryllium	ug/L	500	553	111	80-120	
Cadmium	ug/L	500	546	109	80-120	
Chromium	ug/L	500	594	119	80-120	
Cobalt	ug/L	500	555	111	80-120	
Copper	ug/L	500	553	111	80-120	
Lead	ug/L	500	552	110	80-120	
Nickel	ug/L	500	562	112	80-120	
Selenium	ug/L	500	536	107	80-120	
Silver	ug/L	250	267	107	80-120	
Thallium	ug/L	500	526	105	80-120	
Vanadium	ug/L	500	557	111	80-120	
Zinc	ug/L	500	547	109	80-120	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

MATRIX SPIKE SAMPLE: 38092

Parameter	Units	926859004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	542	108	75-125	
Arsenic	ug/L	ND	500	540	108	75-125	
Barium	ug/L	208	500	722	103	75-125	
Beryllium	ug/L	ND	500	540	108	75-125	
Cadmium	ug/L	ND	500	527	105	75-125	
Chromium	ug/L	ND	500	577	115	75-125	
Cobalt	ug/L	ND	500	533	106	75-125	
Copper	ug/L	ND	500	543	108	75-125	
Lead	ug/L	ND	500	525	105	75-125	
Nickel	ug/L	9.8	500	546	107	75-125	
Selenium	ug/L	ND	500	534	107	75-125	
Silver	ug/L	ND	250	260	104	75-125	
Thallium	ug/L	ND	500	499	99	75-125	
Vanadium	ug/L	ND	500	544	108	75-125	
Zinc	ug/L	ND	500	544	108	75-125	

SAMPLE DUPLICATE: 38093

Parameter	Units	926859005 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND	71	
Barium	ug/L	62.4	60.0	4	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	5.1	4.8J	5	
Cobalt	ug/L	ND	2.1J	21	
Copper	ug/L	6.3	6.0	5	
Lead	ug/L	ND	ND	14	
Nickel	ug/L	ND	2.1J	2	
Selenium	ug/L	ND	ND		
Silver	ug/L	ND	ND	16	
Thallium	ug/L	ND	ND		
Vanadium	ug/L	8.6	8.4	3	
Zinc	ug/L	11.6	11.9	3	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: WETA/1559
QC Batch Method: SM 5220D
Analysis Method: SM 5220D
Analysis Description: 5220D COD
Associated Lab Samples: 926859027

METHOD BLANK: 38841
Associated Lab Samples: 926859027

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

LABORATORY CONTROL SAMPLE: 38842

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	777	104	90-110	

MATRIX SPIKE SAMPLE: 38843

Parameter	Units	926884002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	158	750	1010	113	75-125	

SAMPLE DUPLICATE: 38844

Parameter	Units	926893001 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	113	104	8	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: MERP/1151
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Associated Lab Samples: 926859028

METHOD BLANK: 39692

Associated Lab Samples: 926859012, 926859013, 926859016, 926859017, 926859018, 926859019, 926859020, 926859021, 926859022, 926859025, 926859026, 926859027, 926859028

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Mercury	ug/L	ND	0.20	

LABORATORY CONTROL SAMPLE: 39693

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.7	109	80-120	

MATRIX SPIKE SAMPLE: 39694

Parameter	Units	927338001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	3.1	26	75-125	M0

SAMPLE DUPLICATE: 39695

Parameter	Units	927344001 Result	Dup Result	RPD	Qualifiers
Mercury	ug/L	0.37	0.39	4	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

QC Batch: MPRP/1441 Analysis Method: EPA 6010 GW North Carolina
QC Batch Method: EPA 3010 Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 926859006, 926859026, 926859027, 926859028

METHOD BLANK: 40010
Associated Lab Samples: 926859006, 926859026, 926859027, 926859028

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	5.5	
Vanadium	ug/L	ND	5.0	
Zinc	ug/L	ND	10.0	

LABORATORY CONTROL SAMPLE: 40011

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	476	95	80-120	
Arsenic	ug/L	500	466	93	80-120	
Barium	ug/L	500	482	96	80-120	
Beryllium	ug/L	500	503	101	80-120	
Cadmium	ug/L	500	471	94	80-120	
Chromium	ug/L	500	495	99	80-120	
Cobalt	ug/L	500	488	98	80-120	
Copper	ug/L	500	493	99	80-120	
Lead	ug/L	500	470	94	80-120	
Nickel	ug/L	500	473	95	80-120	
Selenium	ug/L	500	471	94	80-120	
Silver	ug/L	250	247	99	80-120	
Thallium	ug/L	500	489	98	80-120	
Vanadium	ug/L	500	486	97	80-120	
Zinc	ug/L	500	472	94	80-120	

MATRIX SPIKE SAMPLE: 40012

Parameter	Units	926859006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	553	112	75-125	
Arsenic	ug/L	ND	500	614	122	75-125	

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QUALITY CONTROL DATA

Project: White Oak 10/31/07
Pace Project No.: 926859

MATRIX SPIKE SAMPLE: 40012

Parameter	Units	926859006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	516	500	1070	111	75-125	
Beryllium	ug/L	ND	500	596	120	75-125	
Cadmium	ug/L	ND	500	588	118	75-125	
Chromium	ug/L	75.5	500	676	120	75-125	
Cobalt	ug/L	ND	500	529	119	75-125	
Copper	ug/L	40.3	500	627	117	75-125	
Lead	ug/L	12.3	500	581	114	75-125	
Nickel	ug/L	20.2	500	605	117	75-125	
Selenium	ug/L	ND	500	588	117	75-125	
Silver	ug/L	ND	250	278	111	75-125	
Thallium	ug/L	9.5	500	520	102	75-125	
Vanadium	ug/L	103	500	696	119	75-125	
Zinc	ug/L	91.1	500	688	119	75-125	

SAMPLE DUPLICATE: 40013

Parameter	Units	926859026 Result	Dup Result	RPD	Qualifiers
Antimony	ug/L	ND	ND		
Arsenic	ug/L	ND	ND		
Barium	ug/L	162	160	1	
Beryllium	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	.98J	16	
Cobalt	ug/L	ND	ND		
Copper	ug/L	ND	ND		
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND	33	
Selenium	ug/L	ND	ND	9	
Silver	ug/L	ND	.91J	52	
Thallium	ug/L	ND	ND	149	
Vanadium	ug/L	ND	1.9J	4	
Zinc	ug/L	60.0	59.4	1	

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ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALIFIERS

Project: White Oak 10/31/07
Pace Project No.: 926859

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.

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of

1111881

Section A Required Client Information:

Company:	Haywood Co
Address:	Clyde NC
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 SW's
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 STATE: NC

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	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	Analysis Test (Y/N)	pH Temp Shown	Agg Zn vans	Agg Zn vials	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 926859
1	SW-1	GW				10-31	1305		4			1	3						X	X	X		011
2	SW-6	|				|	1125		4			1	3						X	X	X		012
3	SW-7	|				|	1110		4			1	3						X	X	X		013
4	~~SW~~																						
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		10-31	1810	Mark P. [illegible]	10-31-07	1810	

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark P. Swan

SIGNATURE of SAMPLER: [illegible]

DATE Signed (MM/DD/YY): 10-31-07

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for [illegible] voices not paid within 30 days.

F-ALL-Q-020rev.07, 15-M[illegible]07

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Page: 2 of

1111882

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Haywood Co	Report To: Stephen King	Attention:
Address:	Copy To:	Company Name:
		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: Fax:	Project Name: White Oak MWs	Pace Project Manager:
Requested Due Date/TAT:	Project Number:	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NC

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: pH Tot Solids	Static H2O	Appx = Inorg	Appx = Metals	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-2					10-31-07	1320		4			1	3					X	X	X	X		926859001
2	MW-2D						1325		4			1	3					X	X	X	X		002
3	MW-3						1430		4			1	3					X	X	X	X		003
4	MW-3D						1440		4			1	3					X	X	X	X		004
5	MW-4A						1230		4			1	3					X	X	X	X		005
6	MW-8						1445		4			1	3					X	X	X	X		006
7	MW-11S						1525		4			1	3					X	X	X	X		007
8	MW-11D						1515		4			1	3					X	X	X	X		008
9	MW-14						1630		4			1	3					X	X	X	X		009
10	MW-15						1535		4			1	3					X	X	X	X		010
11	CD-2						1635		0										V	[redacted]				014
12	CD-6						1105		0										X					015

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		10-31-07	1810	Mark P Swann Pace	10-31-07	1810	
				Jean McLean Pace	11/1/07	8:00	0.2

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark P. Swann

SIGNATURE of SAMPLER: Mark P Swann Pace DATE Signed (MM/DD/YY): 10-31-07

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 3 of

1111991

Section A Required Client Information:

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

Section B Required Project Information:

Report To:	Steph King
Copy To:	
Purchase Order No.:	
Project Name:	White Oak Surface water - 5
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 STATE: _____

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test ↓	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SW-2					11-1-07	1055		4									X	NH3, Kjeldahl, Nitrate, Phosphorus, Metals, TOC, TSS, Sulfate, TP, NO3-NO2, Coliform, Phenol		
2	SW-3						1135		4									X			
3	SW-5						1340		4									X			
4	Leachate						1020		10	3	3	1	3					X	X X X X X X X X X		
5	Salt Pond						1140												COULD NOT Reach H2O		
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		11-1-07	1545		11-1-07	1545	
		11-1					

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK L. SWANN

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 11-1-07

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-07

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Page: 4 of

1111992

Section A — Required Client Information:

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

Section B — Required Project Information:

Report To:	Steph King
Copy To:	
Purchase Order No.:	
Project Name:	Wh. Fe OAK MWS
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 STATE: _____

Section D — Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	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	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test ↓ Y/N: pH Temp Specific Conductance	Sulfate, Alk 0	Arsenic Total	Arsenic Dissolved	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1A					11-1-07	1155		4			1	3					X	X	X	X		
2	MW-5A						1420		4			1	3					X	X	X	X		
3	MW-5D						1415		4			1	3					X	X	X	X		
4	MW-9						1105		4			1	3					X	X	X	X		
5	MW-12						1325		4			1	3					X	X	X	X		
6	MW-13S						1315		4			1	3					X	X	X	X		
7	MW-13D						1310		4			1	3					X	X	X	X		
8	TVL BLK					10-31			2				2							X			
9	EQUIP BLK					10-31			3			1	2							X	X		
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		11-1-07	1545	Mark Eisenhauer Pace	11-1-07	15:45	
	Mark Eisenhauer Pace						

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark Eisenhauer

SIGNATURE of SAMPLER: Mark Eisenhauer DATE Signed (MM/DD/YY): 11-1-07

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

APPENDIX D

Statistical Calculations

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J07-1957-03

COMPOUND	TOTAL	ND	DETECTED	%ND	STATISTICAL TEST
Total Antimony	231	225	6	97.4%	Poisson Prediction Limits
Total Arsenic	232	199	33	85.8%	Kruskal-Wallis
Total Barium	236	24	212	10.2%	ANOVA
Total Beryllium	232	180	52	77.6%	Kruskal-Wallis
Total Cadmium	234	180	54	76.9%	Kruskal-Wallis
Total Chromium	232	108	124	46.6%	Kruskal-Wallis
Total Cobalt	234	139	95	59.4%	Kruskal-Wallis
Total Copper	232	123	109	53.0%	Kruskal-Wallis
Total Lead	235	151	84	64.3%	Kruskal-Wallis
Total Nickel	233	124	109	53.2%	Kruskal-Wallis
Total Selenium	232	228	4	98.3%	Poisson Prediction Limits
Total Silver	232	229	3	98.7%	Poisson Prediction Limits
Total Thallium	232	211	21	90.9%	Poisson Prediction Limits
Total Vanadium	234	109	125	46.6%	Kruskal-Wallis
Total Zinc	234	51	183	21.8%	Kruskal-Wallis
Carbon Disulfide	151	142	9	94.0%	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

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) =	1223
Total Detected Concentrations (per event) =	1223
Are all accounted for ?	Yes
Statistical Package Prepared By:	TJB
Statistical Package Checked By:	MSP

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J07-1957-03

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

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) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 15.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 38$
$T_{n1} = 181.5$

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).

$k = 14$
$n = 38$
$T_{n1} = 181.5$
$t[37,.01] = 2.4332$
$c = 0.3684$
$T_{n2} = 35$
$T^*_k = 91.3$

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 J07-1957-03

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
N_i	16	15	10	14	14	14	13	14	14	13	13	14	14	14	14	15	11	
sum of rank values (R_i)	1600.0	1602.0	1000.0	1509.0	1400.0	1532.0	1300.0	1400.0	1521.0	1403.0	1300.0	1707.0	1400.0	2553.0	1845.0	1500.0	2456.0	
avg rank value (Rbar)	100.0	106.8	100.0	107.8	100.0	109.4	100.0	100.0	108.6	107.9	100.0	121.9	100.0	182.4	131.8	100.0	223.3	

	Number of each rank value																	Rank Value
rank value of NDs =	16	14	10	13	14	13	13	14	13	12	13	11	14	4	10	15	0	100
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	200
rank value of 5.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	201
rank value of 5.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202
rank value of 6.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	203
rank value of 6.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	204
rank value of 6.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	205
rank value of 7.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	206
rank value of 9.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	207
rank value of 9.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	208
rank value of 10s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	209
rank value of 11s =	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	210.5
rank value of 11.4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	212
rank value of 12s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	213.5
rank value of 13s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	215
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	216
rank value of 21s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	217
rank value of 21.4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	218
rank value of 24s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	219
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	220
rank value of 27s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	221
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	222.5
rank value of 42s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	224
rank value of 42.8s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	225
rank value of 44s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	226
rank value of 53s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	227
rank value of 59s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	228
rank value of 65s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	229
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	230
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	231
rank value of 280s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	232
n =	16	15	10	14	14	14	13	14	14	13	13	14	14	14	14	15	11	

Sum of rank value calculations

1600	1400	1000	1300	1400	1300	1300	1400	1300	1200	1300	1100	1400	400	1000	1500	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	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	0	0	0	0	0	0	203	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	0	0	0	0	0	0	0	0	0	0	0	0	0	205	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	0	0	0	0	0	0	207	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	208	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	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	212	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	213.5	0	0	213.5
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	216	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	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	221	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	222.5	0	0	222.5
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	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	227	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	229
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	0	0	0	0	0	231
0	0	0	0	0	232	0	0	0	0	0	0	0	0	0	0	0

sum of rank values (R_i)	**1600**	**1602**	**1000**	**1509**	**1400**	**1532**	**1300**	**1400**	**1521**	**1403**	**1300**	**1707**	**1400**	**2553**	**1845**	**1500**	**2456**

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 =	430653.8	162649	140000	167645	130000	140000	165246	151416	130000	208132	140000	465558	243145	150000	548358

$N_{i\,bg}$ = 41
N = 232
H = 49.73

Adjust H for ties:

T_i = 8E+06 sum of T1..T3

$H' = H/(1-(T_i/(N^3-N)))$
H' = 134.82
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' =134.82.
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) =	107.8	100.0	109.4	100.0	100.0	108.6	107.9	100.0	121.9	100.0	182.4	131.8	100.0	223.3
avg Rbar (background) =	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5	102.5
Dx =	5.3	-2.5	6.9	-2.5	-2.5	6.2	5.4	-2.5	19.4	-2.5	79.9	29.3	-2.5	120.8
Cx =	48.4	48.4	48.4	49.8	48.4	48.4	49.8	49.8	48.4	48.4	48.4	48.4	47.2	53.1
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	**Yes**	-	-	**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 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 J07-1957-03

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**

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

	X_i values =
11	-149.4797
17	0.3326068
5	-1445.635
5	-1445.635
30	2567.3332
6.3	-1002.144
9.2	-358.9923
2.5	-2632.155
21	103.35036
53	49402.007
12	-79.90387
11	-149.4797
2.5	-2632.155
42.8	18594.581

X_{bar} = 16.307143
SD = 15.493794
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = 4340.8588
γ_1 = 1.3043057

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 =
2.3978953	1.882E-06
2.8332133	0.0897141
1.6094379	-0.467487
1.6094379	-0.467487
3.4011974	1.047687
1.8405496	-0.161877
2.2192035	-0.004603
0.9162907	-3.17171
3.0445224	0.286158
3.9702919	3.9799476
2.4849066	0.0009809
2.3978953	1.882E-06
0.9162907	-3.17171
3.7565381	2.5769325

X_{bar} = 2.3855479
SD = 0.9573288

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.0383249

$\gamma_1 =$ 0.0488175

Since the Coefficient of Skewness of 0.05 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

Compute the mean and standard deviation of the historical data:

2.1124961 = x_{mean} (Mean of N1-N4 historical data)

0.6074595 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

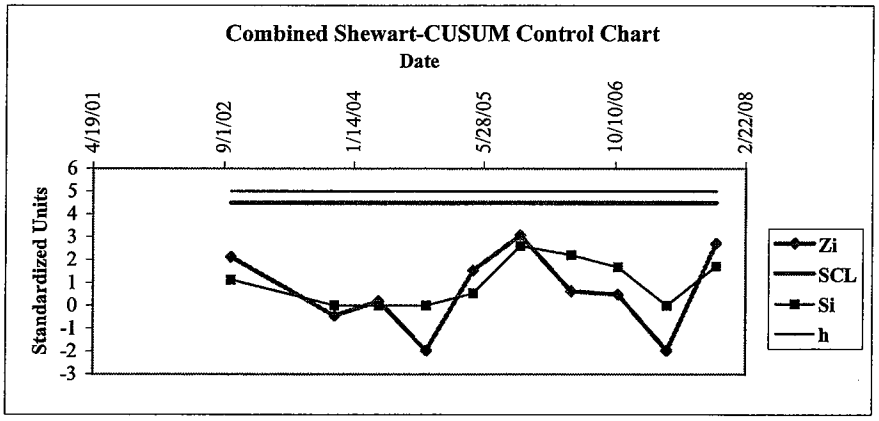
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	3.4011974	2.1214604	1.1214604	5	4.5
10/30/2003	1.8405496	-0.4476784	0	5	4.5
4/20/2004	2.2192035	0.1756617	0	5	4.5
10/21/2004	0.9162907	-1.9691936	0	5	4.5
4/18/2005	3.0445224	1.534302	0.534302	5	4.5
10/13/2005	3.9702919	3.058304	2.592606	5	4.5
4/25/2006	2.4849066	0.6130623	2.2056684	5	4.5
10/20/2006	2.3978953	0.4698242	1.6754925	5	4.5
4/25/2007	0.9162907	-1.9691936	0	5	4.5
10/31/2007	3.7565381	2.7064224	1.7064224	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 J07-1957-03

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**

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

	X_i values =
68	18059.716
24	-5605.258
81	60404.077
30	-1627.889
59	5120.7897
65	12545.977
44	11.184775
42	0.0132051
13	-23797.5
12	-26366.83
21.4	-8444.346

X_{bar} =	41.763636
SD =	23.7734
N =	11
$1/N\Sigma_i(X_i-X_{bar})^3$ =	2754.5391
γ_1 =	0.2365179

Since the Coefficient of Skewness of 0.24 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 =
4.2195077	0.296419
3.1780538	-0.052606
4.3944492	0.5963102
3.4011974	-0.003481
4.0775374	0.1445283
4.1743873	0.2402223
3.7841896	0.0123971
3.7376696	0.0063235
2.5649494	-0.963844
2.4849066	-1.217647
3.0633909	-0.117187

X_{bar} =	3.552749
SD =	0.6649432
N =	11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.096233

$\gamma_1 =$ 0.3776243

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

Compute the mean and standard deviation of the historical data:

50.75 = x_{mean} (Mean of N1-N4 historical data)

28.04015 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

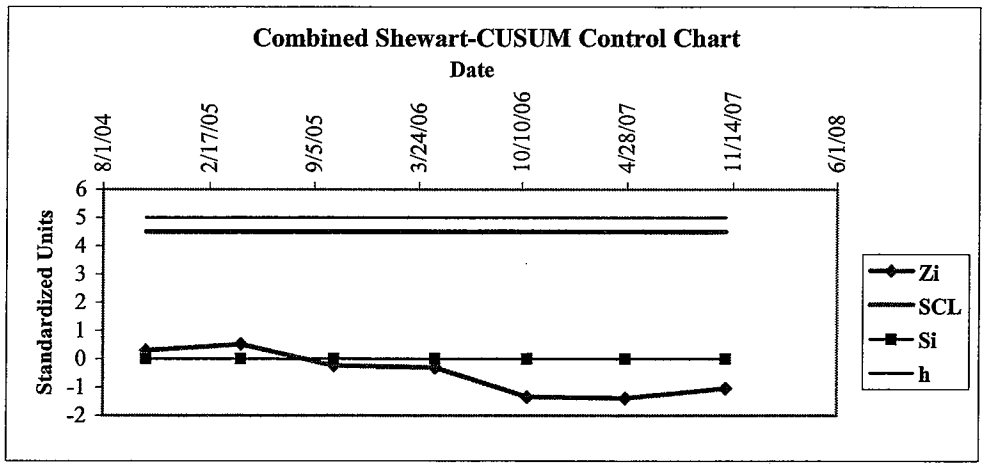
5 = h (constant, upper control limit for the CUSUM scheme)

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	59	0.29422097	0	5	4.5
4/18/2005	65	0.50819985	0	5	4.5
10/13/2005	44	-0.2407262	0	5	4.5
4/25/2006	42	-0.3120525	0	5	4.5
10/20/2006	13	-1.3462838	0	5	4.5
4/25/2007	12	-1.381947	0	5	4.5
10/31/2007	21.4	-1.0467134	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 J07-1957-03

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	230	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	110	540	820	38	NS	5
09/26/02	330	500	750	4200	120	230	93	410	910	130	320	1400	140	8600	1600	46	11000	5
04/28/03	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
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	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
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	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

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	8.88184	6.41346	5.19296	5.07517	4.94164	2.48491	4.35671	5.01064	6.90776	4.94164	7.6009	6.90776	3.43399	8.21609
	6.64639	3.61092	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
	6.47697	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	5.28827	7.20786	6.38182	5.21494	5.33754	4.13357	4.46245	5.00395	6.24611	5.3033	7.6009	7.24423	3.40453	6.77079

n_i =	16	15	10	15	15	14	14	14	14	13	13	14	14	15	14	15	11	
Xi. =	98.0654	63.5761	53.6698	89.0577	86.3105	71.3329	62.0015	68.9253	67.3746	64.5113	69.1874	84.0344	61.7147	102.849	96.5128	56.9478	85.5007	1281.57 = X..
Xi.bar =	6.12908	4.2384	5.36698	5.93718	5.75404	5.09521	4.42868	4.92323	4.81247	4.96241	5.32211	6.00246	4.4082	6.85659	6.89377	3.79652	7.77279	5.43 = X..bar
std dev =	0.51765	0.94117	0.48788	1.8203	1.58671	1.38024	1.16224	1.22531	1.48745	0.77748	0.31638	1.71261	1.49473	1.90819	1.00519	1.32	0.90889	
$ni*(Xi.bar-X..bar)^2$ =	7.81083	21.3124	0.04021	3.8526	1.57121	1.57286	14.048	3.60086	5.34554	2.84709	0.15242	4.58171	14.6283	30.5106	29.9809	40.0429	60.3554	
$(Xi.^2/n_i)$ =	601.051	269.461	288.044	528.752	496.634	363.456	274.584	339.335	324.238	320.131	368.223	504.413	272.051	705.192	665.337	216.203	664.579	

	SS	df	MS	F	Fc
SSw	242.254	16	15.1409	9	1.67
SS_error	363.201	219	1.65845		
SSt	605.455	235			

The calculated F statistic is 9.13. The tabulated Fc value with 16 and 219 degrees of freedom and the a=0.05 level is 1.67 (Table 2 of IFG). 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 t-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 =	5.93718	5.75404	5.09521	4.42868	4.92323	4.81247	4.96241	5.32211	6.00246	4.4082	6.85659	6.89377	3.79652	7.77279
$D_w = Xbar_i - Xbar_{uo}$ =	0.68569	0.50254	-0.1563	-0.8228	-0.3283	-0.439	-0.2891	0.07061	0.75097	-0.8433	1.60509	1.64228	-1.455	2.5213
$= [MS\text{-}error*(1/n_{uo} + 1/n_i)]^{0.5}$ =	0.50045	0.50045	0.51337	0.51337	0.51337	0.51337	0.52788	0.52788	0.51337	0.51337	0.50045	0.51337	0.50045	0.56314
$D_i = SE_i * t_c$ =	1.16604	1.16604	1.19615	1.19615	1.19615	1.19615	1.22996	1.22996	1.19615	1.19615	1.16604	1.19615	1.16604	1.31212
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	Yes	Yes	-	Yes

41 = n_{uo}
5.2514922 = $Xbar_{uo}$(average background: MW-11S, MW-11D, & MW-14)
1.6584512 = MS_error
219 = degrees of freedom
14 = m (number of compliance wells)
2.33 = t_c (from Table 3 of IFG)

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_w 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.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J07-1957-03

Compound: **Total Barium**
AL MCL (µg/l): 2000
Method: Levene's Test for Homogeneity
Background: MW-12

	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

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
n =	16	15	10	15	15	14	14	14	14	13	13	14	14	15	14	15	11
bar x_i =	529.44	115.03	246.3	1182	568.97	290.25	116.46	189.46	287.03	205.05	214.54	717.04	129.71	2123.5	1487.9	135.11	3347.5
z_{ij} =	279.44			942.03	148.97	90.25	53.464	110.54	194.03	124.05	44.538	487.04	127.21				
	229.44	48.033															
	199.44	85.033															
				852.03	476.97												
	770.56	264.97		1002	238.97	170.25	36.464	100.54	72.971	125.05	74.538	252.96	0.2857				
														323.53	3212.1	45.107	
														876.47	1037.9	108.11	
														1143.5	1127.9	94.107	
														2120.5		1164.9	
	770.56	74.033		1179.5	566.47	130.25	93.464	0.5357	172.97	25.054	35.462	682.96	19.714	1583.5	667.86	97.107	
	199.44	384.97	503.7	3018	448.97	60.25	23.464	220.54	622.97	75.054	105.46	682.96	10.286	6476.5	112.14	89.107	7652.5
	70.563	49.033	26.3	617.97	408.97	150.25	6.4643	97.464	72.971	110.05	74.538	82.964	10.286				547.45
	209.44	15.033		972.03	258.97	160.25	21.464	79.464	912.97	374.95	24.538	447.04	0.2857	1203.5	1167.9	106.11	1552.5
	209.44	59.033	126.3	772.03	108.97	120.25	23.536	20.536	225.03	120.05	44.538	222.96	20.286	523.53	627.86	99.107	1347.5
	209.44	75.033	46.3	882.03	258.97	150.25	23.536	59.464	275.03	105.05	105.46	182.96	19.714	576.47	212.14	106.11	1552.5
	49.438	60.033	86.3	6018	41.033	110.25	43.536	49.464	275.03	127.05	64.538	282.96	10.286	123.53	487.86	104.11	352.55
	240.56	78.033	86.3	517.97	301.03	40.25	43.536	49.464	260.03	95.054	75.462	92.964	20.286	3376.5	2912.1	108.11	647.45
	120.56	134.97	3.7	932.03	531.03	40.25	133.54	60.536	37.029	614.95	35.462	32.964	120.29	1873.5	212.14	114.89	647.45
	119.44	93.033	66.3	712.03	531.03	287.75	113.96	186.96	127.03			714.54	127.21	323.53	87.857	132.61	2697.5
	239.44	65.033	46.3	942.03	731.03	1209.8	13.536	9.4643	237.03	34.946	35.462	667.04	30.286	1963.5	1367.9	85.107	2747.5
	28.438	83.533	23.3	984.03	781.03	300.75	67.536	18.536	224.63	118.35	65.538	201.04	71.286	123.53	87.857	105.01	2475.5
bar z_i =	246.6	104.65	101.48	1356.2	388.83	215.79	49.821	75.964	264.98	157.67	60.426	359.53	41.98	1507.4	951.53	170.64	2020
n_i * bar z_i^2 =	972997	164285	102982	3E+07	2E+06	651889	34750	80788	982999	323167	47467	2E+06	24672	3E+07	1E+07	436761	4E+07

bar z = 474.92
N = 236

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	7E+07	16	5E+06	4.34	1.67
Error	2E+08	219	1E+06		
Total	3E+08	235			

Since the F-ratio = 4.34 exceeds the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 16 and 219 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
n =	16	15	10	15	15	14	14	14	14	13	13	14	14	15	14	15	11
bar x_i =	6.1291	4.2384	5.367	5.9372	5.754	5.0952	4.4287	4.9232	4.8125	4.9624	5.3221	6.0025	4.4082	6.8566	6.8938	3.7965	7.7728
z_{ij} =	0.6076			0.4565	0.2862	0.2031	0.2855	0.7805	0.2799	0.568	0.1863	0.5644	3.4919				
	0.4253	0.0337															
	0.33	0.8372															
				0.1381	1.2322												
	1.041	1.7018		0.7442	0.0451	0.3077	0.0466	0.7466	1.0736	0.5804	0.3805	0.8748	0.4593				
														0.639	1.5615	0.7033	
														1.1498	0.7845	0.5007	
														0.031	1.0077	0.0829	
														5.758		3.3736	
	1.041	0.5248		5.0209	4.8377	0.02	1.2932	0.3238	1.3188	0.2306	0.1994	1.2418	0.2923	0.565	0.1845	0.1589	
	0.33	1.9762	1.2531	2.4057	0.9665	0.3429	0.1039	1.0929	2.001	0.0949	0.4462	1.2418	0.5334	2.2029	0.484	0.0321	1.5329
	0.2678	0.0487	0.0267	1.5584	0.6789	0.1536	0.2718	0.4014	1.0736	0.4085	0.3805	0.6822	0.5334				0.1646
	0.3608	0.3668		0.5901	0.0175	0.2277	0.1252	0.2228	2.2776	1.4006	0.0751	0.404	0.4593	0.0322	1.1255	0.4292	0.7242
	0.3608	0.2131	0.5795	0.079	0.3772	0.0406	0.513	0.4239	0.6853	0.5198	0.1863	0.8434	0.6024	0.5212	0.1368	0.213	0.1719
	0.3608	0.5495	0.0687	0.2334	0.0175	0.1536	0.513	0.0557	2.3276	0.3572	0.4462	0.7999	0.2923	1.0444	0.5446	0.4292	0.7242
	0.0447	0.2311	0.2918	2.9447	0.6594	0.0978	0.6465	0.0184	2.3276	0.6057	0.3115	0.9053	0.5334	0.7443	0.014	0.3625	0.4433
	0.5173	0.6275	0.2918	1.5012	1.0145	0.4263	0.6465	0.0184	1.5166	0.2619	0.3478	0.6946	0.6024	1.7559	1.4956	0.5007	0.1282
	0.3479	1.2831	0.1545	0.4157	1.249	0.4263	1.0928	0.5982	0.709	1.7469	0.1994	0.6176	1.1133	1.3351	0.5446	1.7249	0.1282
	0.1129	1.1474	0.174	0.2156	1.249	4.1789	3.5124	4.0069	0.2627			5.0862	3.4919	0.639	0.3505	2.8802	1.2958
	0.4592	0.3264	0.0687	0.4565	1.4161	2.218	0.4389	0.2697	0.9004	0.5182	0.1994	2.0904	0.667	1.7814	2.1063	0.1155	1.3759
	0.0875	0.7884	0.0402	0.6489	1.4538	1.2866	0.7863	0.4143	0.6789	0.5	0.3182	0.2436	0.8951	0.7443	0.3505	0.392	1.002
bar z_i =	0.4184	0.7104	0.2949	1.1606	1.0334	0.7202	0.734	0.6695	1.2452	0.5994	0.2828	1.1636	0.9977	1.2629	0.7636	0.7933	0.6992
n_i * bar z_i^2 =	2.8012	7.5694	0.8696	20.204	16.018	7.2618	7.5419	6.2761	21.707	4.6711	1.0398	18.955	13.935	23.924	8.1633	9.4389	5.3776

bar z = 0.797
N = 236

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	25.84	16	1.62	1.22	1.67
Error	289.40	219	1.32		
Total	315.24	235			

Since the F-ratio = 1.22 does not exceed the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 16 and 219 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 J07-1957-03

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

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

X_i values =	-8E+07			-8E+07	-2E+07	-1E+08	-2E+08	-5E+07	-2E+08	-2E+08	-1E+08	-9E+07	-3E+08				
	-5E+07	-2E+08															
	-4E+07	-3E+08															
				-4E+07	-2E+08												
	2E+08	-3E+07		-1E+08	-4E+07	-2E+08	-2E+08	-6E+07	-3E+07	-2E+08	-2E+08	2E+07	-2E+08				
														1E+09	7E+10	-2E+08	
														1E+10	-1E+07	-3E+08	
														3E+07	-3E+07	-3E+08	
														-3E+08		2E+08	
	2E+08	-3E+08		-3E+08	-3E+08	-1E+08	-3E+08	-1E+08	-1E+07	-1E+08	-8E+07	4E+08	-2E+08	-3E+06	3E+06	-3E+08	
	-4E+07	-6E+06	365253	4E+10	-2E+08	-9E+07	-2E+08	-2E+07	1E+07	-2E+08	-5E+07	4E+08	-2E+08	5E+11	8E+08	-3E+08	1E+12
	-5E+05	-2E+08	-1E+08	1E+09	-1E+08	-2E+08	-2E+08	-2E+08	-3E+07	-2E+08	-2E+08	2E+06	-2E+08				1E+10
	-5E+07	-2E+08		-1E+08	-5E+07	-2E+08	-2E+08	-2E+08	1E+08	-1E+06	-1E+08	-7E+07	-2E+08	1E+07	-5E+07	-3E+08	8E+10
	-5E+07	-2E+08	-2E+08	-2E+07	-1E+07	-1E+08	-2E+08	-1E+08	-2E+08	-2E+08	-1E+08	2E+07	-1E+08	8E+08	6E+06	-3E+08	2E+09
	-5E+07	-3E+08	-1E+08	-5E+07	-5E+07	-2E+08	-2E+08	-2E+08	-3E+08	-2E+08	-5E+07	1E+07	-2E+08	8E+09	1E+09	-3E+08	8E+10
	-8E+06	-2E+08	-1E+08	3E+11	-3E+05	-1E+08	-1E+08	-2E+08	-3E+08	-2E+08	-1E+08	3E+07	-2E+08	2E+09	3E+07	-3E+08	3E+10
	765614	-3E+08	-1E+08	1E+09	7E+06	-8E+07	-1E+08	-2E+08	-3E+08	-2E+08	-6E+07	2E+06	-1E+08	1E+11	5E+10	-3E+08	8E+09
	-23193	-8E+07	-8E+07	-8E+07	7E+07	-8E+07	-8E+07	-8E+07	-8E+07	3E+06	-8E+07	365253	-8E+07	-8E+07	1E+09	-8E+07	8E+09
	-2E+07	-3E+08	-1E+08	-9E+06	7E+07	-3E+08	-3E+08	-3E+08	-1E+08			-3E+08	-3E+08	1E+09	4E+08	-3E+08	-23193
	-6E+07	-2E+08	-1E+08	-8E+07	2E+08	6E+08	-2E+08	-1E+08	-2E+08	-8E+07	-8E+07	-2E+08	-1E+08	-1E+08	-2E+08	-2E+08	-5E+05
	-6E+06	-3E+08	-9E+07	-1E+08	3E+08	-7E+05	-1E+08	-1E+08	-2E+08	-2E+08	-1E+08	-4E+06	-1E+08	2E+09	4E+08	-3E+08	7E+06

X_{bar} = 678.52
SD = 1321.8

N = 236
$1/N\Sigma_i(X_i-X_{bar})^3$ = 1E+10
γ_1 = 4.3676

Since the Coefficient of Skewness of 4.37 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

X_i values =	0.0008			0.0001	0.2268	-0.002	-2.133	0.0204	-0.724	-1.112	-0.026	5E-07	-91.98				
	0.0204	-1.841															
	0.0501	-8.355															
				0.0501	-0.75												
	5.2656	0.1325		-0.013	0.0501	-0.266	-1.152	0.0137	0.0946	-1.152	-0.117	3.0292	-0.178				
														8.8076	27.679	-0.806	
														17.093	0.3129	-9.726	
														3.094	0.0946	-5.06	
														-81.28		5.2656	
	5.2656	-5.06		-91.98	-91.98	-0.045	-12.09	-0.006	0.3442	-0.013	0.0008	5.9676	-0.389	0.6387	2.0918	-5.762	
	0.0501	0.4823	1.6838	24.705	-0.266	5E-07	-0.724	0.201	2.6456	-0.178	0.0386	5.9676	-0.117	47.798	7.3849	-4.109	58.197
	0.9029	-1.91	-5E-05	8.8076	-0.045	-0.117	-0.389	-0.75	0.0946	-0.673	-0.117	1.973	-0.117				15.756
	0.0386	-0.562		-6E-04	0.0287	-0.178	-0.673	-0.389	4.5717	0.8112	-0.006	0.0047	-0.178	2.7088	0.0386	-8.781	28.838
	0.0386	-2.774	-0.266	0.201	0.3442	-0.026	-0.117	-6E-04	-2.214	-0.964	-0.026	2.8361	-0.074	7.3849	2.3343	-6.3	10.226
	0.0386	-5.282	-0.002	0.0204	0.0287	-0.117	-0.117	-0.178	-25.55	-0.562	0.0386	2.5827	-0.389	15.081	8.0963	-8.781	28.838
	0.4108	-2.882	-0.045	41.115	0.9501	-0.013	-0.045	-0.117	-25.55	-1.238	-0.074	3.2245	-0.117	10.226	3.2245	-7.957	21.617
	1.7981	-6.023	-0.045	8.0963	2.3959	0.0008	-0.045	-0.117	-9.726	-0.389	0.0137	2.0322	-0.074	32.222	25.907	-9.726	15.081
	1.1464	0.0008	0.0008	0.0008	3.8897	0.0008	0.0008	0.0008	0.0008	2.0918	0.0008	1.6838	0.0008	0.0008	8.0963	0.0008	15.081
	0.201	-12.8	-0.013	0.3769	3.8897	-91.98	-91.98	-91.98	-0.045			-91.98	-91.98	8.8076	5.9676	-91.98	1.1464
	0.0137	-3.5	-0.002	0.0001	5.2656	6.6747	-0.178	-0.013	-3.5	0.0001	0.0008	-3.5	-0.045	-0.045	-0.266	-3.5	0.9029
	0.486	-7.767	-1E-05	-0.003	5.6158	0.8612	-0.01	-8E-04	-2.181	-0.907	-0.078	0.5428	-0.002	10.226	5.9676	-8.314	2.4083

X_{bar} = 5.4304
SD = 1.6051
N = 236
$1/N\Sigma_i(X_i-X_{bar})^3$ = -2.177
γ_1 = 0.5297

Since the Coefficient of Skewness of 0.53 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 J07-1957-03

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**

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

	X_i values =
1800	-1.07E+08
3000	381078125
980	-2.17E+09
540	-5.22E+09
8600	2.53E+11
920	-2.49E+09
1600	-3.08E+08
2700	76765625
2000	-20796875
5500	3.354E+10
250	-8.3E+09
1800	-1.07E+08
160	-9.46E+09
2000	-20796875

X_{bar} =	2275
SD =	2274.7401
N =	14
$1/N\Sigma_i(X_i-X_{bar})^3$ =	1.849E+10
γ_1 =	1.7553346

Since the Coefficient of Skewness of 1.76 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	0.0118013
8.0063676	0.4027616
6.8875526	-0.055009
6.2915691	-0.930573
9.0595175	5.7511943
6.8243737	-0.087231
7.3777589	0.001327
7.9010071	0.2538015
7.6009025	0.036937
8.6125034	2.431152
5.5214609	-5.326447
7.4955419	0.0118013
5.0751738	-10.54229
7.6009025	0.036937

X_{bar} =	7.2678695
SD =	1.0903141

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.571703

$\gamma_1 =$ 0.4929383

Since the Coefficient of Skewness of 0.49 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

Compute the mean and standard deviation of the historical data:

7.1702578 = x_{mean} (Mean of N1-N4 historical data)

0.7431701 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

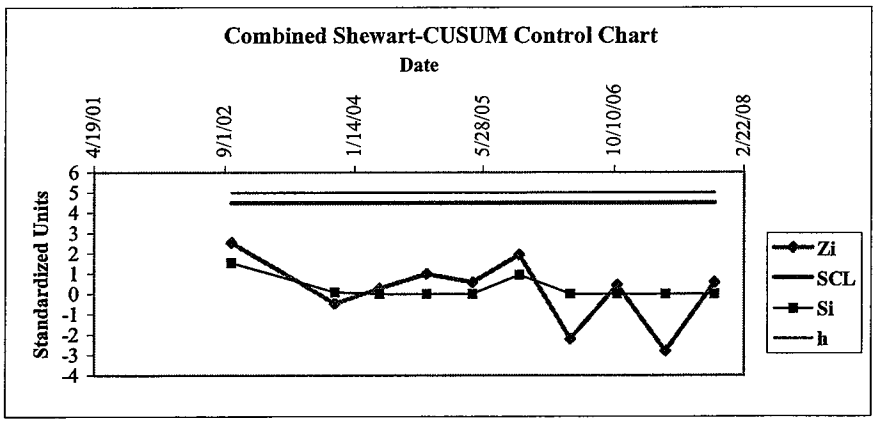
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	9.0595175	2.5421632	1.5421632	5	4.5
10/30/2003	6.8243737	-0.4654172	0.0767461	5	4.5
4/20/2004	7.3777589	0.2792108	0	5	4.5
10/21/2004	7.9010071	0.9832867	0	5	4.5
4/18/2005	7.6009025	0.5794698	0	5	4.5
10/13/2005	8.6125034	1.9406669	0.9406669	5	4.5
4/25/2006	5.5214609	-2.2185996	0	5	4.5
10/20/2006	7.4955419	0.4376981	0	5	4.5
4/25/2007	5.0751738	-2.8191178	0	5	4.5
10/31/2007	7.6009025	0.5794698	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 J07-1957-03

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**

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

	X_i values =
4700	3.314E+10
450	-1.12E+09
360	-1.43E+09
820	-2.98E+08
1600	1410310.9
320	-1.59E+09
860	-2.48E+08
1700	9547402.7
1000	-1.16E+08
4400	2.47E+10
1700	9547402.7
1400	-678158.5
120	-2.56E+09
1400	-678158.5

X_{bar} = 1487.8571
SD = 1402.7126
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3.607E+09
γ_1 = 1.4603778

Since the Coefficient of Skewness of 1.46 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 =
8.4553178	3.807709
6.1092476	-0.482859
5.886104	-1.023182
6.7093043	-0.006277
7.3777589	0.1133704
5.768321	-1.425543
6.7569324	-0.002562
7.4383835	0.1615323
6.9077553	2.734E-06
8.3893598	3.345302
7.4383835	0.1615323
7.2442275	0.0430424
4.7874917	-9.344343
7.2442275	0.0430424

X_{bar} = 6.8937725
SD = 1.0051855

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.329231

$\gamma_1 =$ 0.3622756

Since the Coefficient of Skewness of 0.36 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

Compute the mean and standard deviation of the historical data:

6.7899934 = x_{mean} (Mean of N1-N4 historical data)

1.1633639 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

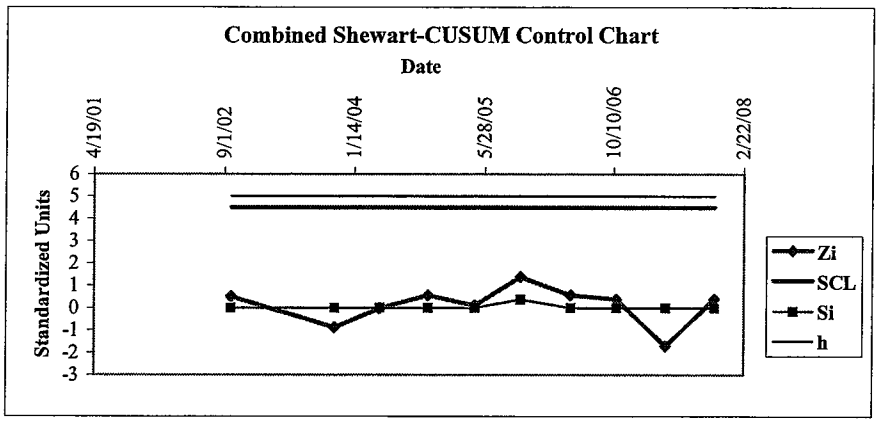
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	7.3777589	0.5052292	0	5	4.5
10/30/2003	5.768321	-0.8782054	0	5	4.5
4/20/2004	6.7569324	-0.0284185	0	5	4.5
10/21/2004	7.4383835	0.5573407	0	5	4.5
4/18/2005	6.9077553	0.1012253	0	5	4.5
10/13/2005	8.3893598	1.3747774	0.3747774	5	4.5
4/25/2006	7.4383835	0.5573407	0	5	4.5
10/20/2006	7.2442275	0.3904488	0	5	4.5
4/25/2007	4.7874917	-1.7213029	0	5	4.5
10/31/2007	7.2442275	0.3904488	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 J07-1957-03

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**

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

11000	X_i values =	4.481E+11
2800		-1.64E+08
4900		3.742E+09
2000		-2.45E+09
4900		3.742E+09
3700		43817274
2700		-2.71E+08
2700		-2.71E+08
650		-1.96E+10
600		-2.07E+10
872		-1.52E+10

X_{bar} =	3347.4545
SD =	2956.5675
N =	11
$1/N\Sigma_i(X_i-X_{bar})^3$ =	3.609E+10
γ_1 =	1.6110357

Since the Coefficient of Skewness of 1.61 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 =	9.3056506	X_i values = 3.6016955
	7.9373747	0.0044582
	8.4969905	0.379817
	7.6009025	-0.005079
	8.4969905	0.379817
	8.2160881	0.0871133
	7.9010071	0.0021078
	7.9010071	0.0021078
	6.4769724	-2.175869
	6.3969297	-2.604499
	6.7707894	-1.006017

X_{bar} =	7.7727911
SD =	0.9088872
N =	11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.121304

$\gamma_1 =$ 0.1863953

Since the Coefficient of Skewness of 0.19 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

Compute the mean and standard deviation of the historical data:

8.3352295 = x_{mean} (Mean of N1-N4 historical data)

0.7450746 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

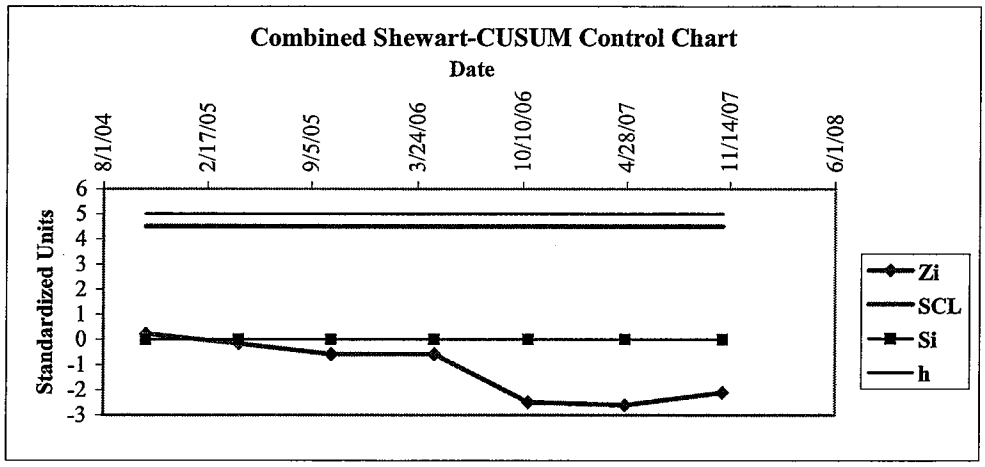
5 = h (constant, upper control limit for the CUSUM scheme)

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	8.4969905	0.21710705	0	5	4.5
4/18/2005	8.2160881	-0.1599054	0	5	4.5
10/13/2005	7.9010071	-0.5827907	0	5	4.5
4/25/2006	7.9010071	-0.5827907	0	5	4.5
10/20/2006	6.4769724	-2.4940554	0	5	4.5
4/25/2007	6.3969297	-2.6014845	0	5	4.5
10/31/2007	6.7707894	-2.0997095	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 J07-1957-03

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
N_i	16	15	10	14	14	14	14	14	14	13	13	14	14	14	14	14	11	
sum of rank values (R_i)	1767.0	1611.5	1003.0	1629.0	1362.0	1400.5	1368.5	1267.0	1908.5	1176.5	1176.5	2046.0	1267.0	2281.5	2025.5	1267.0	2471.0	
avg rank value (Rbar)	110.4	107.4	100.3	116.4	97.3	100.0	97.8	90.5	136.3	90.5	90.5	146.1	90.5	163.0	144.7	90.5	224.6	

	Number of each rank value																	Rank Value
rank value of NDs =	13	13	9	11	13	13	13	14	8	13	13	7	14	5	7	14	0	90.5
rank value of 1.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	181
rank value of 1.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	182.5
rank value of 1.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	184
rank value of 2s =	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	185.5
rank value of 2.1s =	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	188.5
rank value of 2.2s =	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	192
rank value of 2.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194
rank value of 2.4s =	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	196
rank value of 2.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	198.5
rank value of 2.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	200
rank value of 3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	201.5
rank value of 3.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	203
rank value of 3.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	204
rank value of 3.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	205
rank value of 4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	206
rank value of 4.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	207
rank value of 4.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	208
rank value of 4.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	209
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	210
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	211
rank value of 4.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	212
rank value of 5.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	213
rank value of 5.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	214
rank value of 5.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	215
rank value of 6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	216
rank value of 7s =	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	217.5
rank value of 7.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	219
rank value of 8.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	220
rank value of 9.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	221
rank value of 11s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	222
rank value of 13s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	223
rank value of 14s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	224
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	225
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	226
rank value of 21s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	227.5
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	229

rank value of 28s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	230
rank value of 33s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	231
rank value of 95s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	232

n =	**16**	**15**	**10**	**14**	**14**	**14**	**14**	**14**	**14**	**13**	**13**	**14**	**14**	**14**	**14**	**14**	**11**	

Sum of rank value calculations

1176.5	1176.5	814.5	995.5	1176.5	1176.5	1176.5	1267	724	1176.5	1176.5	633.5	1267	452.5	633.5	1267	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	182.5	0	182.5	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	184	0	0	
0	0	0	0	185.5	0	0	0	185.5	0	0	0	0	0	0	0	0	
188.5	0	188.5	0	0	0	0	0	188.5	0	0	0	0	188.5	0	0	0	
0	0	0	0	0	0	192	0	0	0	0	192	0	0	192	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	392	0	0	0	0	0	196	0	0	
0	0	0	0	0	0	0	0	198.5	0	0	0	0	198.5	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	0	0	0	0	0	0	201.5	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	203	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	204	0	0	
0	0	0	0	0	0	0	0	0	0	0	205	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	0	0	0	0	207	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	0	0	0	0	209	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	0	0	0	211	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	213	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	214	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	0	0	216	
0	435	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	0	220	0	0	0	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	0	0	222	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	224	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	225	
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	455	
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	
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	232	

sum of rank values (R_i)	**1767**	**1611.5**	**1003**	**1629**	**1362**	**1400.5**	**1368.5**	**1267**	**1908.5**	**1176.5**	**1176.5**	**2046**	**1267**	**2281.5**	**2025.5**	**1267**	**2471**

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 =	468232.7	189546	132503	140100	133771	114664	260169	106473	106473	299008	114664	371803	293046	114664	555076

$N_{i\,bg}$ = 41
N = 232
H = 55.82

Adjust H for ties:

T_i = 6E+06 sum of T1..T8

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

H' = 104.73

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' =104.73.
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 $(C_x) = P(N(N+1)/12)^{0.5} * (1/N_{ibg}+1/N_x)^{0.5}$

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

N = total sample size

N_{ibg} = 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) =	116.4	97.3	100.0	97.8	90.5	136.3	90.5	90.5	146.1	90.5	163.0	144.7	90.5	224.6
avg Rbar (background) =	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9
Dx =	9.5	-9.6	-6.8	-9.1	-16.4	29.5	-16.4	-16.4	39.3	-16.4	56.1	37.8	-16.4	117.8
Cx =	48.4	48.4	48.4	48.4	48.4	48.4	49.8	49.8	48.4	48.4	48.4	48.4	48.4	53.1
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	**Yes**	-	-	**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 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 J07-1957-03

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**

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

	X_i values =
4	0.2569129
4.2	0.5836782
2.5	-0.645613
2.1	-2.020858
13	894.64707
0.5	-23.49898
0.5	-23.49898
1.4	-7.579036
3	-0.048342
11	445.1937
1	-13.216
2.9	-0.100082
0.5	-23.49898
0.5	-23.49898

X_{bar} = 3.3642857
SD = 3.8948896
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = 87.362536
γ_1 = 1.6524062

Since the Coefficient of Skewness of 1.65 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 =
1.3862944	0.3911291
1.4350845	0.4747509
0.9162907	0.0178441
0.7419373	0.0006576
2.5649494	6.967584
-0.693147	-2.450125
-0.693147	-2.450125
0.3364722	-0.03231
1.0986123	0.0873137
2.3978953	5.2945875
0	-0.28098
1.0647107	0.0687875
-0.693147	-2.450125
-0.693147	-2.450125

X_{bar} = 0.6549756
SD = 1.1118207

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.2277759

$\gamma_1 =$ 0.1852169

Since the Coefficient of Skewness of 0.19 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

Compute the mean and standard deviation of the historical data:

1.1199017 = x_{mean} (Mean of N1-N4 historical data)

0.3438118 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

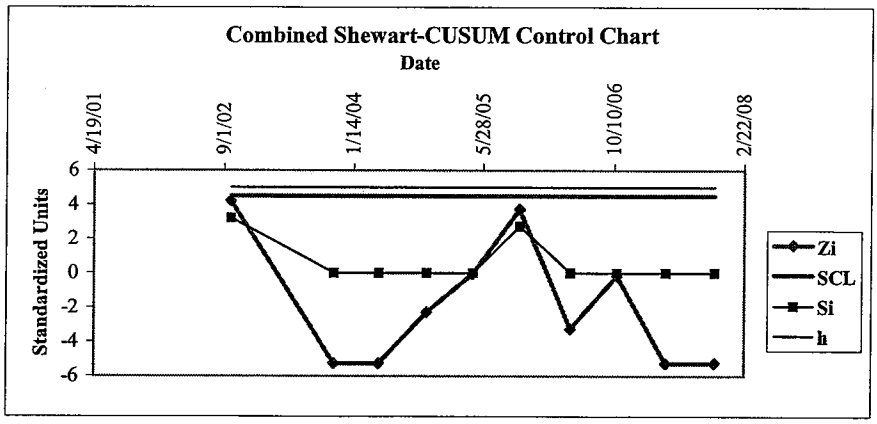
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	2.5649494	4.2030188	3.2030188	5	4.5
10/30/2003	-0.693147	-5.2733755	0	5	4.5
4/20/2004	-0.693147	-5.2733755	0	5	4.5
10/21/2004	0.3364722	-2.2786577	0	5	4.5
4/18/2005	1.0986123	-0.0619218	0	5	4.5
10/13/2005	2.3978953	3.7171307	2.7171307	5	4.5
4/25/2006	0	-3.25731	0	5	4.5
10/20/2006	1.0647107	-0.1605268	0	5	4.5
4/25/2007	-0.693147	-5.2733755	0	5	4.5
10/31/2007	-0.693147	-5.2733755	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 J07-1957-03

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**

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

	X_i values =
95	339537.17
20	-143.5785
33	467.9458
21	-76.02907
28	21.107787
26	0.4453073
21	-76.02907
17	-558.7358
5.7	-7456.434
4.9	-8410.463
6	-7118.179

X_{bar} = 25.236364
SD = 24.963745
N = 11
$1/N\Sigma_i(X_i-X_{bar})^3$ = 28744.293
γ_1 = 2.1316282

Since the Coefficient of Skewness of 2.13 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 =
4.5538769	4.6898706
2.9957323	0.0015496
3.4965076	0.234309
3.0445224	0.0044522
3.3322045	0.0924632
3.2580965	0.0540462
3.0445224	0.0044522
2.8332133	-0.000102
1.7404662	-1.479776
1.5892352	-2.150572
1.7917595	-1.288812

X_{bar} = 2.8800124
SD = 0.8802266
N = 11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.0147165

$\gamma_1 =$ 0.0248948

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	**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

Compute the mean and standard deviation of the historical data:

3.5226598 = x_{mean} (Mean of N1-N4 historical data)

0.7235009 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

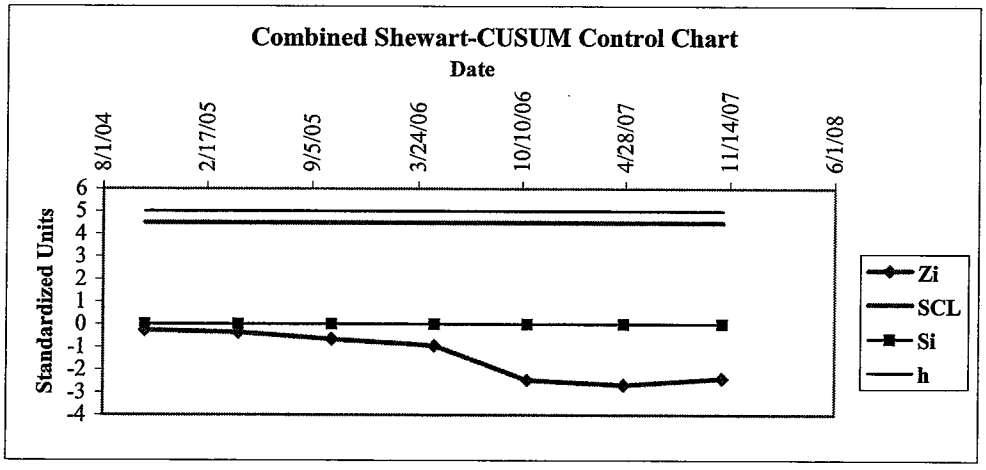
5 = h (constant, upper control limit for the CUSUM scheme)

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	3.3322045	-0.2632413	0	5	4.5
4/18/2005	3.2580965	-0.3656709	0	5	4.5
10/13/2005	3.0445224	-0.6608663	0	5	4.5
4/25/2006	2.8332133	-0.952931	0	5	4.5
10/20/2006	1.7404662	-2.4632916	0	5	4.5
4/25/2007	1.5892352	-2.6723182	0	5	4.5
10/31/2007	1.7917595	-2.3923956	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 J07-1957-03

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**
N_i	16	15	10	14	14	14	14	14	14	13	13	14	14	15	14	15	11	
sum of rank values (R_i)	2242.5	1573.0	1024.0	1533.0	1362.0	1596.5	1579.5	1581.0	1830.0	1269.0	1176.5	2062.0	1267.0	2366.0	1940.0	1565.0	1528.0	
avg rank value (Rbar)	140.2	104.9	102.4	109.5	97.3	114.0	112.8	112.9	130.7	97.6	90.5	147.3	90.5	157.7	138.6	104.3	138.9	

	Number of each rank value																	Rank Value
rank value of NDs =	9	13	9	12	13	11	11	11	9	12	13	8	14	7	8	13	7	90.5
rank value of 1.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181
rank value of 1.2s =	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	183
rank value of 1.3s =	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	185.5
rank value of 1.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	187
rank value of 1.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	188.5
rank value of 1.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	190.5
rank value of 1.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	192
rank value of 2s =	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193.5
rank value of 2.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	195
rank value of 2.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	196.5
rank value of 2.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	198.5
rank value of 2.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	200
rank value of 2.7s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	201
rank value of 2.9s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	202
rank value of 3.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	203
rank value of 3.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	204
rank value of 3.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	205
rank value of 3.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	206
rank value of 3.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	207
rank value of 4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	208
rank value of 4.2s =	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	209.5
rank value of 4.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	211
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	212
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	213
rank value of 5.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	214.5
rank value of 5.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	216
rank value of 6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	217
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	218
rank value of 8.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	219.5
rank value of 10s =	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	221.5
rank value of 13s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	223
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	224.5
rank value of 19s =	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	227
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	229
rank value of 21s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	230
rank value of 27s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	231

rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	232
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	233
rank value of 4300s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	234

n =	**16**	**15**	**10**	**14**	**14**	**14**	**14**	**14**	**14**	**13**	**13**	**14**	**14**	**15**	**14**	**15**	**11**

Sum of rank value calculations

814.5	1176.5	814.5	1086	1176.5	995.5	995.5	995.5	814.5	1086	1176.5	724	1267	633.5	724	1176.5	633.5
181	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	183	0	0	0	183	0	0	0	0	183	0	0
0	0	0	0	185.5	0	185.5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	187	0	0	0	0	0	0	0	0
188.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	188.5	0
0	0	0	0	0	0	190.5	0	0	0	0	0	0	0	190.5	0	0
0	0	0	0	0	0	0	192	0	0	0	0	0	0	0	0	0
193.5	193.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	195	0	0	0	0	0	0	0	0	0
0	0	0	0	0	196.5	0	0	0	0	0	0	0	0	196.5	0	0
0	0	0	0	0	0	0	198.5	0	0	0	0	0	198.5	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	201	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	202	0	0	0	0	0	0	0	0
0	203	0	0	0	0	0	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	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	0	0	0	208	0	0	0	0	0	0	0	0	0	0
0	0	209.5	0	0	0	0	0	209.5	0	0	0	0	0	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	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	213
0	0	0	0	0	0	0	0	0	0	0	214.5	0	0	214.5	0	0
0	0	0	0	0	0	0	0	216	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	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	219.5	0	219.5
0	0	0	0	0	221.5	0	0	0	0	0	0	0	221.5	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	224.5	0	224.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	681	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	231	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	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	234	0	0	0

sum of rank values (R_i)	**2242.5**	**1573**	**1024**	**1533**	**1362**	**1596.5**	**1579.5**	**1581**	**1830**	**1269**	**1176.5**	**2062**	**1267**	**2366**	**1940**	**1565**	**1528**

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 =	571238.1	167864	132503	182058	178201	178540	239207	123874	106473	303703	114664	373197	268829	163282	212253

$N_{i\,bg}$ = 41
N = 234
H = 18.60

Adjust H for ties:

T_i = 6E+06 sum of T1..T8

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

$H' = 34.13$

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' =34.13.
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) =	109.5	97.3	114.0	112.8	112.9	130.7	97.6	90.5	147.3	90.5	157.7	138.6	104.3	138.9
avg Rbar (background) =	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0	118.0
Dx =	-8.5	-20.8	-4.0	-5.2	-5.1	12.7	-20.4	-27.5	29.2	-27.5	39.7	20.5	-13.7	20.9
Cx =	48.8	48.8	48.8	48.8	48.8	48.8	50.2	50.2	48.8	48.8	47.6	48.8	47.6	53.6
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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 J07-1957-03

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	27	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

N_i	16	15	10	14	14	14	14	14	14	13	13	14	14	14	14	14	11	
sum of rank values (R_i)	2833.0	1089.5	1207.0	2174.0	1377.0	1167.5	840.5	1355.0	1685.5	1391.5	1134.5	2600.5	763.0	2330.5	2059.0	833.5	2186.5	
avg rank value (Rbar)	177.1	72.6	120.7	155.3	98.4	83.4	60.0	96.8	120.4	107.0	87.3	185.8	54.5	166.5	147.1	59.5	198.8	

	Number of each rank value																	Rank Value
rank value of NDs =	1	12	2	3	6	10	13	8	5	7	7	2	14	2	3	13	0	54.5
rank value of 2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	109
rank value of 2.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110
rank value of 2.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	111
rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112
rank value of 2.9s =	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	113.5
rank value of 3.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	115
rank value of 3.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	116
rank value of 3.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	117
rank value of 3.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	118
rank value of 4.6s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	119
rank value of 4.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	120
rank value of 5.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	121
rank value of 5.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	122
rank value of 5.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	123
rank value of 5.4s =	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	125
rank value of 5.5s =	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	127.5
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	129
rank value of 6.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	130
rank value of 6.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	131
rank value of 7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	132
rank value of 7.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	133
rank value of 7.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	134
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135
rank value of 8.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	136
rank value of 9.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	137
rank value of 9.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	138
rank value of 10s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	139
rank value of 10.9s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	140
rank value of 11s =	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	142.5
rank value of 11.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 12s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	147
rank value of 13s =	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	149.5
rank value of 14s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	151
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	152
rank value of 16s =	0	0	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	154.5
rank value of 17s =	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	158
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	160.5
rank value of 20s =	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	163.5
rank value of 21s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	167
rank value of 22s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	169.5
rank value of 24s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	171
rank value of 26s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	172
rank value of 27s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	174
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176
rank value of 30s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177
rank value of 31s =	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	179
rank value of 33s =	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182
rank value of 33.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	184
rank value of 36s =	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	185.5
rank value of 37s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	187

rank value of 40.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	188
rank value of 40.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	189
rank value of 43s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	190
rank value of 45s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	191
rank value of 49s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	192
rank value of 50s =	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	194
rank value of 51s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	196
rank value of 52s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	197.5
rank value of 52.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	199
rank value of 56s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	200
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	201
rank value of 66s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	202
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	203
rank value of 75.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	204
rank value of 82s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	205
rank value of 83s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	206
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	207
rank value of 89s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	208
rank value of 93s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	209
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	210.5
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	212
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	213
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	215
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	217.5
rank value of 150s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	219
rank value of 160s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	220
rank value of 170s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	222.5
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	224
rank value of 200s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	225
rank value of 210s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	226
rank value of 230s =	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	227.5
rank value of 410s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	229
rank value of 510s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	230
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	231
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	232
n =	16	15	10	14	14	14	14	14	14	13	13	14	14	14	14	14	11	

Sum of rank value calculations

54.5	654	109	163.5	327	545	708.5	436	272.5	381.5	381.5	109	763	109	163.5	708.5	0
0	0	0	0	109	0	0	0	0	0	0	0	0	0	0	0	0
0	0	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	111	0	0	0	0	0	0
0	0	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	113.5	0	0	0	0	0	113.5	0	0	0	0	0	0
0	0	0	0	0	0	0	115	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	116	0	0	0	0	0	0	0	0
0	0	117	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	118	0	0
0	0	0	0	0	0	0	0	0	0	0	119	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	0	0	0	0	121	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	0	0	0	0
0	125	0	0	0	0	0	0	125	0	0	0	0	0	0	125	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	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
0	0	0	0	0	0	0	0	0	0	131	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	0	0	0	0	0	0	0	133	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	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	136	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	137	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	0	0	0	139	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	142.5	142.5	0	142.5	0	142.5	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	0
0	147	0	0	0	0	0	0	0	0	0	0	0	0	294	0	0
0	0	0	0	149.5	0	0	0	0	149.5	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	151	0	0	0
152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	154.5	309	0	0	0	0	154.5	0	0	0	0	0	0	0	0
0	0	0	0	158	0	0	0	158	0	0	0	0	0	0	0	158
0	0	0	160.5	0	0	0	0	0	0	0	0	0	0	160.5	0	0
163.5	163.5	0	0	0	0	0	163.5	0	0	0	0	0	0	163.5	0	0
167	0	0	0	0	0	0	0	0	0	0	0	0	167	167	0	0
169.5	0	0	0	0	0	0	0	0	0	0	0	0	169.5	0	0	0
0	0	0	171	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	0	0	0	174	0	0	0	0	0	0	0	348
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
0	0	0	0	0	0	0	0	179	179	0	0	0	0	179	0	0
364	0	182	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	184

0	0	0	0	0	0	0	0	185.5	0	0	0	0	185.5	0	0	0
0	0	0	0	0	0	0	187	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	188	0	0	0
189	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	190	0	0	0
0	0	0	191	0	0	0	0	0	0	0	0	0	0	0	0	0
192	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	194	0	194	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	196	0	0	0
197.5	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	0	199	0	0
0	0	0	0	0	0	0	0	200	0	0	0	0	0	0	0	0
201	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	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	0	0	0	204	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	205	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	0	0	0	0	0	0	0	0	0	0	0	207
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	0	0	0	0	0	0	209
0	0	0	0	0	0	0	0	0	0	0	210.5	0	0	0	0	210.5
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	213	0	0	0	0	0
215	0	0	0	0	0	0	0	0	0	0	0	0	215	215	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	435
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	220	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	222.5	0	222.5	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	0	0	0	225	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	227.5	0	0	0	0	0	0	0	227.5	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	0	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	0	0	232
sum of rank values (R_i)	**2833**	**1089.5**	**1207**	**2174**	**1377**	**1167.5**	**840.5**	**1355**	**1685.5**	**1391.5**	**1134.5**	**2600.5**	**763**	**2330.5**	**2059**	**833.5**	**2186.5**

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
Ri^2/N_i =	641750.5	337591	135438	97361	50460	131145	202922	148944	99007	483043	41584	387945	302820	49623	434617

N_{ibg} = 41
N = 232
H = 87.80

Adjust H for ties:

T_i = 1E+06 sum of T1..T2

$H' = H/(1-(T_i/(N^3-N)))$
H' = 97.65
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' =97.65.
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) = $P(N(N+1)/12)^{0.5} * (1/N_{ibg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
N_{ibg} = 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) =	155.3	98.4	83.4	60.0	96.8	120.4	107.0	87.3	185.8	54.5	166.5	147.1	59.5	198.8
avg Rbar (background) =	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.1
Dx =	30.2	-26.8	-41.7	-65.1	-28.3	-4.7	-18.1	-37.8	60.6	-70.6	41.4	22.0	-65.6	73.7
Cx =	48.4	48.4	48.4	48.4	48.4	48.4	49.8	49.8	48.4	48.4	48.4	48.4	48.4	53.1
Statistical Significance ?	-	-	-	-	-	-	-	-	**Yes**	-	-	-	-	**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 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 J07-1957-03

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

Part 1: 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**

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

50	X_i values =	-254840.1
160		101194.7
180		295408.3
230		1585242.3
110		-39.304
4.6		-1287913
190		449455.1
120		287.496
210		901428.7
150		49027.896
100		-2406.104
2.5		-1363938
5		-1273761
75.5		-54439.94

X_{bar} =	113.4
SD =	77.617811
N =	14
$1/N\Sigma_i(X_i-X_{bar})^3$ =	-61092.37
γ_1=	0.1460091

Since the Coefficient of Skewness of 0.15 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 =	3.912023	X_i values = -0.009108
	5.0751738	0.8691039
	5.1929569	1.2322543
	5.4380793	2.285456
	4.7004804	0.1947277
	1.5260563	-17.47086
	5.2470241	1.4282472
	4.7874917	0.2962479
	5.3471075	1.8438812
	5.0106353	0.7044318
	4.6051702	0.113597
	0.9162907	-32.90861
	1.6094379	-15.84017
	4.3241327	0.008399

X_{bar} =	4.1208614
SD =	1.5632353

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -4.089457

$\gamma_1 =$ 1.1963814

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

Compute the mean and standard deviation of the historical data:

155 = x_{mean} (Mean of N1-N4 historical data)

75.938572 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

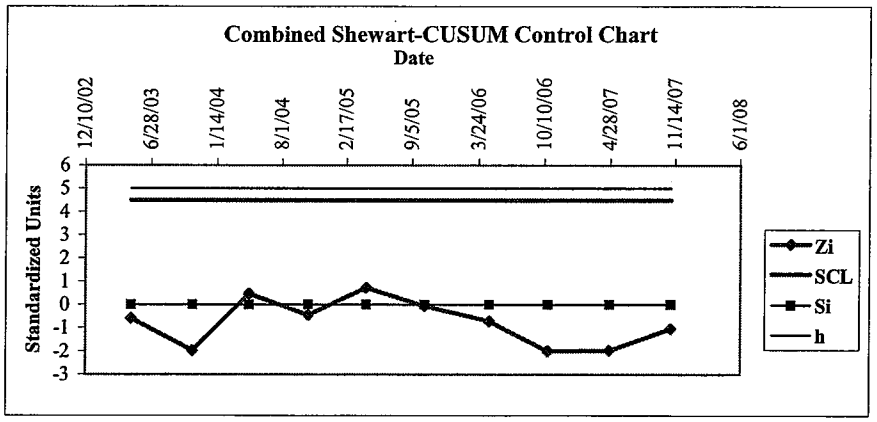
5 = h (constant, upper control limit for the CUSUM scheme)

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		
4/28/2003	110	-0.5925842	0	5	4.5
10/30/2003	4.6	-1.9805482	0	5	4.5
4/20/2004	190	0.4608988	0	5	4.5
10/21/2004	120	-0.4608988	0	5	4.5
4/18/2005	210	0.7242696	0	5	4.5
10/13/2005	150	-0.0658427	0	5	4.5
4/25/2006	100	-0.7242696	0	5	4.5
10/20/2006	2.5	-2.0082021	0	5	4.5
4/25/2007	5	-1.9752808	0	5	4.5
10/31/2007	75.5	-1.0468988	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 J07-1957-03

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**

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

	X_i values =
770	253996928
27	-1320140
140	35.937
68	-324242.7
140	35.937
100	-49430.86
88	-115501.3
93	-83453.45
27	-1320140
17	-1715072
33.7	-1092727

X_{bar} =	136.7
SD =	214.57957
N =	11
$1/N\Sigma_i(X_i-X_{bar})^3$ =	22543299
γ_1 =	2.6323366

Since the Coefficient of Skewness of 2.63 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	12.908147
3.2958369	-1.014378
4.9416424	0.2634187
4.2195077	-0.000533
4.9416424	0.2634187
4.6051702	0.028251
4.4773368	0.0055199
4.5325995	0.012486
3.2958369	-1.014378
2.8332133	-3.159655
3.5174978	-0.480249

X_{bar} =	4.3006068
SD =	1.0627593
N =	11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.7101862

$\gamma_1 =$ 0.6825846

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 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

Compute the mean and standard deviation of the historical data:

4.7758444 = x_{mean} (Mean of N1-N4 historical data)

1.4173173 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

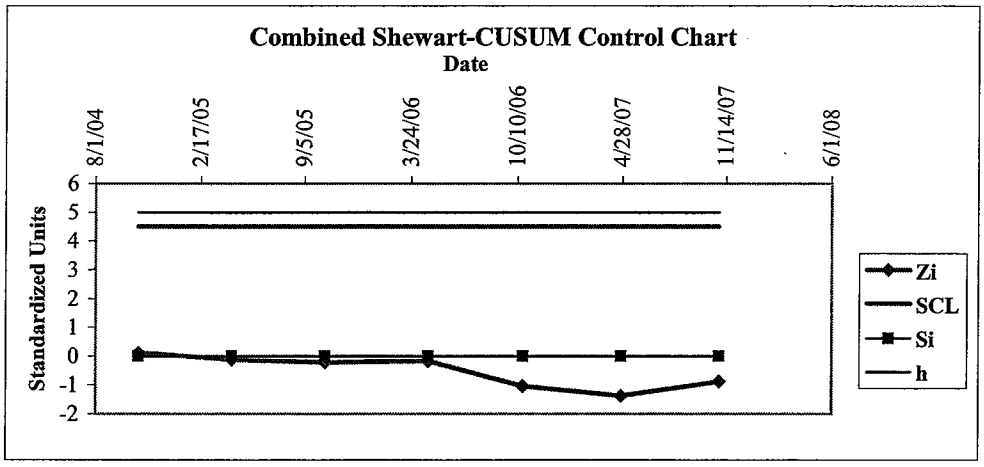
5 = h (constant, upper control limit for the CUSUM scheme)

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	4.9416424	0.11698019	0	5	4.5
4/18/2005	4.6051702	-0.1204206	0	5	4.5
10/13/2005	4.4773368	-0.2106145	0	5	4.5
4/25/2006	4.5325995	-0.1716235	0	5	4.5
10/20/2006	3.2958369	-1.0442316	0	5	4.5
4/25/2007	2.8332133	-1.3706395	0	5	4.5
10/31/2007	3.5174978	-0.8878369	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 J07-1957-03

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
N_i	16	15	10	14	14	14	14	14	14	13	13	14	14	15	14	15	11	
sum of rank values (R_i)	2519.0	1123.5	811.5	1636.0	1233.5	1328.0	1613.5	1472.0	1577.0	1129.0	1003.5	2408.5	1227.5	2982.0	2187.5	1159.0	2084.0	
avg rank value (Rbar)	157.4	74.9	81.2	116.9	88.1	94.9	115.3	105.1	112.6	86.8	77.2	172.0	87.7	198.8	156.3	77.3	189.5	

	Number of each rank value																	Rank Value
rank value of NDs =	3	14	9	9	11	11	7	9	9	11	12	3	11	1	3	14	2	70
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	140.5
rank value of 5.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	142
rank value of 5.4s =	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	143.5
rank value of 5.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	145.5
rank value of 6.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147
rank value of 6.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	148
rank value of 6.8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	149
rank value of 6.9s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	150
rank value of 7.4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	151.5
rank value of 7.7s =	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	153.5
rank value of 8.1s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	155
rank value of 8.2s =	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	156.5
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	158
rank value of 9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	159
rank value of 9.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	160
rank value of 9.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	162
rank value of 10s =	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	163.5
rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	165
rank value of 11s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	166
rank value of 12s =	1	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	169
rank value of 13s =	1	0	0	0	0	0	2	0	1	0	0	0	0	1	1	0	0	174.5
rank value of 14s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	178
rank value of 15s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	179
rank value of 16s =	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	181.5
rank value of 16.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	184
rank value of 17s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	185
rank value of 17.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	186
rank value of 18s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	187
rank value of 19s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	188
rank value of 21s =	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	190.5
rank value of 22s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	193
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	194
rank value of 28s =	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	195.5
rank value of 29s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	197
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	198
rank value of 31s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	199
rank value of 32s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	200
rank value of 36s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	201
rank value of 37s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	202
rank value of 42s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	203
rank value of 43s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	204
rank value of 47s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	205
rank value of 48s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	206
rank value of 50s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	207.5
rank value of 52s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	209

rank value of 53s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	210
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	211.5
rank value of 56s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	213
rank value of 57s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	214
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215
rank value of 59s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	216
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	217
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	218
rank value of 82s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	219.5
rank value of 85s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	221
rank value of 87s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	222
rank value of 92s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	223
rank value of 100s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	224
rank value of 102s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	225
rank value of 110s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	226.5
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	228
rank value of 147s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	229
rank value of 150s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	230
rank value of 170s =	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	0	232
rank value of 260s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	233
rank value of 560s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	234

n =	**16**	**15**	**10**	**14**	**14**	**14**	**14**	**14**	**14**	**13**	**13**	**14**	**14**	**15**	**14**	**15**	**11**

Sum of rank value calculations

210	980	630	630	770	770	490	630	630	770	840	210	770	70	210	980	140
0	0	0	0	0	0	140.5	0	0	0	0	0	0	140.5	0	0	0
0	0	0	0	142	0	0	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	0	0
0	0	0	0	0	0	145.5	0	0	0	0	0	0	0	145.5	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	148	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	150	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	151.5	0	0	0	0	0	0	0	151.5	0	0
0	0	0	153.5	0	0	0	0	0	0	0	0	153.5	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	156.5	0	0	156.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	158	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	0	0	0	0	0	0	0	0	0	0	0	160	0	0
161	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	0
163.5	0	0	0	0	0	0	0	0	0	163.5	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	0	0	0	0	0	166	0	0	0	0	0	0	0
169	0	0	0	0	0	0	169	0	0	0	0	0	0	507	0	0
174.5	0	0	0	0	0	349	0	174.5	0	0	0	0	174.5	174.5	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	179	0
181.5	0	181.5	0	0	181.5	0	0	0	0	0	181.5	0	0	0	0	0
184	0	0	0	0	0	0	0	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	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	186
0	0	0	0	0	0	187	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	188	0	0	0	0	0	0	0	0
381	0	0	0	0	0	0	190.5	190.5	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	194	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	391	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	0	0	0	0	0	0	198	0	0
0	0	0	0	0	0	0	0	0	0	0	199	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	0	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	0	0	203	0	0	0
0	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	205	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	0	207.5	0	0	0	0	207.5
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	0	0	0	210	0	0

211.5	0	0	0	0	0	0	0	0	0	0	0	0	211.5	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	214
215	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	216	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	0	0	0	0	218
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	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	0	0	0	0	223	0	0	0
0	0	0	224	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	225	0	0
0	0	0	226.5	0	0	0	0	0	0	0	0	0	0	0	0	226.5
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	229	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	0	0	0	0	0	231	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	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234

sum of rank values (R_i)	**2519**	**1123.5**	**811.5**	**1636**	**1233.5**	**1328**	**1613.5**	**1472**	**1577**	**1129**	**1003.5**	**2408.5**	**1227.5**	**2982**	**2187.5**	**1159**	**2084**

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 =	483856.5	191178	108680	125970	185956	154770	177638	98049	77462	414348	107625	592822	341797	89552	394823
$N_{i\,bg}$ = 41															
N = 234															
H = 68.49															

Adjust H for ties:

T_i = 3E+06 sum of T1..T7

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

H' = 86.66

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' =86.66.
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) =	116.9	88.1	94.9	115.3	105.1	112.6	86.8	77.2	172.0	87.7	198.8	156.3	77.3	189.5
avg Rbar (background) =	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6
Dx =	8.2	-20.5	-13.8	6.6	-3.5	4.0	-21.8	-31.4	63.4	-21.0	90.2	47.6	-31.4	80.8
Cx =	48.8	48.8	48.8	48.8	48.8	48.8	50.2	50.2	48.8	48.8	47.6	48.8	47.6	53.6
Statistical Significance ?	-	-	-	-	-	-	-	-	**Yes**	-	**Yes**	-	-	**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 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 J07-1957-03

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**

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

	X_i values =
16	-5749.082
59	15786.266
82	111185.52
85	133320.95
50	4162.1819
8.8	-15840.27
43	750.02757
31	-24.75121
36	9.0732828
29	-118.681
25	-708.3692
2.5	-31001.42
5	-24173.38
2.5	-31001.42

X_{bar} = 33.914286
SD = 27.414815
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = 11185.475
γ_1 = 0.6067021

Since the Coefficient of Skewness of 0.61 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 =
	2.7725887	-0.019635
	4.0775374	1.1092587
	4.4067192	2.5396709
	4.4426513	2.7456589
	3.912023	0.6577172
	2.1747517	-0.653108
	3.7612001	0.3714328
	3.4339872	0.0600604
	3.5835189	0.1584719
	3.3672958	0.0343049
	3.2188758	0.005499
	0.9162907	-9.61032
	1.6094379	-2.942226
	0.9162907	-9.61032

X_{bar} = 3.0423692
SD = 1.198365

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -1.082395

$\gamma_1 =$ 0.7029034

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

Compute the mean and standard deviation of the historical data:

60.5 = x_{mean} (Mean of N1-N4 historical data)

31.859065 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

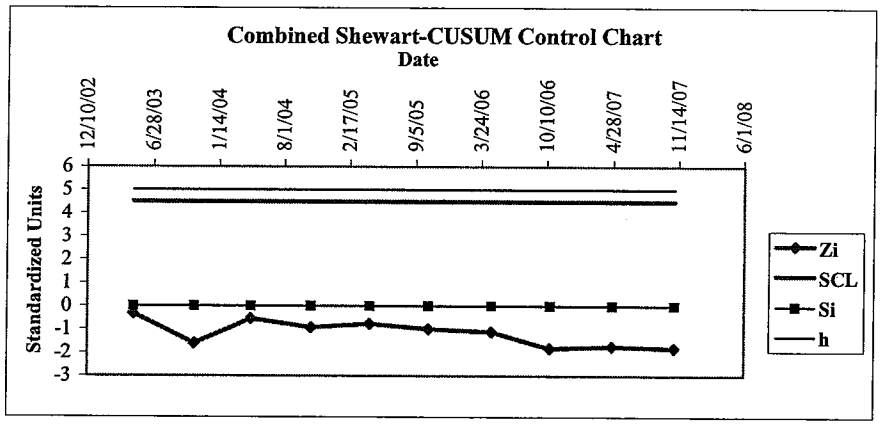
5 = h (constant, upper control limit for the CUSUM scheme)

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		
4/28/2003	50	-0.3295765	0	5	4.5
10/30/2003	8.8	-1.6227721	0	5	4.5
4/20/2004	43	-0.5492942	0	5	4.5
10/21/2004	31	-0.9259531	0	5	4.5
4/18/2005	36	-0.7690119	0	5	4.5
10/13/2005	29	-0.9887296	0	5	4.5
4/25/2006	25	-1.1142826	0	5	4.5
10/20/2006	2.5	-1.820518	0	5	4.5
4/25/2007	5	-1.7420474	0	5	4.5
10/31/2007	2.5	-1.820518	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 J07-1957-03

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**

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

54	X_i values = -21040.9
87	156.83997
28	-154052.2
13	-322929.7
200	1659497.1
28	-154052.2
47	-41447.39
42	-62132.75
82	0.0606323
150	319913.26
170	690639.66
2.5	-495047.8
92	1122.5479
147	279634.62

X_{bar} = 81.607143
SD = 62.733925
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = 121447.23
γ_1 = 0.5497399

Since the Coefficient of Skewness of 0.55 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 = 3.988984	X_i values = 9.235E-06
4.4659081	0.123435
3.3322045	-0.257016
2.5649494	-2.761998
5.2983174	2.3543026
3.3322045	-0.257016
3.8501476	-0.001637
3.7376696	-0.01222
4.4067192	0.0844402
5.0106353	1.133425
5.1357984	1.5925742
0.9162907	-28.42045
4.5217886	0.1698336
4.9904326	1.0688075

X_{bar} = 3.9680036
SD = 1.182252

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -1.798822

$\gamma_1 =$ 1.2165644

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

Compute the mean and standard deviation of the historical data:

45.5 = x_{mean} (Mean of N1-N4 historical data)

32.439688 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

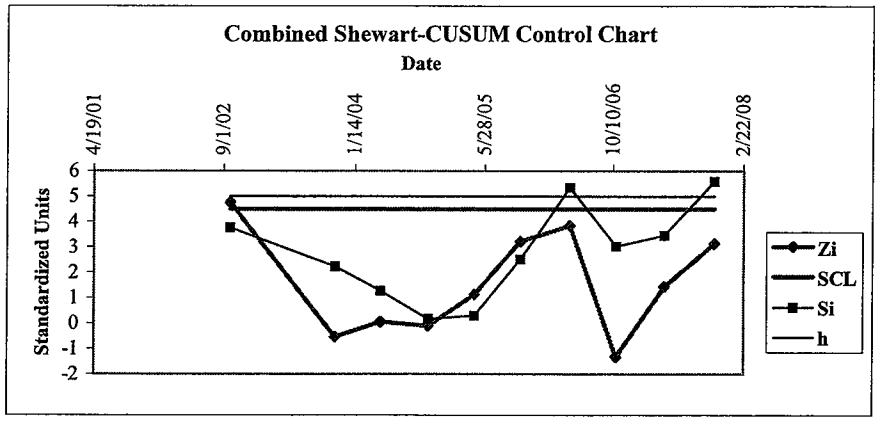
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	**200**	**4.7626846**	3.7626846	5	4.5
10/30/2003	28	-0.5394627	2.2232219	5	4.5
4/20/2004	47	0.0462397	1.2694616	5	4.5
10/21/2004	42	-0.1078925	0.161569	5	4.5
4/18/2005	82	1.125165	0.286734	5	4.5
10/13/2005	150	3.2213627	2.5080967	5	4.5
4/25/2006	**170**	3.8378915	**5.3459882**	5	4.5
10/20/2006	2.5	-1.3255368	3.0204514	5	4.5
4/25/2007	92	1.4334293	3.4538807	5	4.5
10/31/2007	**147**	3.1288834	**5.5827641**	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.
One, or both, of the control limits was exceeded. Therefore, there is statistically significant evidence of contamination in this well at the concentrations indicated above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J07-1957-03

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**

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

	X_i values =
560	95666305
81	-10141.45
110	397.8025
50	-145909.2
120	5226.8463
70	-34791.1
56	-101491.1
57	-95102.65
2.5	-1004370
5	-931013.7
17.6	-615110.8

X_{bar} = 102.64545
SD = 156.48962
N = 11
$1/N\Sigma_i(X_i-X_{bar})^3$ = 8430363.6
γ_1 = 2.5379244

Since the Coefficient of Skewness of 2.54 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	16.097406
4.3944492	0.206905
4.7004804	0.7229149
3.912023	0.0012962
4.7874917	0.9542177
4.2484952	0.0884207
4.0253517	0.0109944
4.0430513	0.0138343
0.9162907	-24.055
1.6094379	-10.55467
2.8678989	-0.817643

X_{bar} = 3.8029915
SD = 1.5111733
N = 11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -1.575575

$\gamma_1 =$ 0.5267266

Since the Coefficient of Skewness of 0.53 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

Compute the mean and standard deviation of the historical data:

4.8337223 = x_{mean} (Mean of N1-N4 historical data)

1.0476833 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

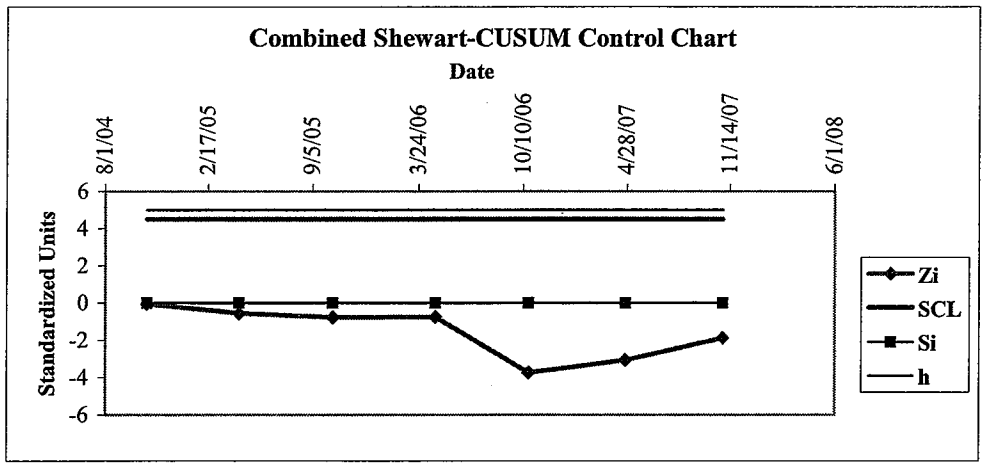
5 = h (constant, upper control limit for the CUSUM scheme)

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	4.7874917	-0.0441265	0	5	4.5
4/18/2005	4.2484952	-0.5585916	0	5	4.5
10/13/2005	4.0253517	-0.7715792	0	5	4.5
4/25/2006	4.0430513	-0.7546852	0	5	4.5
10/20/2006	0.9162907	-3.7391372	0	5	4.5
4/25/2007	1.6094379	-3.0775373	0	5	4.5
10/31/2007	2.8678989	-1.8763528	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 J07-1957-03

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
N_i	16	15	10	14	14	14	14	14	14	13	13	14	14	14	14	14	11	
sum of rank values (R_i)	2798.5	1373.0	969.5	1750.5	1019.0	1364.5	1016.5	1624.0	1959.5	1170.0	1126.0	2464.5	1182.0	2251.0	1900.0	868.0	2191.5	
avg rank value (Rbar)	174.9	91.5	97.0	125.0	72.8	97.5	72.6	116.0	140.0	90.0	86.6	176.0	84.4	160.8	135.7	62.0	199.2	

	Number of each rank value																Rank Value
rank value of NDs =	1	10	6	7	12	9	12	7	5	9	9	3	10	3	5	14	1	62
rank value of 2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	124
rank value of 2.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	125
rank value of 2.3s =	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	127
rank value of 2.6s =	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	130.5
rank value of 2.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	133
rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
rank value of 2.9s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	135
rank value of 3s =	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	136.5
rank value of 3.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	138
rank value of 3.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
rank value of 3.8s =	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	140.5
rank value of 4.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	142
rank value of 4.4s =	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	143.5
rank value of 4.6s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	145
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	146
rank value of 5.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	147
rank value of 5.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	148
rank value of 5.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	149
rank value of 5.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	150
rank value of 6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	151
rank value of 6.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	152
rank value of 6.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	153
rank value of 6.8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	154
rank value of 7.4s =	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	155.5
rank value of 8s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	157
rank value of 8.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	158.5
rank value of 9.6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	160
rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161
rank value of 11s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	162.5
rank value of 12s =	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	165.5
rank value of 13s =	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	169
rank value of 14s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	171
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	173.5
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175
rank value of 18s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176.5
rank value of 20s =	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	178.5
rank value of 22s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	180
rank value of 24s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	182.5
rank value of 26s =	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	185.5
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	188.5
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	190
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191
rank value of 29.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	192
rank value of 31s =	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	194

rank value of 35s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	196
rank value of 35.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	197
rank value of 38s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	198
rank value of 40s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	199
rank value of 40.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	200
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	201
rank value of 42.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	202
rank value of 44s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	203
rank value of 47s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	204
rank value of 47.4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	205
rank value of 63s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	206
rank value of 68s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	207
rank value of 69s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	208
rank value of 70s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	209
rank value of 71s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	210
rank value of 72s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	211
rank value of 75s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	212
rank value of 77s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	213
rank value of 82s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	214
rank value of 85s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	215
rank value of 88s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	216
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	217
rank value of 94s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	218
rank value of 96s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	219
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	220.5
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	222
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	223.5
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	225
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	226
rank value of 150s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	227.5
rank value of 220s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	229
rank value of 240s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	230
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	231
rank value of 450s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	232
n =	**16**	**15**	**10**	**14**	**14**	**14**	**14**	**14**	**14**	**13**	**13**	**14**	**14**	**14**	**14**	**14**	**11**	

Sum of rank value calculations

62	620	372	434	744	558	744	434	310	558	558	186	620	186	310	868	62
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	125	0	0	0	0	0	0
0	0	0	0	127	127	0	0	0	0	0	0	127	0	0	0	0
0	130.5	130.5	0	0	130.5	130.5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	133	0	0
0	0	134	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	135	0	0	0	0
0	0	0	0	0	0	0	136.5	136.5	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
0	0	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	140.5	0	0	140.5	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	0	0	0	0	0	143.5	0	143.5	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	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	0	148	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
0	0	0	0	0	0	0	0	0	0	0	0	0	150	0	0	0
0	151	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	0	0	0	0	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	154	0	0	0	0
0	0	0	0	0	0	0	0	155.5	0	155.5	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	157	0	0
0	158.5	0	0	0	0	0	0	0	0	0	0	0	0	158.5	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
162.5	0	0	0	0	0	0	0	0	0	0	0	0	162.5	0	0	0
331	0	0	165.5	0	0	0	0	0	0	0	0	0	0	165.5	0	0
0	0	0	0	0	169	0	338	0	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
172	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	347	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
353	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	178.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	180	0	0	0	0	0
181	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	182.5	0	0	182.5
185.5	0	0	0	0	0	0	185.5	0	185.5	0	0	0	0	0	0	185.5
0	0	0	0	0	0	0	188.5	0	0	0	0	0	188.5	0	0	0
0	0	0	0	0	0	0	0	190	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
192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
194	0	194	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	196	0	0	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	198	0	0	0	0	0	0	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	201	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	202	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	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	205
0	0	0	0	0	0	0	0	0	0	0	206	0	0	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
0	0	0	209	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	210
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	0	0	0	0	0	212	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	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
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	218	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	220.5	0	220.5	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	0	0	0	447	0	0	0	0	0
0	0	0	0	0	0	0	0	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	226
0	0	0	0	0	0	0	0	0	0	0	227.5	0	0	0	0	227.5
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	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	0	0	0	0	0	0	0	0	232
sum of rank values (R_i)	**2798.5**	**1373**	**969.5**	**1750.5**	**1019**	**1364.5**	**1016.5**	**1624**	**1959.5**	**1170**	**1126**	**2464.5**	**1182**	**2251**	**1900**	**868**	**2191.5**

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 =	644631.2	218875	74169	132990	73805	188384	274260	105300	97529	433840	99795	361929	257857	53816	436607

$N_{i\,bg}$ = 41
N = 232
H = 67.71

Adjust H for ties:

T_i = 2E+06 sum of T1..T6

$H' = H/(1-(T_i/(N^3-N)))$
H' = 79.57
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' =79.57.
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) =	125.0	72.8	97.5	72.6	116.0	140.0	90.0	86.6	176.0	84.4	160.8	135.7	62.0	199.2
avg Rbar (background) =	125.4	125.4	125.4	125.4	125.4	125.4	125.4	125.4	125.4	125.4	125.4	125.4	125.4	125.4
Dx =	-0.4	-52.6	-27.9	-52.8	-9.4	14.6	-35.4	-38.8	50.6	-41.0	35.4	10.3	-63.4	73.8
Cx =	48.4	48.4	48.4	48.4	48.4	48.4	49.8	49.8	48.4	48.4	48.4	48.4	48.4	53.1
Statistical Significance ?	-	-	-	-	-	-	-	-	**Yes**	-	-	-	-	**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 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 J07-1957-03

Compound:	**Total Copper**
NC MCL (µg/l):	1000
Method:	Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-8	MDL
4/24/2000	**22**	**5**
4/9/2001	**110**	**5**
4/15/2002	**120**	**2**
9/26/2002	**150**	**2**
4/28/2003	**94**	**2**
10/30/2003	**4**	**2**
4/20/2004	**100**	**2**
10/21/2004	**63**	**2**
4/18/2005	**120**	**2**
10/13/2005	**82**	**2**
4/25/2006	ND	**200**
10/20/2006	ND	**5**
4/25/2007	ND	**10**
10/31/2007	**40**	**5**

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

22	X_i values = -127806.5
110	53278.648
120	108044.5
150	467804.92
94	10117.74
4.4	-314035.8
100	21089.937
63	-823.0333
120	108044.5
82	892.65896
100	21089.937
2.5	-341113.5
5	-305792.8
40.3	-32987.92

X_{bar} = 72.371429
SD = 49.428245
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = -23728.33
γ_1 = 0.2195931

Since the Coefficient of Skewness of 0.22 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 = 3.0910425	X_i values = -0.275506
4.7004804	0.8812667
4.7874917	1.1436411
5.0106353	2.0430577
4.5432948	0.5149971
1.4816045	-11.5452
4.6051702	0.6437044
4.1431347	0.0646733
4.7874917	1.1436411
4.4067192	0.2940563
4.6051702	0.6437044
0.9162907	-22.55595
1.6094379	-9.69492
3.6963515	-9.35E-05

X_{bar} = 3.7417368
SD = 1.4010122

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -2.621352

$\gamma_1 =$ 1.0653116

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	**22**	5	22
4/9/2001	**110**	5	110
4/15/2002	**120**	2	120
9/26/2002	**150**	2	150
4/28/2003	**94**	2	94
10/30/2003	**4.4**	2	4.4
4/20/2004	**100**	2	100
10/21/2004	**63**	2	63
4/18/2005	**120**	2	120
10/13/2005	**82**	2	82
4/25/2006	ND	200	100
10/20/2006	ND	5	2.5
4/25/2007	ND	10	5
10/31/2007	**40.3**	5	40.3

Compute the mean and standard deviation of the historical data:

100.5 = x_{mean} (Mean of N1-N4 historical data)

55.024237 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

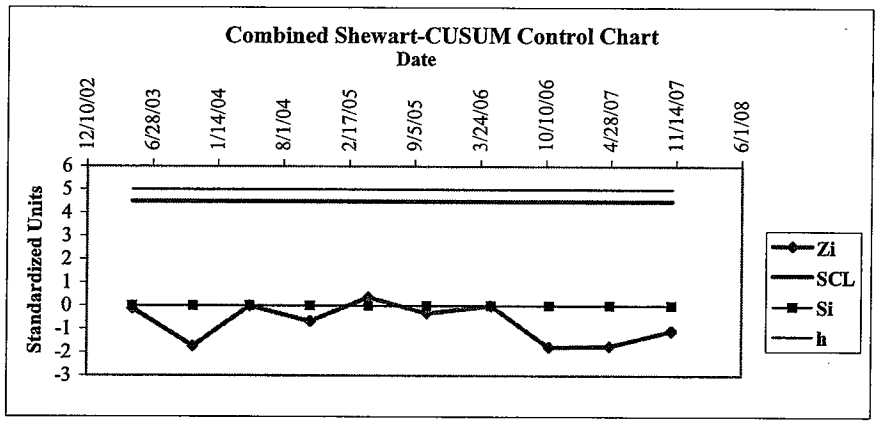
5 = h (constant, upper control limit for the CUSUM scheme)

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		
4/28/2003	94	-0.1181298	0	5	4.5
10/30/2003	4.4	-1.7465031	0	5	4.5
4/20/2004	100	-0.0090869	0	5	4.5
10/21/2004	63	-0.6815179	0	5	4.5
4/18/2005	120	0.3543893	0	5	4.5
10/13/2005	82	-0.3362155	0	5	4.5
4/25/2006	100	-0.0090869	0	5	4.5
10/20/2006	2.5	-1.7810333	0	5	4.5
4/25/2007	5	-1.7355988	0	5	4.5
10/31/2007	40.3	-1.0940633	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 J07-1957-03

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**

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

	450	X_i values = 35806478
	71	-120553.8
	150	25934.336
	89	-30959.14
	140	7529.536
	130	884.736
	96	-14526.78
	100	-8489.664
	25	-868250.7
	26	-841232.4
	47.4	-389017

X_{bar} =	120.4
SD =	117.37461
N =	11
$1/N\Sigma_i(X_i-X_{bar})^3$ =	3051618
γ_1=	2.1771916

Since the Coefficient of Skewness of 2.18 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 =	6.1092476	X_i values = 4.3935343
	4.2626799	-0.009094
	5.0106353	0.1567889
	4.4886364	5.114E-06
	4.9416424	0.1039784
	4.8675345	0.0621586
	4.5643482	0.0008028
	4.6051702	0.0023933
	3.2188758	-1.965019
	3.2580965	-1.786146
	3.8586222	-0.230105

X_{bar} =	4.4714081
SD =	0.8269331
N =	11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.0662998

$\gamma_1 =$ 0.1352664

Since the Coefficient of Skewness of 0.14 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

Compute the mean and standard deviation of the historical data:

4.9677998 = x_{mean} (Mean of N1-N4 historical data)

0.8229074 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

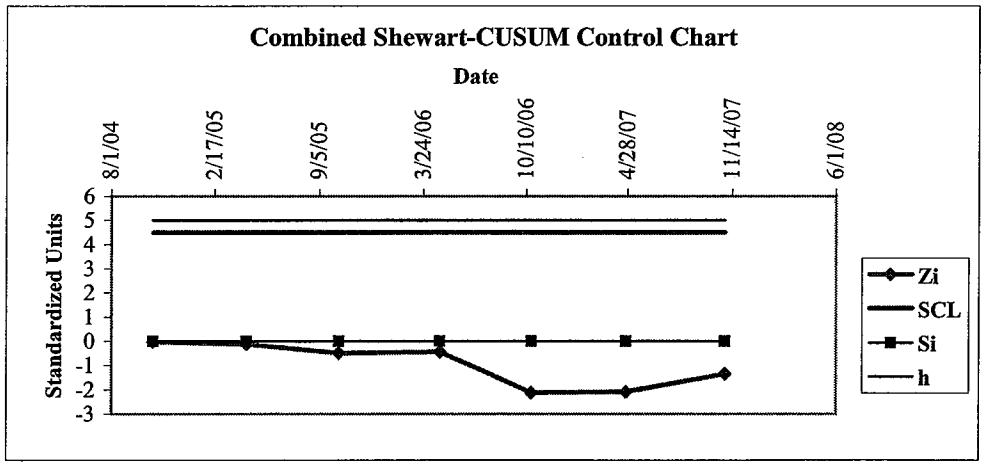
5 = h (constant, upper control limit for the CUSUM scheme)

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	4.9416424	-0.0317865	0	5	4.5
4/18/2005	4.8675345	-0.1218428	0	5	4.5
10/13/2005	4.5643482	-0.4902758	0	5	4.5
4/25/2006	4.6051702	-0.4406688	0	5	4.5
10/20/2006	3.2188758	-2.1252987	0	5	4.5
4/25/2007	3.2580965	-2.0776375	0	5	4.5
10/31/2007	3.8586222	-1.3478766	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 J07-1957-03

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**

N_i	16	15	10	14	14	14	14	14	15	13	13	14	14	15	14	15	11
sum of rank values (R_i)	2254.5	2045.5	1122.5	1407.0	1143.0	1212.0	1064.0	1159.5	2127.0	1331.5	1068.5	2196.0	1064.0	2796.5	1969.5	1249.0	2520.0
avg rank value (Rbar)	140.9	136.4	112.3	100.5	81.6	86.6	76.0	82.8	141.8	102.4	82.2	156.9	76.0	186.4	140.7	83.3	229.1

	Number of each rank value																	Rank Value
rank value of NDs =	6	6	6	11	13	13	14	13	7	10	12	4	14	2	6	14	0	76
rank value of 2.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	152
rank value of 5.2s =	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	153.5
rank value of 5.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	155
rank value of 5.6s =	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	156.5
rank value of 5.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158
rank value of 6.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	159
rank value of 6.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160
rank value of 7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161
rank value of 7.2s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	162.5
rank value of 7.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	164
rank value of 8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	165
rank value of 8.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166
rank value of 8.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167
rank value of 10s =	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	169
rank value of 11s =	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	171.5
rank value of 12s =	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	174
rank value of 12.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	176
rank value of 13s =	2	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	178.5
rank value of 14s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	181.5
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	183
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	184
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	185
rank value of 17.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	186
rank value of 18s =	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	188
rank value of 19s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	190
rank value of 20s =	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	192
rank value of 23.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	194
rank value of 24s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	195
rank value of 25s =	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	196.5
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	198
rank value of 27s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	199
rank value of 29s =	0	0	1	0	0	0	0	0	0	0	0	2	0	1	0	0	0	201.5
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	204
rank value of 32s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	205
rank value of 34s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	206
rank value of 35s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	207

rank value of 37s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	208
rank value of 39s =	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	210
rank value of 40s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	212
rank value of 43s =	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	213.5
rank value of 46.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	215
rank value of 53s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	216
rank value of 59s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	217
rank value of 62s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	218
rank value of 69s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	219
rank value of 73s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	220
rank value of 76s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	222
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	223
rank value of 96s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	224
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	225
rank value of 123s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	226
rank value of 150s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	227
rank value of 250s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	228
rank value of 290s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	229
rank value of 300s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	230.5
rank value of 380s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	232
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	233
rank value of 640s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	234
rank value of 740s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	235
n =	**16**	**15**	**10**	**14**	**14**	**14**	**14**	**14**	**15**	**13**	**13**	**14**	**14**	**15**	**14**	**15**	**11**	

Sum of rank value calculations

456	456	456	836	988	988	1064	988	532	760	912	304	1064	152	456	1064	0
0	0	0	0	0	0	0	0	0	0	0	152	0	0	0	0	0
0	0	307	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	156.5	0	0	0	0	0	0	0	0	156.5	0	0	0	0	0	0
0	0	158	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
0	160	0	0	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
325	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	164	0	0	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
167	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	169	0	0	0	0	169	0	0
0	0	0	0	0	0	0	171.5	0	0	0	0	0	171.5	0	0	0
0	174	0	0	0	0	0	0	174	0	0	0	0	0	174	0	0
0	0	0	0	0	0	0	0	0	0	0	176	0	0	0	0	0
357	0	0	0	0	0	0	0	178.5	0	0	0	0	0	178.5	0	0
181.5	0	0	0	0	0	0	0	0	0	0	0	0	181.5	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	0	0	0	0	184	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	185	0
186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	188	0	0	0	0	188	188	0	0
0	0	0	0	0	0	0	0	0	0	0	190	0	0	0	0	0
192	0	0	192	0	0	0	0	0	0	0	192	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	0	0	0	0	0	0	0	0	195	0	0	0	0	0
0	0	0	0	0	0	0	0	196.5	196.5	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	198	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	199	0	0	0
0	0	201.5	0	0	0	0	0	0	0	0	403	0	201.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	204	0	0	0
0	0	0	0	0	0	0	0	205	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
207	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	208	0	0
0	0	0	0	0	0	0	0	210	0	0	420	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	427	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	216	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	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	219

0	0	0	220	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	222	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	223
0	0	0	0	0	224	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	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	227	0	0	0	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	229
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	461
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	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	235
sum of rank values (R_i)	**2254.5**	**2045.5**	**1122.5**	**1407**	**1143**	**1212**	**1064**	**1159.5**	**2127**	**1331.5**	**1068.5**	**2196**	**1064**	**2796.5**	**1969.5**	**1249**	**2520**

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 =	717158.7	141404	93318	104925	80864	96031	301609	136376	87822	344458	80864	521361	277066	104000	577309

$N_{i\,bg}$ = 41
N = 235
H = 84.91

Adjust H for ties:

T_i = 3E+06 sum of T1..T5

$H' = H/(1-(T_i/(N^3-N)))$
H' = 115.57
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' =115.57.
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) =	100.5	81.6	86.6	76.0	82.8	141.8	102.4	82.2	156.9	76.0	186.4	140.7	83.3	229.1
avg Rbar (background) =	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3	132.3
Dx =	-31.8	-50.6	-45.7	-56.3	-49.4	9.5	-29.8	-50.1	24.6	-56.3	54.2	8.4	-49.0	96.8
Cx =	49.0	49.0	49.0	49.0	49.0	47.8	50.4	50.4	49.0	49.0	47.8	49.0	47.8	53.8
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	**Yes**	-	-	**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 J07-1957-03

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**

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

27	X_i values =	-989.3239
43		219.88015
26		-1318.078
14		-12110.41
81		85391.597
29		-505.1734
43		219.88015
18		-6820.394
40		27.975811
110		389588.24
5		-32658.41
30		-337.7767
5		-32658.41
46.5		867.08104

X_{bar} = 36.964286
SD = 28.700351
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = 27779.763
γ_1 = 1.3132395

Since the Coefficient of Skewness of 1.31 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 = 3.2958369	X_i values =	-1.52E-07
3.7612001		0.0973545
3.2580965		-7.99E-05
2.6390573		-0.290267
4.3944492		1.3067487
3.3672958		0.0002891
3.7612001		0.0973545
2.8903718		-0.069325
3.6888795		0.0582795
4.7004804		2.7399415
1.6094379		-4.841673
3.4011974		0.0010008
1.6094379		-4.841673
3.8394523		0.1559653

X_{bar} = 3.3011709
SD = 0.8928768

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.399006

$\gamma_1 =$ 0.6264435

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-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

Compute the mean and standard deviation of the historical data:

3.2385477 = x_{mean} (Mean of N1-N4 historical data)

0.4605136 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

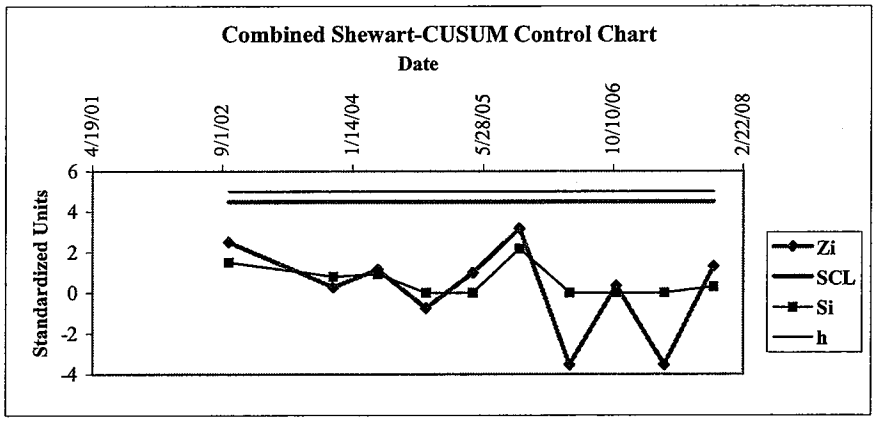
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	4.3944492	2.5100265	1.5100265	5	4.5
10/30/2003	3.3672958	0.279575	0.7896015	5	4.5
4/20/2004	3.7612001	1.1349336	0.9245351	5	4.5
10/21/2004	2.8903718	-0.75606	0	5	4.5
4/18/2005	3.6888795	0.9778901	0	5	4.5
10/13/2005	4.7004804	3.1745697	2.1745697	5	4.5
4/25/2006	1.6094379	-3.5375929	0	5	4.5
10/20/2006	3.4011974	0.3531919	0	5	4.5
4/25/2007	1.6094379	-3.5375929	0	5	4.5
10/31/2007	3.8394523	1.3048573	0.3048573	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 J07-1957-03

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**

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

740	X_i values =	69795738
300		-22599.72
640		30291753
250		-479547.2
430		1052718.4
380		138407.22
290		-56061.95
300		-22599.72
89		-13698708
69		-17428921
123		-8649555

X_{bar} =	328.27273
SD =	213.42872
N =	11
$1/N\Sigma_i(X_i-X_{bar})^3$ =	5538238.6
γ_1=	0.6572069

Since the Coefficient of Skewness of 0.66 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 = 6.6066502	X_i values =	1.1329194
5.7037825		0.0027211
6.4614682		0.7224457
5.5214609		-7.79E-05
6.0637852		0.124709
5.9401713		0.0531564
5.6698809		0.0011812
5.7037825		0.0027211
4.4886364		-1.24416
4.2341065		-2.352993
4.8121844		-0.425241

X_{bar} =	5.5641735
SD =	0.763296
N =	11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.180238

$\gamma_1 =$ 0.4675805

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

Compute the mean and standard deviation of the historical data:

482.5 = x_{mean} (Mean of N1-N4 historical data)

243.90914 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

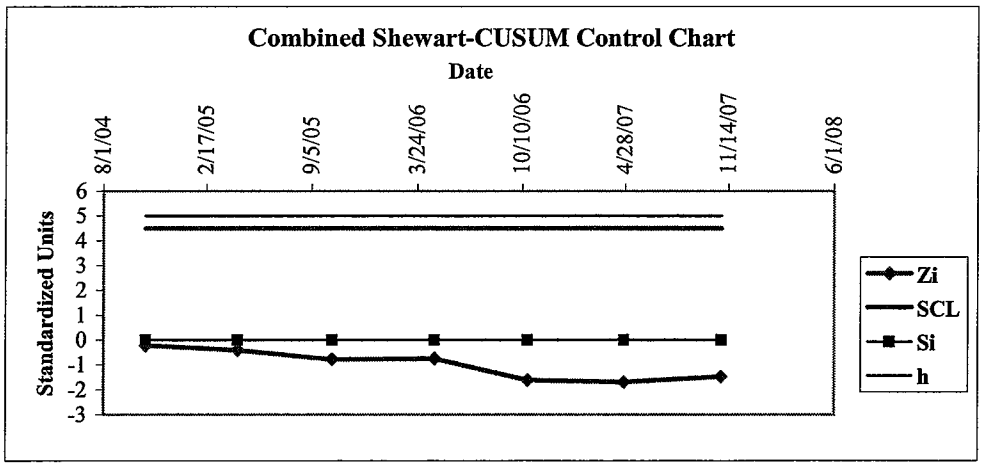
5 = h (constant, upper control limit for the CUSUM scheme)

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	430	-0.2152441	0	5	4.5
4/18/2005	380	-0.4202385	0	5	4.5
10/13/2005	290	-0.7892283	0	5	4.5
4/25/2006	300	-0.7482295	0	5	4.5
10/20/2006	89	-1.6133057	0	5	4.5
4/25/2007	69	-1.6953035	0	5	4.5
10/31/2007	123	-1.4739095	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 J07-1957-03

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
N_i	16	15	10	15	14	14	14	14	14	13	13	14	14	14	14	14	11	
sum of rank values (R_i)	2577.0	1284.5	1044.0	2422.0	1380.5	1129.5	1083.0	1664.0	1668.0	1012.5	1044.5	2180.5	1288.5	2474.5	1897.5	875.0	2235.5	
avg rank value (Rbar)	161.1	85.6	104.4	161.5	98.6	80.7	77.4	118.9	119.1	77.9	80.3	155.8	92.0	176.8	135.5	62.5	203.2	

	Number of each rank value																Rank Value
rank value of NDs =	3	11	6	3	8	12	11	6	7	11	10	4	9	3	5	14	1	62.5
rank value of 5.3s =	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	125.5
rank value of 5.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	127
rank value of 5.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	128.5
rank value of 5.6s =	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	130.5
rank value of 5.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	132
rank value of 6.1s =	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	133.5
rank value of 6.2s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	135
rank value of 6.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	136
rank value of 6.7s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	137
rank value of 6.8s =	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	138.5
rank value of 6.9s =	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	141
rank value of 7.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	143
rank value of 7.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144
rank value of 7.3s =	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	145.5
rank value of 7.7s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	147
rank value of 8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148
rank value of 8.3s =	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	149.5
rank value of 8.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	151.5
rank value of 8.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	153
rank value of 8.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	154
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	155
rank value of 9.6s =	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	156.5
rank value of 9.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158
rank value of 9.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	159
rank value of 12s =	1	0	0	0	1	0	0	1	0	0	0	0	1	0	1	0	0	162
rank value of 13s =	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	166
rank value of 13.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	168
rank value of 14s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	169
rank value of 15s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170.5
rank value of 16s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172.5
rank value of 17s =	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	174.5
rank value of 18s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	176
rank value of 19s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177
rank value of 20s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	178.5
rank value of 20.2s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	180
rank value of 22s =	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	182
rank value of 23s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	184
rank value of 24s =	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	186
rank value of 25s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	188
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	189
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	190.5
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	192
rank value of 29s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193.5
rank value of 30s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	195
rank value of 30.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	196
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	197

rank value of 34s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	198
rank value of 35s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	199
rank value of 36s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	200
rank value of 36.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	201
rank value of 40s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	202
rank value of 44s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	203
rank value of 46s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	204
rank value of 48s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	205
rank value of 49s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	206.5
rank value of 59s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	208.5
rank value of 61s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	210
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	211
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	212
rank value of 72s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	213
rank value of 73.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	214
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215
rank value of 76s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216
rank value of 78s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	217
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	218
rank value of 90s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	219
rank value of 97s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	220
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	221
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	222
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	223
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	225
rank value of 170s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	227
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	228
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	229
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	230
rank value of 400s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	231
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	232
rank value of 460s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	233
n =	16	15	10	15	14	14	14	14	14	13	13	14	14	14	14	14	11	

Sum of rank value calculations

187.5	687.5	375	187.5	500	750	687.5	375	437.5	687.5	625	250	562.5	187.5	312.5	875	62.5
0	0	0	0	125.5	0	0	0	125.5	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	0	0	0	0	0	128.5	0	0	0	0	0	0	0	128.5	0	0
0	0	0	0	0	0	0	0	0	0	130.5	0	130.5	0	0	0	0
0	0	0	0	0	0	132	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	133.5	0	0	0	133.5	0	0	0	0	0
0	0	0	0	0	0	135	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	136	0	0	0	0	0	0
0	0	0	0	0	0	0	0	137	0	0	0	0	0	0	0	0
0	138.5	0	0	138.5	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	141	141	0	0	0	0	0	0	0	141	0	0	0	0
0	0	0	0	0	0	0	0	0	143	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	0	0	145.5	0	0	0	0	0	0	0	145.5	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	147	0	0	0	0
0	0	148	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	149.5	0	0	149.5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	151.5	0	0	0	0	0	0	0	0	0	0	151.5	0	0
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	0	155	0	0	0	0	0	0	0	0	0
0	156.5	0	156.5	0	0	0	0	0	0	0	0	0	0	0	0	0
0	158	0	0	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
162	0	0	0	162	0	0	162	0	0	0	0	162	0	162	0	0
0	0	0	166	0	0	0	0	166	0	0	0	0	0	166	0	0
0	0	0	0	168	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	169	0	0
341	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	174.5	174.5	0	0	0	0	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
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	0	0	0	178.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	180	0	0	0	0	0
182	0	0	0	0	0	0	0	0	182	0	182	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	184	0	0	0
186	0	0	0	0	0	0	186	0	0	0	0	0	0	0	0	186
0	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	189	0	0	0	0	0
0	0	0	0	0	0	0	190.5	0	0	0	0	0	0	190.5	0	0
0	0	0	0	0	0	0	0	192	0	0	0	0	0	0	0	0
387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	196	0	0
0	0	197	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	198	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	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	0	0	0	202	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
0	0	0	0	0	0	0	0	0	0	0	204	0	0	0	0	0
0	0	0	0	0	0	0	0	205	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	206.5	0	206.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	208.5	0	0	208.5	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	0	211	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	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	0
215	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	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	0	0	218
0	0	0	219	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	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	0	0	0	222
0	0	0	0	0	0	0	0	0	0	0	0	0	223	0	0	0
0	0	0	225	0	0	0	0	0	0	0	0	0	225	0	0	225
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	228	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	230	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	0	0	0	0	0	0	0	0	0	0	232
0	0	0	233	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2577**	**1284.5**	**1044**	**2422**	**1380.5**	**1129.5**	**1083**	**1664**	**1668**	**1012.5**	**1044.5**	**2180.5**	**1288.5**	**2474.5**	**1897.5**	**875**	**2235.5**

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 ≈	586925.1	391072	136127	91126	83778	197778	198730	78858	83922	339613	118588	437368	257179	54688	454315

$N_{i\,bg}$ = 41
N = 233
H = 70.55

Adjust H for ties:

T_i ≈ 2E+06 sum of T1..T8

$H' = H/(1-(T_i/(N^3-N)))$
H' = 83.07
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' =83.07.
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) =	161.5	98.6	80.7	77.4	118.9	119.1	77.9	80.3	155.8	92.0	176.8	135.5	62.5	203.2
avg Rbar (background) =	119.6	119.6	119.6	119.6	119.6	119.6	119.6	119.6	119.6	119.6	119.6	119.6	119.6	119.6
Dx =	41.8	-21.0	-39.0	-42.3	-0.8	-0.5	-41.8	-39.3	36.1	-27.6	57.1	15.9	-57.1	83.6
Cx =	47.4	48.6	48.6	48.6	48.6	48.6	50.0	50.0	48.6	48.6	48.6	48.6	48.6	53.3
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	**Yes**	-	-	**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 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 J07-1957-03

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**

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

		X_i values =	
	97		33742.999
	120		169243.47
	49		-3859.339
	20		-89229.02
	180		1533378.4
	34		-28894.07
	36		-23604.62
	23		-72437.21
	61		-50.06855
	160		865912.47
	25		-62503.25
	2.5		-240476.1
	25		-62503.25
	73.1		595.73315

X_{bar} = 64.685714
SD = 55.005229
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = 144236.87
γ_1 = 0.9685931

Since the Coefficient of Skewness of 0.97 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 =	
	4.574711		0.5580152
	4.7874917		1.1121371
	3.8918203		0.0027671
	2.9957323		-0.431561
	5.1929569		2.9954993
	3.5263605		-0.011401
	3.5835189		-0.004734
	3.1354942		-0.233671
	4.1108739		0.0464405
	5.0751738		2.3195991
	3.2188758		-0.151039
	0.9162907		-22.78886
	3.2188758		-0.151039
	4.2918284		0.1578137

X_{bar} = 3.7514289
SD = 1.0974446

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -1.184288

$\gamma_1 =$ 1.0013516

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	**97**	5	97
10/29/2001	**120**	5	120
1/30/2002	**49**	5	49
4/15/2002	**20**	5	20
9/26/2002	**180**	5	180
10/30/2003	**34**	5	34
4/20/2004	**36**	5	36
10/21/2004	**23**	5	23
4/18/2005	**61**	5	61
10/13/2005	**160**	5	160
4/25/2006	ND	50	25
10/20/2006	ND	5	2.5
4/25/2007	ND	50	25
10/31/2007	**73.1**	5	73.1

Compute the mean and standard deviation of the historical data:

71.5 = x_{mean} (Mean of N1-N4 historical data)

45.317399 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

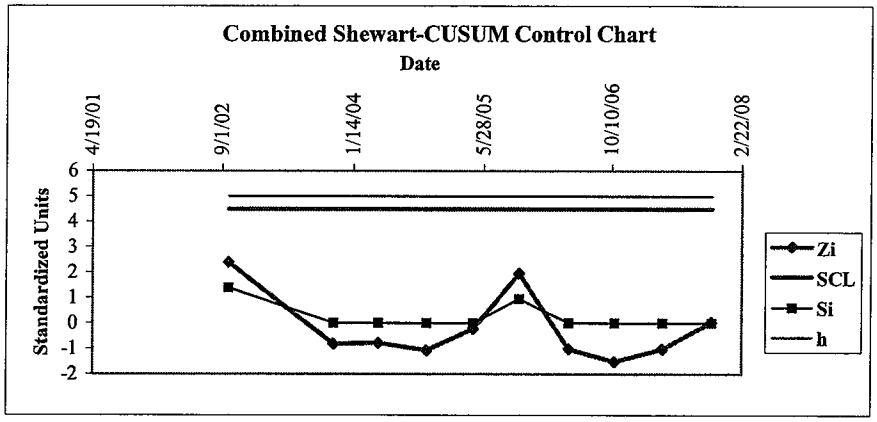
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	180	2.3942239	1.3942239	5	4.5
10/30/2003	34	-0.8274967	0	5	4.5
4/20/2004	36	-0.7833636	0	5	4.5
10/21/2004	23	-1.0702291	0	5	4.5
4/18/2005	61	-0.2316991	0	5	4.5
10/13/2005	160	1.9528923	0.9528923	5	4.5
4/25/2006	25	-1.026096	0	5	4.5
10/20/2006	2.5	-1.522594	0	5	4.5
4/25/2007	25	-1.026096	0	5	4.5
10/31/2007	73.1	0.0353065	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 J07-1957-03

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**

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

	X_i values =
430	27663175
70	-190741.3
190	243395.65
110	-5418.054
160	34126.872
170	76421.312
100	-20941.58
88	-61928.22
24	-1110764
25	-1078898
36.2	-762641

X_{bar} =	127.56364
SD =	115.65386
N =	11
$1/N\Sigma_i(X_i-X_{bar})^3$ =	2253253.4
γ_1 =	1.6804233

Since the Coefficient of Skewness of 1.68 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 =
6.0637852	3.7979988
4.2484952	-0.016596
5.2470241	0.4109275
4.7004804	0.0076351
5.0751738	0.1867622
5.1357984	0.2527117
4.6051702	0.0010488
4.4773368	-1.8E-05
3.1780538	-2.328915
3.2188758	-2.120302
3.5890591	-0.764829

X_{bar} =	4.5035684
SD =	0.8984458
N =	11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.052143

$\gamma_1 =$ 0.082949

Since the Coefficient of Skewness of 0.08 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

Compute the mean and standard deviation of the historical data:

5.0649462 = x_{mean} (Mean of N1-N4 historical data)

0.7810803 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

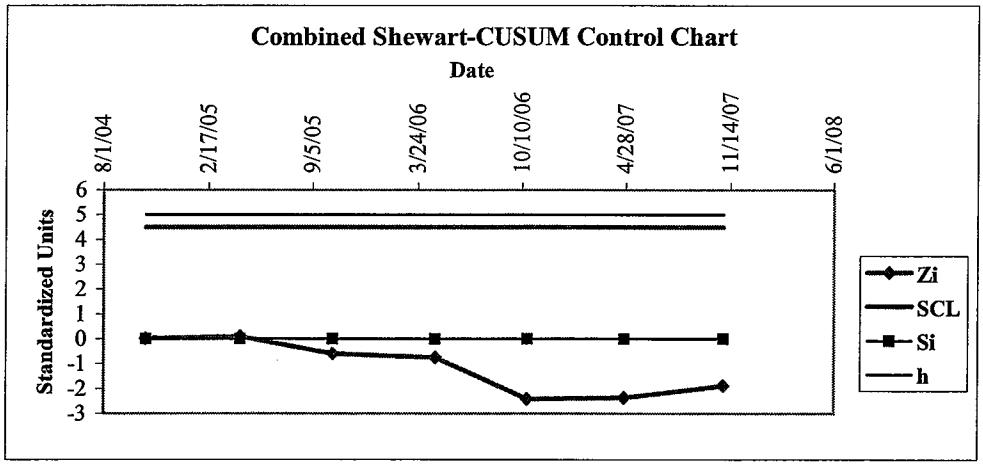
5 = h (constant, upper control limit for the CUSUM scheme)

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	0.01309416	0	5	4.5
4/18/2005	5.1357984	0.09071054	0	5	4.5
10/13/2005	4.6051702	-0.5886412	0	5	4.5
4/25/2006	4.4773368	-0.7523035	0	5	4.5
10/20/2006	3.1780538	-2.4157471	0	5	4.5
4/25/2007	3.2188758	-2.3634835	0	5	4.5
10/31/2007	3.5890591	-1.889546	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 J07-1957-03

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

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	

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 15.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 38$
$T_{n1} = 252$

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).

$k = 14$
$n = 38$
$T_{n1} = 252$
$t[37,.01] = 2.4332$
$c = 0.3684$
$T_{n2} = 70$
$T^*_k = 121.4$

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 J07-1957-03

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**

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) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 15.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 38$
$T_{n1} = 71.1$

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).

$k = 14$
$n = 38$
$T_{n1} = 71.1$
$t\,[37,.01] = 2.4332$
$c = 0.3684$
$T_{n2} = 35$
$T^*_k = 41.9$

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 J07-1957-03

Compound: **Total Silver**
MCL (µg/l): 17.5
Method: Wilcoxon Rank Sum
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-3	MDL
04/24/00	**3.7**	NS	NS	**6.9**	**2**
06/26/00	ND	ND	NS	NS	**2**
07/26/00	ND	ND	NS	NS	**2**
09/18/00	NS	NS	NS	NS	**10**
04/09/01	ND	ND	NS	ND	**2**
09/18/01	NS	NS	NS	NS	**2**
10/29/01	NS	NS	NS	NS	**2**
01/30/02	NS	NS	NS	NS	**2**
02/28/02	NS	NS	NS	NS	**10**
04/15/02	ND	ND	NS	ND	**2**
09/26/02	ND	ND	ND	ND	**2**
04/28/03	ND	ND	ND	ND	**2**
10/30/03	ND	ND	NT	ND	**2**
04/20/04	ND	ND	ND	ND	**2**
10/21/04	ND	ND	ND	ND	**2**
04/18/05	ND	ND	ND	ND	**2**
10/13/05	**2.9**	ND	ND	ND	**2**
04/25/06	ND	ND	ND	ND	**10**
10/20/06	ND	ND	ND	ND	**5**
04/25/07	ND	ND	ND	ND	**10**
10/31/07	ND	ND	ND	ND	**5**

1) Rank the N = 55 observations from the smallest to the largest from background wells and compliance well MW-3.

n =	14
m =	41
N =	55
Ci (MW-3) =	399.5

# samples =	16	15	10	14
sum of rank values (Ri) =	478.0	397.5	265.0	399.5
avg rank value (Rbar) =	29.9	26.5	26.5	28.5

	Number of each rank value				Rank Value
rank value of NDs =	14	15	10	13	26.5
rank value of 2.9s =	1	0	0	0	53
rank value of 3.7s =	1	0	0	0	54
rank value of 6.9s =	0	0	0	1	55
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
# samples =	**16**	**15**	**10**	**14**	

Sum of rank value calculations			
371	397.5	265	344.5
53	0	0	0
54	0	0	0
0	0	0	55
0	0	0	0
0	0	0	0
0	0	0	0
sum of rank values (R_i)	**478**	**397.5**	**265**	**399.5**

2) Compute the Wilcoxon statistic by adding up the compliance well ranks and subtracting n/(n+1)/2.

$W = Ci - 1/2(n(n+1))$

$W = 294.5$

3) Compute the expected value and standard deviation of W.

$E(W) = 1/2mn$

$SD(W) = ((mn(N+1)/12)*(1-\Sigma^{g}_{i=1} (t_i^3 - t_i)/(N^3 - N)))^{0.5}$

$E(W) = 287$

Adjustment for tie values:

Tie Values:	$(t_i^3 - t_i)/(N^3 - N) =$
ND	0.845
2.9	0.000
3.7	0.000
6.9	0.000
0	0.000
0	0.000
0	0.000

$SD(W) = 20.370$

4) Form the appropriate Z-score.

$Z = (W - E(W) - 0.5)/SD(W)$

$Z = 0.344$

5) Compare the observed Z-score to the upper 0.01 percentile of the normal distribution.

$Z = 0.344$

$Z_{0.01} = 2.326$

Since Z is smaller, there is not significant evidence of contamination at the compliance well at the 1 percent significance level.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J07-1957-03

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

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				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	

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 15.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 38$
$T_{n1} = 217.8$

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).

$k = 14$
$n = 38$
$T_{n1} = 217.8$
$t[37,.01] = 2.4332$
$c = 0.3684$
$T_{n2} = 62.55$
$T^*_k = 106.8$

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 J07-1957-03

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

N_i	16	15	10	14	14	14	14	14	14	14	13	13	14	14	15	14	15	11
sum of rank values (R_i)	2954.0	1027.5	810.0	2075.5	1439.0	1253.0	865.5	1247.5	1671.0	1264.0	1135.5	2592.5	905.5	2754.5	2355.5	1012.5	2132.0	
avg rank value (Rbar)	184.6	68.5	81.0	148.3	102.8	89.5	61.8	89.1	119.4	97.2	87.3	185.2	64.7	183.6	168.3	67.5	193.8	

	Number of each rank value																Rank Value
rank value of NDs =	0	12	7	3	6	9	13	9	5	8	7	2	12	2	1	13	0	55
rank value of 1.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110
rank value of 5.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	111
rank value of 5.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	112
rank value of 5.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	113
rank value of 5.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	114
rank value of 5.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	115
rank value of 6.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116
rank value of 6.4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	117
rank value of 6.6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	118
rank value of 6.8s =	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	119.5
rank value of 8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	121
rank value of 8.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	122
rank value of 8.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	123
rank value of 8.8s =	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	124.5
rank value of 8.9s =	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	126.5
rank value of 9.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	128
rank value of 9.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	129
rank value of 9.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130
rank value of 10s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	131
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	132
rank value of 12s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	133.5
rank value of 13s =	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	136
rank value of 14s =	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	138.5
rank value of 14.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	140
rank value of 16s =	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	141.5
rank value of 17s =	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	144
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	146
rank value of 19s =	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	147.5
rank value of 20s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	149
rank value of 21s =	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	150.5
rank value of 23s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	152
rank value of 24s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	153
rank value of 25s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	154
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	155
rank value of 28s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	156
rank value of 29s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	157
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	158
rank value of 32s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	159
rank value of 33s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	160.5
rank value of 37s =	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	163
rank value of 40s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	165
rank value of 41s =	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	166.5
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	168
rank value of 43s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169
rank value of 44s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	170.5
rank value of 45s =	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	172.5
rank value of 46s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	174
rank value of 48.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	175
rank value of 50s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	176
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	177.5

rank value of 55s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	179
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	180.5
rank value of 59s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	182
rank value of 69s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	183
rank value of 78s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	184
rank value of 79s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	185
rank value of 82s =	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	187.5
rank value of 83s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	190
rank value of 85s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	191.5
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	193
rank value of 89s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194.5
rank value of 92s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	196
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	197.5
rank value of 103s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	199
rank value of 110s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	200.5
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	202.5
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	204.5
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	206
rank value of 146s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	207
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	209
rank value of 170s =	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	212
rank value of 176s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	214
rank value of 200s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	215.5
rank value of 210s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	217.5
rank value of 230s =	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	219.5
rank value of 240s =	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	222
rank value of 250s =	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	224.5
rank value of 260s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	226
rank value of 300s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	227
rank value of 310s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	228.5
rank value of 330s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	230
rank value of 530s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	231
rank value of 640s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	232
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	233
rank value of 1000s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	234
n =	16	15	10	14	14	14	14	14	14	13	13	14	14	15	14	15	11	

Sum of rank value calculations

0	660	385	165	330	495	715	495	275	440	385	110	660	110	55	715	0
0	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	111	0	0	0	0	0	0	0	0
0	0	0	0	112	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	113	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	114	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	115	0	0	0	0	0	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	0	0	0	0	0	0	0	0	117	0
0	0	0	118	0	0	0	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
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	122	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	123	0	0	0	0	0	0	0
0	0	124.5	0	0	0	0	0	0	0	0	0	124.5	0	0	0	0
0	0	0	0	126.5	0	0	0	126.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	128	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	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	131	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	0	0	0	0	0	0	0	0	133.5	0	0	0	133.5	0	0
0	0	0	136	0	0	0	136	0	0	0	0	0	0	136	0	0
0	0	0	0	0	0	0	138.5	0	0	0	138.5	0	0	0	0	0
0	0	0	140	0	0	0	0	0	0	0	0	0	0	0	0	0
0	141.5	0	0	141.5	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	144	144	0	0	0	0	0	0
0	0	0	146	0	0	0	0	0	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	0	0	149	0	0	0	0	0	0	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	0	152	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	153	0	0	0	0	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	0	0	0	0	0	0	0	0	0	155
0	0	0	156	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	157	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	158
0	0	0	0	159	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	160.5	0	0	0	0	160.5	0	0
0	0	0	0	0	0	0	0	163	0	0	0	0	163	163	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	0	0	0
0	0	0	0	0	0	0	168	0	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	170.5	0	0	0	0	0	0	0	0	0	0	0	170.5	0	0
172.5	0	0	172.5	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	174	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175
0	0	0	0	0	0	0	0	176	0	0	0	0	0	0	0	0

177.5	0	0	0	0	0	0	0	0	0	0	0	0	0	177.5	0	0
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180.5	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	183	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	184	0	0	0	0	0
185	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	187.5	0	0	0	187.5	0	0	187.5
0	0	0	0	0	0	0	0	0	0	0	0	0	190	0	0	0
191.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191.5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193
389	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	0	0	0	0	0	0	0	0	0	197.5	197.5	0	0
0	0	0	0	0	0	0	0	0	0	0	199	0	0	0	0	0
200.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200.5
0	0	0	0	0	0	0	0	0	0	0	202.5	0	202.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	204.5	0	204.5
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	0	0	0	0	0	207	0	0
0	0	0	0	0	0	0	0	0	209	0	209	0	209	0	0	0
0	0	0	212	0	0	0	0	0	0	0	212	0	0	212	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	215.5	0	0	215.5
0	0	0	217.5	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	439	0	0	0	0	0
222	0	0	0	0	0	0	0	0	0	0	444	0	0	0	0	0
224.5	0	0	0	0	0	0	0	0	0	0	0	0	224.5	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	227	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	228.5	0	0	228.5	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	0	0	0	0	0	231	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	0	0	0	0	0	234
sum of rank values (R_i)	**2954**	**1027.5**	**810**	**2075.5**	**1439**	**1253**	**865.5**	**1247.5**	**1671**	**1264**	**1135.5**	**2592.5**	**905.5**	**2754.5**	**2355.5**	**1012.5**	**2132**

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 =	559962.7	307693	147909	112144	53506	111161	199446	122900	99182	480075	58566	505818	396313	68344	413220

$N_{i\,bg}$ = 41
N = 234
H = 88.51

Adjust H for ties:

T_i = 1E+06 sum of T1..T3

$H' = H/(1-(T_i/(N^3-N)))$
H' = 98.46
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' =98.46.
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) =	148.3	102.8	89.5	61.8	89.1	119.4	97.2	87.3	185.2	64.7	183.6	168.3	67.5	193.8
avg Rbar (background) =	116.9	116.9	116.9	116.9	116.9	116.9	116.9	116.9	116.9	116.9	116.9	116.9	116.9	116.9
Dx =	31.4	-14.1	-27.4	-55.0	-27.8	2.5	-19.6	-29.5	68.3	-52.2	66.8	51.4	-49.4	77.0
Cx =	48.8	48.8	48.8	48.8	48.8	48.8	50.2	50.2	48.8	48.8	47.6	48.8	47.6	53.6
Statistical Significance ?	-	-	-	-	-	-	-	-	Yes	-	Yes	Yes	-	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 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 J07-1957-03

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**

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

78	X_i values =	-456533
230		421875
260		1157625
310		3723875
230		421875
14		-2803221
240		614125
160		125
240		614125
170		3375
120		-42875
2.5		-3546578
12.5		-2893641
103		-140608

X_{bar} =	155
SD =	101.64096
N =	14
$1/N\Sigma_i(X_i-X_{bar})^3$ =	-209032.6
γ_1=	0.2224768

Since the Coefficient of Skewness of 0.22 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 = -0.003943
	5.4380793	0.7873242
	5.5606816	1.1444158
	5.7365723	1.824263
	5.4380793	0.7873242
	2.6390573	-6.598479
	5.4806389	0.9012839
	5.0751738	0.176071
	5.4806389	0.9012839
	5.1357984	0.2396078
	4.7874917	0.020302
	0.9162907	-46.59382
	2.5257286	-7.868274
	4.634729	0.0017297

X_{bar} =	4.5146906
SD =	1.4516477

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -3.877208

$\gamma_1 =$ 1.4164863

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

Compute the mean and standard deviation of the historical data:

219.5 = x_{mean} (Mean of N1-N4 historical data)

99.938314 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

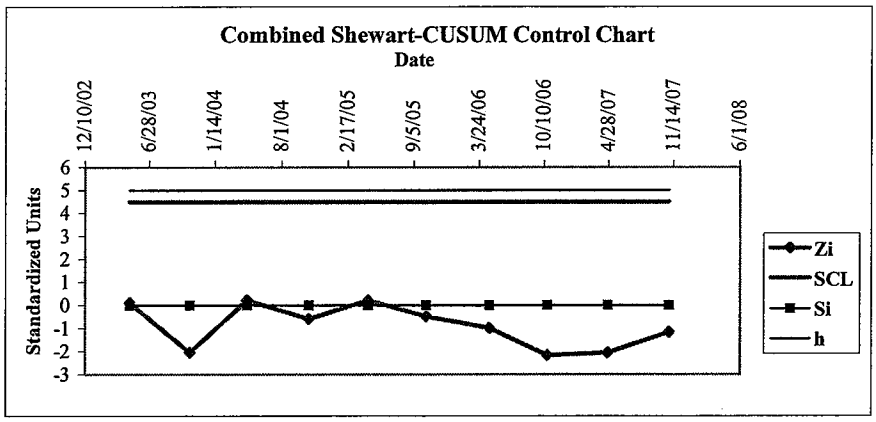
5 = h (constant, upper control limit for the CUSUM scheme)

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		
4/28/2003	230	0.1050648	0	5	4.5
10/30/2003	14	-2.0562684	0	5	4.5
4/20/2004	240	0.2051265	0	5	4.5
10/21/2004	160	-0.5953673	0	5	4.5
4/18/2005	240	0.2051265	0	5	4.5
10/13/2005	170	-0.4953055	0	5	4.5
4/25/2006	120	-0.9956142	0	5	4.5
10/20/2006	2.5	-2.1713394	0	5	4.5
4/25/2007	12.5	-2.0712777	0	5	4.5
10/31/2007	103	-1.1657191	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 J07-1957-03

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**

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

	X_i values =
160	1318.0778
250	1029208.4
83	-287963
37	-1406272
530	55290789
82	-301244.2
140	-737.7131
46	-1093864
100	-117906.4
330	5926231.6
20	-2148472
120	-24479.22
12.5	-2545299
176	19604.996

X_{bar} = 149.03571
SD = 141.30361
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3881493.9
γ_1 = 1.5375037

Since the Coefficient of Skewness of 1.54 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	0.130019
5.5214609	0.8652274
4.4188406	-0.003357
3.6109179	-0.878259
6.272877	4.9504409
4.4067192	-0.00424
4.9416424	0.0519256
3.8286414	-0.405106
4.6051702	4.903E-05
5.7990927	1.8632425
2.9957323	-3.890911
4.7874917	0.0104923
2.5257286	-8.525181
5.170484	0.2180743

X_{bar} = 4.5685695
SD = 1.0486061

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.401256

$\gamma_1 =$ 0.3889209

Since the Coefficient of Skewness of 0.39 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

Compute the mean and standard deviation of the historical data:

4.6565983 = x_{mean} (Mean of N1-N4 historical data)

0.831298 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

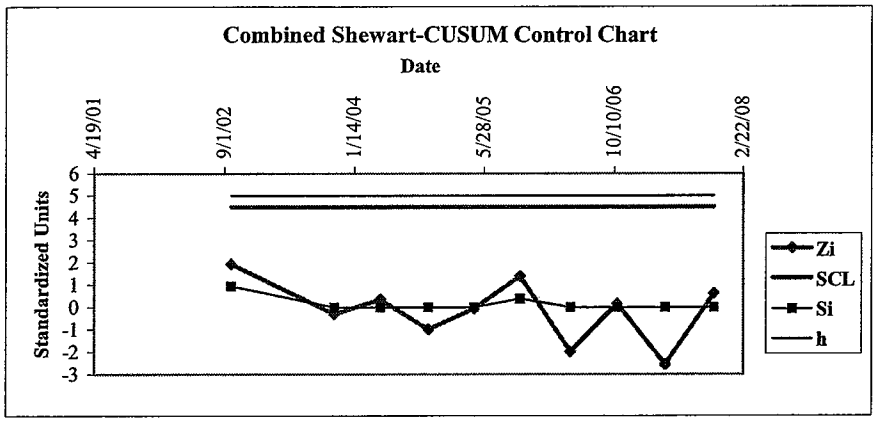
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	6.272877	1.9442832	0.9442832	5	4.5
10/30/2003	4.4067192	-0.300589	0	5	4.5
4/20/2004	4.9416424	0.3428904	0	5	4.5
10/21/2004	3.8286414	-0.9959809	0	5	4.5
4/18/2005	4.6051702	-0.0618649	0	5	4.5
10/13/2005	5.7990927	1.37435	0.37435	5	4.5
4/25/2006	2.9957323	-1.997919	0	5	4.5
10/20/2006	4.7874917	0.1574567	0	5	4.5
4/25/2007	2.5257286	-2.5633043	0	5	4.5
10/31/2007	5.170484	0.6181727	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 J07-1957-03

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**

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

170	X_i values =	712292.85
9.2		-365416.3
12		-324141.6
37		-83412.54
130		119875.25
13		-310190.5
33		-108482.6
59		-10208.23
44		-49402.01
310		12057374
54		-19018.89
100		7197.0419
12.5		-317114.9
146		278536.46

X_{bar} =	80.692857
SD =	84.763095
N =	14
$1/N\Sigma_i(X_i-X_{bar})^3$ =	827706.32
γ_1=	1.5189129

Since the Coefficient of Skewness of 1.52 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 =	5.1357984	X_i values = 2.0620902
	2.2192035	-4.441421
	2.4849066	-2.617034
	3.6109179	-0.016013
	4.8675345	1.0137502
	2.5649494	-2.18699
	3.4965076	-0.049215
	4.0775374	0.0098782
	3.7841896	-0.000489
	5.7365723	6.5770464
	3.988984	0.002001
	4.6051702	0.4088461
	2.5257286	-2.391285
	4.9836066	1.4073179

X_{bar} =	3.8629719
SD =	1.1192843

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.015823

$\gamma_1 =$ 0.0126105

Since the Coefficient of Skewness of 0.01 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

Compute the mean and standard deviation of the historical data:

3.3627066 = x_{mean} (Mean of N1-N4 historical data)

1.3271016 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

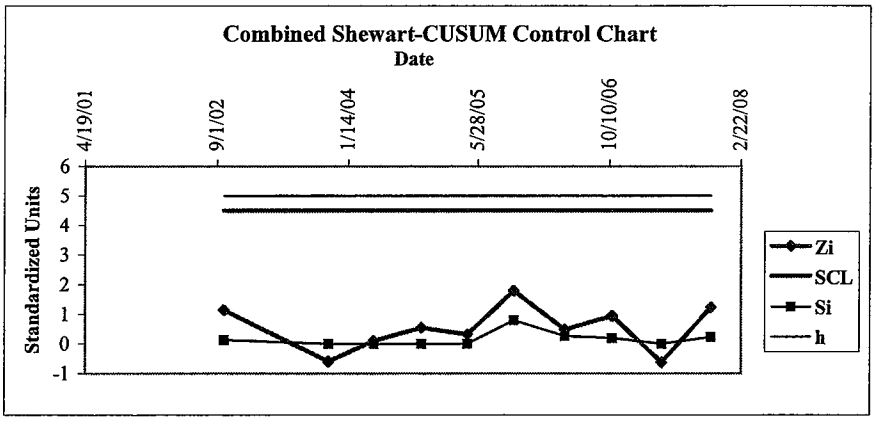
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	4.8675345	1.1339206	0.1339206	5	4.5
10/30/2003	2.5649494	-0.6011275	0	5	4.5
4/20/2004	3.4965076	0.1008219	0	5	4.5
10/21/2004	4.0775374	0.5386406	0	5	4.5
4/18/2005	3.7841896	0.3175967	0	5	4.5
10/13/2005	5.7365723	1.7887596	0.7887596	5	4.5
4/25/2006	3.988984	0.4719137	0.2606733	5	4.5
10/20/2006	4.6051702	0.9362234	0.1968968	5	4.5
4/25/2007	2.5257286	-0.6306812	0	5	4.5
10/31/2007	4.9836066	1.2213835	0.2213835	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 J07-1957-03

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**

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

1000	X_i values =	546030567
130		-145984.8
200		5218.6366
88		-848055.8
210		20448.217
110		-383520.3
82		-1019765
85		-931273.8
30		-3557371
26		-3844404
48.2		-2430673

X_{bar} =	182.65455
SD =	277.79538
N =	11
$1/N\Sigma_i(X_i-X_{bar})^3$ =	48445017
γ_1 =	2.6071324

Since the Coefficient of Skewness of 2.61 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 =	6.9077553	X_i values = 11.743172
	4.8675345	0.0126098
	5.2983174	0.2921464
	4.4773368	-0.003903
	5.3471075	0.3614459
	4.7004804	0.0002836
	4.4067192	-0.011861
	4.4426513	-0.007092
	3.4011974	-1.877165
	3.2580965	-2.609157
	3.875359	-0.43797

X_{bar} =	4.6347778
SD =	1.0139042
N =	11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.6784101

$\gamma_1 =$ 0.7509146

Since the Coefficient of Skewness of 0.75 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

Compute the mean and standard deviation of the historical data:

5.387736 = x_{mean} (Mean of N1-N4 historical data)

1.0673785 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

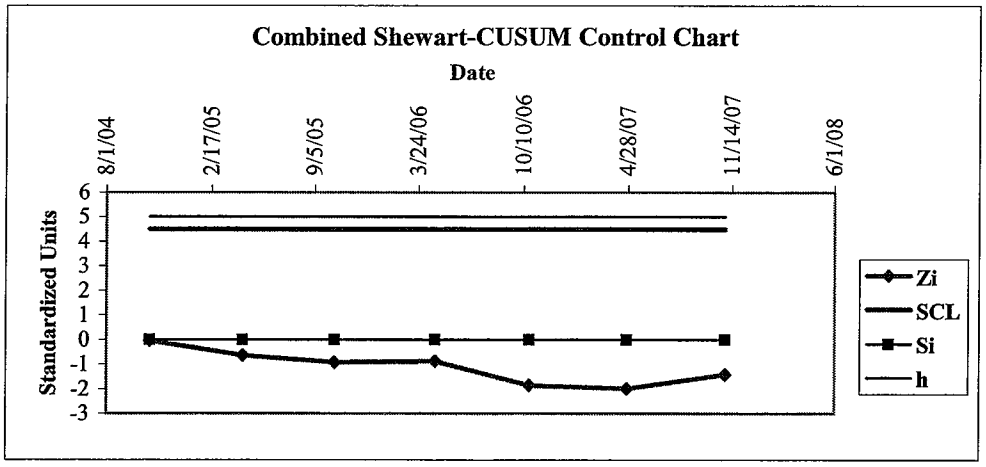
5 = h (constant, upper control limit for the CUSUM scheme)

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	5.3471075	-0.0380638	0	5	4.5
4/18/2005	4.7004804	-0.6438724	0	5	4.5
10/13/2005	4.4067192	-0.9190898	0	5	4.5
4/25/2006	4.4426513	-0.885426	0	5	4.5
10/20/2006	3.4011974	-1.8611379	0	5	4.5
4/25/2007	3.2580965	-1.9952055	0	5	4.5
10/31/2007	3.875359	-1.4169078	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 J07-1957-03

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-13S	MW-13D	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	66	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	280	43	510	110	15	4800	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	10	ND	ND	140	100	12	26	64	61	24	13	1800	10
04/20/04	55	10	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	70	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	56	ND	780	50
10/20/06	74	ND	20	37	ND	ND	ND	ND	55	NS	NS	ND	82	110	75	ND	200	10
04/25/07	55	21	30	30	22	830	22	15	10	39	21	12	74	37	20	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
N_i	16	15	10	14	14	14	14	14	14	13	13	14	14	15	14	15	11	
sum of rank values (R_i)	2719.0	1259.5	1023.0	1790.0	1095.0	1280.5	806.5	1033.5	1821.5	1127.0	940.5	2381.0	2169.5	2545.5	2110.0	918.5	2474.5	
avg rank value (Rbar)	169.9	84.0	102.3	127.9	78.2	91.5	57.6	73.8	130.1	86.7	72.3	170.1	155.0	169.7	150.7	61.2	225.0	

	Number of each rank value																Rank Value
rank value of NDs =	0	5	3	2	6	3	7	6	1	5	4	1	1	1	0	6	0	26
rank value of 3s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	52
rank value of 10s =	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	54.5
rank value of 11s =	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	2	0	59
rank value of 11.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	62
rank value of 12s =	0	1	1	1	0	0	2	1	0	1	1	1	0	0	0	1	0	67.5
rank value of 13s =	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	1	0	75
rank value of 14s =	0	1	0	1	0	1	1	0	1	0	1	0	0	0	0	1	0	81
rank value of 14.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	85
rank value of 15s =	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	0	88
rank value of 16s =	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	92
rank value of 17s =	0	0	0	2	0	0	1	0	0	1	0	0	0	0	1	0	0	96
rank value of 18s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	99
rank value of 19s =	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	100.5
rank value of 20s =	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	0	0	103.5
rank value of 21s =	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	106.5
rank value of 22s =	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	109
rank value of 23s =	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	111.5
rank value of 24s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	113.5
rank value of 25s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	115
rank value of 26s =	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	116.5
rank value of 27s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	118
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	119
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120
rank value of 30s =	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	122.5
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	126
rank value of 33s =	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	128.5
rank value of 33.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	130
rank value of 35s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	131
rank value of 36s =	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	133
rank value of 37s =	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	136.5
rank value of 37.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	139
rank value of 38s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	140.5
rank value of 39s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	142
rank value of 43s =	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	143.5
rank value of 44s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 48s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	146
rank value of 51s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	147
rank value of 52s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	148
rank value of 55s =	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	151
rank value of 56s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	154.5
rank value of 57s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156
rank value of 58s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	157
rank value of 61s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	158
rank value of 62s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	159
rank value of 64s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	160
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161
rank value of 66s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	162
rank value of 66.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	163
rank value of 66.9s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	164
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	165
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	166
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	167.5
rank value of 75s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	169.5
rank value of 79s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	171
rank value of 81s =	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	172.5

rank value of 82s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	174
rank value of 83s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175
rank value of 86s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176.5
rank value of 88s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178
rank value of 91.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	179
rank value of 92s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180
rank value of 96s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	181
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	182
rank value of 110s =	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1	0	0	184.5
rank value of 120s =	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	189
rank value of 130s =	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	193
rank value of 140s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	195
rank value of 148s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	196
rank value of 150s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	197
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	198.5
rank value of 169s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	200
rank value of 170s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	201
rank value of 180s =	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	202.5
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	204
rank value of 200s =	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2	207
rank value of 220s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	210.5
rank value of 230s =	2	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	213.5
rank value of 240s =	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	216.5
rank value of 250s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	218
rank value of 280s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	219.5
rank value of 330s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	221
rank value of 336s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	222
rank value of 510s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	223
rank value of 580s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	224
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	225
rank value of 780s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	226.5
rank value of 800s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	228.5
rank value of 830s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	230
rank value of 1200s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	231.5
rank value of 1800s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	233
rank value of 4800s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	234
n =	16	15	10	14	14	14	14	14	14	13	13	14	14	15	14	15	11	

Sum of rank value calculations

0	130	78	52	156	78	182	156	26	130	104	26	26	26	0	156	0
0	0	0	0	0	0	0	0	0	0	0	0	52	0	0	0	0
0	54.5	0	0	0	54.5	0	54.5	54.5	0	0	0	0	0	0	0	0
0	0	0	0	0	59	0	0	0	59	59	0	0	0	0	118	0
0	0	0	0	0	0	0	0	62	0	0	0	0	0	0	0	0
0	67.5	67.5	67.5	0	0	135	67.5	0	67.5	67.5	67.5	0	0	0	67.5	0
0	75	0	0	0	75	75	0	0	0	75	0	0	0	0	75	0
0	81	0	81	0	81	81	0	81	0	81	0	0	0	0	81	0
0	0	0	0	0	0	0	0	0	0	85	0	0	0	0	0	0
0	0	0	0	0	0	0	88	88	0	0	0	0	0	0	264	0
0	92	0	0	92	0	0	0	0	0	0	0	0	0	92	0	0
0	0	0	192	0	0	96	0	0	96	0	0	0	0	96	0	0
0	0	0	0	0	99	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	100.5	0	0	100.5	0	0	0	0	0	0	0	0	0
0	0	103.5	0	0	103.5	0	0	0	0	103.5	0	0	0	103.5	0	0
0	106.5	0	0	0	0	0	0	0	0	106.5	0	0	0	0	0	0
0	109	0	0	109	0	109	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	111.5	111.5	0	0	0	0	0	0	0
0	0	0	0	113.5	0	0	0	0	0	0	0	0	0	113.5	0	0
0	0	0	0	0	115	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	116.5	0	0	0	0	0	0	116.5	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	119	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
0	0	122.5	122.5	122.5	122.5	0	0	0	0	0	0	0	0	0	0	0
0	0	126	0	0	0	0	0	0	0	126	0	0	0	126	0	0
0	0	0	0	0	0	128.5	128.5	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	0	0	131	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	133	0	0	0	0	133	0	0	0	133	0	0
136.5	0	0	136.5	0	0	0	0	0	136.5	0	0	0	136.5	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	0	0	140.5	0	0	0	0	0	0	140.5	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	143.5	0	0	0	0	143.5	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	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	148	0	0	0	0
453	0	0	0	0	0	0	0	151	0	0	0	151	0	0	0	0
0	0	0	0	0	0	0	154.5	0	0	0	0	0	0	154.5	0	0
156	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	157	0
0	0	0	0	0	0	0	0	0	0	0	0	0	158	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	0	0	160	0	0	0	0
161	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
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	0	0	164	0	0	0	0
0	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	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0	0	167.5	0	0	0	0

0	0	0	0	0	0	0	0	169.5	0	0	0	0	0	169.5	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	172.5	0	0	0	172.5	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	174	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
353	0	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	179	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	0	0	0	0	0	0	0	0	181	0	0	0
0	0	0	0	0	0	0	0	0	182	0	0	0	0	0	0	0
0	0	184.5	0	0	0	0	0	184.5	0	0	0	0	184.5	184.5	0	0
0	189	0	0	0	0	0	0	189	0	0	189	189	189	0	0	0
193	193	0	0	0	0	0	0	0	0	0	0	0	193	0	0	0
0	0	0	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	196	0	0
197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	198.5	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	201	0	0	0	0	0
0	0	0	0	0	0	0	0	0	202.5	0	0	0	202.5	0	0	0
0	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	207	207	207	0	0	414
0	0	0	0	0	0	0	0	0	0	0	210.5	0	0	210.5	0	0
427	0	0	213.5	0	0	0	0	0	0	0	213.5	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	216.5	216.5	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	219.5	0	0	219.5	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	0	0	223	0	0	0
0	0	0	224	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	225
0	0	0	226.5	0	0	0	0	0	0	0	0	0	0	0	0	226.5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	457
0	0	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	463
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
sum of rank values (R_i)	**2719**	**1259.5**	**1023**	**1790**	**1095**	**1280.5**	**806.5**	**1033.5**	**1821.5**	**1127**	**940.5**	**2381**	**2169.5**	**2545.5**	**2110**	**918.5**	**2474.5**

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
Ri^2/N_i =	610122.0	228864	85645	117120	46460	76294	236990	97702	68042	404940	336195	431971	318007	56243	556650

$N_{i\ bg}$ = 41
N = 234
H = 96.14

Adjust H for ties:

T_i = 135372 sum of T1..T11

$H' = H/(1-(T_i/(N^3-N)))$
H' = 97.17
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' =97.17.
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) =	127.9	78.2	91.5	57.6	73.8	130.1	86.7	72.3	170.1	155.0	169.7	150.7	61.2	225.0
avg Rbar (background) =	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0
Dx =	5.9	-43.8	-30.5	-64.4	-48.2	8.1	-35.3	-49.6	48.1	33.0	47.7	28.7	-60.8	103.0
Cx =	48.8	48.8	48.8	48.8	48.8	48.8	50.2	50.2	48.8	48.8	47.6	48.8	47.6	53.6
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	Yes	-	-	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 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 J07-1957-03

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**

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

	X_i values =
130	-459.0787
200	241638.06
62	-434043.7
51	-652036.6
510	51597554
61	-451469.8
120	-5558.671
27	-1357097
96	-72586.26
330	7109532.8
25	-1431980
110	-21286.83
37	-1021582
169	30622.329

X_{bar} = 137.71429
SD = 135.17876
N = 14
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3823660.5
γ_1 = 1.7299398

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.

ln =	X_i values =
4.8675345	0.0325151
5.2983174	0.4218032
4.1271344	-0.074738
3.9318256	-0.234354
6.2344107	4.7930502
4.1108739	-0.083732
4.7874917	0.0136745
3.2958369	-1.964976
4.5643482	4.087E-06
5.7990927	1.9565618
3.2188758	-2.3499
4.7004804	0.0035202
3.6109179	-0.823822
5.1298987	0.1966691

X_{bar} = 4.5483599
SD = 0.8967572

$N =$ 14

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.134734

$\gamma_1 =$ 0.2087996

Since the Coefficient of Skewness of 0.21 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

Compute the mean and standard deviation of the historical data:

4.556203 = x_{mean} (Mean of N1-N4 historical data)

0.6381243 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

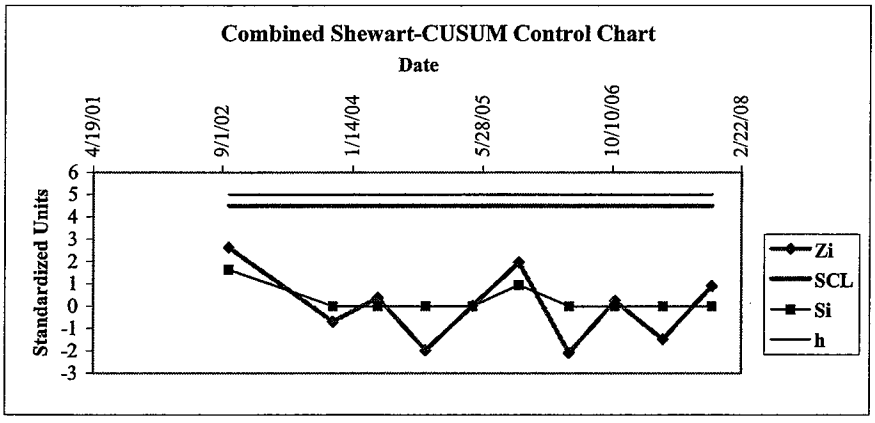
5 = h (constant, upper control limit for the CUSUM scheme)

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		
9/26/2002	6.2344107	2.6299072	1.6299072	5	4.5
10/30/2003	4.1108739	-0.697872	0	5	4.5
4/20/2004	4.7874917	0.362451	0	5	4.5
10/21/2004	3.2958369	-1.9751105	0	5	4.5
4/18/2005	4.5643482	0.0127643	0	5	4.5
10/13/2005	5.7990927	1.9477234	0.9477234	5	4.5
4/25/2006	3.2188758	-2.0957156	0	5	4.5
10/20/2006	4.7004804	0.2260961	0	5	4.5
4/25/2007	3.6109179	-1.4813493	0	5	4.5
10/31/2007	5.1298987	0.8990345	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 J07-1957-03

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**

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

	X_i values =
4800	4.777E+10
800	-51252733
1800	248319068
770	-64700724
1200	23260.063
1200	23260.063
800	-51252733
780	-59985188
200	-9.17E+08
200	-9.17E+08
336	-5.83E+08

X_{bar} = 1171.4545
SD = 1293.7864
N = 11
$1/N\Sigma_i(X_i-X_{bar})^3$ = 4.125E+09
γ_1 = 2.197682

Since the Coefficient of Skewness of 2.20 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 =
	8.4763712	6.0099437
	6.6846117	1.833E-05
	7.4955419	0.5869957
	6.6463905	-1.67E-06
	7.0900768	0.0805262
	7.0900768	0.0805262
	6.6846117	1.833E-05
	6.6592939	1.146E-09
	5.2983174	-2.515067
	5.2983174	-2.515067
	5.8171112	-0.595112

X_{bar} = 6.6582473
SD = 0.9374141
N = 11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.10298

$\gamma_1 =$ 0.1442273

Since the Coefficient of Skewness of 0.14 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

Compute the mean and standard deviation of the historical data:

7.3257288 = x_{mean} (Mean of N1-N4 historical data)

0.8612677 = s (Standard Deviation of N1-N4 historical data)

1 = k (constant, reference value)

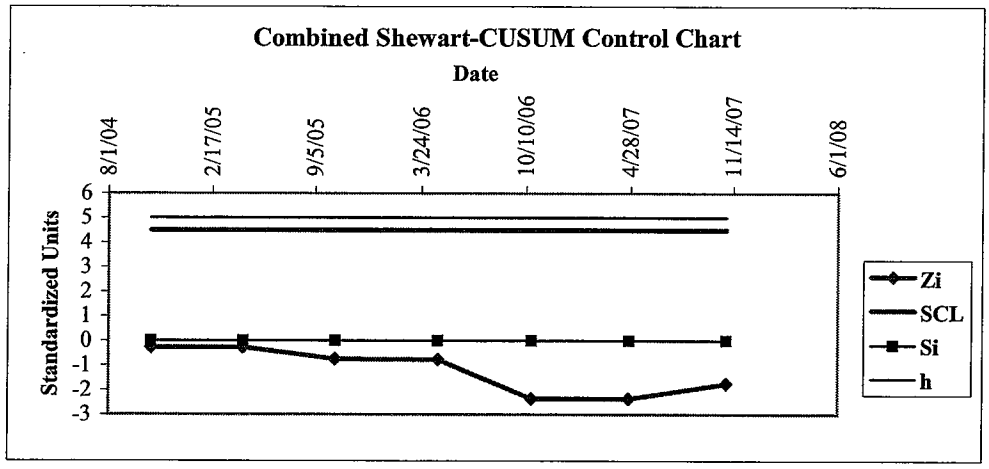
5 = h (constant, upper control limit for the CUSUM scheme)

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	7.0900768	-0.2736107	0	5	4.5
4/18/2005	7.0900768	-0.2736107	0	5	4.5
10/13/2005	6.6846117	-0.7443878	0	5	4.5
4/25/2006	6.6592939	-0.7737837	0	5	4.5
10/20/2006	5.2983174	-2.3539853	0	5	4.5
4/25/2007	5.2983174	-2.3539853	0	5	4.5
10/31/2007	5.8171112	-1.7516246	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 J07-1957-03

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**

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	

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 8.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 24$
$T_{n1} = 139$

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).

$k = 14$
$n = 24$
$T_{n1} = 139$
$t[23,.01] = 2.5$
$c = 0.5833$
$T_{n2} = 14$
$T^*_k = 111.3$

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.