B L E

BUNNELL-LAMMONS ENGINEERING, INC.

GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

REPORT OF GROUNDWATER QUALITY RESULTS & STATISTICAL ANALYSIS

SECOND SEMI-ANNUAL SAMPLING EVENT OF 2015

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

Prepared For:

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

Prepared By:

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

January 20, 2016

BLE Project Number J15-1957-50

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

January 20, 2016

Haywood County Solid Waste Management
278 Recycle Road
Clyde, North Carolina 28721

Attention: Mr. David B. Francis
Solid Waste and Tax Administrator

Subject: **Report of Groundwater Quality Results & Statistical Analysis**
Second Semi-Annual Sampling Event of 2015
White Oak Landfill
Permit Number: 44-07
Haywood County, North Carolina
BLE Project Number J15-1957-50

Dear Mr. Francis:

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 2015 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 geological 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, L.G.
Project Geologist
Licensed, North Carolina No. 2025

Mark S. Preddy, L.G.
Senior Geologist
Licensed, North Carolina No. 1043

cc: Mr. Ervin Lane – NC DEQ Solid Waste Section, 401 Oberlin Road, Suite 150, Raleigh, North Carolina 27605

6004 PONDERS COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE (864) 288-1265
FAX (864) 288-4430

PROJECT INFORMATION

The White Oak 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 off Interstate 40 (**Figure 1**). The Subtitle D lined MSW landfill has eleven groundwater monitoring wells consisting of two upgradient (MW-11S and MW-11D) and nine downgradient wells (MW-1A, MW-2, MW-2D, MW-3r, MW-3Dr, MW-4A, MW-8, MW-16, and MW-17). Monitoring wells MW-5A, MW-5D, MW-12, MW-13S, and MW-13D were abandoned in 2009 and monitoring wells MW-16 and MW-17 were installed in 2010 as related to the construction of Phase No. 3 at the facility. Additionally, there are four surface water sampling points (SW-1, SW-2, SW-3, and SW-5), and a leachate lagoon sampling point (LSP). 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 Santek Waste Services, Inc. to prepare the semi-annual sampling reports for 2015. Historical data from multiple sources and in multiple formats were gathered 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 2015).

This report presents data from the second semi-annual sampling event in 2015 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 and surface water samples were collected by personnel from Pace Analytical Services, Inc. (Pace) of Asheville, North Carolina on October 26 - 27, 2015. 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).

Water samples were collected from the monitoring wells, surface water points, and the LSP. The collected 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, turbidity, and temperature. A copy of the Pace laboratory and field data is included in **Appendix C**.

GROUNDWATER FLOW

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

Groundwater

Concentrations of total barium (thirteen wells), total cadmium (two wells), total chromium (two wells), total cobalt (three wells), total copper (four wells), total lead (one well) total nickel (seven wells), total vanadium (three wells), and total zinc (five wells) were detected in the groundwater monitoring wells during the current sampling event. Total barium (MW-2 and MW-2D), total cadmium (MW-16), and total chromium (MW-11S) were detected at concentrations above the North Carolina maximum contaminant level[1] (MCL). Additionally, no VOCs were detected during the sampling event.

Surface Water

Concentrations of total metals were detected in five of the six surface water samples and the LSP sample during the current sampling event. The detections included total antimony (LSP), total barium (five surface waters and the LSP), total chromium (LSP), total cobalt (one surface water and the LSP), total nickel (LSP), total vanadium (LSP) and total zinc (LSP). No VOCs were detected in the samples from the surface water locations. However, eight VOCs (acetone, benzene, carbon disulfide, ethylbenzene, 2-butanone, 4-methyl-2-pentanone, toluene, and total xylenes {M+P and O Xylenes}) were detected in the LSP sample. Additionally, phosphorus, nitrate, nitrite, sulfate, BOD, and COD were detected in the LSP sample. Only the laboratory detection of toluene in the LSP exceeded an established North Carolina established surface water MCL[2].

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 a guidance document for evaluating groundwater quality data titled *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance* (March 2009). The procedures and methodology used for data analysis of this project are consistent with this US EPA guidance document, and meet or exceed the performance criteria specified in the North Carolina solid waste management rules Title 15A NCAC 13B .1632(g-i). Four 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] North Carolina Department of Environment and Natural Resources (NCDENR), Classifications of Water Quality Standards, Section 15A NCAC 2L.202, December 1, 2005.

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

1. 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;

2. 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);

3. 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. Wilcoxon rank-sum tests were performed for those compounds that failed the initial Poisson Prediction Limits test; and

4. Intrawell comparisons were performed, if necessary, using Shewhart-CUSUM control charts or the Kendall-Mann Non-Parametric Trend Test.

It is important to note that the nature of the statistical procedures applied to the data frequently leads to false positives, which result in statistically significant increases (SSI). These false positives are inherent to the statistical procedures themselves and are a result of the insufficiency of the mathematical equations to represent the multiple factors affecting the groundwater quality variability at a given site. Furthermore, a clear distinction should be made between the terms "calculated SSI" and "validated SSI." A calculated SSI is the result of the application of mathematical equations to evaluate variability of water quality data over time by mathematical means. A validated SSI is determined when, based on a review of the data set as a whole, it can be concluded that the calculated statistical significance might be a function of a release of leachate to groundwater, and not a function of natural variability and/or other conditions.

SUMMARY OF STATISTICAL RESULTS

The statistical analysis was performed on constituents that have been historically detected and that were detected during the current sampling event. The statistical results summarized on **Table 3** and included in **Appendix D** indicate that:

1. The Poisson Prediction Limit and Wilcoxon tests performed for total antimony, total arsenic, total selenium, total silver, total thallium, acetone, carbon disulfide, chloroethane, iodomethane, dichloromethane, and 2-butanone did not calculate SSIs; and

2. The Kruskal-Wallis tests and Shewhart-CUSUM control charts did not calculate SSIs for total beryllium, total cadmium, total chromium, total cobalt, total copper, total lead, total vanadium, and total zinc; however, the tests calculated SSIs for total barium (MW-2 and MW-2D) and total nickel (MW-3Dr).

CONCLUSION

Concentrations of various total metals were detected in the groundwater monitoring wells and surface water sampling points during the current sampling event. Only the concentrations of total barium (MW-2 and MW-2D), total cadmium (MW-16), and total chromium (MW-11S), were detected at concentrations exceeding North Carolina MCLs. The remaining detected concentrations were either below North Carolina's promulgated MCLs, or MCLs have not been established for a particular constituent. Additionally, only total barium in wells MW-2 and MW-2D and total nickel in well MW-3Dr were calculated to be statistically significant; these metals are naturally occurring elements in the soil and bedrock throughout North Carolina and are not necessarily a derivative of landfill leachate.

In summary, the detected concentrations of total metals in the groundwater and surface water samples 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 sampling continue on a semi-annual basis for the *Appendix I* list of VOCs and total metals constituents.

TABLES

TABLE 1

GROUNDWATER MONITORING WELL CONSTRUCTION AND GROUNDWATER ELEVATION DATA
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

October 26, 2015														
Well	**Northing (feet)**	**Easting (feet)**	**Meas. Pt. Elevation**	**Gnd. Surface Elevation**	***Depth to Water (bgs)**	**Depth to Water (bmp)**	**Water Elevation**	**Total Borehole Depth (bgs)**	**Screen Depth (bgs)**	**Screen Elevation**	**Well Type**	**Well Monitors**	**Top of Rock Depth (bgs)**	**Top of Rock Elev.**
MW-1A	721,096.30	812,481.47	2,520.02	2,517.97	19.75	21.80	2,498.22	UK	10.4 - 25.4	2,507.6 - 2,492.6	UK	Deep Residuum	UK	UK
MW-2	721,460.76	812,309.44	2,496.71	2,494.43	28.40	30.68	2,466.03	UK	19.9 - 34.9	2,474.5 - 2,459.5	UK	Deep Residuum/PWR	UK	UK
MW-2D	721,456.01	812,311.87	2,496.89	2,494.69	28.40	30.60	2,466.29	UK	44.6 - 54.6	2,450.1 - 2,440.1	UK	Bedrock	36.9	2,457.8
MW-3r	721,943.38	812,063.70	2,462.61	2,459.53	30.37	33.45	2,429.16	41.5	26.3 - 41.3	2,433.2 - 2,418.2	II	Deep Residuum	NE	NE
MW-3Dr	721,940.67	812,082.82	2,461.89	2,458.42	34.03	37.50	2,424.39	65.0	49.8 - 64.8	2,408.6 - 2,393.6	IIIs	Bedrock	44.0	2,414.4
MW-4A	721,693.04	811,976.64	2,493.85	2,491.60	42.03	44.28	2,449.57	UK	80.6 - 95.6	2,411.0 - 2,396.0	UK	Bedrock	23.3	2,468.3
MW-8	721,704.50	812,155.03	2,477.33	2,474.84	28.56	31.05	2,446.28	UK	31.0 - 41.0	2,443.8 - 2,433.8	UK	Deep Residuum	UK	UK
MW-11S	719,905.88	811,642.89	2,674.58	UK	UK	81.15	2,593.43	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-11D	719,909.34	811,651.55	2,674.89	2,672.01	79.27	82.15	2,592.74	UK	118.0 - 127.6	2,554.0 - 2,544.4	UK	Bedrock	97.0	2,575.0
MW-14	UK	UK	2,711.69	UK	UK	101.30	2,610.39	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-15	UK	UK	2,547.41	UK	UK	9.69	2,537.72	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-16	721,821.98	811,660.70	2,519.35	2,516.07	32.01	35.29	2,484.06	41.0	25.8 - 40.8	2,490.3 - 2,475.3	II	Fill / Residuum	40.0	2,476.1
MW-17	721,783.47	811,219.93	2,542.55	2,539.13	53.54	56.96	2,485.59	63.0	43.0 - 58.0	2,496.1 - 2,481.1	II	Bedrock	40.0	2,499.1

Notes:
All survey data provided by McGill Associates, all units in feet. Data for MW-14 & MW-15 sourced from historical Municipal Engineering reports.
*DTW from bgs values have been calculated from survey data provided by McGill Associates.
All values shown to the nearest 0.1-ft have been rounded.
Water levels were measured on 10/26/15 by Pace Analytical.
MW-4A was lowered 4.59 feet by Haywood County. All bgs referenced depths for MW-4A have been adjusted accordingly on this table.

Measuring Point Elevation is top of casing.
II = Type II well
IIIs = Type III screened well
NE = Not encountered
UK = Unknown, information is not available

Prepared by: IAI
Checked by: DRM

TABLE 2

GROUNDWATER FLOW DATA
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

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	0.0753	0.114	0.28	102.48
MW-2	1.50E-04	2.95E-04	4.31E+00	0.0753	0.114	2.84	1,037.59
MW-4A	1.49E-04	2.93E-04	4.28E+00	0.1000	0.05	8.55	3,121.78
MW-8	1.50E-04	2.95E-04	4.31E+00	0.0753	0.114	2.84	1,037.59
MW-11S	2.40E-06	4.72E-06	6.89E-02	0.0836	0.114	0.05	18.43
MW-14	1.38E-05	2.72E-05	3.96E-01	0.0658	0.17	0.15	55.94
MW-15	2.10E-05	4.13E-05	6.03E-01	0.0658	0.17	0.23	85.13

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 26, 2015 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
8. NA = information not available

Prepared by: IAI
Checked by: DRM

TABLE 3

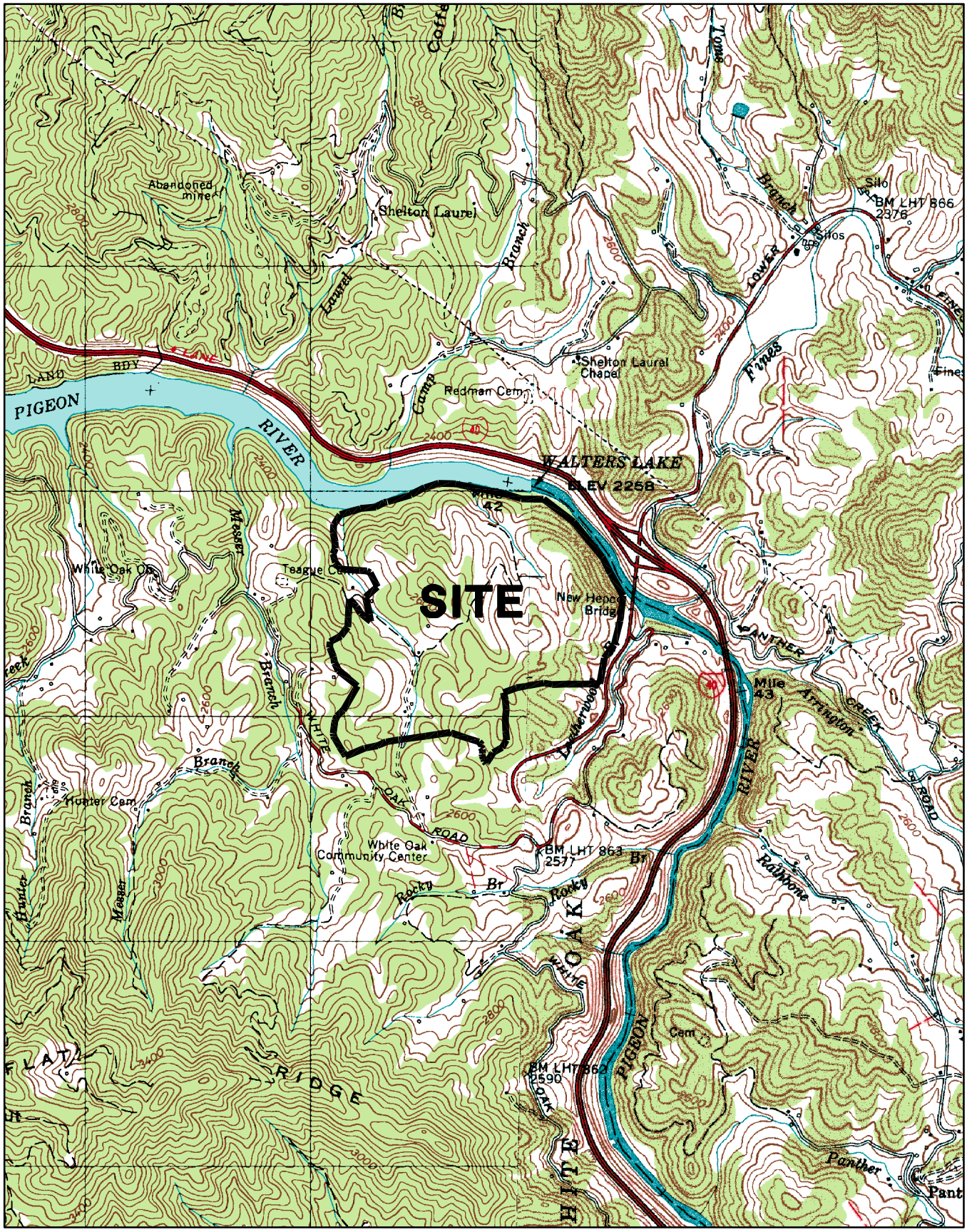
SUMMARY OF STATISTICAL ANALYSIS RESULTS
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Chemical/ Compound	Percent ND	Primary Statistical Test	Primary Pass/Fail	Secondary Statistical Test	Secondary Pass/Fail	SSI Calculated	SSI Validated as Leachate	SSI Concentration Above MCL During Current Event
Total Antimony	98%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Arsenic	92%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Barium	5%	Prediction Limits	Fail	Shewhart-CUSUM	Fail	MW-2, MW-2D (3)	No (3)	Yes (MW-2, MW-2D)
Total Beryllium	87%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Cadmium	87%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Chromium	58%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Cobalt	65%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Copper	63%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Lead	77%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Nickel	46%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Fail	MW-3Dr	No	No
Total Selenium	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Silver	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Thallium	94%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Vanadium	59%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Zinc	37%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Acetone	100%	Poisson Prediction Limits	Pass	-	-	-	-	-
Carbon Disulfide	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Chloroethane	100%	Poisson Prediction Limits	Pass	-	-	-	-	-
Iodomethane	100%	Poisson Prediction Limits	Pass	-	-	-	-	-
Dichloromethane	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
2-Butanone	100%	Poisson Prediction Limits	Pass	-	-	-	-	-

Notes:
1. MCL = *Maximum Contaminant Level*
2. SSI = *Statistically Significant Increase*
3. Total barium is a naturally occuring metal throughout much of North Carolina and is likely related to sample turbidity.

Prepared by: IAI
Checked by: DRM/MSP

FIGURES



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

DRAWN: ACE	DATE: 07-10-15	BLE INC. BUNNELL-LAMMONS ENGINEERING, INC. 6004 PONDERS COURT GREENVILLE, SOUTH CAROLINA 29615 PHONE: (864)288-1265 FAX: (864)288-4430	SITE LOCATION MAP WHITE OAK LANDFILL HAYWOOD COUNTY, NORTH CAROLINA	FIGURE 1
CHECKED: TJB	CAD: HCWOLF49-SLM			
APPROVED:	JOB NO: J15-1957-49			

NOTE:
WATER LEVELS WERE MEASURED ON OCTOBER 27, 2014 BY PACE ANALYTICAL.

LEGEND

- EXISTING GROUNDWATER MONITORING WELL
- EXISTING LANDFILL GAS MONITORING WELL
- SURFACE WATER SAMPLING LOCATION
- PROPOSED SURFACE WATER SAMPLING LOCATION FOR PHASE 4
- PROPOSED GROUNDWATER MONITORING WELL LOCATION FOR PHASE 4
- 2498.22 — GROUNDWATER ELEVATION (IN FEET)
- 2560 — GROUNDWATER ELEVATION CONTOUR CONTOUR INTERVAL = 20 FEET
- GROUNDWATER FLOW DIRECTION
- FENCE
- SURFACE WATER
- PHASE BOUNDARY OR WASTE UNITS
- PROPERTY LINE

REFERENCES:
DRAWING TITLED "ENVIRONMENTAL MONITORING PLAN AS-BUILT INFORMATION" (OCTOBER 2010) PROVIDED BY McGILL ASSOCIATES.
LOCATION OF AND SURVEY DATA FOR MW-14 AND MW-15 SOURCED FROM HISTORICAL REPORTS BY MUNICIPAL ENGINEERING.

REVISIONS		
No.	DESCRIPTION	BY

DRAWN:	ACE
CHECKED:	IAI
APPROVED:	TJB

DATE:	11-23-15
CAD FILE:	HCWOLF50-WTM102615
JOB NO:	J15-1957-50

BLE INC.

BUNNELL-LAMMONS ENGINEERING, INC.
8004 POINDEXTER COURT
GREENVILLE, SOUTH CAROLINA 29616
PHONE: (864)250-1265 FAX: (864)250-5430

GROUNDWATER ELEVATION CONTOUR MAP – OCTOBER 26, 2015
WHITE OAK 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 (4-24-2000)

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

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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.9**	**6.8**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**29**	**60**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	**14**	**14**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**300**	**67**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	**1.6**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**22**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**10**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**17**	**6**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	ND	**10**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**15**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Thallium (Tl)	µg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**40**	**6.3**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**37**	**12**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Acetone	µg/l	100	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Benzene	µg/l	5	1	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromoform	µg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroform	µg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromomethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Ethylbenzene	µg/l	5	29	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Hexanone	µg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Iodomethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Styrene	µg/l	10	100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Toluene	µg/l	5	1000	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Xylene	µg/l	5	530	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**330**	**30**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	**1.1**	**3.2**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**29**	**20**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**9.9**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**12**	**6.1**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**16**	**9.7**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Thallium (Tl)	µg/l	2	NE	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**45**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**65**	**66**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Acetone	µg/l	100	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Benzene	µg/l	5	1	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromoform	µg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroform	µg/l	5	0.19	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromomethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Ethylbenzene	µg/l	5	29	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Hexanone	µg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Iodomethane	µg/l	10	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Styrene	µg/l	10	100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Toluene	µg/l	5	1000	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Xylene	µg/l	5	530	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	**330**	**92**	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	**8.8**	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	ND
Acetone	µg/l	100	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Benzene	µg/l	5	1	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Styrene	µg/l	10	100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Toluene	µg/l	5	1000	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	NT
Xylene	µg/l	5	530	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.9**	**7.3**	NS	**6.4**	**6**	**6.3**	**6**	**6.1**	**8.2**	**5.8**	NS	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**20**	**60**	NS	**75**	**75**	**68**	**130**	**90**	**110**	**125**	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15**	**15**	NS	**13**	**15**	**15**	**14**	**15**	**15**	**15**	NS	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**1300**	**380**	NS	**180**	**330**	**120**	**80**	**290**	**360**	**970**	NS	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	**2.3**	**7**	NS	ND	ND	ND	ND	ND	**2.4**	**4.8**	NS	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	**130**	**2**	NS	ND	ND	ND	**1.7**	**1.8**	**2.7**	**19**	NS	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**130**	ND	NS	**11**	**8.4**	ND	ND	**20**	**27**	**160**	NS	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**54**	ND	NS	ND	ND	ND	**13**	**12**	**13**	**59**	NS	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**77**	**8.4**	NS	ND	ND	**5.4**	ND	**26**	**38**	**110**	NS	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	ND	**59**	NS	ND	ND	ND	ND	ND	**18**	**2.5**	NS	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**76**	**7.2**	NS	**9.6**	**5.3**	ND	ND	**18**	**28**	**6.1**	NS	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Thallium (Tl)	µg/l	2	NE	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**250**	**1.4**	NS	**13**	**19**	**9.3**	ND	**24**	**41**	**230**	NS	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**230**	**130**	NS	**12**	**24**	**18**	**17**	**33**	**75**	**200**	NS	NP	NP	**24**
Acetone	µg/l	100	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Benzene	µg/l	5	1	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromoform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Ethylbenzene	µg/l	5	29	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Hexanone	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Iodomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Styrene	µg/l	10	100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Toluene	µg/l	5	1000	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Xylene	µg/l	5	530	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

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

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

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

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

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

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Arsenic (As)	µg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Barium (Ba)	µg/l	500	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Copper (Cu)	µg/l	200	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Silver (Ag)	µg/l	10	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Thallium (Tl)	µg/l	20	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Total Zinc (Zn)	µg/l	50	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	ND
Acetone	µg/l	100	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Benzene	µg/l	5	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromoform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloroform	µg/l	5	0.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dibromomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Ethylbenzene	µg/l	5	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Hexanone	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Iodomethane	µg/l	10	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Styrene	µg/l	10	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Toluene	µg/l	5	1000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	NT
Xylene	µg/l	5	530	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**6.01**	NS	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**21**	**42**	NS	**75**	**82**	**84**	**101**	**93**	**94**	**125**	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15.9**	**17.4**	NS	**15.3**	**15.7**	**16.8**	**16.2**	**13.2**	**16.3**	**17.3**	NS	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Total Antimony (Sb)	µg/l	10	NE	**15.0**	ND	NS	ND	ND	ND	NT	ND	ND	**11**	NS	NP	NP	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	ND	ND	ND	NT	ND	ND	ND	NS	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**1300**	**41**	NS	ND	ND	**160**	**23**	**190**	**460**	**1400**	NS	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	**2.1**	ND	NS	ND	ND	ND	ND	ND	**2.5**	**4.5**	NS	NP	NP	ND
Total Cadmium (Cd)	µg/l	10	5	**13**	ND	NS	ND	ND	ND	**4**	ND	**5.5**	**19**	NS	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**170**	ND	NS	ND	ND	**5.7**	**7**	**10**	**56**	**180**	NS	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**58**	ND	NS	ND	ND	ND	**18**	**8.2**	**21**	**82**	NS	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**69**	ND	NS	ND	ND	ND	ND	**13**	**68**	**120**	NS	NP	NP	**150**
Total Lead (Pb)	µg/l	10	15	**13**	ND	NS	ND	ND	ND	ND	ND	**13**	**29**	NS	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**74**	ND	NS	ND	ND	ND	**6.2**	**9.2**	**44**	**68**	NS	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Thallium (Tl)	µg/l	2	NE	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**240**	ND	NS	ND	ND	**11**	**21**	**14**	**69**	**260**	NS	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**230**	**16**	NS	ND	ND	**13**	**33**	**38**	**120**	**230**	NS	NP	NP	**15**
Acetone	µg/l	100	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Benzene	µg/l	5	1	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromoform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Ethylbenzene	µg/l	5	29	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Hexanone	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Iodomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Styrene	µg/l	10	100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Toluene	µg/l	5	1000	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Xylene	µg/l	5	530	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**6.37**	**6.65**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**22**	**59**	**52**	**71**	**85**	**82**	**117**	**101**	**92**	**130**	**97**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15.1**	**13.5**	**13.7**	**13.5**	**13.9**	**14**	**15.8**	**14.6**	**15.1**	**17.7**	**16.6**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	ND	**12**	ND	ND	ND	ND	ND	ND	**98**	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	**5.7**	ND	ND	ND	ND	ND	ND	**27**	ND	**68**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**330**	**500**	**750**	**4200**	**120**	**230**	**93**	**410**	**910**	**1400**	**11000**	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	ND	**7**	**2.1**	**5.1**	ND	ND	ND	ND	**8.5**	**4.7**	**95**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	**4.2**	**21**	ND	**10**	ND	**2.3**	**4.2**	**19**	**180**	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**33**	**5.4**	**33**	**510**	ND	**5.2**	ND	**37**	**36**	**230**	**770**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**13**	**5.4**	**16**	**100**	ND	**16**	**7.4**	**21**	**19**	**85**	**560**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**20**	**10**	**31**	**220**	ND	ND	**2.6**	**42**	**88**	**150**	**450**	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	ND	**76**	**29**	ND	ND	ND	ND	ND	**150**	**20**	**740**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**16**	**6.8**	**31**	**400**	ND	ND	ND	**27**	**40**	**78**	**430**	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**65**	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**58**	**16**	**44**	**640**	ND	ND	ND	**42**	**50**	**310**	**1000**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**57**	**120**	**110**	**580**	ND	**20**	ND	**56**	**250**	**280**	**4800**	NP	NP	**2000**
Acetone	µg/l	100	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Benzene	µg/l	5	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromoform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Styrene	µg/l	10	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Toluene	µg/l	5	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Xylene	µg/l	5	530	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**5.85**	**6.75**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**29**	**43**	**55**	**91**	**110**	**99**	**150**	**114**	**100**	**138**	**125**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**16.7**	**15.9**	**15.6**	**15.6**	**16.3**	**15.3**	**13.5**	**14.2**	**17.7**	**14.9**	**18.4**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**600**	**66**	**220**	**1800**	**160**	**140**	**110**	**92**	**360**	**800**	**2800**	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	**2**	**2.2**	**20**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	**3.6**	ND	ND	**6**	ND	ND	ND	ND	**2.9**	**16**	**20**	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	**89**	ND	ND	ND	ND	ND	**110**	**27**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**21**	ND	ND	**37**	ND	ND	**6.9**	ND	**17**	**50**	**81**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**24**	ND	**2.6**	**40**	ND	ND	ND	ND	**28**	**94**	**71**	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	ND	ND	ND	ND	ND	ND	ND	ND	**25**	ND	**300**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	ND	ND	ND	**90**	ND	ND	ND	ND	ND	**26**	**70**	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	1	NE	ND	ND	ND	**1.6**	ND	ND	ND	ND	**1.4**	ND	**15**	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**89**	ND	**9.6**	**170**	**6.8**	**6.8**	ND	ND	**37**	**230**	**130**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**86**	**14**	**31**	**160**	**16**	ND	ND	ND	**81**	**190**	**800**	NP	NP	ND
Acetone	µg/l	100	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Benzene	µg/l	5	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromoform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Styrene	µg/l	10	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Toluene	µg/l	5	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Xylene	µg/l	5	530	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**6.18**	**6.46**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**29**	**39**	**58**	**82**	**119**	**110**	**140**	**115**	**105**	**149**	**120**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15**	**15.1**	**14.9**	**15.8**	**15.9**	**16.7**	**15**	**14**	**17.5**	**16.3**	**16**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	NT	ND	ND	ND	ND	ND	ND	**5.3**	**81**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**320**	**100**	NT	**210**	**310**	**130**	**95**	**110**	**1200**	**270**	**4900**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	NT	ND	ND	ND	ND	ND	**2.4**	ND	**33**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	**30**	ND	NT	ND	**6.2**	ND	ND	ND	**31**	**4.6**	**140**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**9**	ND	NT	ND	ND	ND	**5.7**	ND	**52**	**8.8**	**110**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**18**	ND	NT	ND	**2.3**	**2.6**	ND	**3**	**85**	**4.4**	**150**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**8.7**	**12**	NT	ND	ND	ND	ND	ND	**39**	**7.4**	**640**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**19**	ND	NT	**6.9**	**6.9**	ND	ND	ND	**48**	ND	**190**	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**54**	ND	NT	**6.6**	**16**	ND	ND	ND	**92**	**14**	**200**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**55**	**22**	NT	**17**	**26**	**10**	ND	ND	**140**	**26**	**1800**	NP	NP	ND
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**5.17**	**6.83**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**25**	**31**	**40**	**67**	**135**	**120**	**115**	**100**	**100**	**115**	**70**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15.8**	**15.6**	**15.5**	**13.5**	**14.6**	**14.4**	**13.5**	**14.1**	**15.3**	**14.9**	**13.8**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**	**30**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**320**	**56**	**120**	**410**	**460**	**170**	**140**	**210**	**62**	**940**	**2000**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.8**	**8.9**	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	**33**	ND	**2.1**	**45**	**13**	ND	ND	**11**	**3.5**	**190**	**68**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**9.5**	ND	ND	**7.7**	**5.2**	ND	**13**	**6.4**	ND	**43**	**50**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**18**	ND	**2.8**	**12**	**5.3**	**2.3**	**4.3**	**13**	**7.4**	**100**	**89**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**7.2**	**7**	**5.2**	**6.4**	**5.4**	ND	ND	ND	**12**	**39**	**250**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**20**	ND	ND	**30**	**7.3**	ND	ND	**12**	**5.3**	**49**	**110**	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	**5**	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**55**	ND	ND	**45**	**25**	ND	ND	**13**	**5.1**	**240**	**88**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**55**	**10**	ND	**44**	**30**	**11**	**14**	**19**	**23**	**220**	**770**	NP	NP	**11**
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**5.57**	**7.12**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**29**	**49**	**62**	**96**	**290**	**302**	**196**	**148**	**111**	**198**	**134**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**14.3**	**16.7**	**14**	**13**	**14.7**	**14.3**	**15**	**14.5**	**14.2**	**14.6**	**17**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**59**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**320**	**40**	**200**	**300**	**310**	**140**	**140**	**130**	**12**	**900**	**4900**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.4**	**28**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	**21**	ND	**2.8**	**16**	**2**	ND	ND	ND	ND	**120**	**140**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**6.2**	ND	ND	ND	ND	ND	ND	ND	ND	**31**	**120**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**11**	ND	ND	**2**	ND	ND	ND	ND	ND	**63**	**140**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**7.2**	**5.6**	**5.7**	ND	ND	ND	ND	ND	ND	**24**	**430**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**12**	ND	ND	**13**	ND	ND	ND	ND	ND	**35**	**160**	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**41**	ND	ND	**18**	ND	ND	ND	ND	ND	**160**	**210**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**29**	ND	ND	**17**	ND	**14**	ND	**12**	**15**	**70**	**1200**	NP	NP	ND
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	NE	ND	**24**	ND	ND	ND	ND	ND	ND	**15**	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**5.6**	**6.85**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**25**	**40**	**42**	**78**	**330**	**161**	**171**	**139**	**95**	**149**	**138**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**14.2**	**15.6**	**15**	**13.5**	**15**	**17.7**	**13**	**13.5**	**16.2**	**14.1**	**16.4**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	**10**	ND	ND	ND	ND	ND	**5.2**	**65**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**480**	**55**	**160**	**7200**	**610**	**180**	**160**	**140**	**12**	**1000**	**3700**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	**7.2**	ND	ND	ND	ND	ND	**3.8**	**26**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	**49**	**12**	**8.3**	**680**	**2.9**	ND	ND	**3.2**	ND	**210**	**100**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**12**	ND	ND	**110**	ND	ND	ND	ND	ND	**36**	**70**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**29**	ND	ND	**240**	ND	ND	ND	**3.8**	ND	**120**	**130**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**13**	**8**	**5.2**	**73**	ND	ND	ND	ND	ND	**39**	**380**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**29**	**9.6**	**17**	**460**	ND	ND	**5.5**	**5.4**	ND	**59**	**170**	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**85**	ND	ND	**680**	**5.4**	ND	ND	ND	ND	**240**	**110**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**83**	ND	ND	**780**	ND	**30**	**13**	**10**	ND	**240**	**1200**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**6.08**	**6.72**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**21**	**35**	**40**	**85**	**580**	**201**	**185**	**160**	**102**	**180**	**52**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.2**	**14**	**13.3**	**13.3**	**14.9**	**14.3**	**16.5**	**15.5**	**15.3**	**16.5**	**16.8**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**44**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**770**	**37**	**160**	**1700**	**870**	**250**	**160**	**140**	**27**	**810**	**2700**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	**3**	ND	ND	ND	ND	ND	**3.4**	**21**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	**52**	ND	**3.7**	**230**	**4.7**	ND	ND	ND	ND	**150**	**88**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**21**	ND	ND	**32**	ND	ND	**5.1**	ND	ND	**29**	**56**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**31**	**2.6**	**3.5**	**70**	ND	ND	ND	ND	**3**	**82**	**96**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**14**	**6.9**	ND	**20**	ND	ND	ND	ND	ND	**29**	**290**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**29**	ND	ND	**160**	**6.8**	ND	ND	**6.1**	ND	**46**	**100**	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	**2.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	**22**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**82**	ND	ND	**210**	**8.9**	ND	ND	ND	ND	**170**	**82**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**92**	**13**	**12**	**230**	**19**	**25**	ND	ND	**14**	**170**	**800**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**5.56**	**5.83**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**53**	**48**	**52**	**106**	**105**	**383**	**301**	**236**	**136**	**251**	**70**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**18.1**	**19.2**	**16.1**	**13.7**	**19.5**	**20.6**	**12.4**	**13.8**	**14.6**	**14.8**	**12.9**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**42**	NP	NP	ND
Total Barium (Ba)	µg/l	500	2000	**650**	ND	ND	ND	**1100**	ND	ND	ND	ND	**750**	**2700**	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	**2.1**	ND	**17**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	10	50	**65**	ND	**16**	ND	ND	ND	ND	ND	**16**	**100**	**93**	NP	NP	ND
Total Cobalt (Co)	µg/l	10	NE	**16**	ND	ND	ND	ND	ND	ND	ND	ND	**25**	**57**	NP	NP	ND
Total Copper (Cu)	µg/l	200	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	**15**	ND	ND	ND	ND	ND	ND	ND	**53**	**19**	**300**	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**88**	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	10	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	40	NE	**110**	ND	ND	ND	ND	ND	ND	ND	ND	**120**	**85**	NP	NP	ND
Total Zinc (Zn)	µg/l	50	1050	**130**	ND	**88**	ND	ND	ND	ND	ND	**110**	**120**	**780**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**5.61**	**5.97**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**229**	**48**	**53**	**108**	**876**	**564**	**149**	**200**	**12.8**	**330**	**33**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**12.2**	**11.9**	**12.8**	**12.5**	**12.7**	**12.9**	**14.9**	**13.7**	**13.5**	**13.3**	**14.9**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13**	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	**410**	**22**	**180**	**470**	**1100**	ND	ND	ND	**160**	ND	**650**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	**3.8**	ND	ND	ND	ND	ND	ND	ND	**1.5**	ND	**5.2**	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**50**	ND	**11**	**24**	ND	ND	ND	ND	**17**	ND	**27**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**26**	ND	ND	**9.6**	ND	ND	ND	ND	**20**	ND	**25**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**20**	ND	ND	ND	ND	ND	ND	ND	**32**	ND	**89**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**22**	ND	**8.3**	**25**	ND	ND	ND	ND	**13**	ND	**24**	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**79**	ND	ND	**28**	ND	ND	ND	ND	**23**	ND	**30**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**74**	ND	**20**	**37**	ND	ND	ND	ND	**55**	ND	**200**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**5.54**	**9.08**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**31**	**50**	**54**	**105**	**1540**	**757**	**391**	**312**	**134**	**336**	**46**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.4**	**14.2**	**14**	**13**	**14**	**14.6**	**14**	**13**	**15.7**	**15.4**	**12.5**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	6	NE	ND	ND	ND	ND	ND	**20**	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	**280**	ND	ND	ND	ND	**12**	NP	NP	ND
Total Barium (Ba)	µg/l	100	2000	**290**	ND	**200**	**240**	**1300**	**1500**	**130**	**180**	ND	ND	**600**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	**14**	ND	ND	ND	ND	**4.9**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	10	50	**20**	ND	ND	**16**	ND	**410**	ND	ND	ND	ND	**17**	NP	NP	ND
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	ND	**260**	ND	ND	ND	ND	ND	NP	NP	ND
Total Copper (Cu)	µg/l	10	1000	**15**	ND	ND	ND	ND	**330**	ND	ND	ND	ND	**26**	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	ND	ND	ND	ND	ND	**96**	ND	ND	ND	ND	**69**	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	ND	ND	ND	ND	ND	**330**	ND	ND	ND	ND	ND	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	**12**	ND	ND	ND	ND	**460**	ND	ND	ND	ND	**18**	NP	NP	ND
Total Silver (Ag)	µg/l	10	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	5.5	NE	ND	ND	ND	ND	ND	**35**	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	25	NE	**43**	ND	ND	ND	ND	**300**	ND	ND	ND	ND	**26**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**55**	**21**	**30**	**30**	**22**	**830**	**22**	**15**	**10**	**12**	**200**	NP	NP	**12**
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	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**	**5.5**	**5.9**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**28**	**61**	**45**	**94**	**1475**	**911**	**346**	**300**	**132**	**543**	**36**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.8**	**16**	**16.1**	**14.8**	**17.5**	**17.6**	**17.5**	**17.2**	**14.8**	**15.6**	**17.2**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21.4**	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	**501**	**31.5**	**223**	**198**	**1350**	**591**	**184**	**208**	**62.4**	**516**	**872**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**40.9**	ND	**11.9**	**10.9**	**7.8**	ND	ND	ND	**5.1**	**75.5**	**33.7**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**16.8**	ND	ND	ND	**10.6**	ND	ND	ND	ND	ND	**17.6**	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**29.2**	ND	ND	ND	ND	ND	ND	ND	**6.3**	**40.3**	**47.4**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**17.5**	**8.1**	ND	ND	ND	ND	ND	ND	ND	**12.3**	**123**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**24**	ND	**8**	**8.4**	**13.8**	ND	**5.8**	**9.8**	ND	**20.2**	**36.2**	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	5.5	NE	**11.6**	ND	ND	ND	ND	ND	ND	ND	ND	**9.5**	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**89**	ND	**8.8**	**14.7**	**20**	ND	ND	ND	**8.6**	**103**	**48.2**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**86**	ND	**66.2**	**14**	**37.4**	**33.3**	**12**	ND	**11.6**	**91.1**	**336**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylenes	µg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.59**	**7.22**	**6.58**	**6.33**	**5.71**	**6.05**	**5.66**	**5.65**	**8.13**	**5.56**	**6.69**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**25**	**49**	**49**	**102**	**1546**	**946**	**411**	**318**	**124**	**481**	**33**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.9**	**14.2**	**14.2**	**13.2**	**14.6**	**14.4**	**13.4**	**14.7**	**17.4**	**14.8**	**14.1**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10.2**	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	**194**	**30.8**	**253**	**168**	**1230**	**661**	**216**	**202**	**61.8**	**151**	**361**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**10.7**	ND	**16.8**	**7.8**	ND	ND	ND	ND	**7.6**	**7.3**	**14.9**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**22.3**	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**7.2**	ND	ND	ND	ND	ND	ND	ND	**7.2**	ND	**17**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	**8.4**	ND	ND	ND	ND	ND	**5.8**	ND	**50.2**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**7.3**	ND	**12.9**	**6.3**	**10.8**	**5.7**	ND	**11.3**	**5.3**	ND	**19**	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	5.5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**26.1**	ND	**11.4**	**9.7**	**10.1**	ND	ND	**5.1**	**9.7**	**10**	**23.1**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**27.3**	ND	**50.3**	**12.2**	**24.4**	**36.9**	ND	**10.3**	**17.5**	**38.8**	**138**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylenes	µg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-20-2008)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.7**	**6.7**	**6.2**	**6.1**	**5.9**	**6.0**	**5.9**	**5.8**	**7.9**	**5.6**	**5.5**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**28.0**	**54.0**	**44.0**	**104**	**1420**	**1111**	**320**	**350.0**	**129.0**	**621.0**	**41.0**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.8**	**14.2**	**12.0**	**13.2**	**14.3**	**15.4**	**14.9**	**14.6**	**15.2**	**14.5**	**16.5**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.6**	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	**474**	**66.0**	**313**	**224**	**1210**	**894**	**164**	**216**	**41.1**	**182**	**245**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**38.6**	ND	**29.4**	**12.7**	ND	ND	ND	ND	ND	ND	**6.8**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**27.0**	**10.4**	**19.5**	**9.4**	**7.7**	ND	**12.6**	**5.3**	**7.1**	ND	**18.4**	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**26.5**	ND	**8.3**	ND	ND	ND	ND	ND	ND	ND	**9.7**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	ND	**13.5**	**7.6**	ND	ND	ND	ND	ND	ND	ND	**25.9**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**23.0**	ND	**21.0**	**11.1**	**10.7**	**7.5**	ND	**14.0**	ND	ND	**8.5**	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	5.4	NE	**7.2**	ND	ND	ND	ND	ND	ND	**6.1**	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**79.0**	ND	**15.1**	**15.8**	ND	ND	ND	ND	**5.4**	ND	**14.8**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**66.5**	**19.9**	**59.2**	**15.3**	**10.6**	**29.1**	ND	**12.4**	ND	**17.4**	**71.5**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**140**	NP	NP	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**54.4**	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylenes	µg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-22-2009)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.64**	**6.89**	**6.32**	**5.83**	**5.74**	**5.92**	**5.75**	**5.72**	**7.56**	**5.47**	NS	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**28.0**	**53.0**	**12.0**	**131**	**1427**	**1109**	**398**	**358**	**131**	**536.0**	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.3**	**13.1**	**47**	**13.4**	**12.8**	**13.1**	**11.7**	**12.1**	**14.4**	**15.1**	NS	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	**5.4**	ND	ND	**5.6**	ND	ND	ND	ND	NS	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	**126**	**47.2**	**591**	**309**	**1300**	**817**	**230**	**216**	**77.0**	**163**	NS	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	**1.5**	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**12.3**	ND	**28.9**	**19.7**	**5.1**	ND	ND	ND	**7.3**	ND	NS	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**5.0**	**6.3**	**17.1**	**8.5**	**5.7**	ND	**7.0**	ND	**6.4**	ND	NS	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**5.1**	ND	**22.6**	**6.0**	ND	ND	ND	ND	**8.8**	ND	NS	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	ND	**8.7**	**24.4**	ND	ND	ND	ND	ND	**9.8**	ND	NS	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**5.6**	**7.2**	**19.7**	**16.7**	**10.9**	**6.0**	**5.1**	**14.0**	**6.0**	ND	NS	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**16.0**	ND	**32.7**	**19.8**	**7.7**	ND	ND	ND	**13.3**	ND	NS	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**23.1**	**43.5**	**99.9**	**25.3**	**17.9**	**17.6**	**10.5**	ND	**35.2**	ND	NS	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	**4.5**	ND	NS	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Chloroethane	µg/l	1	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1-Dichloroethane	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Ethylbenzene	µg/l	1	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Xylenes	µg/l	2	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-26-2009)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.88**	**6.35**	**6.0**	**5.76**	**5.78**	**5.95**	NS	NS	NS	**5.32**	**5.30**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**29**	**50**	**37.0**	**127**	**1532**	**1120**	NS	NS	NS	**637**	**39**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.4**	**13.2**	**14.4**	**14.6**	**14.7**	**15.9**	NS	NS	NS	**14.5**	**15.3**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NS	NS	NS	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	**6.0**	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	**131**	**16.8**	**144**	**188**	**1720**	**987**	NS	NS	NS	**209**	**178**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**1.7**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**10.0**	ND	**8.1**	ND	**18.7**	ND	NS	NS	NS	**10.9**	**8.1**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	**6.0**	ND	NS	NS	NS	ND	**6.0**	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**5.8**	ND	ND	ND	**6.4**	ND	NS	NS	NS	ND	**7.1**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**24.7**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**6.7**	ND	**5.2**	**6.0**	**18.0**	**7.5**	NS	NS	NS	**6.0**	**8.4**	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**17.9**	ND	ND	**5.3**	**33.6**	ND	NS	NS	NS	**12.2**	**11.9**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**19.6**	ND	**14.8**	ND	**37.8**	ND	NS	NS	NS	ND	**63.8**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Chloroethane	µg/l	1	2800	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1	1.4	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	1	550	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND
Xylenes	µg/l	2	530	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-22-2010)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.05**	**6.54**	**6.33**	**6.06**	**5.90**	**5.94**	NS	NS	**7.04**	**5.50**	**5.69**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**65**	**96**	**8.2**	**161**	**1987**	**1812**	NS	NS	**1727**	**659**	**83**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.5**	**13.8**	**13.9**	**13.5**	**13.3**	**13.4**	NS	NS	**14.9**	**14.6**	**12.7**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NS	NS	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	**7.4**	**9.8**	NS	NS	ND	ND	ND	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	**208**	**43.5**	**153**	**157**	**1920**	**1380**	NS	NS	**20.9**	**150**	**74.8**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**14.3**	**10.9**	**13.1**	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**5.6**	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**9.9**	ND	ND	ND	ND	**5.9**	NS	NS	ND	ND	ND	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	ND	**10.5**	ND	ND	ND	ND	NS	NS	ND	ND	**9.2**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**8.6**	**9.6**	**7.6**	ND	**6.2**	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**27.9**	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**22.2**	**14.2**	ND	ND	ND	ND	NS	NS	ND	ND	**24.6**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	1	2800	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1	1.4	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	1	0.38	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	1	550	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Toluene	µg/l	1	1000	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND
Xylenes	µg/l	2	530	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-27-2010)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**5.33**	**6.38**	**6.06**	**5.69**	**5.72**	**5.96**	**5.43**	**5.65**	**7.36**	**5.29**	**5.44**	**5.65**	**5.82**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**35**	**52**	**54**	**113**	**189**	**177**	**418**	**317**	**140**	**772**	**46**	**221**	**90**	NT
Temperature	°C (on-site)	-	NE	**13.7**	**14.1**	**14.1**	**13.9**	**13.9**	**14.7**	**15.2**	**15.0**	**15.7**	**14.7**	**16.5**	**15.9**	**15.0**	NT
Turbidity	NTU (on-site)	NT	NE	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
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	**5.4**	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	2000	**147**	**15.8**	**162**	**178**	**1760**	**1550**	**531**	**234**	**20.0**	**190**	**111**	**191**	**84.4**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	**10.1**	ND	**6.6**	**7.1**	ND	ND	**12.0**	**9.2**	ND	ND	**5.2**	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**17.3**	**5.6**	ND	ND	**7.8**	**29.6**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**6.7**	ND	ND	ND	ND	ND	ND	**12.4**	ND	ND	**53.9**	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**16.0**	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**7.0**	ND	ND	ND	**7.4**	ND	**21.5**	**19.0**	ND	ND	**7.5**	**10.8**	ND	ND
Total Selenium (Se)	µg/l	10	50	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
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**17.4**	ND	ND	**6.9**	ND	ND	**14.2**	**7.1**	ND	ND	**5.9**	ND	ND	ND
Total Zinc (Zn)	µg/l	10	1050	**19.1**	ND	**12.3**	**15.0**	ND	ND	**32.4**	**16.3**	ND	ND	**60.7**	ND	ND	ND
Acetone	µg/l	25	700	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.56	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
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	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
Chlorobenzene (mono)	µg/l	1	50	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
Chloroform	µg/l	1	70	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
Dibromochloromethane	µg/l	1	NE	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
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	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
1,2-Dichlorobenzene	µg/l	1	24	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
trans-1,4-Dichloro-2-butene	µg/l	1	NE	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
1,2-Dichloroethane	µg/l	1	0.38	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.51	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
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	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
2-Hexanone	µg/l	5	NE	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
Dichloromethane (Methylene chloride)	µg/l	2	4.6	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
4-Methyl-2-Pentanone	µg/l	5	NE	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
1,1,1,2-Tetrachloroethane	µg/l	1	NE	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
Tetrachloroethene (-ethylene)	µg/l	1	0.7	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
1,1,1-Trichloroethane	µg/l	1	200	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
Trichloroethene (-ethylene)	µg/l	1	2.8	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
1,2,3-Trichloropropane	µg/l	1	0.005	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
Vinyl chloride	µg/l	1	0.015	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

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.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-29-2011)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.00**	**6.50**	**6.50**	**6.10**	**5.80**	**6.00**	**5.60**	**5.60**	**6.20**	**5.40**	**5.70**	**5.60**	**5.60**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**29**	**50**	**53**	**127**	**1770**	**1593**	**491**	**290**	**135**	**762**	**90**	**197**	**125**	NT
Temperature	°C (on-site)	-	NE	**14.3**	**14.6**	**13.7**	**13.2**	**14.5**	**14.7**	**15.3**	**14.5**	**14.8**	**14.4**	**13.2**	**15.2**	**14.8**	NT
Turbidity	NTU (on-site)	NT	NE	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
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**191**	**16.3**	**188**	**182**	**1620**	**1390**	**428**	**173**	**13.6**	**196**	**125**	**201**	**133.0**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.1**	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	10	**8.0**	ND	**8.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	**6.9**	ND	**8.9**	ND	ND	ND	ND	**26.3**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**6.4**	ND	ND	ND	**6.7**	**6.1**	ND	ND	ND	ND	**5.2**	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11.0**	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	ND	ND	ND	ND	**10.5**	**8.6**	**19.5**	**15.2**	ND	ND	ND	**10.3**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**15.8**	ND	**5.1**	ND	ND	ND	ND	ND	ND	ND	**5.5**	**7.3**	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**25.7**	ND	**21.9**	ND	**11.8**	**23.9**	**13.7**	ND	ND	ND	**42.9**	**20.5**	**21.5**	ND
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-25-2011)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.50**	**6.20**	**6.40**	**6.10**	**5.60**	**5.40**	**5.40**	**5.30**	**7.00**	**5.20**	**5.60**	**5.60**	**5.80**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**32**	**47**	**46**	**108**	**1275**	**1450**	**395**	**297**	**137**	**802**	**52**	**245**	**145**	NT
Temperature	°C (on-site)	-	NE	**14.2**	**13.5**	**15.3**	**12.4**	**13.2**	**13.7**	**15.8**	**15.1**	**15.7**	**16.2**	**16.9**	**16.3**	**15.6**	NT
Turbidity	NTU (on-site)	NT	NE	**96.5**	**8.09**	**17.7**	**9.06**	**9.22**	**1.78**	**8.72**	**5.24**	**1.91**	**80.5**	**154.0**	**4.62**	**1.77**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**185**	**19.7**	**120**	**332**	**1200**	**1300**	**945**	**205**	**8.2**	**238**	**123**	**161**	**154**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	10	**15.0**	ND	ND	**21.1**	ND	ND	**8.1**	ND	ND	**9.2**	**5.1**	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	**5.3**	ND	ND	**6.4**	**6.3**	ND	**21.0**	ND	ND	ND	ND	**42.4**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**9.6**	ND	ND	**9.4**	**6.8**	**11.2**	**7.6**	ND	ND	**5.1**	**6.9**	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	**6.3**	ND	ND	ND	**14.6**	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**6.9**	ND	ND	**14.7**	**8.8**	**7.5**	**20.8**	**19.9**	ND	ND	ND	**8.0**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**25.6**	ND	ND	**23.0**	ND	ND	**15.1**	ND	ND	**9.7**	**6.3**	ND	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**34.5**	ND	**11.6**	**23.7**	**12.8**	**10.1**	**32.5**	ND	ND	**17.7**	**49.9**	**15.1**	ND	ND
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-20-2012)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.4**	**6.9**	**6.6**	**6.3**	**6.2**	**6.1**	**5.7**	**5.8**	**8.3**	**5.5**	**5.8**	**6.0**	**6.0**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**29.1**	**48.1**	**45.5**	**112.2**	**1339**	**1397**	**508**	**341**	**140**	**845**	**61.4**	**284.3**	**165.9**	NT
Temperature	°C (on-site)	-	NE	**13.5**	**13.9**	**13.6**	**14.0**	**14.9**	**14.7**	**15.9**	**14.2**	**15.1**	**15.2**	**14.0**	**15.9**	**14.9**	NT
Turbidity	NTU (on-site)	NT	NE	**90**	**48.1**	**11.5**	**4.28**	**3.53**	**2.50**	**14.70**	**3.63**	**4.36**	**2.21**	**70.0**	**21.10**	**1.75**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**304**	**17.5**	**129**	**153**	**1020**	**1140**	**442**	**215**	**9.5**	**232**	**64.8**	**249**	**169**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.8**	ND	ND
Total Chromium (Cr)	µg/l	5	10	**24.5**	ND	ND	**5.1**	ND	ND	**7.9**	ND	ND	ND	ND	**12.3**	ND	ND
Total Cobalt (Co)	µg/l	5	NE	**6.9**	ND	ND	ND	ND	ND	**6.4**	ND	ND	ND	ND	**134.0**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**15.6**	ND	ND	ND	**5.8**	**5.2**	ND	ND	ND	ND	ND	**6.5**	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.4**	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**12.2**	ND	ND	ND	**9.4**	**9.4**	**23.8**	**24.6**	ND	ND	ND	**19.3**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**44.3**	ND	ND	ND	ND	ND	**10.0**	ND	ND	ND	ND	**15.0**	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**47.6**	ND	**12.5**	ND	**11.6**	**10.1**	**21.1**	ND	ND	**11.1**	**30.7**	**50.8**	ND	ND
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-24-2012)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.3**	**6.8**	**6.3**	**6.3**	**6.1**	**6.0**	**5.6**	**5.7**	**8.1**	**5.3**	**5.6**	**5.9**	**5.8**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**28.0**	**49.0**	**49.0**	**122.0**	**1200**	**1332**	**540**	**395**	**140**	**867**	**50.0**	**260.0**	**171.0**	NT
Temperature	°C (on-site)	-	NE	**14.4**	**13.3**	**12.5**	**16.5**	**15.3**	**15.2**	**15.6**	**15.2**	**15.3**	**15.4**	**16.1**	**15.9**	**15.7**	NT
Turbidity	NTU (on-site)	NT	NE	**921**	**3.2**	**9.2**	**8.64**	**5.54**	**2.67**	**6.39**	**4.52**	**10.31**	**2.50**	**56.0**	**2.82**	**2.23**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**389**	**19.0**	**124**	**167**	**889**	**1030**	**393**	**229**	**26.1**	**235**	**43.2**	**177**	**181**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.0**	ND	ND
Total Chromium (Cr)	µg/l	5	10	**30.4**	**6.0**	ND	**6.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	**15.7**	ND	ND	ND	**5.6**	ND	**6.5**	ND	ND	ND	ND	**48.5**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**22.7**	ND	ND	ND	**6.0**	ND	ND	ND	**5.1**	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**18.5**	ND	ND	ND	**10.1**	**8.9**	**20.0**	**25.3**	ND	ND	ND	**9.6**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**59.0**	ND	ND	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**93.4**	**10.4**	**11.3**	**22.4**	**23.8**	ND	**10.3**	**16.1**	**14.9**	**12.2**	**15.7**	**15.8**	ND	ND
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	ND	ND	ND	ND	**4.4**	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-24-2013)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.5**	**6.8**	**6.3**	**6.2**	**6.3**	**6.2**	**5.7**	**5.7**	**8.1**	**5.6**	**5.9**	**6.0**	**5.8**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**22.0**	**46.0**	**44.0**	**121.0**	**1205**	**1328**	**516**	**387**	**144**	**887**	**72.0**	**247**	**190**	NT
Temperature	°C (on-site)	-	NE	**15.2**	**13.9**	**13.7**	**13.2**	**14.3**	**14.4**	**14.3**	**14.1**	**15.6**	**16.0**	**13.6**	**15.7**	**14.3**	NT
Turbidity	NTU (on-site)	NT	NE	**100**	**1.21**	**6.28**	**282**	**4.84**	**0.30**	**1.76**	**1.61**	**0.55**	**1.57**	**60.0**	**1.01**	**0.11**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**241**	**16.8**	**100**	**164**	**842**	**964**	**344**	**226**	**9.3**	**218**	**96.5**	**116**	**190**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	10	**19.0**	ND	ND	**8.8**	**6.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	**16.5**	ND	ND	ND	**10.8**	ND	**5.6**	ND	ND	ND	**8.9**	**115**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**13.4**	ND	ND	ND	**9.3**	**6.0**	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10.4**	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**10.0**	ND	ND	ND	**12.0**	**8.6**	**21.8**	**32.8**	ND	ND	ND	**9.2**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**33.5**	ND	ND	**7.7**	**9.6**	ND	ND	ND	ND	ND	**5.4**	ND	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**56.3**	ND	ND	ND	**18.6**	**14.9**	ND	ND	ND	ND	**33.2**	ND	ND	ND
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-24-2013)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.6**	**6.9**	**11.9**	**6.5**	**6.5**	**6.4**	**5.9**	**6.0**	**8.0**	**5.8**	**6.1**	**6.2**	**6.1**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**31.0**	**47.0**	**67.0**	**117.0**	**1191**	**1390**	**536**	**402**	**142**	**897**	**53.0**	**301**	**212**	NT
Temperature	°C (on-site)	-	NE	**12.5**	**12.5**	**11.9**	**12.5**	**13.7**	**13.6**	**13.1**	**13.9**	**13.4**	**13.7**	**13.9**	**13.6**	**13.0**	NT
Turbidity	NTU (on-site)	NT	NE	**55**	**2.23**	**9.29**	**3.02**	**3.17**	**0.61**	**3.01**	**2.27**	**0.36**	**0.55**	**100.0**	**0.53**	**0.66**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**255**	**18.1**	**156**	**166**	**839**	**1160**	**510**	**256**	**9.1**	**250**	**55.2**	**171**	**218**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	10	**14.5**	ND	**12.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	**11.8**	ND	ND	ND	**8.0**	ND	**7.5**	ND	ND	ND	ND	**84.5**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**12.6**	ND	ND	ND	**7.5**	**5.8**	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**7.9**	ND	**8.3**	ND	**7.5**	**7.0**	**30.2**	**29.9**	ND	ND	ND	**12.1**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**30.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**30.6**	ND	ND	ND	ND	ND	**28.1**	ND	ND	**28.8**	**39.6**	**14.9**	ND	**12**
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-24-2014)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.8**	**7.0**	**6.6**	**6.3**	**6.5**	**6.4**	**5.8**	**5.8**	**8.3**	**5.6**	**5.8**	**6.1**	**5.8**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**30.0**	**48.0**	**50.0**	**126.0**	**1364**	**1652**	**517**	**418**	**147**	**919**	**57.0**	**240**	**187**	NT
Temperature	°C (on-site)	-	NE	**12.9**	**13.8**	**14.9**	**14.5**	**15.5**	**15.3**	**15.8**	**14.2**	**16.0**	**15.6**	**12.8**	**16.5**	**16.5**	NT
Turbidity	NTU (on-site)	NT	NE	**39**	**1.43**	**4.85**	**1.82**	**1.49**	**2.86**	**2.25**	**1.24**	**1.51**	**2.38**	**9.39**	**1.95**	**2.24**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.1**	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**174**	**17.7**	**127**	**148**	**941**	**1290**	**378**	**248**	**8.3**	**238**	**27.5**	**148**	**189**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	ND	ND
Total Chromium (Cr)	µg/l	5	10	**12.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.1**	ND	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	**5.7**	ND	ND	ND	ND	ND	ND	**65.1**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**7.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**7.0**	ND	ND	ND	**9.3**	**10.1**	**23.6**	**33.9**	ND	ND	ND	**12.5**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.6**	ND	ND
Total Vanadium (V)	µg/l	5	NE	**22.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**25.8**	ND	ND	ND	ND	ND	**18.9**	ND	ND	ND	ND	**14.9**	**10.1**	ND
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	**2**	ND	ND	ND	**2.2**	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-27-2014)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.55**	**8.52**	**6.50**	**6.27**	**6.18**	**6.13**	**5.71**	**5.25**	**7.70**	**5.81**	**6.50**	**5.92**	**5.89**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**21.7**	**108.1**	**32.4**	**115.1**	**1468.0**	**1646.0**	**466.3**	**353.0**	**163.1**	**698.0**	**50.9**	**223.7**	**172.0**	NT
Temperature	°C (on-site)	-	NE	**14.8**	**13.7**	**17.1**	**16.7**	**16.6**	**14.9**	**18.3**	**20.7**	**16.1**	**16.7**	**15.6**	**17.2**	**15.4**	NT
Turbidity	NTU (on-site)	NT	NE	**>50**	**>50**	**30.00**	**2.68**	**3.09**	**2.99**	**30.00**	**3.92**	**30.00**	**6.01**	**4.35**	**3.17**	**1.44**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**117**	**16.1**	**102**	**136**	**1280**	**1410**	**363**	**224**	**8.6**	**228**	**23.2**	**156**	**180**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24.2**	ND	ND
Total Copper (Cu)	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	ND	ND	ND	ND	**10.7**	**10.1**	**29.5**	**31.4**	ND	ND	ND	**9.1**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	10	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	2	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (4-28-2015)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.60**	**6.50**	**7.50**	**6.40**	**6.00**	**6.10**	**6.50**	**6.20**	**6.30**	**6.10**	**6.30**	**6.10**	**6.10**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**26.0**	**44.0**	**53.0**	**112.7**	**1601.0**	**1621.0**	**464.0**	**387.0**	**236.0**	**843.0**	**66.0**	**253.0**	**169.0**	NT
Temperature	°C (on-site)	-	NE	**13.5**	**13.2**	**12.5**	**13.9**	**16.9**	**15.5**	**14.1**	**14.2**	**16.5**	**15.8**	**13.5**	**16.6**	**14.8**	NT
Turbidity	NTU (on-site)	NT	NE	**39.5**	**4.82**	**9.58**	**4.46**	**7.43**	**3.78**	**4.84**	**4.94**	**3.80**	**4.37**	**18.40**	**4.49**	**3.49**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**119**	**16.0**	**109**	**199**	**1330**	**1380**	**345**	**260**	**9.0**	**218**	**30.2**	**156**	**190**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.3**	ND	ND
Total Chromium (Cr)	µg/l	5	10	**10.3**	ND	**8.2**	**7.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**29.3**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**7.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**6.3**	ND	**5.6**	**6.8**	**11.7**	**11.2**	**25.1**	**35.4**	ND	ND	ND	**8.3**	**5.1**	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**15.5**	ND	ND	**8.0**	ND	ND	ND	ND	ND	ND	ND	**7.0**	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**51.7**	ND	**14.2**	**19.0**	**13.6**	ND	**14.8**	**12.9**	ND	ND	**11.3**	**13.3**	ND	ND
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	2	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	**10.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

White Oak Landfill - Haywood Co., NC
Groundwater Sampling Event (10-27-15)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.70**	**6.60**	**6.60**	**6.30**	**5.90**	**6.20**	**6.00**	**5.80**	**6.80**	**6.40**	**6.70**	**6.30**	**5.90**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**27.0**	**44.0**	**104.0**	**118.0**	**1478.0**	**1566.0**	**429.0**	**357.0**	**162.0**	**816.0**	**48.0**	**248.0**	**169.0**	NT
Temperature	°C (on-site)	-	NE	**12.1**	**12.4**	**12.4**	**12.5**	**13.0**	**13.0**	**13.5**	**13.7**	**13.2**	**13.5**	**14.3**	**14.5**	**13.4**	NT
Turbidity	NTU (on-site)	NT	NE	**5.5**	**4.35**	**28.00**	**1.88**	**2.52**	**1.27**	**4.05**	**7.82**	**8.68**	**5.50**	**16.56**	**11.09**	**5.11**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**346**	**16.0**	**95.7**	**164**	**1190**	**1400**	**352**	**247**	**13.8**	**279**	**18.8**	**188**	**191**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	**1.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.1**	ND	ND
Total Chromium (Cr)	µg/l	5	10	**31.4**	ND	ND	ND	ND	ND	ND	ND	ND	**7.7**	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	**6.2**	ND	ND	ND	**5.6**	ND	ND	ND	ND	ND	ND	**39.0**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**19.1**	ND	ND	ND	**5.4**	**7.3**	ND	ND	ND	ND	ND	**6.0**	ND	ND
Total Lead (Pb)	µg/l	5	15	**7.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**21.3**	ND	ND	ND	**12.6**	**12.6**	**24.4**	**33.4**	ND	**5.9**	ND	**8.7**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**44.5**	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**	ND	**9.8**	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**69.8**	ND	ND	ND	**14.3**	ND	ND	**11.8**	ND	**22.1**	ND	**36.4**	ND	ND
Acetone	µg/l	25	6000	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
Benzene	µg/l	1	1	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
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	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
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	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
Chloroethane	µg/l	1	3000	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
Chloromethane (Methylchloride)	µg/l	1	3	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
1,2-Dibromo-3-chloropropane; DBCP	µg/l	2	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	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
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	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
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	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
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	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
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	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
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	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
Styrene	µg/l	1	70	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
1,1,2,2-Tetrachloroethane	µg/l	1	NE	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
Toluene	µg/l	1	600	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
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	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
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
total Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting 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 indicate exceedance of MCLs.

APPENDIX B

SUMMARY TABLES OF SURFACE WATER ANALYTICAL RESULTS

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.4**	**6.3**	**6.7**	**6.4**	NS	NS	NS	**7.8**
Specific Conductance	µmhos/cm (on-site)	1	NE	**65**	**65**	**59**	**65**	NS	NS	NS	**2600**
Temperature	°C (on-site)	-	29	**11**	**11**	**14**	**11**	NS	NS	NS	**11**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NS	NS	NS	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	**300**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NS	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NS	NS	NS	**95**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	**95**
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NS	NS	NS	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NS	NS	NS	**190**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NS	NS	NS	**670**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NS	NS	NS	**2700**
Cyanide	µg/l	2	5	NT	NT	NT	NT	NS	NS	NS	**13**
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	**25**	NS	NS	NS	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	NS	NS	NS	NT
Total Barium (Ba)	µg/l	500	NE	**91**	**70**	**29**	**62**	NS	NS	NS	NT
Total Beryllium (Be)	µg/l	2	6.5	ND	**2**	ND	ND	NS	NS	NS	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	NS	NS	NS	NT
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	NS	NS	NS	**13**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	**16**	NS	NS	NS	NT
Total Copper (Cu)	µg/l	200	7	ND	ND	ND	ND	NS	NS	NS	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	ND	NS	NS	NS	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	ND	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	**3.8**	NS	NS	NS	NT
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	NS	**2**
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	NS	NS	NS	NT
Total Zinc (Zn)	µg/l	50	50	**13**	**26**	**14**	ND	NS	NS	NS	NT
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NS	NS	NS	**0.3**
Acetone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NS	NS	NS	NT
Benzene	µg/l	5	51	NT	NT	NT	NT	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
Bromoform	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT	NT	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT
Chloroform	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NS	NT
Styrene	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT	NT	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT	NT	NS	NS	NS	NT
Toluene	µg/l	5	0.36	NT	NT	NT	NT	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT	NT	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NS	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT	NT	NS	NS	NS	NT
Xylene	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NS	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7**	**7.1**	**7.1**	NS	NS	NS	**8.1**
Specific Conductance	µmhos/cm (on-site)	1	NE	**73**	**80**	**75**	NS	NS	NS	**3600**
Temperature	°C (on-site)	-	29	**11**	**13**	**18**	NS	NS	NS	**15**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NS	NS	NS	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	ND
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NS	NS	**120**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NS	NS	**120**
Sulfate	mg/l	500	NE	NT	NT	NT	NS	NS	NS	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NS	NS	**240**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NS	NS	**430**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NS	NS	NS	**5000**
Cyanide	µg/l	2	5	NT	NT	NT	NS	NS	NS	ND
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	NS	NS	NS	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	NS	NS	NS	NT
Total Barium (Ba)	µg/l	500	NE	**99**	**81**	**55**	NS	NS	NS	NT
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	NS	NS	NS	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	NS	NS	NS	NT
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	NS	NS	NS	**10**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	NS	NS	NS	NT
Total Copper (Cu)	µg/l	200	7	ND	ND	ND	NS	NS	NS	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	NS	NS	NS	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	NS	NS	NS	**210**
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	NS	NS	NS	NT
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	NS	NS	NS	NT
Total Zinc (Zn)	µg/l	50	50	**15**	**31**	**20**	NS	NS	NS	NT
Mercury	µg/l	0.2	0.012	NT	NT	NT	NS	NS	NS	ND
Acetone	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NS	NS	NS	NT
Benzene	µg/l	5	51	NT	NT	NT	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Bromoform	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Chloroform	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
Styrene	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT	NS	NS	NS	NT
Toluene	µg/l	5	0.36	NT	NT	NT	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NS	NS	NS	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT	NS	NS	NS	NT
Xylene	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	NS	NS	NS	**7.48**	NS	NS	NS
Specific Conductance	µmhos/cm (on-site)	1	NE	NS	NS	NS	**160**	NS	NS	NS
Temperature	°C (on-site)	-	29	NS	NS	NS	**20**	NS	NS	NS
Turbidity	NTU (on-site)	NT	50	NS	NS	NS	NT	NS	NS	NS
Nitrate as N	mg/l	0.1	NE	NS	NS	NS	NT	NS	NS	NS
Nitrate/Nitrite as N	mg/l	0.1	NE	NS	NS	NS	NT	NS	NS	NS
Nitrite as N	mg/l	0.1	NE	NS	NS	NS	NT	NS	NS	NS
Nitrogen	mg/l	0.2	NE	NS	NS	NS	NT	NS	NS	NS
Total Nitrogen, Kjeldahl	mg/l	100	NE	NS	NS	NS	NT	NS	NS	NS
Sulfate	mg/l	500	NE	NS	NS	NS	NT	NS	NS	NS
Biochemical Oxygen Demand	mg/l	2	NE	NS	NS	NS	NT	NS	NS	NS
Chemical Oxygen Demand	mg/l	25	NE	NS	NS	NS	NT	NS	NS	NS
Total Dissolved Solids	mg/l	20	NE	NS	NS	NS	NT	NS	NS	NS
Cyanide	µg/l	2	5	NS	NS	NS	NT	NS	NS	NS
Total Antimony (Sb)	µg/l	30	NE	NS	NS	NS	ND	NS	NS	NS
Total Arsenic (As)	µg/l	10	10	NS	NS	NS	ND	NS	NS	NS
Total Barium (Ba)	µg/l	500	NE	NS	NS	NS	**71**	NS	NS	NS
Total Beryllium (Be)	µg/l	2	6.5	NS	NS	NS	ND	NS	NS	NS
Total Cadmium (Cd)	µg/l	1	0.4	NS	NS	NS	ND	NS	NS	NS
Total Chromium (Cr)	µg/l	10	50	NS	NS	NS	ND	NS	NS	NS
Total Cobalt (Co)	µg/l	10	NE	NS	NS	NS	**7.2**	NS	NS	NS
Total Copper (Cu)	µg/l	200	7	NS	NS	NS	ND	NS	NS	NS
Total Lead (Pb)	µg/l	10	25	NS	NS	NS	ND	NS	NS	NS
Total Nickel (Ni)	µg/l	50	88	NS	NS	NS	**9.4**	NS	NS	NS
Total Selenium (Se)	µg/l	20	5	NS	NS	NS	ND	NS	NS	NS
Total Silver (Ag)	µg/l	10	0.06	NS	NS	NS	ND	NS	NS	NS
Total Thallium (Tl)	µg/l	10	NE	NS	NS	NS	ND	NS	NS	NS
Total Vanadium (V)	µg/l	40	NE	NS	NS	NS	ND	NS	NS	NS
Total Zinc (Zn)	µg/l	50	50	NS	NS	NS	**11**	NS	NS	NS
Mercury	µg/l	0.2	0.012	NS	NS	NS	NT	NS	NS	NS
Acetone	µg/l	100	NE	NS	NS	NS	NT	NS	NS	NS
Acrylonitrile	µg/l	200	NE	NS	NS	NS	NT	NS	NS	NS
Benzene	µg/l	5	51	NS	NS	NS	NT	NS	NS	NS
Bromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
Bromodichloromethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
Bromoform	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
Carbon Disulfide	µg/l	100	NE	NS	NS	NS	NT	NS	NS	NS
Bromomethane (Methylbromide)	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS
Carbon tetrachloride	µg/l	10	1.6	NS	NS	NS	NT	NS	NS	NS
Chlorobenzene (mono)	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
Chloroethane	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS
Chloroform	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
Chloromethane (Methylchloride)	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS
Dibromochloromethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NS	NS	NS	NT	NS	NS	NS
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
Dibromomethane	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS
1,2-Dichlorobenzene	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
1,4-Dichlorobenzene	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
trans-1,4-Dichloro-2butene	µg/l	100	NE	NS	NS	NS	NT	NS	NS	NS
1,1-Dichloroethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
1,2-Dichloroethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
1,2-Dichloropropane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS
Ethylbenzene	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
2-Hexanone	µg/l	50	NE	NS	NS	NS	NT	NS	NS	NS
Iodomethane	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS
Dichloromethane (Methylene chloride)	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NS	NS	NS	NT	NS	NS	NS
4-Methyl-2-Pentanone	µg/l	100	NE	NS	NS	NS	NT	NS	NS	NS
Styrene	µg/l	10	NE	NS	NS	NS	NT	NS	NS	NS
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
1,1,2,2-Tetrachloroethane	µg/l	5	4	NS	NS	NS	NT	NS	NS	NS
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NS	NS	NS	NT	NS	NS	NS
Toluene	µg/l	5	0.36	NS	NS	NS	NT	NS	NS	NS
1,1,1-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
1,1,2-Trichloroethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
Trichloroethene (-ethylene)	µg/l	5	30	NS	NS	NS	NT	NS	NS	NS
Trichlorofluoromethane	µg/l	5	NE	NS	NS	NS	NT	NS	NS	NS
1,2,3-Trichloropropane	µg/l	15	NE	NS	NS	NS	NT	NS	NS	NS
Vinyl acetate	µg/l	50	NE	NS	NS	NS	NT	NS	NS	NS
Vinyl chloride	µg/l	10	2.4	NS	NS	NS	NT	NS	NS	NS
Xylene	µg/l	5	NE	NS	NS	NS	NT	NS	NS	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 Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.67**	**6.08**	**6.46**	**7**	NS	NS	**6.71**
Specific Conductance	µmhos/cm (on-site)	1	NE	**78**	**78**	**80**	**170**	NS	NS	**265**
Temperature	°C (on-site)	-	29	**17.8**	**13.3**	**19.4**	**20**	NS	NS	**20.1**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NS	NS	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	**0.3**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NS	NS	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NS	NS	**96**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NS	NS	**96**
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NS	NS	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NS	NS	**740**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NS	NS	**1400**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NS	NS	**2300**
Cyanide	µg/l	2	5	NT	NT	NT	NT	NS	NS	**0.006**
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	NS	NS	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	NS	NS	NT
Total Barium (Ba)	µg/l	500	NE	**92**	**91**	**40**	**140**	NS	NS	NT
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	NS	NS	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	NS	NS	NT
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	NS	NS	**34**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	**7.7**	NS	NS	NT
Total Copper (Cu)	µg/l	200	7	ND	ND	ND	ND	NS	NS	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	NS	NS	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	**9**	NS	NS	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	ND	NS	NS	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	ND	NS	NS	NT
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	**6.5**	NS	NS	NT
Total Zinc (Zn)	µg/l	50	50	ND	**37**	**32**	**60**	NS	NS	NT
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NS	NS	ND
Acetone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NS	NS	NT
Benzene	µg/l	5	51	NT	NT	NT	NT	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
Bromoform	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT	NT	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT
Chloroform	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT	NT	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NS	NS	NT
Styrene	µg/l	10	NE	NT	NT	NT	NT	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT	NT	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT	NT	NS	NS	NT
Toluene	µg/l	5	0.36	NT	NT	NT	NT	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT	NT	NS	NS	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NS	NS	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT	NT	NS	NS	NT
Xylene	µg/l	5	NE	NT	NT	NT	NT	NS	NS	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.9**	**6.88**	**7.01**	NS	NS	NS	**7.48**
Specific Conductance	µmhos/cm (on-site)	1	NE	**102**	**151**	**115**	NS	NS	NS	**3700**
Temperature	°C (on-site)	-	29	**16.5**	**17.2**	**17.5**	NS	NS	NS	**18.4**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NS	NS	NS	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	ND
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NS	NS	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NS	NS	ND
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NS	NS	**130**
Sulfate	mg/l	500	NE	NT	NT	NT	NS	NS	NS	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NS	NS	**210**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NS	NS	**1300**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NS	NS	NS	**3000**
Cyanide	µg/l	2	5	NT	NT	NT	NS	NS	NS	**2.5**
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	NS	NS	NS	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	NS	NS	NS	NT
Total Barium (Ba)	µg/l	500	NE	**150**	**160**	**80**	NS	NS	NS	NT
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	NS	NS	NS	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	NS	NS	NS	NT
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	NS	NS	NS	**34**
Total Cobalt (Co)	µg/l	10	NE	**7.2**	ND	ND	NS	NS	NS	NT
Total Copper (Cu)	µg/l	200	7	ND	**4.5**	**2.7**	NS	NS	NS	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	NS	NS	NS	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	NS	NS	NS	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	NS	NS	NS	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	NS	NS	NS	NT
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	NS	NS	NS	ND
Total Vanadium (V)	µg/l	40	NE	ND	**6.4**	ND	NS	NS	NS	NT
Total Zinc (Zn)	µg/l	50	50	**19**	**100**	**41**	NS	NS	NS	NT
Mercury	µg/l	0.2	0.012	NT	NT	NT	NS	NS	NS	ND
Acetone	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NS	NS	NS	NT
Benzene	µg/l	5	51	NT	NT	NT	NS	NS	NS	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Bromoform	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT	NS	NS	NS	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Chloroform	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NS	NS	NS	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NS	NS	NS	NT
Styrene	µg/l	10	NE	NT	NT	NT	NS	NS	NS	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT	NS	NS	NS	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT	NS	NS	NS	NT
Toluene	µg/l	5	0.36	NT	NT	NT	NS	NS	NS	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT	NS	NS	NS	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NS	NS	NS	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NS	NS	NS	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT	NS	NS	NS	NT
Xylene	µg/l	5	NE	NT	NT	NT	NS	NS	NS	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.91**	**6.42**	**7.17**	NS	**6.41**	**6.71**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**77**	**75**	**101**	NS	**19**	**29**	NT
Temperature	°C (on-site)	-	29	**11.8**	**13**	**16**	NS	**15.6**	**14.9**	NT
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NS	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	ND
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NT	NT	**220**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NT	NT	**220**
Sulfate	mg/l	500	NE	NT	NT	NT	NS	NT	NT	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NT	NT	**2500**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NT	NT	**1100**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NS	NT	NT	**120**
Cyanide	µg/l	2	5	NT	NT	NT	NS	NT	NT	**110**
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	NS	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	NS	ND	ND	**15**
Total Barium (Ba)	µg/l	500	NE	**90**	**82**	**64**	NS	**27**	**27**	**270**
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	NS	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	NS	ND	ND	**2.5**
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	NS	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	**16**
Total Copper (Cu)	µg/l	200	7	ND	ND	ND	NS	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	NS	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	NS	ND	ND	ND
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	NS	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	NS	ND	ND	**2.4**
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	NS	ND	ND	**19**
Total Zinc (Zn)	µg/l	50	50	ND	**45**	**20**	NS	ND	ND	**1000**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NS	NT	NT	NT
Acetone	µg/l	100	NE	NT	NT	NT	NS	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NS	NT	NT	NT
Benzene	µg/l	5	51	NT	NT	NT	NS	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NS	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT	NS	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT
Chloroform	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT	NS	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT	NS	NT	NT	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NS	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT	NS	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NS	NT	NT	NT
Styrene	µg/l	10	NE	NT	NT	NT	NS	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT	NS	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT	NS	NT	NT	NT
Toluene	µg/l	5	0.36	NT	NT	NT	NS	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT	NS	NT	NT	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NS	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NS	NT	NT	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT	NS	NT	NT	NT
Xylene	µg/l	5	NE	NT	NT	NT	NS	NT	NT	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.41**	**7.38**	**7.42**	NS	**5.87**	**7.14**	**8.37**
Specific Conductance	µmhos/cm (on-site)	1	NE	**80**	**80**	**80**	NS	**19**	**29**	**3500**
Temperature	°C (on-site)	-	29	**12**	**12**	**12**	NS	**14.2**	**15.1**	**19.3**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NS	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	**3.4**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	**3.4**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NS	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NS	NT	NT	**72**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NS	NT	NT	**69**
Sulfate	mg/l	500	NE	NT	NT	NT	NS	NT	NT	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NS	NT	NT	ND
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NS	NT	NT	**250**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NS	NT	NT	**2500**
Cyanide	µg/l	2	5	NT	NT	NT	NS	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	NS	ND	ND	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	NS	**5.5**	ND	NT
Total Barium (Ba)	µg/l	500	NE	**110**	**130**	**84**	NS	**24**	**27**	NT
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	NS	ND	ND	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	NS	ND	ND	NT
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	NS	ND	ND	**10**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
Total Copper (Cu)	µg/l	200	7	ND	**2.7**	**2.2**	NS	**2.2**	ND	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	NS	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	NS	ND	ND	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	NS	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	NS	ND	ND	NT
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	**5.3**	ND	NS	ND	ND	NT
Total Zinc (Zn)	µg/l	50	50	ND	**80**	**40**	NS	**14**	ND	NT
Mercury	µg/l	0.2	0.012	NT	NT	NT	NS	NT	NT	ND
Acetone	µg/l	100	NE	ND	ND	ND	NS	ND	ND	NT
Acrylonitrile	µg/l	200	NE	ND	ND	ND	NS	ND	ND	NT
Benzene	µg/l	5	51	ND	ND	ND	NS	ND	ND	NT
Bromochloromethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
Bromoform	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	NS	ND	**11**	NT
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND	NS	ND	ND	NT
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
Chloroethane	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
Chloroform	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND	NS	ND	ND	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
Dibromomethane	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	NS	ND	ND	NT
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
Ethylbenzene	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
2-Hexanone	µg/l	50	NE	ND	ND	ND	NS	ND	ND	NT
Iodomethane	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND	NS	ND	ND	NT
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	NS	ND	ND	NT
Styrene	µg/l	10	NE	ND	ND	ND	NS	ND	ND	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND	NS	ND	ND	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND	NS	ND	ND	NT
Toluene	µg/l	5	0.36	ND	ND	ND	NS	ND	ND	NT
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND	NS	ND	ND	NT
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND	NS	ND	ND	NT
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	NS	ND	ND	NT
Vinyl acetate	µg/l	50	NE	ND	ND	ND	NS	ND	ND	NT
Vinyl chloride	µg/l	10	2.4	ND	ND	ND	NS	ND	ND	NT
Xylene	µg/l	5	NE	ND	ND	ND	NS	ND	ND	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 Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.8**	**7.05**	**7.19**	**8.05**	**6.19**	**6.35**	**8.37**
Specific Conductance	µmhos/cm (on-site)	1	NE	**74**	**73**	**142**	**1790**	**19**	**29**	**4050**
Temperature	°C (on-site)	-	29	**13**	**13**	**15**	**17**	**17**	**16**	**28.4**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.11**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.11**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**640**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**470**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**1100**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	**16**
Total Barium (Ba)	µg/l	500	NE	**120**	**95**	**83**	**260**	**18**	**26**	**140**
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	ND	ND	**28**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	**26**	ND	ND	**17**
Total Copper (Cu)	µg/l	200	7	ND	ND	**3.1**	ND	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	**12**	ND	ND	**45**
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	**6**	ND	ND	**8**
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	ND	ND	**12**
Total Zinc (Zn)	µg/l	50	50	ND	**48**	**31**	**310**	**15**	ND	**62**
Mercury	µg/l	0.2	0.012	NT	NT	NT	ND	NT	NT	ND
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	**490**
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	**14**
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND	ND	ND	ND	**300**
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.06**	**6.62**	NS	**7.16**	**7.42**	**6.41**	**7.89**
Specific Conductance	µmhos/cm (on-site)	1	NE	**103**	**103**	NS	**129**	**26**	**38**	**3270**
Temperature	°C (on-site)	-	29	**14**	**14.5**	NS	**15**	**15**	**16**	**23.4**
Turbidity	NTU (on-site)	NT	50	NT	NT	NS	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NS	NT	NT	NT	ND
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NS	NT	NT	NT	ND
Nitrite as N	mg/l	0.1	NE	NT	NT	NS	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NS	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NS	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NS	NT	NT	NT	**34**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NS	NT	NT	NT	**640**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NS	NT	NT	NT	**1300**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NS	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NS	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	NS	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	NS	ND	ND	ND	**10**
Total Barium (Ba)	µg/l	500	NE	**100**	**100**	NS	**87**	**24**	**31**	**160**
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	NS	ND	**2.6**	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	NS	ND	**2.1**	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	NS	ND	**3.7**	**2.3**	**26**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	NS	**6.5**	ND	ND	ND
Total Copper (Cu)	µg/l	200	7	ND	ND	NS	ND	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	NS	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	NS	ND	ND	ND	**24**
Total Selenium (Se)	µg/l	20	5	ND	ND	NS	ND	ND	ND	**6.2**
Total Silver (Ag)	µg/l	10	0.06	ND	ND	NS	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	NS	ND	ND	ND	**8.2**
Total Zinc (Zn)	µg/l	50	50	ND	**44**	NS	**17**	**12**	**13**	**43**
Mercury	µg/l	0.2	0.012	NT	NT	NS	NT	NT	NT	NT
Acetone	µg/l	100	NE	ND	ND	NS	ND	ND	ND	**290**
Acrylonitrile	µg/l	200	NE	ND	ND	NS	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	NS	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	NS	ND	**39**	**32**	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	NS	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	NS	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	NS	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	NS	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	NS	ND	ND	ND	**260**
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	NS	ND	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	NS	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	NS	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	NS	ND	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	NS	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	NS	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	NS	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	NS	ND	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	NS	ND	ND	ND	ND
Xylene	µg/l	5	NE	ND	ND	NS	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.49**	**5.99**	**6.21**	**7.05**	**7.08**	**7.27**	**7.28**
Specific Conductance	µmhos/cm (on-site)	1	NE	**79**	**88**	**151**	**120**	**21**	**28**	**6500**
Temperature	°C (on-site)	-	29	**13**	**123**	**13.5**	**16**	**14.1**	**13**	**19**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**1300**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**300**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**760**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	**22**
Total Barium (Ba)	µg/l	500	NE	**100**	**120**	**98**	**79**	**24**	**28**	**390**
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	ND	ND	**31**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	**14**
Total Copper (Cu)	µg/l	200	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	ND	ND	ND	**50**
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	ND	ND	ND	**7.4**
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	ND	ND	**17**
Total Zinc (Zn)	µg/l	50	50	ND	**50**	**22**	**34**	ND	ND	**150**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	**240**
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**11**
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**11**
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND	ND	ND	ND	**410**
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	**40**
Styrene	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND	ND	ND	ND	**63**
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**43**

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 Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.11**	**6.72**	**7.18**	**6.28**	**6.76**	**8.13**	**8.01**
Specific Conductance	µmhos/cm (on-site)	1	NE	**89**	**90**	**240**	**340**	**91**	**31**	**6500**
Temperature	°C (on-site)	-	29	**15.7**	**16.9**	**16.9**	**18.9**	**18.7**	**15.2**	**21.1**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**1300**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**720**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**920**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT	ND	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	**16**
Total Barium (Ba)	µg/l	500	NE	**120**	**96**	**140**	**90**	**86**	**36**	**430**
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT	ND	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	**4.2**	ND	ND	**50**
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT	**6.8**	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT	**2.4**	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT	ND	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	ND	ND	ND	**9.2**
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT	ND	NT	NT	NT
Total Vanadium (V)	µg/l	40	NE	NT	NT	NT	ND	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT	**33**	NT	NT	NT
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	ND
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.07**	**7.11**	**7.18**	**6.73**	**6.45**	**6.28**	**7.55**
Specific Conductance	µmhos/cm (on-site)	1	NE	**107**	**138**	**340**	**201**	**45**	**53**	**8660**
Temperature	°C (on-site)	-	29	**14.1**	**13.8**	**15.6**	**18.6**	**14.8**	**14.3**	**17.1**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**2.4**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**2.4**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**2400**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**51**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**700**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	**18**
Total Barium (Ba)	µg/l	500	NE	ND	ND	ND	ND	ND	ND	**580**
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	ND	ND	**40**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	**15**
Total Copper (Cu)	µg/l	200	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	**11**	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	ND	ND	ND	**56**
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	50	50	ND	ND	ND	ND	ND	ND	**130**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**6.2**
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND	ND	ND	ND	**24**
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	**15**
Styrene	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND	ND	ND	ND	**12**
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**16.1**

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 Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.53**	**7.1**	NT	**7.14**	**6.64**	**7.13**	**8.11**
Specific Conductance	µmhos/cm (on-site)	1	NE	**123**	**139**	NT	**200**	**46**	**40**	**9800**
Temperature	°C (on-site)	-	29	**11.9**	**10.9**	NT	**11.9**	**13.4**	**11.3**	**19.6**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.58**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**2100**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**61**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**780**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	**18**
Total Barium (Ba)	µg/l	500	NE	**120**	**140**	**120**	**240**	**54**	**33**	**430**
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	**5.8**	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	**21**	ND	ND	**54**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	**7.4**	ND	**14**
Total Copper (Cu)	µg/l	200	7	ND	ND	ND	**23**	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	**18**	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	**8.4**	ND	ND	**68**
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	**62**	ND	ND	**18**
Total Zinc (Zn)	µg/l	50	50	ND	**39**	**22**	**130**	ND	ND	**63**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	NT	NT	NT	NT	NT	NT	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NT	NT	NT	NT	NT	NT	NT
Temperature	°C (on-site)	-	29	NT	NT	NT	NT	NT	NT	NT
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.38**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrogen	mg/l	0.2	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**2400**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**89**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**1000**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	**16**
Total Barium (Ba)	µg/l	500	NE	**100**	**120**	**250**	ND	ND	ND	**380**
Total Beryllium (Be)	µg/l	2	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND	ND	ND	ND	**46**
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Total Copper (Cu)	µg/l	200	7	ND	ND	ND	**38**	ND	ND	ND
Total Lead (Pb)	µg/l	10	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	ND	ND	ND	ND	ND	ND	**50**
Total Selenium (Se)	µg/l	20	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	40	NE	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	50	50	**13**	**37**	**130**	**91**	**15**	**11**	**80**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**10**
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND	ND	ND	ND	**46**
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**31.3**

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 Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.04**	**7.11**	**6.8**	**7.5**	**6.35**	**6.74**	**8.03**
Specific Conductance	µmhos/cm (on-site)	1	NE	**156**	**150**	**266**	**320**	**61**	**40**	**1282**
Temperature	°C (on-site)	-	29	**16.5**	**13.4**	**12.7**	**17.2**	**11.5**	**9**	**14.3**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.53**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**3010**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**221**
Chemical Oxygen Demand	mg/l	100	NE	NT	NT	NT	NT	NT	NT	**968**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**24.6**
Total Barium (Ba)	µg/l	5	NE	**583**	**154**	**162**	**85**	**111**	**30.3**	**436**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	**25.7**	ND	ND	ND	ND	ND	**74.1**
Total Cobalt (Co)	µg/l	5	NE	**10.5**	ND	ND	ND	ND	ND	**12**
Total Copper (Cu)	µg/l	5	7	**18.4**	ND	ND	ND	**8.3**	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	**18.1**	ND	ND	ND	ND	ND	**81.2**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.5	NE	**6.3**	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**56.2**	ND	ND	**6.8**	**11.4**	ND	**23.9**
Total Zinc (Zn)	µg/l	10	50	**135**	**71.9**	**60**	**41.3**	**20.4**	ND	**76.7**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.8**	**7.32**	**7.06**	**7.2**	**7.56**	**7**	**8.56**
Specific Conductance	µmhos/cm (on-site)	1	NE	**124**	**162**	**234**	**426**	**48**	**42**	**8140**
Temperature	°C (on-site)	-	29	**13.1**	**14.5**	**14.3**	**16.9**	**15.2**	**15.6**	**21.4**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**1940**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**741**
Chemical Oxygen Demand	mg/l	100	NE	NT	NT	NT	NT	NT	NT	**1620**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**9.5**
Total Barium (Ba)	µg/l	5	NE	**111**	**145**	**133**	**184**	**34.4**	**24.9**	**247**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	**1.5**	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	**6.5**	ND	ND	**28.9**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	**11.2**	ND	ND	**9**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	**7.6**	ND	ND	**51.3**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.5	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	**14.4**	ND	ND	**9.1**
Total Zinc (Zn)	µg/l	10	50	ND	**52.3**	**50.1**	**124**	ND	ND	**52.3**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	**34.1**
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, and .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-21-08)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.51**	**6.75**	**6.84**	**6.54**	**6.08**	**6.45**	**8.63**
Specific Conductance	µmhos/cm (on-site)	1	NE	**202**	**171**	**296**	**205.6**	**56.1**	**41**	**10780**
Temperature	°C (on-site)	-	29	**11.3**	**10.2**	**7.9**	**12.5**	**10.8**	**9.6**	**22.2**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	ND
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.14**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.14**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**58.3**
Biochemical Oxygen Dema	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**198**
Chemical Oxygen Dema	mg/l	100	NE	NT	NT	NT	NT	NT	NT	**1190**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	**6**	**6.7**	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**11.4**
Total Barium (Ba)	µg/l	5	NE	**285**	**126**	**137**	**289**	**145**	**25.2**	**317**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	**17.9**	ND	ND	**34.5**
Total Cobalt (Co)	µg/l	5	NE	**7.9**	**5**	**6.4**	**34.4**	**21.1**	ND	**14.4**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	**15.8**	**10.1**	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	**5.4**	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	**12.1**	**6**	ND	**57.6**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	**14**	**13.2**	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	**7.2**	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**9.9**	ND	ND	**43.5**	**17.5**	ND	**12**
Total Zinc (Zn)	µg/l	10	50	**19**	**75.4**	**39.4**	**116**	**29.5**	**16.7**	**27.6**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	**37.2**
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Xylene	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-22-09)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.29**	**6.47**	**6.79**	**6.75**	**5.83**	**5.97**	**8.24**
Specific Conductance	µmhos/cm (on-site)	1	NE	**139**	**208**	**319**	**366**	**40**	**52**	**7620**
Temperature	°C (on-site)	-	29	**11.1**	**10.8**	**9.8**	**12.2**	**11.9**	**12.6**	**19.6**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.16**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.29**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.12**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	500	NE	NT	NT	NT	NT	NT	NT	**1570**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**55.8**
Chemical Oxygen Demand	mg/l	100	NE	NT	NT	NT	NT	NT	NT	**694**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**11.3**
Total Barium (Ba)	µg/l	5	NE	**108**	**167**	**133**	**70.1**	**35.9**	**41.1**	**181**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**16.7**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	**14.9**	**6.5**	**6.6**	**9.8**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	**5.6**	ND	ND	**48.2**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	**8.1**	ND	ND	**11.2**
Total Zinc (Zn)	µg/l	10	50	ND	**50**	**36.6**	**80**	ND	ND	**10.9**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	**38.4**
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	**5.2**
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**13.7**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**11.3**
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	**7.3**
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**65.1**
Methyl-tert-butyl-ether (MTBE)	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**9.0**
Naphthalene	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**6.7**
Phosphorus	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.75**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-26-09)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.41**	Dry	**6.49**	Dry	**6.07**	**6.26**	**7.8**
Specific Conductance	µmhos/cm (on-site)	1	NE	**192**	Dry	**291**	Dry	**60**	**58**	NT
Temperature	°C (on-site)	-	29	**11.5**	Dry	**11.0**	Dry	**13.6**	**12.4**	NT
Turbidity	NTU (on-site)	NT	50	NT	Dry	NT	Dry	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT
Nitrogen	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	Dry	NT	Dry	NT	NT	NT
Sulfate	mg/l	500	NE	NT	Dry	NT	Dry	NT	NT	NT
Biochemical Oxygen Demand	mg/l	2	NE	NT	Dry	NT	Dry	NT	NT	**4.8**
Chemical Oxygen Demand	mg/l	100	NE	NT	Dry	NT	Dry	NT	NT	**212**
Total Dissolved Solids	mg/l	20	NE	NT	Dry	NT	Dry	NT	NT	NT
Cyanide	µg/l	2	5	NT	Dry	NT	Dry	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	Dry	ND	Dry	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**228**	Dry	**285**	Dry	**48.4**	**30.9**	**305**
Total Beryllium (Be)	µg/l	1	6.5	ND	Dry	ND	Dry	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	Dry	ND	Dry	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	Dry	**8.9**	Dry	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	ND	Dry	**5.7**	Dry	**6.5**	ND	**12.5**
Total Copper (Cu)	µg/l	5	7	ND	Dry	**5.5**	Dry	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	Dry	ND	Dry	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	Dry	**10.1**	Dry	ND	ND	**20.4**
Total Selenium (Se)	µg/l	10	5	ND	Dry	ND	Dry	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	Dry	ND	Dry	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	Dry	ND	Dry	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	Dry	**16.0**	Dry	ND	ND	**8.5**
Total Zinc (Zn)	µg/l	10	50	ND	Dry	**151**	Dry	ND	ND	**48.1**
Mercury	µg/l	0.2	0.012	NT	Dry	NT	Dry	NT	NT	NT
Acetone	µg/l	25	NE	ND	Dry	ND	Dry	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	Dry	ND	Dry	ND	ND	ND
Benzene	µg/l	1	51	ND	Dry	ND	Dry	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Bromoform	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	Dry	ND	Dry	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	Dry	ND	Dry	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Chloroform	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	NE	ND	Dry	ND	Dry	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	Dry	ND	Dry	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	Dry	ND	Dry	ND	ND	ND
Styrene	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	Dry	ND	Dry	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	Dry	ND	Dry	ND	ND	ND
Toluene	µg/l	1	0.36	ND	Dry	ND	Dry	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	Dry	ND	Dry	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	Dry	ND	Dry	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	Dry	ND	Dry	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	Dry	ND	Dry	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	Dry	ND	Dry	ND	ND	ND
Methyl-tert-butyl-ether (MTBE)	µg/l	5	NE	NT	Dry	NT	Dry	NT	NT	ND
Naphthalene	µg/l	5	NE	NT	Dry	NT	Dry	NT	NT	ND
Phosphorus	mg/l	0.1	NE	NT	Dry	NT	Dry	NT	NT	NT

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-21-10)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.72**	**7.29**	**7.14**	NP	**6.06**	**6.04**	**7.69**
Specific Conductance	µmhos/cm (on-site)	1	NE	**189**	**213**	**273**	NP	**94**	**106**	**310**
Temperature	°C (on-site)	-	29	**13.9**	**12.3**	**15.9**	NP	**15.7**	**14**	**13.3**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NP	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	ND
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	ND
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	ND
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NP	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NP	NT	NT	**477**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NP	NT	NT	**54**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NP	NT	NT	**203**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NP	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NP	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	NP	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	NP	ND	ND	**8.6**
Total Barium (Ba)	µg/l	5	NE	**123**	**178**	**172**	NP	**34.3**	**41.4**	**124**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	NP	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	NP	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	NP	ND	ND	**8**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	NP	ND	ND	**11.7**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	NP	ND	ND	**6.8**
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	NP	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	NP	ND	ND	**35.3**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	NP	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	NP	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	NP	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	NP	ND	ND	**6.8**
Total Zinc (Zn)	µg/l	10	50	ND	**49.8**	**32.9**	NP	ND	ND	**12.1**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NP	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	NP	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	NP	ND	ND	NT
Benzene	µg/l	1	51	ND	ND	ND	NP	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	NP	ND	ND	NT
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	NP	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	NP	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	NE	ND	ND	ND	NP	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	NP	ND	ND	NT
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	NP	ND	ND	**2**
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	NP	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	NP	ND	ND	NT
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	NP	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	NP	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	NP	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	NP	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	NP	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	NP	ND	ND	**1.1**
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	NP	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	NP	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	NP	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	NP	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	NP	ND	ND	NT
Methyl-tert-butyl-ether (MTBE)	µg/l	1	NE	NT	NT	NT	NP	NT	NT	ND
Naphthalene	µg/l	1	NE	NT	NT	NT	NP	NT	NT	ND
Phosphorus	mg/l	0.1	NE	NT	NT	NT	NP	NT	NT	**0.26**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting 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 indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-26-10)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.31**	**6.14**	**7.15**	**6.11**	**5.7**	**6.39**	**7.31**
Specific Conductance	µmhos/cm (on-site)	1	NE	**203**	**250**	**287**	**158**	**50**	**53**	**20400**
Temperature	°C (on-site)	-	29	**15.8**	**15.2**	**16.6**	**17.5**	**14.7**	**13.4**	**18.2**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**5.5**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**6**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.51**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**7670**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**40**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**96**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**13.9**
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**29.4**
Total Barium (Ba)	µg/l	5	NE	**209**	**180**	**350**	**126**	**40.1**	**32.9**	**172**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	**1.3**
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	**13.2**	ND	ND	ND	**10.7**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	**17.7**	**48.8**	ND	ND	ND
Total Copper (Cu)	µg/l	5	7	ND	ND	**9**	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	**9**	**5**	ND	ND	**44.4**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	**29.6**
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	**27.9**	ND	ND	ND	**21**
Total Zinc (Zn)	µg/l	10	50	ND	**31.2**	**60.6**	ND	ND	ND	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	ND	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	NT
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	**1**
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**3.4**
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NT
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.2**
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**6.8**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NT
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	**8.4**
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**10.9**
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**5.7**
Methyl-tert-butyl-ether (MTBE)	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**2.9**
Naphthalene	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**6.5**
p-isopropyltoluene	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**2.9**
Phosphorus	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**1.40**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-28-11)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.3**	**6.2**	**6.8**	**6**	**5.8**	**6.1**	**7.4**
Specific Conductance	µmhos/cm (on-site)	1	NE	**174**	**225**	**304**	**212**	**45**	**65**	**14,320**
Temperature	°C (on-site)	-	29	**15.9**	**14.9**	**18.5**	**13.5**	**15.1**	**13.3**	**18.3**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**8.5**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**9.6**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**1.1**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**4360**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**55.2**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**762**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**13.5**
Total Barium (Ba)	µg/l	5	NE	**238**	**204**	**130**	**156**	**38.7**	**43.6**	**243**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	**5.2**	ND	ND	ND	ND	ND	**27.1**
Total Cobalt (Co)	µg/l	5	NE	ND	**5.4**	ND	**22.6**	ND	ND	**32.6**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**159**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**11**	ND	ND	ND	ND	ND	**9.4**
Total Zinc (Zn)	µg/l	10	50	**15.8**	**46.1**	**61.7**	ND	ND	ND	**32.1**
Mercury	µg/l	0.2	0.012	NT	NT	NT	ND	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	**40.6**
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	NT
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**2.7**
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NT
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**6**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NT
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.2**
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	**4.5**
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	*ND*
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**3.5**
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**3.8**
Methyl-tert-butyl-ether (MTBE)	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**1.6**
Naphthalene	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**5.3**
p-isopropyltoluene	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**1.8**
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**0.85**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-25-11)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.2**	**6.7**	**7.2**	**6**	**5.7**	**6.2**	**6.9**
Specific Conductance	µmhos/cm (on-site)	1	NE	**207**	**208**	**275**	**241**	**42**	**17**	**272**
Temperature	°C (on-site)	-	29	**10.4**	**11.9**	**11.7**	**17.2**	**15.8**	**13**	**11.7**
Turbidity	NTU (on-site)	NT	50	**7.92**	**19.0**	**8.08**	**15.5**	**5.52**	**6.19**	**6.35**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.85**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.17**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**1**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**5170**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**63.9**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**908**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**7.2**
Total Barium (Ba)	µg/l	5	NE	**170**	**168**	**126**	**140**	**32.7**	**30.7**	**261**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**35.4**
Total Cobalt (Co)	µg/l	5	NE	ND	**5**	**5**	**28.8**	ND	ND	**19.7**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**170**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**14.0**
Total Zinc (Zn)	µg/l	10	50	ND	**33.6**	**56.1**	ND	ND	ND	**18.0**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	**43.9**
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	NT
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NT
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.0**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NT
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	**1.5**
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	*ND*
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**3.5**
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**2.3**
Methyl-tert-butyl-ether (MTBE)	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**1.5**
Naphthalene	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**1.6**
p-isopropyltoluene	µg/l	1	NE	NT	NT	NT	NT	NT	NT	ND
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**1.20**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-20-12)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.0**	**6.8**	**7.8**	**6.3**	**6.4**	**7.0**	**7.6**
Specific Conductance	µmhos/cm (on-site)	1	NE	**146**	**218.4**	**261.2**	**111**	**41.3**	**65.8**	**260.4**
Temperature	°C (on-site)	-	29	**15.1**	**14.2**	**16.8**	**15.3**	**14.9**	**13.5**	**16.5**
Turbidity	NTU (on-site)	NT	50	**12.5**	**6.1**	**15.9**	**4.84**	**4.06**	**6.43**	**5.71**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**8.6**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.52**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**8.6**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**299**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**20.5**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**154**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**103**	**177**	**90.8**	**121**	**35.2**	**40.5**	**85.2**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**6**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	**14.4**	ND	ND	**7.6**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	**7.7**
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**33.3**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	10	50	ND	**37.6**	**15**	ND	ND	ND	**21.5**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	NT
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NT
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NT
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Methyl-tert-butyl-ether (MTBE)	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Naphthalene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
p-isopropyltoluene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**0.28**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-24-12)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.1**	**6.9**	**7.9**	**6.2**	**6.1**	**7.2**	**7.5**
Specific Conductance	µmhos/cm (on-site)	1	NE	**217**	**272**	**329**	**227**	**39**	**54**	**16,940.0**
Temperature	°C (on-site)	-	29	**13.6**	**14.5**	**13.9**	**17.5**	**13.1**	**11.9**	**19.9**
Turbidity	NTU (on-site)	NT	50	**7.38**	**3.6**	**6.16**	**30.5**	**1.97**	**3.39**	**19.6**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.18**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.075**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.26**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**5100**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**53.3**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**860**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**14**
Total Barium (Ba)	µg/l	5	NE	**172**	**175**	**124**	**164**	**38.7**	**31.2**	**390**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**32.6**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	**20.2**	ND	ND	**19**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**166**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**16.0**
Total Zinc (Zn)	µg/l	10	50	ND	**28.5**	**10.7**	ND	ND	ND	ND
Mercury	µg/l	0.2	0.012	ND	ND	ND	ND	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.8**
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**3.1**
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
o-Xylenes	µg/l	1	NE	NT	NT	NT	NT	NT	NT	**1.4**
Methyl-tert-butyl-ether (MTBE)	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Naphthalene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
p-isopropyltoluene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**0.87**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters a Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-24-13)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.1**	**7.5**	**7.4**	**6.3**	**6.5**	**6.8**	**7.6**
Specific Conductance	µmhos/cm (on-site)	1	NE	**180**	**183**	**274**	**249**	**42**	**63**	**15,320**
Temperature	°C (on-site)	-	29	**13.6**	**13**	**14.1**	**15.4**	**15.2**	**13.2**	**15.1**
Turbidity	NTU (on-site)	NT	50	**7.06**	**6.9**	**4.23**	**5.06**	**0.37**	**2.11**	**15**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.098**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.15**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.056**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**3830**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**107**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**866**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**159**	**146**	**148**	**114**	**34.8**	**33**	**436**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**27.3**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	**5.8**	**29.3**	ND	ND	**17.8**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**130**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**13.0**
Total Zinc (Zn)	µg/l	10	50	ND	**46.2**	**19**	ND	ND	ND	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	**150**
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**2.5**
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**2.0**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**157**
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**5**
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**3**
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**2**
Methyl-tert-butyl-ether (MTBE)	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Naphthalene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
p-isopropyltoluene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**1.1**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-24-13)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.4**	**6.9**	**7.5**	**6.3**	**6.3**	**6.8**	**7.6**
Specific Conductance	µmhos/cm (on-site)	1	NE	**238**	**280.6**	**329.7**	**281.7**	**38**	**67**	**14,800**
Temperature	°C (on-site)	-	29	**11.2**	**11.7**	**10.8**	**16.7**	**11.1**	**9.6**	**15**
Turbidity	NTU (on-site)	NT	50	**25.2**	**2.05**	**2.96**	**3.28**	**1.19**	**2.24**	**200**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.2**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.25**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.044**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**4.1**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**52.8**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**920**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**205**	**209**	**161**	**138**	**36.7**	**31**	**438**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**32.4**
Total Cobalt (Co)	µg/l	5	NE	**5.1**	**7.9**	ND	**37.8**	ND	ND	**27.8**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	**5.7**	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**140**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**7.3**	ND	ND	ND	ND	ND	**12.8**
Total Zinc (Zn)	µg/l	10	50	ND	**33.2**	**13.3**	ND	ND	ND	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.9**
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.1**
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**2.6**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**5.7**
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**3.5**
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**2.2**
Methyl-tert-butyl-ether (MTBE)	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Naphthalene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
p-isopropyltoluene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**1.4**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-24-14)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.3**	**6.4**	**7.7**	**6.2**	**6.6**	**6.8**	**7.3**
Specific Conductance	µmhos/cm (on-site)	1	NE	**183**	**285**	**294**	**262**	**42**	**6.6**	**9,040**
Temperature	°C (on-site)	-	29	**14.6**	**14.1**	**17.9**	**15.9**	**13.8**	**12.1**	**16.9**
Turbidity	NTU (on-site)	NT	50	**3.64**	**2.67**	**5.1**	**4.46**	**3.74**	**3.07**	**36.3**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.84**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**1.3**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.43**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**4450**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**53.3**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**964**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	**14.3**
Total Barium (Ba)	µg/l	5	NE	**142**	**187**	**133**	**125**	**38.5**	**35.5**	**376**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	**1.8**
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**14.6**
Total Cobalt (Co)	µg/l	5	NE	ND	**6.4**	ND	**9.7**	ND	ND	**24.8**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	**5.5**	ND	ND	ND	ND	**157**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**15.9**
Total Zinc (Zn)	µg/l	10	50	ND	**23.8**	**10.8**	ND	ND	ND	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	**2**
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**3.1**
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**5.9**
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**3.6**
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**15.6**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**34.8**
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	**2.6**
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**41.4**
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**29.7**
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**11.7**
Methyl-tert-butyl-ether (MTBE)	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Naphthalene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
p-isopropyltoluene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**1.7**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-28-14)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.3**	**7.7**	**7.8**	**6.0**	**6.8**	**6.9**	**7.5**
Specific Conductance	µmhos/cm (on-site)	1	NE	**236**	**232**	**356**	**206**	**43**	**57**	**15,110**
Temperature	°C (on-site)	-	29	**12.9**	**12.5**	**12.1**	**18.2**	**12.4**	**11.3**	**19.4**
Turbidity	NTU (on-site)	NT	50	**4.43**	**3.73**	**5.52**	**11.3**	**4.3**	**1.45**	**4.71**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.12**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.2**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.08**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**3070**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**48.9**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**1010**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	**0.0075**
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**56.7**
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**181**	**155**	**132**	**147**	**31.4**	**28**	**360**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**27.1**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	**9.7**	ND	ND	**14.5**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**135**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**24.0**
Total Zinc (Zn)	µg/l	10	50	ND	**75.8**	ND	ND	ND	ND	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**2.8**
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.1**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.2**
Methyl-tert-butyl-ether (MTBE)	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	**1.7**
Naphthalene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	**2.1**
p-isopropyltoluene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**1.7**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (4-28-15)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.3**	**7.6**	**8.3**	**6.1**	**7.3**	**7.1**	**8.1**
Specific Conductance	µmhos/cm (on-site)	1	NE	**201**	**217**	**330**	**181**	**41**	**81**	**6,309**
Temperature	°C (on-site)	-	29	**13.8**	**11.5**	**16.8**	**18.2**	**12.3**	**10.7**	**22.1**
Turbidity	NTU (on-site)	NT	50	**4.62**	**6.77**	**3.6**	**6.7**	**5.76**	**4.76**	**5.43**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.031**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**712**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**24.6**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**503**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**23.4**
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**175**	**152**	**145**	**133**	**34.5**	**33.3**	**119**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**9.5**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	**7.4**	ND	ND	**7.3**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**64.5**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**19.3**
Total Zinc (Zn)	µg/l	10	50	ND	**43.4**	**20.4**	ND	ND	ND	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	**32.3**
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Methyl-tert-butyl-ether (MTBE)	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	ND
Naphthalene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	ND
p-isopropyltoluene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**0.34**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

White Oak Landfill - Haywood Co., NC
Surface Water Sampling Event (10-27-15)

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.8**	**7.4**	**7.2**	**7.7**	**6.8**	**6.8**	**6.4**
Specific Conductance	µmhos/cm (on-site)	1	NE	**222**	**226**	**360**	**307**	**72**	**61**	**6,509**
Temperature	°C (on-site)	-	29	**13.5**	**13.3**	**13.4**	**17.8**	**14.3**	**13.0**	**15.5**
Turbidity	NTU (on-site)	NT	50	**10.18**	**18.30**	**9.92**	**24.52**	**8.05**	**3.92**	**66.79**
Nitrate as N	mg/l	0.02	NE	NT	NT	NT	NT	NT	NT	ND
Nitrate/Nitrite as N	mg/l	0.02	NE	NT	NT	NT	NT	NT	NT	**0.042**
Nitrite as N	mg/l	0.02	NE	NT	NT	NT	NT	NT	NT	**0.066**
Nitrogen	mg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	400	NE	NT	NT	NT	NT	NT	NT	**837**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**73.3**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**442**
Total Dissolved Solids	mg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	0.008	5	NT	NT	NT	NT	NT	NT	ND
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**23.4**
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**187**	ND	**164**	**139**	**35**	**31.4**	**285**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**9.8**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	**5.9**	ND	ND	**5.7**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**61.7**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**18.2**
Total Zinc (Zn)	µg/l	10	50	ND	ND	ND	ND	ND	ND	**13.7**
Mercury	µg/l	NT	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	**162**
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	**2**
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**7.1**
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**2.2**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**168**
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**7.1**
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	**14.6**
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**3.7**
m&p-Xylenes	µg/l	2	NE	ND	ND	ND	ND	ND	ND	**2.5**
o-Xylenes	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.2**
Methyl-tert-butyl-ether (MTBE)	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	ND
Naphthalene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	ND
p-isopropyltoluene	µg/l	NT	NE	NT	NT	NT	NT	NT	NT	NT
Phosphorus	mg/l	0.05	NE	NT	NT	NT	NT	NT	NT	**0.26**

Notes:
MCL = Maximum Contaminant Level, as established in the NCDENR, "Redbook" Surface Waters and Wetlands Standards
Section 15A NCAC 02B.0100, .0200, a .0300.
ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

APPENDIX C

LABORATORY ANALYTICAL RESULTS

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

November 16, 2015

Mr. Ron Vail
Santek Environmental Inc.
650 25th St, NW Suite 100
Cleveland, TN 37311

RE: Project: White Oak LF 10/26
Pace Project No.: 92273406

Dear Mr. Vail:
Enclosed are the analytical results for sample(s) received by the laboratory between October 26, 2015 and October 27, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Chris Derouen
christopher.derouen@pacelabs.com
Project Manager

Enclosures

cc: Robert Hudson, Santek Waste Services
Ron Vail, Santek Environmental

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

CERTIFICATIONS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

SAMPLE SUMMARY

Project: White Oak LF 10/26
Pace Project No.: 92273406

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92273406001	**SW-1**	Water	10/26/15 12:20	10/26/15 17:15
92273406002	**SW-2**	Water	10/26/15 13:45	10/26/15 17:15
92273406003	**SW-3**	Water	10/26/15 14:00	10/26/15 17:15
92273406004	**SW-5**	Water	10/26/15 13:30	10/26/15 17:15
92273406005	**SW-6**	Water	10/26/15 09:45	10/26/15 17:15
92273406006	**SW-7**	Water	10/26/15 09:30	10/26/15 17:15
92273406007	**Leachate**	Water	10/26/15 13:10	10/26/15 17:15
92273406008	**MW-1A**	Water	10/27/15 12:15	10/27/15 15:50
92273406009	**MW-2**	Water	10/27/15 12:35	10/27/15 15:50
92273406010	**MW-2D**	Water	10/27/15 12:45	10/27/15 15:50
92273406011	**MW-3R**	Water	10/27/15 13:25	10/27/15 15:50
92273406012	**MW-3DR**	Water	10/27/15 13:35	10/27/15 15:50
92273406013	**MW-4A**	Water	10/27/15 14:00	10/27/15 15:50
92273406014	**MW-8**	Water	10/27/15 13:00	10/27/15 15:50
92273406015	**MW-11s**	Water	10/27/15 11:40	10/27/15 15:50
92273406016	**MW-11D**	Water	10/27/15 11:50	10/27/15 15:50
92273406017	**MW-14**	Water	10/27/15 10:45	10/27/15 15:50
92273406018	**MW-15**	Water	10/27/15 11:00	10/27/15 15:50
92273406019	**MW-16**	Water	10/27/15 14:20	10/27/15 15:50
92273406020	**MW-17**	Water	10/27/15 14:35	10/27/15 15:50
92273406021	**TVL BLK**	Water	10/26/15 08:00	10/27/15 15:50
92273406022	**Equip Blk**	Water	10/27/15 08:30	10/27/15 15:50

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

SAMPLE ANALYTE COUNT

Project: White Oak LF 10/26
Pace Project No.: 92273406

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92273406001	**SW-1**	EPA 6010	JMW	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406002	**SW-2**	EPA 6010	JMW	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406003	**SW-3**	EPA 6010	JMW	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406004	**SW-5**	EPA 6010	JMW	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406005	**SW-6**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406006	**SW-7**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406007	**Leachate**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
		SM 5210B	EWS	1	PASI-A
		EPA 300.0	MDW	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	SER	1	PASI-A
		SM 4500-CN-E	AES2	1	PASI-A
		SM 5220D	WRC	1	PASI-A
92273406008	**MW-1A**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406009	**MW-2**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406010	**MW-2D**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406011	**MW-3R**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406012	**MW-3DR**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406013	**MW-4A**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406014	**MW-8**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406015	**MW-11s**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406016	**MW-11D**	EPA 6010	CDF	15	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

SAMPLE ANALYTE COUNT

Project: White Oak LF 10/26
Pace Project No.: 92273406

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	NB	52	PASI-C
92273406017	**MW-14**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406018	**MW-15**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406019	**MW-16**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406020	**MW-17**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C
92273406021	**TVL BLK**	EPA 8260	NB	52	PASI-C
92273406022	**Equip Blk**	EPA 6010	CDF	15	PASI-A
		EPA 8260	NB	52	PASI-C

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-1 **Lab ID: 92273406001** Collected: 10/26/15 12:20 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 09:07		
Collected Date	**10/26/15**				1		11/16/15 09:07		
Collected Time	**12:20**				1		11/16/15 09:07		
Field pH	**6.8**	Std. Units	0.10	0.10	1		11/16/15 09:07		
Field Temperature	**13.5**	deg C	0.50	0.50	1		11/16/15 09:07		
Field Specific Conductance	**222**	umhos/cm	1.0	1.0	1		11/16/15 09:07		
Turbidity	**10.18**	NTU	1.0	1.0	1		11/16/15 09:07		
Appearance	**Low, Clear**				1		11/16/15 09:07		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 20:00	10/30/15 23:50	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 20:00	10/30/15 23:50	7440-38-2	
Barium	**187**	ug/L	5.0	2.5	1	10/28/15 20:00	10/30/15 23:50	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 20:00	10/30/15 23:50	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 20:00	10/30/15 23:50	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/30/15 23:50	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/30/15 23:50	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/30/15 23:50	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/30/15 23:50	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/30/15 23:50	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 20:00	10/30/15 23:50	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/30/15 23:50	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 20:00	10/30/15 23:50	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/30/15 23:50	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/28/15 20:00	10/30/15 23:50	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 05:52	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 05:52	107-13-1	M1
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 05:52	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 05:52	74-97-5	M1
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 05:52	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 05:52	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 05:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 05:52	78-93-3	M1
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 05:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 05:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 05:52	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 05:52	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 05:52	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 05:52	74-87-3	M1
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 05:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 05:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 05:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 05:52	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-1 **Lab ID: 92273406001** Collected: 10/26/15 12:20 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 05:52	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 05:52	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 05:52	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 05:52	75-34-3	M1
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 05:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 05:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 05:52	156-59-2	M1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 05:52	156-60-5	M1
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 05:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 05:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 05:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 05:52	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 05:52	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 05:52	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 05:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 05:52	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 05:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 05:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 05:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 05:52	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 05:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 05:52	71-55-6	M1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 05:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 05:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 05:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 05:52	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 05:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 05:52	75-01-4	M1
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 05:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 05:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 05:52	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/31/15 05:52	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		10/31/15 05:52	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 05:52	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-2 **Lab ID: 92273406002** Collected: 10/26/15 13:45 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 09:12		
Collected Date	**10/26/16**				1		11/16/15 09:12		
Collected Time	**13:45**				1		11/16/15 09:12		
Field pH	**7.4**	Std. Units	0.10	0.10	1		11/16/15 09:12		
Field Temperature	**13.3**	deg C	0.50	0.50	1		11/16/15 09:12		
Field Specific Conductance	**226**	umhos/cm	1.0	1.0	1		11/16/15 09:12		
Turbidity	**18.3**	NTU	1.0	1.0	1		11/16/15 09:12		
Appearance	**Low, Orgainc Debris**				1		11/16/15 09:12		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 20:00	10/31/15 00:02	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 20:00	10/31/15 00:02	7440-38-2	
Barium	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:02	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 20:00	10/31/15 00:02	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 20:00	10/31/15 00:02	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:02	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:02	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:02	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:02	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:02	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 20:00	10/31/15 00:02	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:02	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 20:00	10/31/15 00:02	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:02	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/28/15 20:00	10/31/15 00:02	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 06:09	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 06:09	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 06:09	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 06:09	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 06:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 06:09	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 06:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 06:09	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 06:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 06:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 06:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 06:09	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 06:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 06:09	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 06:09	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 06:09	124-48-1	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-2 **Lab ID: 92273406002** Collected: 10/26/15 13:45 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 06:09	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 06:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 06:09	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 06:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 06:09	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 06:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 06:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 06:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 06:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 06:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 06:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 06:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 06:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 06:09	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 06:09	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 06:09	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 06:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 06:09	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 06:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 06:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 06:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 06:09	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 06:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 06:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 06:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 06:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 06:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 06:09	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 06:09	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 06:09	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 06:09	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 06:09	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 06:09	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/31/15 06:09	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		10/31/15 06:09	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 06:09	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-3 **Lab ID: 92273406003** Collected: 10/26/15 14:00 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 09:15		
Collected Date	**10/26/15**				1		11/16/15 09:15		
Collected Time	**14:00**				1		11/16/15 09:15		
Field pH	**7.2**	Std. Units	0.10	0.10	1		11/16/15 09:15		
Field Temperature	**13.4**	deg C	0.50	0.50	1		11/16/15 09:15		
Field Specific Conductance	**360**	umhos/cm	1.0	1.0	1		11/16/15 09:15		
Turbidity	**9.92**	NTU	1.0	1.0	1		11/16/15 09:15		
Appearance	**Low, Clean**				1		11/16/15 09:15		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 20:00	10/31/15 00:05	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 20:00	10/31/15 00:05	7440-38-2	
Barium	**164**	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:05	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 20:00	10/31/15 00:05	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 20:00	10/31/15 00:05	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:05	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:05	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:05	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:05	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:05	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 20:00	10/31/15 00:05	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:05	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 20:00	10/31/15 00:05	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:05	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/28/15 20:00	10/31/15 00:05	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 06:27	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 06:27	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 06:27	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 06:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 06:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 06:27	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 06:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 06:27	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 06:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 06:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 06:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 06:27	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 06:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 06:27	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 06:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 06:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 06:27	106-93-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-3 **Lab ID: 92273406003** Collected: 10/26/15 14:00 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 06:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 06:27	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 06:27	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 06:27	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 06:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 06:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 06:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 06:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 06:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 06:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 06:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 06:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 06:27	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 06:27	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 06:27	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 06:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 06:27	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 06:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 06:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 06:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 06:27	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 06:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 06:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 06:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 06:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 06:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 06:27	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 06:27	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 06:27	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 06:27	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 06:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 06:27	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/31/15 06:27	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		10/31/15 06:27	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 06:27	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-5 **Lab ID: 92273406004** Collected: 10/26/15 13:30 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 09:17		
Collected Date	**10/26/15**				1		11/16/15 09:17		
Collected Time	**13:30**				1		11/16/15 09:17		
Field pH	**7.7**	Std. Units	0.10	0.10	1		11/16/15 09:17		
Field Temperature	**17.8**	deg C	0.50	0.50	1		11/16/15 09:17		
Field Specific Conductance	**307**	umhos/cm	1.0	1.0	1		11/16/15 09:17		
Turbidity	**24.52**	NTU	1.0	1.0	1		11/16/15 09:17		
Appearance	**Rusty Sediment Low Flow**				1		11/16/15 09:17		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 20:00	10/31/15 00:08	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 20:00	10/31/15 00:08	7440-38-2	
Barium	**139**	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:08	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 20:00	10/31/15 00:08	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 20:00	10/31/15 00:08	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:08	7440-47-3	
Cobalt	**5.9**	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:08	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:08	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:08	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:08	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 20:00	10/31/15 00:08	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:08	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 20:00	10/31/15 00:08	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 20:00	10/31/15 00:08	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/28/15 20:00	10/31/15 00:08	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 06:44	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 06:44	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 06:44	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 06:44	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 06:44	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 06:44	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 06:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 06:44	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 06:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 06:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 06:44	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 06:44	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 06:44	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 06:44	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 06:44	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 06:44	124-48-1	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-5 **Lab ID: 92273406004** Collected: 10/26/15 13:30 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 06:44	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 06:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 06:44	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 06:44	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 06:44	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 06:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 06:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 06:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 06:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 06:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 06:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 06:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 06:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 06:44	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 06:44	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 06:44	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 06:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 06:44	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 06:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 06:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 06:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 06:44	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 06:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 06:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 06:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 06:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 06:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 06:44	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 06:44	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 06:44	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 06:44	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 06:44	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 06:44	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/31/15 06:44	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		10/31/15 06:44	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 06:44	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-6 **Lab ID: 92273406005** Collected: 10/26/15 09:45 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 09:22		
Collected Date	**10/26/15**				1		11/16/15 09:22		
Collected Time	**09.45**				1		11/16/15 09:22		
Field pH	**6.8**	Std. Units	0.10	0.10	1		11/16/15 09:22		
Field Temperature	**14.3**	deg C	0.50	0.50	1		11/16/15 09:22		
Field Specific Conductance	**72**	umhos/cm	1.0	1.0	1		11/16/15 09:22		
Turbidity	**8.05**	NTU	1.0	1.0	1		11/16/15 09:22		
Appearance	**Clear, Low Flow, Rust Sediment**				1		11/16/15 09:22		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:02	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:02	7440-38-2	
Barium	**35.0**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:02	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:02	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:02	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:02	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:02	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:02	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:02	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:02	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:02	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:02	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:02	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:02	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:02	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 07:01	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 07:01	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 07:01	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 07:01	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 07:01	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 07:01	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 07:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 07:01	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 07:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 07:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 07:01	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 07:01	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 07:01	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 07:01	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 07:01	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 07:01	124-48-1	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-6 **Lab ID: 92273406005** Collected: 10/26/15 09:45 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 07:01	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 07:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 07:01	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 07:01	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 07:01	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 07:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 07:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 07:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 07:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 07:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 07:01	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 07:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 07:01	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 07:01	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 07:01	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 07:01	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 07:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 07:01	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 07:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 07:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 07:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 07:01	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 07:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 07:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 07:01	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 07:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 07:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 07:01	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 07:01	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 07:01	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 07:01	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 07:01	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 07:01	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/31/15 07:01	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		10/31/15 07:01	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 07:01	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-7 **Lab ID: 92273406006** Collected: 10/26/15 09:30 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 09:26		
Collected Date	**10/26/15**				1		11/16/15 09:26		
Collected Time	**09:30**				1		11/16/15 09:26		
Field pH	**6.8**	Std. Units	0.10	0.10	1		11/16/15 09:26		
Field Temperature	**13.0**	deg C	0.50	0.50	1		11/16/15 09:26		
Field Specific Conductance	**61**	umhos/cm	1.0	1.0	1		11/16/15 09:26		
Turbidity	**3.92**	NTU	1.0	1.0	1		11/16/15 09:26		
Appearance	**Clear Low Flow**				1		11/16/15 09:26		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/29/15 20:00	11/05/15 00:36	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/29/15 20:00	11/05/15 00:36	7440-38-2	
Barium	**31.4**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:36	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 00:36	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 00:36	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:36	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:36	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:36	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:36	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:36	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 00:36	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:36	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/29/15 20:00	11/05/15 00:36	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:36	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 00:36	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 07:18	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 07:18	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 07:18	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 07:18	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 07:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 07:18	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 07:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 07:18	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 07:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 07:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 07:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 07:18	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 07:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 07:18	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 07:18	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 07:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 07:18	106-93-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: SW-7 **Lab ID: 92273406006** Collected: 10/26/15 09:30 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 07:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 07:18	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 07:18	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 07:18	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 07:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 07:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 07:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 07:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 07:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 07:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 07:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 07:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 07:18	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 07:18	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 07:18	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 07:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 07:18	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 07:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 07:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 07:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 07:18	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 07:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 07:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 07:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 07:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 07:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 07:18	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 07:18	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 07:18	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 07:18	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 07:18	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 07:18	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/31/15 07:18	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		10/31/15 07:18	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		10/31/15 07:18	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: Leachate **Lab ID: 92273406007** Collected: 10/26/15 13:10 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 09:36		
Collected Date	**10/26/15**				1		11/16/15 09:36		
Collected Time	**13:10**				1		11/16/15 09:36		
Field pH	**6.4**	Std. Units	0.10	0.10	1		11/16/15 09:36		
Field Temperature	**15.5**	deg C	0.50	0.50	1		11/16/15 09:36		
Field Specific Conductance	**6509**	umhos/cm	1.0	1.0	1		11/16/15 09:36		
Turbidity	**66.79**	NTU	1.0	1.0	1		11/16/15 09:36		
Odor	**Organic Oder**				1		11/16/15 09:36		
Appearance	**Opaque Dark**				1		11/16/15 09:36		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	**23.4**	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:05	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:05	7440-38-2	
Barium	**285**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:05	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:05	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:05	7440-43-9	
Chromium	**9.8**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:05	7440-47-3	
Cobalt	**5.7**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:05	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:05	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:05	7439-92-1	
Nickel	**61.7**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:05	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:05	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:05	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:05	7440-28-0	
Vanadium	**18.2**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:05	7440-62-2	
Zinc	**13.7**	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:05	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	**162**	ug/L	25.0	10.0	1		10/31/15 07:36	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 07:36	107-13-1	
Benzene	**2.0**	ug/L	1.0	0.25	1		10/31/15 07:36	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 07:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 07:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 07:36	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 07:36	74-83-9	
2-Butanone (MEK)	**168**	ug/L	5.0	0.96	1		10/31/15 07:36	78-93-3	
Carbon disulfide	**7.1**	ug/L	2.0	1.2	1		10/31/15 07:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 07:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 07:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 07:36	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 07:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 07:36	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 07:36	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 07:36	124-48-1	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: Leachate **Lab ID: 92273406007** Collected: 10/26/15 13:10 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 07:36	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 07:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 07:36	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 07:36	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 07:36	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 07:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 07:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 07:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 07:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 07:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 07:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 07:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 07:36	10061-02-6	
Ethylbenzene	**2.2**	ug/L	1.0	0.30	1		10/31/15 07:36	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 07:36	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 07:36	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 07:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	**7.1**	ug/L	5.0	0.33	1		10/31/15 07:36	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 07:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 07:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 07:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 07:36	127-18-4	
Toluene	**14.6**	ug/L	1.0	0.26	1		10/31/15 07:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 07:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 07:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 07:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 07:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 07:36	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 07:36	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 07:36	75-01-4	
Xylene (Total)	**3.7**	ug/L	2.0	0.66	1		10/31/15 07:36	1330-20-7	
m&p-Xylene	**2.5**	ug/L	2.0	0.66	1		10/31/15 07:36	179601-23-1	
o-Xylene	**1.2**	ug/L	1.0	0.23	1		10/31/15 07:36	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/31/15 07:36	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		10/31/15 07:36	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 07:36	2037-26-5	
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**73.3**	mg/L	2.0	2.0	1	10/28/15 05:00	11/02/15 10:40		L1
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**837**	mg/L	400	200	200		11/02/15 21:27	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	mg/L	0.020	0.010	1		10/27/15 20:21		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: Leachate **Lab ID: 92273406007** Collected: 10/26/15 13:10 Received: 10/26/15 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrite	**0.066**	mg/L	0.020	0.010	1		10/27/15 20:21		
Nitrogen, NO2 plus NO3	**0.042**	mg/L	0.020	0.010	1		10/27/15 20:21		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**0.26**	mg/L	0.050	0.025	1		11/03/15 03:49	7723-14-0	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0080	0.0040	1		10/30/15 16:44	57-12-5	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**442**	mg/L	25.0	12.5	1		10/29/15 13:40		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-1A **Lab ID: 92273406008** Collected: 10/27/15 12:15 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 09:56		
Collected Date	**10/27/15**				1		11/16/15 09:56		
Collected Time	**12:15**				1		11/16/15 09:56		
Field pH	**6.3**	Std. Units	0.10	0.10	1		11/16/15 09:56		
Field Temperature	**12.5**	deg C	0.50	0.50	1		11/16/15 09:56		
Static Water Level	**21.80**	feet			1		11/16/15 09:56		
Field Specific Conductance	**118**	umhos/cm	1.0	1.0	1		11/16/15 09:56		
Turbidity	**1.88**	NTU	1.0	1.0	1		11/16/15 09:56		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:18	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:18	7440-38-2	
Barium	**164**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:18	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:18	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:18	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:18	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:18	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:18	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:18	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:18	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:18	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:18	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:18	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:18	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:18	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 07:53	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 07:53	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 07:53	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 07:53	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 07:53	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 07:53	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 07:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 07:53	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 07:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 07:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 07:53	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 07:53	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 07:53	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 07:53	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 07:53	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 07:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 07:53	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 07:53	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-1A **Lab ID: 92273406008** Collected: 10/27/15 12:15 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 07:53	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 07:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 07:53	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 07:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 07:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 07:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 07:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 07:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 07:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 07:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 07:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 07:53	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 07:53	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 07:53	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 07:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 07:53	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 07:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 07:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 07:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 07:53	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 07:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 07:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 07:53	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 07:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 07:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 07:53	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 07:53	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 07:53	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 07:53	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 07:53	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 07:53	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/31/15 07:53	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/31/15 07:53	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		10/31/15 07:53	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-2 **Lab ID: 92273406009** Collected: 10/27/15 12:35 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 09:58		
Collected Date	**10/27/15**				1		11/16/15 09:58		
Collected Time	**12:35**				1		11/16/15 09:58		
Field pH	**5.9**	Std. Units	0.10	0.10	1		11/16/15 09:58		
Field Temperature	**13.0**	deg C	0.50	0.50	1		11/16/15 09:58		
Static Water Level	**30.68**	feet			1		11/16/15 09:58		
Field Specific Conductance	**1478**	umhos/cm	1.0	1.0	1		11/16/15 09:58		
Turbidity	**2.52**	NTU	1.0	1.0	1		11/16/15 09:58		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:21	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:21	7440-38-2	
Barium	**1190**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:21	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:21	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:21	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:21	7440-47-3	
Cobalt	**5.6**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:21	7440-48-4	
Copper	**5.4**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:21	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:21	7439-92-1	
Nickel	**12.6**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:21	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:21	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:21	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:21	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:21	7440-62-2	
Zinc	**14.3**	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:21	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 08:10	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 08:10	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 08:10	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 08:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 08:10	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 08:10	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 08:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 08:10	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 08:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 08:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 08:10	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 08:10	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 08:10	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 08:10	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 08:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 08:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 08:10	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 08:10	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-2 **Lab ID: 92273406009** Collected: 10/27/15 12:35 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 08:10	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 08:10	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 08:10	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 08:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 08:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 08:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 08:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 08:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 08:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 08:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 08:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 08:10	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 08:10	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 08:10	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 08:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 08:10	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 08:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 08:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 08:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 08:10	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 08:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 08:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 08:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 08:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 08:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 08:10	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 08:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 08:10	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 08:10	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 08:10	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 08:10	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/31/15 08:10	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/31/15 08:10	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 08:10	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-2D **Lab ID: 92273406010** Collected: 10/27/15 12:45 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:01		
Collected Date	**10/27/15**				1		11/16/15 10:01		
Collected Time	**12:45**				1		11/16/15 10:01		
Field pH	**6.2**	Std. Units	0.10	0.10	1		11/16/15 10:01		
Field Temperature	**13.0**	deg C	0.50	0.50	1		11/16/15 10:01		
Static Water Level	**30.60**	feet			1		11/16/15 10:01		
Field Specific Conductance	**1566**	umhos/cm	1.0	1.0	1		11/16/15 10:01		
Turbidity	**1.27**	NTU	1.0	1.0	1		11/16/15 10:01		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:24	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:24	7440-38-2	
Barium	**1400**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:24	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:24	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:24	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:24	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:24	7440-48-4	
Copper	**7.3**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:24	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:24	7439-92-1	
Nickel	**12.6**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:24	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:24	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:24	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:24	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:24	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:24	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 08:28	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 08:28	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 08:28	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 08:28	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 08:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 08:28	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 08:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 08:28	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 08:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 08:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 08:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 08:28	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 08:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 08:28	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 08:28	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 08:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 08:28	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 08:28	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-2D **Lab ID: 92273406010** Collected: 10/27/15 12:45 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 08:28	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 08:28	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 08:28	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 08:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 08:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 08:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 08:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 08:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 08:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 08:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 08:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 08:28	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 08:28	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 08:28	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 08:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 08:28	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 08:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 08:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 08:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 08:28	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 08:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 08:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 08:28	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 08:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 08:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 08:28	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 08:28	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 08:28	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 08:28	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 08:28	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 08:28	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/31/15 08:28	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		10/31/15 08:28	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 08:28	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-3R **Lab ID: 92273406011** Collected: 10/27/15 13:25 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:04		
Collected Date	**10/27/15**				1		11/16/15 10:04		
Collected Time	**13:25**				1		11/16/15 10:04		
Field pH	**6.0**	Std. Units	0.10	0.10	1		11/16/15 10:04		
Field Temperature	**13.5**	deg C	0.50	0.50	1		11/16/15 10:04		
Static Water Level	**33.45**	feet			1		11/16/15 10:04		
Field Specific Conductance	**429**	umhos/cm	1.0	1.0	1		11/16/15 10:04		
Turbidity	**4.05**	NTU	1.0	1.0	1		11/16/15 10:04		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:27	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:27	7440-38-2	
Barium	**352**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:27	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:27	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:27	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:27	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:27	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:27	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:27	7439-92-1	
Nickel	**24.4**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:27	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:27	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:27	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:27	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:27	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:27	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 08:45	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 08:45	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 08:45	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 08:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 08:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 08:45	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 08:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 08:45	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 08:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 08:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 08:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 08:45	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 08:45	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 08:45	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 08:45	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 08:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 08:45	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 08:45	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-3R **Lab ID: 92273406011** Collected: 10/27/15 13:25 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 08:45	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 08:45	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 08:45	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 08:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 08:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 08:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 08:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 08:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 08:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 08:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 08:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 08:45	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 08:45	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 08:45	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 08:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 08:45	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 08:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 08:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 08:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 08:45	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 08:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 08:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 08:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 08:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 08:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 08:45	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 08:45	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 08:45	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 08:45	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 08:45	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 08:45	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		10/31/15 08:45	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/31/15 08:45	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 08:45	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-3DR **Lab ID: 92273406012** Collected: 10/27/15 13:35 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:06		
Collected Date	**10/27/15**				1		11/16/15 10:06		
Collected Time	**13:35**				1		11/16/15 10:06		
Field pH	**5.8**	Std. Units	0.10	0.10	1		11/16/15 10:06		
Field Temperature	**13.7**	deg C	0.50	0.50	1		11/16/15 10:06		
Static Water Level	**37.50**	feet			1		11/16/15 10:06		
Field Specific Conductance	**357**	umhos/cm	1.0	1.0	1		11/16/15 10:06		
Turbidity	**7.82**	NTU	1.0	1.0	1		11/16/15 10:06		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:30	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:30	7440-38-2	
Barium	**247**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:30	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:30	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:30	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:30	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:30	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:30	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:30	7439-92-1	
Nickel	**33.4**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:30	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:30	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:30	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:30	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:30	7440-62-2	
Zinc	**11.8**	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:30	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 09:02	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 09:02	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 09:02	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 09:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 09:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 09:02	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 09:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 09:02	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 09:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 09:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 09:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 09:02	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 09:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 09:02	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 09:02	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 09:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 09:02	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 09:02	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-3DR **Lab ID: 92273406012** Collected: 10/27/15 13:35 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 09:02	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 09:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 09:02	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 09:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 09:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 09:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 09:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 09:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 09:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 09:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 09:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 09:02	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 09:02	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 09:02	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 09:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 09:02	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 09:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 09:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 09:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 09:02	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 09:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 09:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 09:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 09:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 09:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 09:02	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 09:02	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 09:02	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 09:02	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 09:02	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 09:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/31/15 09:02	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/31/15 09:02	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		10/31/15 09:02	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-4A **Lab ID: 92273406013** Collected: 10/27/15 14:00 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:08		
Collected Date	**10/27/15**				1		11/16/15 10:08		
Collected Time	**14:00**				1		11/16/15 10:08		
Field pH	**6.8**	Std. Units	0.10	0.10	1		11/16/15 10:08		
Field Temperature	**13.2**	deg C	0.50	0.50	1		11/16/15 10:08		
Static Water Level	**44.28**	feet			1		11/16/15 10:08		
Field Specific Conductance	**162**	umhos/cm	1.0	1.0	1		11/16/15 10:08		
Turbidity	**8.68**	NTU	1.0	1.0	1		11/16/15 10:08		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:34	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:34	7440-38-2	
Barium	**13.8**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:34	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:34	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:34	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:34	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:34	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:34	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:34	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:34	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:34	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:34	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:34	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:34	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:34	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 09:20	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 09:20	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 09:20	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 09:20	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 09:20	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 09:20	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 09:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 09:20	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 09:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 09:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 09:20	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 09:20	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 09:20	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 09:20	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 09:20	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 09:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 09:20	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 09:20	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-4A **Lab ID: 92273406013** Collected: 10/27/15 14:00 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 09:20	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 09:20	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 09:20	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 09:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 09:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 09:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 09:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 09:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 09:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 09:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 09:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 09:20	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 09:20	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 09:20	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 09:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 09:20	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 09:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 09:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 09:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 09:20	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 09:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 09:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 09:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 09:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 09:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 09:20	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 09:20	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 09:20	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 09:20	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 09:20	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 09:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/31/15 09:20	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		10/31/15 09:20	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 09:20	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-8 **Lab ID: 92273406014** Collected: 10/27/15 13:00 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:11		
Collected Date	**10/27/15**				1		11/16/15 10:11		
Collected Time	**13:00**				1		11/16/15 10:11		
Field pH	**6.4**	Std. Units	0.10	0.10	1		11/16/15 10:11		
Field Temperature	**13.5**	deg C	0.50	0.50	1		11/16/15 10:11		
Static Water Level	**31.05**	feet			1		11/16/15 10:11		
Field Specific Conductance	**816**	umhos/cm	1.0	1.0	1		11/16/15 10:11		
Turbidity	**5.50**	NTU	1.0	1.0	1		11/16/15 10:11		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:37	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:37	7440-38-2	
Barium	**279**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:37	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:37	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:37	7440-43-9	
Chromium	**7.7**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:37	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:37	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:37	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:37	7439-92-1	
Nickel	**5.9**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:37	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:37	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:37	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:37	7440-28-0	
Vanadium	**7.4**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:37	7440-62-2	
Zinc	**22.1**	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:37	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 09:37	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 09:37	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 09:37	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 09:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 09:37	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 09:37	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 09:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 09:37	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 09:37	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 09:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 09:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 09:37	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 09:37	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 09:37	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 09:37	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 09:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 09:37	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 09:37	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-8 **Lab ID: 92273406014** Collected: 10/27/15 13:00 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 09:37	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 09:37	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 09:37	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 09:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 09:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 09:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 09:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 09:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 09:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 09:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 09:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 09:37	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 09:37	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 09:37	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 09:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 09:37	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 09:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 09:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 09:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 09:37	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 09:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 09:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 09:37	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 09:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 09:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 09:37	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 09:37	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 09:37	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 09:37	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 09:37	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 09:37	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/31/15 09:37	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		10/31/15 09:37	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 09:37	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-11s **Lab ID: 92273406015** Collected: 10/27/15 11:40 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:13		
Collected Date	**10/27/15**				1		11/16/15 10:13		
Collected Time	**11:40**				1		11/16/15 10:13		
Field pH	**6.7**	Std. Units	0.10	0.10	1		11/16/15 10:13		
Field Temperature	**12..1**	deg C	0.50	0.50	1		11/16/15 10:13		
Static Water Level	**81.15**	feet			1		11/16/15 10:13		
Field Specific Conductance	**27**	umhos/cm	1.0	1.0	1		11/16/15 10:13		
Turbidity	**5.50**	NTU	1.0	1.0	1		11/16/15 10:13		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/28/15 19:00	11/04/15 20:40	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/28/15 19:00	11/04/15 20:40	7440-38-2	
Barium	**346**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:40	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:40	7440-41-7	
Cadmium	**1.9**	ug/L	1.0	0.50	1	10/28/15 19:00	11/04/15 20:40	7440-43-9	
Chromium	**31.4**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:40	7440-47-3	
Cobalt	**6.2**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:40	7440-48-4	
Copper	**19.1**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:40	7440-50-8	
Lead	**7.7**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:40	7439-92-1	
Nickel	**21.3**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:40	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:40	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:40	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/28/15 19:00	11/04/15 20:40	7440-28-0	
Vanadium	**44.5**	ug/L	5.0	2.5	1	10/28/15 19:00	11/04/15 20:40	7440-62-2	
Zinc	**69.8**	ug/L	10.0	5.0	1	10/28/15 19:00	11/04/15 20:40	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 09:54	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 09:54	107-13-1	M1
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 09:54	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 09:54	74-97-5	M1
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 09:54	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 09:54	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 09:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 09:54	78-93-3	M1
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 09:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 09:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 09:54	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 09:54	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 09:54	67-66-3	M1
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 09:54	74-87-3	M1
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 09:54	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 09:54	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 09:54	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 09:54	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-11s **Lab ID: 92273406015** Collected: 10/27/15 11:40 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 09:54	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 09:54	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 09:54	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 09:54	75-34-3	M1
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 09:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 09:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 09:54	156-59-2	M1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 09:54	156-60-5	M1
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 09:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 09:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 09:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 09:54	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 09:54	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 09:54	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 09:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 09:54	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 09:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 09:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 09:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 09:54	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 09:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 09:54	71-55-6	M1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 09:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 09:54	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 09:54	75-69-4	M1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 09:54	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 09:54	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 09:54	75-01-4	M1
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 09:54	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 09:54	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 09:54	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/31/15 09:54	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		10/31/15 09:54	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 09:54	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-11D **Lab ID: 92273406016** Collected: 10/27/15 11:50 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:27		
Collected Date	**10/27/15**				1		11/16/15 10:27		
Collected Time	**11:50**				1		11/16/15 10:27		
Field pH	**6.6**	Std. Units	0.10	0.10	1		11/16/15 10:27		
Field Temperature	**12.4**	deg C	0.50	0.50	1		11/16/15 10:27		
Static Water Level	**82.15**	feet			1		11/16/15 10:27		
Field Specific Conductance	**44**	umhos/cm	1.0	1.0	1		11/16/15 10:27		
Turbidity	**4.35**	NTU	1.0	1.0	1		11/16/15 10:27		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/29/15 20:00	11/05/15 00:44	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/29/15 20:00	11/05/15 00:44	7440-38-2	
Barium	**16.0**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:44	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 00:44	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 00:44	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:44	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:44	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:44	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:44	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:44	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 00:44	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:44	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/29/15 20:00	11/05/15 00:44	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:44	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 00:44	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 10:11	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 10:11	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 10:11	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 10:11	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 10:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 10:11	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 10:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 10:11	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 10:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 10:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 10:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 10:11	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 10:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 10:11	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 10:11	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 10:11	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 10:11	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 10:11	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-11D **Lab ID: 92273406016** Collected: 10/27/15 11:50 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 10:11	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 10:11	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 10:11	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 10:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 10:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 10:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 10:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 10:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 10:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 10:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 10:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 10:11	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 10:11	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 10:11	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 10:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 10:11	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 10:11	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 10:11	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 10:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 10:11	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 10:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 10:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 10:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 10:11	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 10:11	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 10:11	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 10:11	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 10:11	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 10:11	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 10:11	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 10:11	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/31/15 10:11	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		10/31/15 10:11	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 10:11	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-14 **Lab ID: 92273406017** Collected: 10/27/15 10:45 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:52		
Collected Date	**10/27/15**				1		11/16/15 10:52		
Collected Time	**10:45**				1		11/16/15 10:52		
Field pH	**6.6**	Std. Units	0.10	0.10	1		11/16/15 10:52		
Field Temperature	**12.4**	deg C	0.50	0.50	1		11/16/15 10:52		
Static Water Level	**101.30**	feet			1		11/16/15 10:52		
Field Specific Conductance	**104**	umhos/cm	1.0	1.0	1		11/16/15 10:52		
Turbidity	**28.0**	NTU	1.0	1.0	1		11/16/15 10:52		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/29/15 20:00	11/05/15 00:48	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/29/15 20:00	11/05/15 00:48	7440-38-2	
Barium	**95.7**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:48	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 00:48	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 00:48	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:48	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:48	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:48	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:48	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:48	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 00:48	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:48	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/29/15 20:00	11/05/15 00:48	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 00:48	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 00:48	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 10:29	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 10:29	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 10:29	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 10:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 10:29	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 10:29	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 10:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 10:29	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 10:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 10:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 10:29	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 10:29	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 10:29	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 10:29	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 10:29	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 10:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 10:29	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 10:29	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-14 **Lab ID: 92273406017** Collected: 10/27/15 10:45 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 10:29	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 10:29	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 10:29	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 10:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 10:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 10:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 10:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 10:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 10:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 10:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 10:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 10:29	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 10:29	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 10:29	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 10:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 10:29	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 10:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 10:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 10:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 10:29	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 10:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 10:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 10:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 10:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 10:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 10:29	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 10:29	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 10:29	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 10:29	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 10:29	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 10:29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/31/15 10:29	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		10/31/15 10:29	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 10:29	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-15 **Lab ID: 92273406018** Collected: 10/27/15 11:00 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:54		
Collected Date	**10/27/15**				1		11/16/15 10:54		
Collected Time	**11:00**				1		11/16/15 10:54		
Field pH	**6.7**	Std. Units	0.10	0.10	1		11/16/15 10:54		
Field Temperature	**14.3**	deg C	0.50	0.50	1		11/16/15 10:54		
Static Water Level	**9.69**	feet			1		11/16/15 10:54		
Field Specific Conductance	**48**	umhos/cm	1.0	1.0	1		11/16/15 10:54		
Turbidity	**16.56**	NTU	1.0	1.0	1		11/16/15 10:54		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/29/15 20:00	11/05/15 01:00	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/29/15 20:00	11/05/15 01:00	7440-38-2	
Barium	**18.8**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:00	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 01:00	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 01:00	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:00	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:00	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:00	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:00	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:00	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 01:00	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:00	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/29/15 20:00	11/05/15 01:00	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:00	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 01:00	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 10:46	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 10:46	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 10:46	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 10:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 10:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 10:46	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 10:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 10:46	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 10:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 10:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 10:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 10:46	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 10:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 10:46	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 10:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 10:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 10:46	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 10:46	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-15 **Lab ID: 92273406018** Collected: 10/27/15 11:00 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 10:46	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 10:46	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 10:46	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 10:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 10:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 10:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 10:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 10:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 10:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 10:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 10:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 10:46	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 10:46	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 10:46	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 10:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 10:46	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 10:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 10:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 10:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 10:46	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 10:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 10:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 10:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 10:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 10:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 10:46	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 10:46	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 10:46	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 10:46	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 10:46	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 10:46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/31/15 10:46	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		10/31/15 10:46	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		10/31/15 10:46	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-16 **Lab ID: 92273406019** Collected: 10/27/15 14:20 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:55		
Collected Date	**10/27/15**				1		11/16/15 10:55		
Collected Time	**14:20**				1		11/16/15 10:55		
Field pH	**6.3**	Std. Units	0.10	0.10	1		11/16/15 10:55		
Field Temperature	**14.5**	deg C	0.50	0.50	1		11/16/15 10:55		
Static Water Level	**35.29**	feet			1		11/16/15 10:55		
Field Specific Conductance	**248**	umhos/cm	1.0	1.0	1		11/16/15 10:55		
Turbidity	**11.09**	NTU	1.0	1.0	1		11/16/15 10:55		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/29/15 20:00	11/05/15 01:03	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/29/15 20:00	11/05/15 01:03	7440-38-2	
Barium	**188**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:03	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 01:03	7440-41-7	
Cadmium	**3.1**	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 01:03	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:03	7440-47-3	
Cobalt	**39.0**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:03	7440-48-4	
Copper	**6.0**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:03	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:03	7439-92-1	
Nickel	**8.7**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:03	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 01:03	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:03	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/29/15 20:00	11/05/15 01:03	7440-28-0	
Vanadium	**9.8**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:03	7440-62-2	
Zinc	**36.4**	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 01:03	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 11:38	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 11:38	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 11:38	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 11:38	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 11:38	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 11:38	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 11:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 11:38	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 11:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 11:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 11:38	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 11:38	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 11:38	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 11:38	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 11:38	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 11:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 11:38	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 11:38	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-16 **Lab ID: 92273406019** Collected: 10/27/15 14:20 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 11:38	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 11:38	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 11:38	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 11:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 11:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 11:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 11:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 11:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 11:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 11:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 11:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 11:38	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 11:38	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 11:38	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 11:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 11:38	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 11:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 11:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 11:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 11:38	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 11:38	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 11:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 11:38	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 11:38	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 11:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 11:38	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 11:38	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 11:38	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 11:38	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 11:38	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 11:38	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/31/15 11:38	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		10/31/15 11:38	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 11:38	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-17 **Lab ID: 92273406020** Collected: 10/27/15 14:35 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**Mark Swann**				1		11/16/15 10:56		
Collected Date	**10/27/15**				1		11/16/15 10:56		
Collected Time	**14:35**				1		11/16/15 10:56		
Field pH	**5.9**	Std. Units	0.10	0.10	1		11/16/15 10:56		
Field Temperature	**13.4**	deg C	0.50	0.50	1		11/16/15 10:56		
Static Water Level	**56.98**	feet			1		11/16/15 10:56		
Field Specific Conductance	**169**	umhos/cm	1.0	1.0	1		11/16/15 10:56		
Turbidity	**5.11**	NTU	1.0	1.0	1		11/16/15 10:56		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/29/15 20:00	11/05/15 01:06	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/29/15 20:00	11/05/15 01:06	7440-38-2	
Barium	**191**	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:06	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 01:06	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 01:06	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:06	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:06	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:06	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:06	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:06	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 01:06	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:06	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/29/15 20:00	11/05/15 01:06	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:06	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 01:06	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 11:55	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 11:55	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 11:55	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 11:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 11:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 11:55	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 11:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 11:55	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 11:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 11:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 11:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 11:55	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 11:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 11:55	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 11:55	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 11:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 11:55	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 11:55	74-95-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: MW-17 **Lab ID: 92273406020** Collected: 10/27/15 14:35 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 11:55	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 11:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 11:55	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 11:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 11:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 11:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 11:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 11:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 11:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 11:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 11:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 11:55	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 11:55	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 11:55	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 11:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 11:55	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 11:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 11:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 11:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 11:55	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 11:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 11:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 11:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 11:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 11:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 11:55	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 11:55	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 11:55	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 11:55	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 11:55	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 11:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/31/15 11:55	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		10/31/15 11:55	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		10/31/15 11:55	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: TVL BLK **Lab ID: 92273406021** Collected: 10/26/15 08:00 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 04:25	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 04:25	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 04:25	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 04:25	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 04:25	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 04:25	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 04:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 04:25	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 04:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 04:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 04:25	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 04:25	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 04:25	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 04:25	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 04:25	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 04:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 04:25	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 04:25	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 04:25	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 04:25	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 04:25	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 04:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 04:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 04:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 04:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 04:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 04:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 04:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 04:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 04:25	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 04:25	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 04:25	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 04:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 04:25	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 04:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 04:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 04:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 04:25	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 04:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 04:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 04:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 04:25	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 04:25	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 04:25	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 04:25	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 04:25	75-01-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: TVL BLK **Lab ID: 92273406021** Collected: 10/26/15 08:00 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 04:25	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 04:25	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 04:25	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/31/15 04:25	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		10/31/15 04:25	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/31/15 04:25	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: Equip Blk **Lab ID: 92273406022** Collected: 10/27/15 08:30 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	3.8	1	10/29/15 20:00	11/05/15 01:09	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	10/29/15 20:00	11/05/15 01:09	7440-38-2	
Barium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:09	7440-39-3	
Beryllium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 01:09	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	10/29/15 20:00	11/05/15 01:09	7440-43-9	
Chromium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:09	7440-47-3	
Cobalt	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:09	7440-48-4	
Copper	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:09	7440-50-8	
Lead	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:09	7439-92-1	
Nickel	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:09	7440-02-0	
Selenium	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 01:09	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:09	7440-22-4	
Thallium	ND	ug/L	5.4	5.0	1	10/29/15 20:00	11/05/15 01:09	7440-28-0	
Vanadium	ND	ug/L	5.0	2.5	1	10/29/15 20:00	11/05/15 01:09	7440-62-2	
Zinc	ND	ug/L	10.0	5.0	1	10/29/15 20:00	11/05/15 01:09	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		10/31/15 05:00	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		10/31/15 05:00	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		10/31/15 05:00	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		10/31/15 05:00	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/31/15 05:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		10/31/15 05:00	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		10/31/15 05:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		10/31/15 05:00	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		10/31/15 05:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		10/31/15 05:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/31/15 05:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		10/31/15 05:00	75-00-3	L2
Chloroform	ND	ug/L	1.0	0.14	1		10/31/15 05:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		10/31/15 05:00	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	2.0	1		10/31/15 05:00	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		10/31/15 05:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		10/31/15 05:00	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		10/31/15 05:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		10/31/15 05:00	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		10/31/15 05:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		10/31/15 05:00	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		10/31/15 05:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		10/31/15 05:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		10/31/15 05:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		10/31/15 05:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		10/31/15 05:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		10/31/15 05:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		10/31/15 05:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		10/31/15 05:00	10061-02-6	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

ANALYTICAL RESULTS

Project: White Oak LF 10/26
Pace Project No.: 92273406

Sample: Equip Blk **Lab ID: 92273406022** Collected: 10/27/15 08:30 Received: 10/27/15 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/31/15 05:00	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		10/31/15 05:00	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		10/31/15 05:00	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		10/31/15 05:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		10/31/15 05:00	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		10/31/15 05:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		10/31/15 05:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		10/31/15 05:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		10/31/15 05:00	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		10/31/15 05:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		10/31/15 05:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		10/31/15 05:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		10/31/15 05:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		10/31/15 05:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		10/31/15 05:00	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		10/31/15 05:00	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		10/31/15 05:00	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/31/15 05:00	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/31/15 05:00	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/31/15 05:00	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/31/15 05:00	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		10/31/15 05:00	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/31/15 05:00	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: MPRP/19905 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92273406001, 92273406002, 92273406003, 92273406004

METHOD BLANK: 1593024 | Matrix: Water
Associated Lab Samples: 92273406001, 92273406002, 92273406003, 92273406004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.8	10/30/15 22:42	
Arsenic	ug/L	ND	10.0	2.5	10/30/15 22:42	
Barium	ug/L	ND	5.0	2.5	10/30/15 22:42	
Beryllium	ug/L	ND	1.0	0.50	10/30/15 22:42	
Cadmium	ug/L	ND	1.0	0.50	10/30/15 22:42	
Chromium	ug/L	ND	5.0	2.5	10/30/15 22:42	
Cobalt	ug/L	ND	5.0	2.5	10/30/15 22:42	
Copper	ug/L	ND	5.0	2.5	10/30/15 22:42	
Lead	ug/L	ND	5.0	2.5	10/30/15 22:42	
Nickel	ug/L	ND	5.0	2.5	10/30/15 22:42	
Selenium	ug/L	ND	10.0	5.0	10/30/15 22:42	
Silver	ug/L	ND	5.0	2.5	10/30/15 22:42	
Thallium	ug/L	ND	5.4	5.0	10/30/15 22:42	
Vanadium	ug/L	ND	5.0	2.5	10/30/15 22:42	
Zinc	ug/L	ND	10.0	5.0	10/30/15 22:42	

LABORATORY CONTROL SAMPLE: 1593025

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	491	98	80-120	
Arsenic	ug/L	500	464	93	80-120	
Barium	ug/L	500	479	96	80-120	
Beryllium	ug/L	500	487	97	80-120	
Cadmium	ug/L	500	482	96	80-120	
Chromium	ug/L	500	474	95	80-120	
Cobalt	ug/L	500	467	93	80-120	
Copper	ug/L	500	494	99	80-120	
Lead	ug/L	500	471	94	80-120	
Nickel	ug/L	500	469	94	80-120	
Selenium	ug/L	500	466	93	80-120	
Silver	ug/L	250	237	95	80-120	
Thallium	ug/L	500	465	93	80-120	
Vanadium	ug/L	500	481	96	80-120	
Zinc	ug/L	500	445	89	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1593026 1593027

Parameter	Units	92273337001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	530	464	106	92	75-125	13	25	
Arsenic	ug/L	ND	500	500	504	441	101	88	75-125	13	25	
Barium	ug/L	74.1J	500	500	607	539	107	93	75-125	12	25	
Beryllium	ug/L	ND	500	500	543	475	109	95	75-125	13	25	
Cadmium	ug/L	ND	500	500	527	461	105	92	75-125	13	25	
Chromium	ug/L	ND	500	500	528	465	105	93	75-125	13	25	
Cobalt	ug/L	ND	500	500	517	453	103	91	75-125	13	25	
Copper	ug/L	ND	500	500	544	469	109	94	75-125	15	25	
Lead	ug/L	ND	500	500	518	452	104	90	75-125	13	25	
Nickel	ug/L	ND	500	500	522	457	104	91	75-125	13	25	
Selenium	ug/L	ND	500	500	505	441	101	88	75-125	14	25	
Silver	ug/L	ND	250	250	262	228	105	91	75-125	14	25	
Thallium	ug/L	ND	500	500	509	446	102	89	75-125	13	25	
Vanadium	ug/L	ND	500	500	538	473	108	95	75-125	13	25	
Zinc	ug/L	ND	500	500	506	443	101	88	75-125	13	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: MPRP/19918 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92273406005, 92273406007, 92273406008, 92273406009, 92273406010, 92273406011, 92273406012, 92273406013, 92273406014, 92273406015

METHOD BLANK: 1594175 | Matrix: Water
Associated Lab Samples: 92273406005, 92273406007, 92273406008, 92273406009, 92273406010, 92273406011, 92273406012, 92273406013, 92273406014, 92273406015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.8	11/04/15 19:09	
Arsenic	ug/L	ND	10.0	2.5	11/04/15 19:09	
Barium	ug/L	ND	5.0	2.5	11/04/15 19:09	
Beryllium	ug/L	ND	1.0	0.50	11/04/15 19:09	
Cadmium	ug/L	ND	1.0	0.50	11/04/15 19:09	
Chromium	ug/L	ND	5.0	2.5	11/04/15 19:09	
Cobalt	ug/L	ND	5.0	2.5	11/04/15 19:09	
Copper	ug/L	ND	5.0	2.5	11/04/15 19:09	
Lead	ug/L	ND	5.0	2.5	11/04/15 19:09	
Nickel	ug/L	ND	5.0	2.5	11/04/15 19:09	
Selenium	ug/L	ND	10.0	5.0	11/04/15 19:09	
Silver	ug/L	ND	5.0	2.5	11/04/15 19:09	
Thallium	ug/L	ND	5.4	5.0	11/04/15 19:09	
Vanadium	ug/L	ND	5.0	2.5	11/04/15 19:09	
Zinc	ug/L	ND	10.0	5.0	11/04/15 19:09	

LABORATORY CONTROL SAMPLE: 1594176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	452	90	80-120	
Arsenic	ug/L	500	485	97	80-120	
Barium	ug/L	500	471	94	80-120	
Beryllium	ug/L	500	455	91	80-120	
Cadmium	ug/L	500	469	94	80-120	
Chromium	ug/L	500	478	96	80-120	
Cobalt	ug/L	500	487	97	80-120	
Copper	ug/L	500	493	99	80-120	
Lead	ug/L	500	485	97	80-120	
Nickel	ug/L	500	471	94	80-120	
Selenium	ug/L	500	475	95	80-120	
Silver	ug/L	250	218	87	80-120	
Thallium	ug/L	500	445	89	80-120	
Vanadium	ug/L	500	461	92	80-120	
Zinc	ug/L	500	501	100	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1594177 1594178

Parameter	Units	92273330003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	459	530	91	105	75-125	14	25	
Arsenic	ug/L	ND	500	500	493	573	98	115	75-125	15	25	
Barium	ug/L	837	500	500	1320	1420	97	116	75-125	7	25	
Beryllium	ug/L	ND	500	500	461	538	92	108	75-125	15	25	
Cadmium	ug/L	ND	500	500	474	547	95	109	75-125	14	25	
Chromium	ug/L	3.4J	500	500	473	555	94	110	75-125	16	25	
Cobalt	ug/L	11.7	500	500	477	553	93	108	75-125	15	25	
Copper	ug/L	ND	500	500	496	572	99	114	75-125	14	25	
Lead	ug/L	ND	500	500	463	537	92	107	75-125	15	25	
Nickel	ug/L	8.4J	500	500	458	531	90	104	75-125	15	25	
Selenium	ug/L	ND	500	500	479	551	96	110	75-125	14	25	
Silver	ug/L	ND	250	250	220	255	88	101	75-125	15	25	
Thallium	ug/L	ND	500	500	408	477	82	95	75-125	16	25	
Vanadium	ug/L	5.9J	500	500	470	549	93	109	75-125	16	25	
Zinc	ug/L	ND	500	500	478	562	95	112	75-125	16	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: MPRP/19926 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92273406006, 92273406016, 92273406017, 92273406018, 92273406019, 92273406020, 92273406022

METHOD BLANK: 1595304 | Matrix: Water
Associated Lab Samples: 92273406006, 92273406016, 92273406017, 92273406018, 92273406019, 92273406020, 92273406022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.8	11/05/15 00:30	
Arsenic	ug/L	ND	10.0	2.5	11/05/15 00:30	
Barium	ug/L	ND	5.0	2.5	11/05/15 00:30	
Beryllium	ug/L	ND	1.0	0.50	11/05/15 00:30	
Cadmium	ug/L	ND	1.0	0.50	11/05/15 00:30	
Chromium	ug/L	ND	5.0	2.5	11/05/15 00:30	
Cobalt	ug/L	ND	5.0	2.5	11/05/15 00:30	
Copper	ug/L	ND	5.0	2.5	11/05/15 00:30	
Lead	ug/L	ND	5.0	2.5	11/05/15 00:30	
Nickel	ug/L	ND	5.0	2.5	11/05/15 00:30	
Selenium	ug/L	ND	10.0	5.0	11/05/15 00:30	
Silver	ug/L	ND	5.0	2.5	11/05/15 00:30	
Thallium	ug/L	ND	5.4	5.0	11/05/15 00:30	
Vanadium	ug/L	ND	5.0	2.5	11/05/15 00:30	
Zinc	ug/L	ND	10.0	5.0	11/05/15 00:30	

LABORATORY CONTROL SAMPLE: 1595305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	442	88	80-120	
Arsenic	ug/L	500	452	90	80-120	
Barium	ug/L	500	426	85	80-120	
Beryllium	ug/L	500	412	82	80-120	
Cadmium	ug/L	500	444	89	80-120	
Chromium	ug/L	500	443	89	80-120	
Cobalt	ug/L	500	453	91	80-120	
Copper	ug/L	500	446	89	80-120	
Lead	ug/L	500	455	91	80-120	
Nickel	ug/L	500	440	88	80-120	
Selenium	ug/L	500	448	90	80-120	
Silver	ug/L	250	218	87	80-120	
Thallium	ug/L	500	473	95	80-120	
Vanadium	ug/L	500	436	87	80-120	
Zinc	ug/L	500	463	93	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1595306 1595307

Parameter	Units	92273406006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	435	441	87	88	75-125	1	25	
Arsenic	ug/L	ND	500	500	444	449	89	90	75-125	1	25	
Barium	ug/L	31.4	500	500	457	450	85	84	75-125	2	25	
Beryllium	ug/L	ND	500	500	414	404	83	81	75-125	2	25	
Cadmium	ug/L	ND	500	500	439	440	88	88	75-125	0	25	
Chromium	ug/L	ND	500	500	441	431	88	86	75-125	2	25	
Cobalt	ug/L	ND	500	500	447	446	89	89	75-125	0	25	
Copper	ug/L	ND	500	500	445	444	89	89	75-125	0	25	
Lead	ug/L	ND	500	500	449	447	90	89	75-125	0	25	
Nickel	ug/L	ND	500	500	437	435	87	87	75-125	0	25	
Selenium	ug/L	ND	500	500	438	444	88	89	75-125	1	25	
Silver	ug/L	ND	250	250	215	212	86	84	75-125	1	25	
Thallium	ug/L	ND	500	500	465	465	93	93	75-125	0	25	
Vanadium	ug/L	ND	500	500	436	425	87	85	75-125	3	25	
Zinc	ug/L	ND	500	500	466	458	92	90	75-125	2	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: MSV/34071 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92273406001, 92273406002, 92273406003, 92273406004, 92273406005, 92273406006, 92273406007, 92273406008, 92273406009, 92273406010, 92273406011, 92273406012, 92273406013, 92273406014, 92273406021, 92273406022

METHOD BLANK: 1596108 Matrix: Water
Associated Lab Samples: 92273406001, 92273406002, 92273406003, 92273406004, 92273406005, 92273406006, 92273406007, 92273406008, 92273406009, 92273406010, 92273406011, 92273406012, 92273406013, 92273406014, 92273406021, 92273406022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.33	10/31/15 03:34	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	10/31/15 03:34	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	10/31/15 03:34	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	10/31/15 03:34	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	10/31/15 03:34	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	10/31/15 03:34	
1,2,3-Trichloropropane	ug/L	ND	1.0	0.41	10/31/15 03:34	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	10/31/15 03:34	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	10/31/15 03:34	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	10/31/15 03:34	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	10/31/15 03:34	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	10/31/15 03:34	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	10/31/15 03:34	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	10/31/15 03:34	
2-Hexanone	ug/L	ND	5.0	0.46	10/31/15 03:34	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	10/31/15 03:34	
Acetone	ug/L	ND	25.0	10.0	10/31/15 03:34	
Acrylonitrile	ug/L	ND	10.0	1.9	10/31/15 03:34	
Benzene	ug/L	ND	1.0	0.25	10/31/15 03:34	
Bromochloromethane	ug/L	ND	1.0	0.17	10/31/15 03:34	
Bromodichloromethane	ug/L	ND	1.0	0.18	10/31/15 03:34	
Bromoform	ug/L	ND	1.0	0.26	10/31/15 03:34	
Bromomethane	ug/L	ND	2.0	0.29	10/31/15 03:34	
Carbon disulfide	ug/L	ND	2.0	1.2	10/31/15 03:34	
Carbon tetrachloride	ug/L	ND	1.0	0.25	10/31/15 03:34	
Chlorobenzene	ug/L	ND	1.0	0.23	10/31/15 03:34	
Chloroethane	ug/L	ND	1.0	0.54	10/31/15 03:34	
Chloroform	ug/L	ND	1.0	0.14	10/31/15 03:34	
Chloromethane	ug/L	ND	1.0	0.11	10/31/15 03:34	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	10/31/15 03:34	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	10/31/15 03:34	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/31/15 03:34	
Dibromomethane	ug/L	ND	1.0	0.21	10/31/15 03:34	
Ethylbenzene	ug/L	ND	1.0	0.30	10/31/15 03:34	
Iodomethane	ug/L	ND	5.0	0.32	10/31/15 03:34	
m&p-Xylene	ug/L	ND	2.0	0.66	10/31/15 03:34	
Methylene Chloride	ug/L	ND	2.0	0.97	10/31/15 03:34	
o-Xylene	ug/L	ND	1.0	0.23	10/31/15 03:34	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

METHOD BLANK: 1596108 Matrix: Water

Associated Lab Samples: 92273406001, 92273406002, 92273406003, 92273406004, 92273406005, 92273406006, 92273406007, 92273406008, 92273406009, 92273406010, 92273406011, 92273406012, 92273406013, 92273406014, 92273406021, 92273406022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Styrene	ug/L	ND	1.0	0.26	10/31/15 03:34	
Tetrachloroethene	ug/L	ND	1.0	0.46	10/31/15 03:34	
Toluene	ug/L	ND	1.0	0.26	10/31/15 03:34	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	10/31/15 03:34	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	10/31/15 03:34	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	1.0	10/31/15 03:34	
Trichloroethene	ug/L	ND	1.0	0.47	10/31/15 03:34	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	10/31/15 03:34	
Vinyl acetate	ug/L	ND	2.0	0.35	10/31/15 03:34	
Vinyl chloride	ug/L	ND	1.0	0.62	10/31/15 03:34	
Xylene (Total)	ug/L	ND	2.0	0.66	10/31/15 03:34	
1,2-Dichloroethane-d4 (S)	%	102	70-130		10/31/15 03:34	
4-Bromofluorobenzene (S)	%	99	70-130		10/31/15 03:34	
Toluene-d8 (S)	%	101	70-130		10/31/15 03:34	

LABORATORY CONTROL SAMPLE: 1596109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.9	96	70-130	
1,1,1-Trichloroethane	ug/L	50	57.0	114	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	56.4	113	70-130	
1,1,2-Trichloroethane	ug/L	50	54.0	108	70-130	
1,1-Dichloroethane	ug/L	50	55.0	110	70-130	
1,1-Dichloroethene	ug/L	50	55.3	111	70-132	
1,2,3-Trichloropropane	ug/L	50	55.7	111	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.5	103	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	59.0	118	70-130	
1,2-Dichlorobenzene	ug/L	50	55.2	110	70-130	
1,2-Dichloroethane	ug/L	50	50.6	101	70-130	
1,2-Dichloropropane	ug/L	50	54.8	110	70-130	
1,4-Dichlorobenzene	ug/L	50	52.4	105	70-130	
2-Butanone (MEK)	ug/L	100	124	124	70-145	
2-Hexanone	ug/L	100	124	124	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	120	120	70-140	
Acetone	ug/L	100	115	115	50-175	
Acrylonitrile	ug/L	250	294	118	70-143	
Benzene	ug/L	50	54.8	110	70-130	
Bromochloromethane	ug/L	50	57.2	114	70-130	
Bromodichloromethane	ug/L	50	47.5	95	70-130	
Bromoform	ug/L	50	45.8	92	70-130	
Bromomethane	ug/L	50	37.1	74	54-130	
Carbon disulfide	ug/L	50	44.2	88	70-131	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

LABORATORY CONTROL SAMPLE: 1596109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	47.0	94	70-132	
Chlorobenzene	ug/L	50	53.2	106	70-130	
Chloroethane	ug/L	50	28.3	57	64-134	L0
Chloroform	ug/L	50	54.6	109	70-130	
Chloromethane	ug/L	50	55.6	111	64-130	
cis-1,2-Dichloroethene	ug/L	50	55.3	111	70-131	
cis-1,3-Dichloropropene	ug/L	50	49.2	98	70-130	
Dibromochloromethane	ug/L	50	44.9	90	70-130	
Dibromomethane	ug/L	50	54.8	110	70-131	
Ethylbenzene	ug/L	50	55.0	110	70-130	
Iodomethane	ug/L	100	101	101	49-180	
m&p-Xylene	ug/L	100	110	110	70-130	
Methylene Chloride	ug/L	50	53.4	107	63-130	
o-Xylene	ug/L	50	56.7	113	70-130	
Styrene	ug/L	50	51.0	102	70-130	
Tetrachloroethene	ug/L	50	51.7	103	70-130	
Toluene	ug/L	50	53.6	107	70-130	
trans-1,2-Dichloroethene	ug/L	50	56.4	113	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.1	96	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	57.5	115	70-141	
Trichloroethene	ug/L	50	51.2	102	70-130	
Trichlorofluoromethane	ug/L	50	45.5	91	62-133	
Vinyl acetate	ug/L	100	110	110	66-157	
Vinyl chloride	ug/L	50	57.6	115	50-150	
Xylene (Total)	ug/L	150	167	111	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1596110

Parameter	Units	92273406001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.1	116	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	28.0	140	70-130	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	23.7	119	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	23.7	118	70-130	
1,1-Dichloroethane	ug/L	ND	20	26.2	131	70-130	M1
1,1-Dichloroethene	ug/L	ND	20	27.9	140	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	23.4	117	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20.9	105	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	25.0	125	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	24.4	122	70-130	
1,2-Dichloroethane	ug/L	ND	20	23.9	119	70-130	
1,2-Dichloropropane	ug/L	ND	20	24.8	124	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	23.9	119	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

MATRIX SPIKE SAMPLE: 1596110

Parameter	Units	92273406001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
2-Butanone (MEK)	ug/L	ND	40	55.3	138	70-130	M1
2-Hexanone	ug/L	ND	40	51.4	128	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	51.8	129	70-130	
Acetone	ug/L	ND	40	49.9	125	70-130	
Acrylonitrile	ug/L	ND	100	135	135	70-130	M1
Benzene	ug/L	ND	20	25.6	128	70-148	
Bromochloromethane	ug/L	ND	20	26.4	132	70-130	M1
Bromodichloromethane	ug/L	ND	20	23.2	116	70-130	
Bromoform	ug/L	ND	20	19.8	99	70-130	
Bromomethane	ug/L	ND	20	22.0	110	70-130	
Carbon disulfide	ug/L	ND	20	23.8	119	70-130	
Carbon tetrachloride	ug/L	ND	20	25.4	127	70-130	
Chlorobenzene	ug/L	ND	20	24.5	122	70-146	
Chloroethane	ug/L	ND	20	18.5	92	70-130	
Chloroform	ug/L	ND	20	25.3	127	70-130	
Chloromethane	ug/L	ND	20	27.9	140	70-130	M1
cis-1,2-Dichloroethene	ug/L	ND	20	26.3	131	70-130	M1
cis-1,3-Dichloropropene	ug/L	ND	20	23.5	117	70-130	
Dibromochloromethane	ug/L	ND	20	21.6	108	70-130	
Dibromomethane	ug/L	ND	20	24.0	120	70-130	
Ethylbenzene	ug/L	ND	20	25.7	128	70-130	
Iodomethane	ug/L	ND	40	43.6	109	70-130	
m&p-Xylene	ug/L	ND	40	50.6	127	70-130	
Methylene Chloride	ug/L	ND	20	25.5	128	70-130	
o-Xylene	ug/L	ND	20	24.9	124	70-130	
Styrene	ug/L	ND	20	24.2	121	70-130	
Tetrachloroethene	ug/L	ND	20	24.6	123	70-130	
Toluene	ug/L	ND	20	24.9	124	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	27.5	137	70-130	M1
trans-1,3-Dichloropropene	ug/L	ND	20	23.7	118	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	25.7	128	70-130	
Trichloroethene	ug/L	ND	20	24.0	120	69-151	
Trichlorofluoromethane	ug/L	ND	20	26.0	130	70-130	
Vinyl acetate	ug/L	ND	40	51.2	128	70-130	
Vinyl chloride	ug/L	ND	20	28.1	141	70-130	M1
1,2-Dichloroethane-d4 (S)	%				104	70-130	
4-Bromofluorobenzene (S)	%				98	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1596111

Parameter	Units	92273406002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

SAMPLE DUPLICATE: 1596111

Parameter	Units	92273406002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Acrylonitrile	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon disulfide	ug/L	ND	5.4		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Iodomethane	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
trans-1,4-Dichloro-2-butene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	106	109	3		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

SAMPLE DUPLICATE: 1596111

Parameter	Units	92273406002 Result	Dup Result	RPD	Max RPD	Qualifiers
4-Bromofluorobenzene (S)	%	98	97	1		
Toluene-d8 (S)	%	101	101	1		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: MSV/34073 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92273406015, 92273406016, 92273406017, 92273406018, 92273406019, 92273406020

METHOD BLANK: 1596124 Matrix: Water
Associated Lab Samples: 92273406015, 92273406016, 92273406017, 92273406018, 92273406019, 92273406020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.33	10/31/15 03:51	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.48	10/31/15 03:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.40	10/31/15 03:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.29	10/31/15 03:51	
1,1-Dichloroethane	ug/L	ND	1.0	0.32	10/31/15 03:51	
1,1-Dichloroethene	ug/L	ND	1.0	0.56	10/31/15 03:51	
1,2,3-Trichloropropane	ug/L	ND	1.0	0.41	10/31/15 03:51	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	2.0	10/31/15 03:51	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.27	10/31/15 03:51	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.30	10/31/15 03:51	
1,2-Dichloroethane	ug/L	ND	1.0	0.24	10/31/15 03:51	
1,2-Dichloropropane	ug/L	ND	1.0	0.27	10/31/15 03:51	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.33	10/31/15 03:51	
2-Butanone (MEK)	ug/L	ND	5.0	0.96	10/31/15 03:51	
2-Hexanone	ug/L	ND	5.0	0.46	10/31/15 03:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	0.33	10/31/15 03:51	
Acetone	ug/L	ND	25.0	10.0	10/31/15 03:51	
Acrylonitrile	ug/L	ND	10.0	1.9	10/31/15 03:51	
Benzene	ug/L	ND	1.0	0.25	10/31/15 03:51	
Bromochloromethane	ug/L	ND	1.0	0.17	10/31/15 03:51	
Bromodichloromethane	ug/L	ND	1.0	0.18	10/31/15 03:51	
Bromoform	ug/L	ND	1.0	0.26	10/31/15 03:51	
Bromomethane	ug/L	ND	2.0	0.29	10/31/15 03:51	
Carbon disulfide	ug/L	ND	2.0	1.2	10/31/15 03:51	
Carbon tetrachloride	ug/L	ND	1.0	0.25	10/31/15 03:51	
Chlorobenzene	ug/L	ND	1.0	0.23	10/31/15 03:51	
Chloroethane	ug/L	ND	1.0	0.54	10/31/15 03:51	
Chloroform	ug/L	ND	1.0	0.14	10/31/15 03:51	
Chloromethane	ug/L	ND	1.0	0.11	10/31/15 03:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.19	10/31/15 03:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.13	10/31/15 03:51	
Dibromochloromethane	ug/L	ND	1.0	0.21	10/31/15 03:51	
Dibromomethane	ug/L	ND	1.0	0.21	10/31/15 03:51	
Ethylbenzene	ug/L	ND	1.0	0.30	10/31/15 03:51	
Iodomethane	ug/L	ND	5.0	0.32	10/31/15 03:51	
m&p-Xylene	ug/L	ND	2.0	0.66	10/31/15 03:51	
Methylene Chloride	ug/L	ND	2.0	0.97	10/31/15 03:51	
o-Xylene	ug/L	ND	1.0	0.23	10/31/15 03:51	
Styrene	ug/L	ND	1.0	0.26	10/31/15 03:51	
Tetrachloroethene	ug/L	ND	1.0	0.46	10/31/15 03:51	
Toluene	ug/L	ND	1.0	0.26	10/31/15 03:51	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

METHOD BLANK: 1596124 Matrix: Water
Associated Lab Samples: 92273406015, 92273406016, 92273406017, 92273406018, 92273406019, 92273406020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.49	10/31/15 03:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.26	10/31/15 03:51	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	1.0	10/31/15 03:51	
Trichloroethene	ug/L	ND	1.0	0.47	10/31/15 03:51	
Trichlorofluoromethane	ug/L	ND	1.0	0.20	10/31/15 03:51	
Vinyl acetate	ug/L	ND	2.0	0.35	10/31/15 03:51	
Vinyl chloride	ug/L	ND	1.0	0.62	10/31/15 03:51	
Xylene (Total)	ug/L	ND	2.0	0.66	10/31/15 03:51	
1,2-Dichloroethane-d4 (S)	%	103	70-130		10/31/15 03:51	
4-Bromofluorobenzene (S)	%	99	70-130		10/31/15 03:51	
Toluene-d8 (S)	%	101	70-130		10/31/15 03:51	

LABORATORY CONTROL SAMPLE: 1596125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.3	95	70-130	
1,1,1-Trichloroethane	ug/L	50	53.4	107	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	56.6	113	70-130	
1,1,2-Trichloroethane	ug/L	50	53.0	106	70-130	
1,1-Dichloroethane	ug/L	50	52.0	104	70-130	
1,1-Dichloroethene	ug/L	50	50.6	101	70-132	
1,2,3-Trichloropropane	ug/L	50	55.9	112	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	52.1	104	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	58.6	117	70-130	
1,2-Dichlorobenzene	ug/L	50	54.8	110	70-130	
1,2-Dichloroethane	ug/L	50	49.1	98	70-130	
1,2-Dichloropropane	ug/L	50	52.9	106	70-130	
1,4-Dichlorobenzene	ug/L	50	52.9	106	70-130	
2-Butanone (MEK)	ug/L	100	120	120	70-145	
2-Hexanone	ug/L	100	121	121	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	118	118	70-140	
Acetone	ug/L	100	110	110	50-175	
Acrylonitrile	ug/L	250	289	116	70-143	
Benzene	ug/L	50	52.1	104	70-130	
Bromochloromethane	ug/L	50	55.7	111	70-130	
Bromodichloromethane	ug/L	50	46.5	93	70-130	
Bromoform	ug/L	50	46.5	93	70-130	
Bromomethane	ug/L	50	36.7	73	54-130	
Carbon disulfide	ug/L	50	42.3	85	70-131	
Carbon tetrachloride	ug/L	50	44.8	90	70-132	
Chlorobenzene	ug/L	50	51.6	103	70-130	
Chloroethane	ug/L	50	26.6	53	64-134	L0
Chloroform	ug/L	50	52.3	105	70-130	
Chloromethane	ug/L	50	53.8	108	64-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

LABORATORY CONTROL SAMPLE: 1596125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	52.9	106	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.4	97	70-130	
Dibromochloromethane	ug/L	50	44.1	88	70-130	
Dibromomethane	ug/L	50	53.9	108	70-131	
Ethylbenzene	ug/L	50	52.6	105	70-130	
Iodomethane	ug/L	100	96.3	96	49-180	
m&p-Xylene	ug/L	100	106	106	70-130	
Methylene Chloride	ug/L	50	51.6	103	63-130	
o-Xylene	ug/L	50	54.6	109	70-130	
Styrene	ug/L	50	49.7	99	70-130	
Tetrachloroethene	ug/L	50	48.6	97	70-130	
Toluene	ug/L	50	50.8	102	70-130	
trans-1,2-Dichloroethene	ug/L	50	52.5	105	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.0	96	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	58.0	116	70-141	
Trichloroethene	ug/L	50	48.2	96	70-130	
Trichlorofluoromethane	ug/L	50	42.5	85	62-133	
Vinyl acetate	ug/L	100	108	108	66-157	
Vinyl chloride	ug/L	50	53.0	106	50-150	
Xylene (Total)	ug/L	150	160	107	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1596126

Parameter	Units	92273406015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.3	117	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	28.1	140	70-130	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	23.2	116	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	23.8	119	70-130	
1,1-Dichloroethane	ug/L	ND	20	26.5	133	70-130	M1
1,1-Dichloroethene	ug/L	ND	20	27.9	140	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	23.3	116	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20.9	104	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	25.2	126	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	23.7	118	70-130	
1,2-Dichloroethane	ug/L	ND	20	23.8	118	70-130	
1,2-Dichloropropane	ug/L	ND	20	24.9	124	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	24.1	120	70-130	
2-Butanone (MEK)	ug/L	ND	40	53.7	134	70-130	M1
2-Hexanone	ug/L	ND	40	50.0	125	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	50.3	126	70-130	
Acetone	ug/L	ND	40	46.8	117	70-130	
Acrylonitrile	ug/L	ND	100	132	132	70-130	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

MATRIX SPIKE SAMPLE: 1596126

Parameter	Units	92273406015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	20	25.6	128	70-148	
Bromochloromethane	ug/L	ND	20	26.3	132	70-130	M1
Bromodichloromethane	ug/L	ND	20	23.2	116	70-130	
Bromoform	ug/L	ND	20	19.5	98	70-130	
Bromomethane	ug/L	ND	20	21.9	110	70-130	
Carbon disulfide	ug/L	ND	20	23.4	117	70-130	
Carbon tetrachloride	ug/L	ND	20	25.3	127	70-130	
Chlorobenzene	ug/L	ND	20	24.4	122	70-146	
Chloroethane	ug/L	ND	20	19.2	96	70-130	
Chloroform	ug/L	ND	20	26.2	131	70-130	M1
Chloromethane	ug/L	ND	20	28.0	140	70-130	M1
cis-1,2-Dichloroethene	ug/L	ND	20	26.2	131	70-130	M1
cis-1,3-Dichloropropene	ug/L	ND	20	23.3	116	70-130	
Dibromochloromethane	ug/L	ND	20	21.3	106	70-130	
Dibromomethane	ug/L	ND	20	23.9	120	70-130	
Ethylbenzene	ug/L	ND	20	25.1	126	70-130	
Iodomethane	ug/L	ND	40	44.2	111	70-130	
m&p-Xylene	ug/L	ND	40	49.8	124	70-130	
Methylene Chloride	ug/L	ND	20	25.2	126	70-130	
o-Xylene	ug/L	ND	20	24.6	123	70-130	
Styrene	ug/L	ND	20	23.7	119	70-130	
Tetrachloroethene	ug/L	ND	20	24.2	121	70-130	
Toluene	ug/L	ND	20	24.7	124	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	27.6	138	70-130	M1
trans-1,3-Dichloropropene	ug/L	ND	20	23.6	118	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	25.5	127	70-130	
Trichloroethene	ug/L	ND	20	24.0	120	69-151	
Trichlorofluoromethane	ug/L	ND	20	26.4	132	70-130	M1
Vinyl acetate	ug/L	ND	40	51.1	128	70-130	
Vinyl chloride	ug/L	ND	20	27.8	139	70-130	M1
1,2-Dichloroethane-d4 (S)	%				106	70-130	
4-Bromofluorobenzene (S)	%				98	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 1596127

Parameter	Units	92273406016 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

SAMPLE DUPLICATE: 1596127

Parameter	Units	92273406016 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Acrylonitrile	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon disulfide	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Iodomethane	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
trans-1,4-Dichloro-2-butene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	111	110	1		
4-Bromofluorobenzene (S)	%	98	97	1		
Toluene-d8 (S)	%	101	101	0		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: WET/41079 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92273406007

METHOD BLANK: 1593055 | Matrix: Water
Associated Lab Samples: 92273406007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	2.0	11/02/15 10:40	

LABORATORY CONTROL SAMPLE: 1593056

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	232	117	84.6-115.4	L0

SAMPLE DUPLICATE: 1593057

Parameter	Units	92273406007 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	73.3	73.0	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: WETA/25222 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92273406007

METHOD BLANK: 1596867 | Matrix: Water
Associated Lab Samples: 92273406007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	1.0	11/02/15 18:58	

LABORATORY CONTROL SAMPLE: 1596868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	20.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1596869 1596870

Parameter	Units	92273860001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	20	20	20.3	20.8	95	97	90-110	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: WETA/25144
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92273406007

METHOD BLANK: 1593010
Matrix: Water
Associated Lab Samples: 92273406007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	0.010	10/27/15 20:18	
Nitrogen, Nitrite	mg/L	ND	0.020	0.010	10/27/15 20:18	
Nitrogen, NO2 plus NO3	mg/L	ND	0.020	0.010	10/27/15 20:18	

LABORATORY CONTROL SAMPLE: 1593011

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.4	98	90-110	
Nitrogen, Nitrite	mg/L	1	0.97	97	90-110	
Nitrogen, NO2 plus NO3	mg/L	2.5	2.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1593012 1593013

Parameter	Units	92273406007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	2.5	2.5	2.4	2.4	97	98	90-110	1	10	
Nitrogen, Nitrite	mg/L	0.066	1	1	1.1	1.1	99	99	90-110	0	10	
Nitrogen, NO2 plus NO3	mg/L	0.042	2.5	2.5	2.4	2.4	95	96	90-110	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: WETA/25184 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 92273406007

METHOD BLANK: 1595324 | Matrix: Water
Associated Lab Samples: 92273406007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	0.025	11/03/15 03:33	

LABORATORY CONTROL SAMPLE: 1595325

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1595326 1595327

Parameter	Units	92272773001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	0.70	2.5	2.5	3.2	3.2	100	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1595328 1595329

Parameter	Units	92273203004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	6.4	2.5	2.5	9.2	9.1	114	108	90-110	2	10	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: WETA/25198 | Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E | Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92273406007

METHOD BLANK: 1595456 | Matrix: Water
Associated Lab Samples: 92273406007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0080	0.0040	10/30/15 16:30	

LABORATORY CONTROL SAMPLE: 1595457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1595458 1595459

Parameter	Units	92273608001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	0.018	.1	.1	0.10	0.10	86	82	75-125	4	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1595460 1595461

Parameter	Units	92273762001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	ND	.1	.1	ND	ND	0	0	75-125		10	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: White Oak LF 10/26
Pace Project No.: 92273406

QC Batch: WETA/25178 | Analysis Method: SM 5220D
QC Batch Method: SM 5220D | Analysis Description: 5220D COD
Associated Lab Samples: 92273406007

METHOD BLANK: 1594813 | Matrix: Water
Associated Lab Samples: 92273406007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	12.5	10/29/15 13:40	

LABORATORY CONTROL SAMPLE: 1594814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	726	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1594815 1594816

Parameter	Units	92273906001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	96.0	750	750	816	816	96	96	90-110	0	3	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1594817 1594818

Parameter	Units	92273906002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	137	750	750	782	782	86	86	90-110	0	3	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALIFIERS

Project: White Oak LF 10/26
Pace Project No.: 92273406

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

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.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: White Oak LF 10/26
Pace Project No.: 92273406

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92273406001	**SW-1**		FLD/		
92273406002	**SW-2**		FLD/		
92273406003	**SW-3**		FLD/		
92273406004	**SW-5**		FLD/		
92273406005	**SW-6**		FLD/		
92273406006	**SW-7**		FLD/		
92273406007	**Leachate**		FLD/		
92273406008	**MW-1A**		FLD/		
92273406009	**MW-2**		FLD/		
92273406010	**MW-2D**		FLD/		
92273406011	**MW-3R**		FLD/		
92273406012	**MW-3DR**		FLD/		
92273406013	**MW-4A**		FLD/		
92273406014	**MW-8**		FLD/		
92273406015	**MW-11s**		FLD/		
92273406016	**MW-11D**		FLD/		
92273406017	**MW-14**		FLD/		
92273406018	**MW-15**		FLD/		
92273406019	**MW-16**		FLD/		
92273406020	**MW-17**		FLD/		
92273406001	**SW-1**	EPA 3010	MPRP/19905	EPA 6010	ICP/17945
92273406002	**SW-2**	EPA 3010	MPRP/19905	EPA 6010	ICP/17945
92273406003	**SW-3**	EPA 3010	MPRP/19905	EPA 6010	ICP/17945
92273406004	**SW-5**	EPA 3010	MPRP/19905	EPA 6010	ICP/17945
92273406005	**SW-6**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406006	**SW-7**	EPA 3010	MPRP/19926	EPA 6010	ICP/17968
92273406007	**Leachate**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406008	**MW-1A**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406009	**MW-2**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406010	**MW-2D**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406011	**MW-3R**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406012	**MW-3DR**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406013	**MW-4A**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406014	**MW-8**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406015	**MW-11s**	EPA 3010	MPRP/19918	EPA 6010	ICP/17958
92273406016	**MW-11D**	EPA 3010	MPRP/19926	EPA 6010	ICP/17968
92273406017	**MW-14**	EPA 3010	MPRP/19926	EPA 6010	ICP/17968
92273406018	**MW-15**	EPA 3010	MPRP/19926	EPA 6010	ICP/17968
92273406019	**MW-16**	EPA 3010	MPRP/19926	EPA 6010	ICP/17968
92273406020	**MW-17**	EPA 3010	MPRP/19926	EPA 6010	ICP/17968
92273406022	**Equip Blk**	EPA 3010	MPRP/19926	EPA 6010	ICP/17968
92273406001	**SW-1**	EPA 8260	MSV/34071		
92273406002	**SW-2**	EPA 8260	MSV/34071		
92273406003	**SW-3**	EPA 8260	MSV/34071		
92273406004	**SW-5**	EPA 8260	MSV/34071		
92273406005	**SW-6**	EPA 8260	MSV/34071		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: White Oak LF 10/26
Pace Project No.: 92273406

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92273406006	**SW-7**	EPA 8260	MSV/34071		
92273406007	**Leachate**	EPA 8260	MSV/34071		
92273406008	**MW-1A**	EPA 8260	MSV/34071		
92273406009	**MW-2**	EPA 8260	MSV/34071		
92273406010	**MW-2D**	EPA 8260	MSV/34071		
92273406011	**MW-3R**	EPA 8260	MSV/34071		
92273406012	**MW-3DR**	EPA 8260	MSV/34071		
92273406013	**MW-4A**	EPA 8260	MSV/34071		
92273406014	**MW-8**	EPA 8260	MSV/34071		
92273406015	**MW-11s**	EPA 8260	MSV/34073		
92273406016	**MW-11D**	EPA 8260	MSV/34073		
92273406017	**MW-14**	EPA 8260	MSV/34073		
92273406018	**MW-15**	EPA 8260	MSV/34073		
92273406019	**MW-16**	EPA 8260	MSV/34073		
92273406020	**MW-17**	EPA 8260	MSV/34073		
92273406021	**TVL BLK**	EPA 8260	MSV/34071		
92273406022	**Equip Blk**	EPA 8260	MSV/34071		
92273406007	**Leachate**	SM 5210B	WET/41079	SM 5210B	WET/41080
92273406007	**Leachate**	EPA 300.0	WETA/25222		
92273406007	**Leachate**	EPA 353.2	WETA/25144		
92273406007	**Leachate**	EPA 365.1	WETA/25184		
92273406007	**Leachate**	SM 4500-CN-E	WETA/25198		
92273406007	**Leachate**	SM 5220D	WETA/25178		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 3

1946047

Section A Required Client Information:

Company: SANTEK HARWOOD
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: HARWOOD CO
Copy To: SANTEK
Purchase Order No.:
Project Name: White OAK LF
Project Number:

Section C Invoice Information:

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

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location 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	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED 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) Fe	Appr I VOCs	Appr Metals	BOD	NH3N	SO4	TP	COD	Cl-				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92273406-
1	SW-1					10/26	1220					1	3																		92273406-001
2	SW-2					10/26	1345					1	3					X	X	X											002
3	SW-3					10/26	1400					1	3					X	X	X											003
4	~~SW-4~~ SW-5					10/26	1330					1	3					X	X	X											004
5	SW-6					10/26	945					1	3					X	X	X											005
6	SW-7					10/26	930					1	3					X	X	X											006
7	Leachate					10/26	1310		10	3	2	1	3	1				X	X	X	X	X	X	X	X	X					007
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		10.26.15	1615	[signature] AVC	10.26.15	1615	0			
	[signature] AVC	10.26.15	1715	Rush Deux Trash	10/26/15	1715	0.4	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK P. SWANN

SIGNATURE of SAMPLER: [signature] AVC

DATE Signed (MM/DD/YY): 10.26.15

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-2007

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

1946049

Section A Required Client Information:

Company: SANTEK HAYWOOD CO
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: SANTEK
Copy To: HAYWOOD CO
Purchase Order No.:
Project Name: SANTEK Haywood Wh. Ck OAK
Project Number:

Section C Invoice Information:

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

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☑ RCRA ☐ OTHER

Site Location 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

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 Temp Specd Cond	Static H2O	Acid Frozen	Acid Frozen Methyl	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1A					10-27-15	1215		4			1	3					X	X	X	X		
2	MW-2					10-27	1235		4			1	3					X	X	X	X		
3	MW-2D					10-27	1245		4			1	3					X	X	X	X		
4	MW-3R					10-27	1325		4			1	3					X	X	X	X		
5	MW-3DR					10-27	1335		4			1	3					X	X	X	X		
6	MW-4A					10-27	1400		4			1	3					X	X	X	X		
7	MW-8					10-27	1300		4			1	3					X	X	X	X		
8	MW-11S					10-27	1140		4			1	3					X	X	X	X		
9	MW-11D					10-27	1150		4			1	3					X	X	X	X		
10	MW-14					10-27	1045		4			1	3					X	X	X	X		
11	MW 15					10-27	1100		4			1	3					X	X	X	X		
12	MW 16					10-27	1420		4			1	3					X	X	X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
		10-27-15	1450	[signature] AVL	10-27-15	1450
	[signature] AVL	10-27-15	1550	[signature]	10/27/15	1550

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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK F. SWANN

SIGNATURE of SAMPLER: [signature] AVL

DATE Signed (MM/DD/YY): 10-27-15

*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-2007

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 3 of 3

1946048

Section A Required Client Information:

Company: SANTEK Haywood	
Address:	
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To: SANTEK	
Copy To: Haywood Co	
Purchase Order No.:	
Project Name: White OAK LF	
Project Number:	

Section C Invoice Information:

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

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☑ RCRA ☐ OTHER _____

Site Location 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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB G=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)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-17					10.27.15	14:35													
2						~~10~~														
3	TVL BLK					10.26	800		2				2							
4	Equip BLK					10.27	830		3			1	2							
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		10.27.15	~~1450~~ 1450	[signature] AVL	10.27.15	1450				
	[signature] AVL	10.27.15	1550	[signature]	10/27/15	15:50	1.1	Y	N	Y

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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK P. SWANN

SIGNATURE of SAMPLER: [signature] AVL — DATE Signed (MM/DD/YY): 10.27.15

*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-2007

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

10-2015

Pace Analytical Services, Inc.

Report Form for Field Monitoring

ocation HAYWOOD CO White OAK SW's

ce	Time	Samples	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	ORP	Comments
10-16	1220	~~SW-1~~ MPS	SW-1	~~6.8~~	6.8	13.5	222	10.18		LOW CLEAR
	1345	SW-2	SW-2	~~7.4~~	7.4	13.3	226	18.3		LOW ORGANIC DEBRIS
	1400	SW-3	SW-3	~~7.2~~	7.2	13.4	360	9.92		LOW Clear
	1330		SW-5	~~7.7~~	7.7	17.8	307	24.52		Rusty sediment LOW FLOW
	945		SW-6	~~6.2~~	6.2	14.3	72	8.05		CLEAR LOW FLOW Rusty sediment
	930		SW-7	~~6.2~~	6.2	13.0	61	3.92		CLEAR LOW FLOW
	1310		Beaverdam	~~6.4~~	6.4	15.5	6508	66.79		OPAQUE DARK ORGANIC ODOR

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

10 - 15

Pace Analytical Services, Inc.

Report Form for Field Monitoring

ocation HAYWOOD Co White Oak MW's

ce	Time	Samples	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	ORP	Comments
10→	1215	MPS	MW-1A	21.80	6.3	12.5	118	1.88		
	1235		MW-2	30.68	5.9	13.0	1472	2.52		
	1245		MW-2D	30.60	6.2	13.0	1566	1.27		
	1325		MW-3R	33.45	6.0	13.5	429	4.05		
	1335		MW 3DR	37.50	5.8	13.7	357	7.82		
	1400		MW-4A	44.22	6.8	13.2	162	8.68		
	1300		MW-8	31.05	6.4	13.5	816	5.50		
	1140		MW-11S	81.15	6.7	12.1	27	550		
	1150		MW 11D	82.15	6.6	12.4	44	4.35		

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

10.2015

Pace Analytical Services, Inc

Report Form for Field Monitoring

Location HAYWOOD White OAK

Date	Time	Samples	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	ORP	DO	Comments
10-27	1045	MS	MW-14	101.30	6.6	12.4	104	28.0			
	1100		MW-15	9.69	6.7	14.3	42	16.56			
	1420		MW-16	35.29	6.3	14.5	248	11.09			
	1435		MW-17	56.92	5.9	13.4	169	5.11			

Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 15, 2015 Page 1 of 2*
	Document No.: F-ASV-CS-003-rev.14	Issuing Authorities: Pace Asheville Quality Office

Client Name: Sentek Haywood

* Page 2 of 2 is for Internal Use Only

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other_____

Thermometer Used: IR Gun#3 -130265963 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun #4 SN:140290365 Other:_____

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 0.4 C **Biological Tissue is Frozen:** Yes No N/A

Date and Initials of person examining contents: RDB 10/26/15

Temp should be above freezing to 6°C

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6. BOD
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No		
Samples checked for dechlorination:	☑Yes	☐No	☐N/A	14. COD
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):_____				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [signature] Date: 10/28/15

SRF Review: [signature] Date: 10/28/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO# : 92273406

92273406

APPENDIX D

STATISTICAL CALCULATIONS

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

COMPOUND	TOTAL	ND	DETECTED	%ND	STATISTICAL TEST
Total Antimony	341	334	7	97.9%	Poisson Prediction Limits
Total Arsenic	341	314	27	92.1%	Poisson Prediction Limits
Total Barium	344	16	328	4.7%	Prediction Limits
Total Beryllium	342	298	44	87.1%	Kruskal-Wallis
Total Cadmium	342	298	44	87.1%	Kruskal-Wallis
Total Chromium	342	199	143	58.2%	Kruskal-Wallis
Total Cobalt	342	224	118	65.5%	Kruskal-Wallis
Total Copper	342	217	125	63.5%	Kruskal-Wallis
Total Lead	343	265	78	77.3%	Kruskal-Wallis
Total Nickel	343	159	184	46.4%	Kruskal-Wallis
Total Selenium	342	338	4	98.8%	Poisson Prediction Limits
Total Silver	342	339	3	99.1%	Poisson Prediction Limits
Total Thallium	342	323	19	94.4%	Poisson Prediction Limits
Total Vanadium	342	203	139	59.4%	Kruskal-Wallis
Total Zinc	342	125	217	36.5%	Kruskal-Wallis
Acetone	291	290	1	99.7%	Poisson Prediction Limits
Carbon Disulfide	291	288	3	99.0%	Poisson Prediction Limits
Chloroethane	291	290	1	99.7%	Poisson Prediction Limits
Iodomethane	291	290	1	99.7%	Poisson Prediction Limits
Dichloromethane	291	288	3	99.0%	Poisson Prediction Limits
2-Butanone	239	238	1	99.6%	Poisson Prediction Limits

Sampling Event	# Detected
N 1	64
N 2	13
N 3	14
N 4	3
N 5	64
N 6	0
N 7	0
N 8	0
N 9	0
N 10	53
N 11	88
N 12	59
N 13	55
N 14	74
N 15	49
N 16	61
N 17	60
N 18	28

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*

N 19	38
N 20	43
N 21	57
N 22	52
N 23	58
N 24	55
N 25	37
N 26	27
N 27	46
N 28	41
N 29	54
N 30	43
N 31	45
N 32	40
N 33	35
N 34	34
N 35	19
N 36	41
N 37	40

Total Detected Concentrations (per compound) =	1490
Total Detected Concentrations (per event) =	1490
Are all accounted for ?	Yes
Statistical Package Prepared By:	IAI
Statistical Package Checked By:	MSP

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

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-8	MW-15	MW-16	MW-17	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**30**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**30**
04/15/02	**15**	ND	NS	ND	ND	ND	NT	ND	ND	**11**	NS	NP	NP	**10**
09/26/02	ND	ND	ND	**12**	ND	ND	ND	ND	ND	ND	**98**	NP	NP	**10**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	NP	NP	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**30**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	**20**	ND	ND	ND	ND	ND	NP	NP	**6**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.1**	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/15	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.

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 31.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 86$
$T_{n1} = 301.5$

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).

$k = 1$
$n = 86$
$T_{n1} = 301.5$
$t\,[85,.01] = 2.3767$

$c = 0.0116$

$T^*_k = 8.0$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Total Arsenic**
MCL (µg/l): 10
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	ND	ND	NS	ND	ND	ND	NT	ND	ND	ND	NS	NP	NP	**10**
09/26/02	ND	**5.7**	ND	ND	ND	ND	ND	ND	**27**	ND	**68**	NP	NP	**5**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24**	NP	NP	**5**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	**5.3**	**81**	NP	NP	**5**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**	**30**	NP	NP	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**59**	NP	NP	**5**
04/18/05	ND	ND	ND	**10**	ND	ND	ND	ND	ND	**5.2**	**65**	NP	NP	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**44**	NP	NP	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**42**	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13**	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	**280**	ND	ND	ND	ND	**12**	NP	NP	**5**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21.4**	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10.2**	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.6**	NP	NP	**5**
04/22/09	ND	ND	**5.4**	ND	ND	**5.6**	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	**6**	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	**7.4**	**9.8**	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	**5.4**	**5.9**	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/27/15	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.

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 31.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 86$
$T_{n1} = 288.6$

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).

$k = 1$
$n = 86$
$T_{n1} = 288.6$
$t\,[85,.01] = 2.3767$

$c = 0.0116$

$T^*_k = 7.8$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	5	5	5	5	5	5	5	5	5	5

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Total Barium**
NC MCL (µg/l): 700
Method: Prediction Limits

	BACKGROUND WELLS			DETECTION WELLS										
	MW-11S	**MW-11D**	**MW-14**	**MW-1A**	**MW-2**	**MW-2D**	**MW-3**	**MW-3D**	**MW-4A**	**MW-8**	**MW-15**	**MW-16**	**MW-17**	**MDL**
4/24/00	**250**	NS	NS	**240**	**420**	**200**	**63**	**300**	**93**	**230**	NS	NP	NP	**5**
6/26/00	**300**	**67**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
7/26/00	**330**	**30**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
9/18/00	NS	NS	NS	**330**	**92**	NS	NS	NS	NT	NS	NS	NP	NP	**500**
4/9/01	**1300**	**380**	NS	**180**	**330**	**120**	**80**	**290**	**360**	**970**	NS	NP	NP	**5**
9/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
1/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
2/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**500**
4/15/02	**1300**	**41**	NS	ND	ND	**160**	**23**	**190**	**460**	**1400**	NS	NP	NP	**5**
9/26/02	**330**	**500**	**750**	**4200**	**120**	**230**	**93**	**410**	**910**	**1400**	**11000**	NP	NP	**5**
4/28/03	**600**	**66**	**220**	**1800**	**160**	**140**	**110**	**92**	**360**	**800**	**2800**	NP	NP	**5**
10/30/03	**320**	**100**	NT	**210**	**310**	**130**	**95**	**110**	**1200**	**270**	**4900**	NP	NP	**5**
4/20/04	**320**	**56**	**120**	**410**	**460**	**170**	**140**	**210**	**62**	**940**	**2000**	NP	NP	**5**
10/21/04	**320**	**40**	**200**	**300**	**310**	**140**	**140**	**130**	**12**	**900**	**4900**	NP	NP	**5**
4/18/05	**480**	**55**	**160**	**7200**	**610**	**180**	**160**	**140**	**12**	**1000**	**3700**	NP	NP	**5**
10/13/05	**770**	**37**	**160**	**1700**	**870**	**250**	**160**	**140**	**27**	**810**	**2700**	NP	NP	**5**
4/25/06	**650**	ND	ND	ND	**1100**	ND	ND	ND	ND	**750**	**2700**	NP	NP	**500**
10/20/06	**410**	**22**	**180**	**470**	**1100**	ND	ND	ND	**160**	ND	**650**	NP	NP	**5**
4/25/07	**290**	ND	**200**	**240**	**1300**	**1500**	**130**	**180**	ND	ND	**600**	NP	NP	**100**
10/31/07	**501**	**31.5**	**223**	**198**	**1350**	**591**	**184**	**208**	**62.4**	**516**	**872**	NP	NP	**5**
4/23/08	**194**	**30.8**	**253**	**168**	**1230**	**661**	**216**	**202**	**61.8**	**151**	**361**	NP	NP	**5**
10/20/08	**474**	**66**	**313**	**224**	**1210**	**894**	**164**	**216**	**41.1**	**182**	**245**	NP	NP	**5**
4/22/09	**126**	**47.2**	**591**	**309**	**1300**	**817**	**230**	**216**	**77**	**163**	NS	NP	NP	**5**
10/26/09	**131**	**16.8**	**144**	**188**	**1720**	**987**	NS	NS	NS	**209**	**178**	NP	NP	**5**
4/22/10	**208**	**43.5**	**153**	**157**	**1920**	**1380**	NS	NS	**20.9**	**150**	**74.8**	NP	NP	**5**
10/27/10	**147**	**15.8**	**162**	**178**	**1760**	**1550**	**531**	**234**	**20**	**190**	**111**	**191**	**84.4**	**5**
4/29/11	**191**	**16.3**	**188**	**182**	**1620**	**1390**	**428**	**173**	**13.6**	**196**	**125**	**201**	**133**	**5**
10/25/11	**185**	**19.7**	**120**	**332**	**1200**	**1300**	**945**	**205**	**8.2**	**238**	**123**	**161**	**154**	**5**
4/20/12	**304**	**17.5**	**129**	**153**	**1020**	**1140**	**442**	**215**	**9.5**	**232**	**64.8**	**249**	**169**	**5**
10/24/12	**389**	**19**	**124**	**167**	**889**	**1030**	**393**	**229**	**26.1**	**235**	**43.2**	**177**	**181**	**5**
4/24/13	**241**	**16.8**	**100**	**164**	**842**	**964**	**344**	**226**	**9.3**	**218**	**96.5**	**116**	**190**	**5**
10/24/13	**255**	**18.1**	**156**	**166**	**839**	**1160**	**510**	**256**	**9.1**	**250**	**55.2**	**171**	**218**	**5**
4/24/14	**174**	**17.7**	**127**	**148**	**941**	**1290**	**378**	**248**	**8.3**	**238**	**27.5**	**148**	**189**	**5**
10/27/14	**117**	**16.1**	**102**	**136**	**1280**	**1410**	**363**	**224**	**8.6**	**228**	**23.2**	**156**	**180**	**5**
4/28/15	**119**	**16**	**109**	**199**	**1330**	**1380**	**345**	**260**	**9**	**218**	**30.2**	**156**	**190**	**5**
10/27/15	**346**	**16**	**95.7**	**164**	**1190**	**1400**	**352**	**247**	**13.8**	**279**	**18.8**	**188**	**191**	**5**

1) Use the data above as-is for testing:

2) Calculate the Upper Prediction limit (T):

$T = xbar + t_{[n-1,\ 1-\alpha^*/k]} s\ [1+1/n)]^{-0.5}$

where:

$n = 86$	Number of background concentrations
$n_0 = 3$	Number of *ND* background concentrations
$n_1 = 83$	Number of *detected* background concentrations
$n_0/n = 0.0349$	Ratio of *ND* to *all* background values
$xbar = 215.27$	Average background concentration
$x'bar = 223.05$	Average *detected* background concentration
$\alpha^* = 0.05$	Sitewide error rate
$k = 10$	Number of Comparisons during the Current Sampling Event
$s' = 244.63$	Standard deviation of *detected* background concentrations
$s = 240.24$	Standard deviation of background concentrations
$\alpha^*/k = 0.005$	
$t\ [85, 0.005] = 2.6421$	Upper percentage point of Student's *t*-distribution (Table 6 of the IFG)
$T_n = 1400$	Maximum concentration detected during current sampling event
$T = 853.7$	Upper Prediction Limit

	MW-1A	**MW-2**	**MW-2D**	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
Current Concentration =	164	1190	1400	352	247	13.8	279	18.8	188	191
Statistical Significance ?	No	**Yes**	**Yes**	No	No	No	No	No	No	No
If SSI, is current event above MCL?	-	**Yes**	**Yes**	-	-	-	-	-	-	-

2) Compare the *Upper Prediction Limit* (T) to the *Maximum Concentration Detected* (T_n) in the wells during the most recent sampling event. Since the Prediction Limit was exceeded, there is evidence that the detected concentrations during the current sampling event that the detected concentrations are statistically significant.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Total Barium**
NC MCL (µg/l): 700
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-2	MDL
9/26/02	**120**	**5**
4/28/03	**160**	**5**
10/30/03	**310**	**5**
4/20/04	**460**	**5**
10/21/04	**310**	**5**
4/18/05	**610**	**5**
10/13/05	**870**	**5**
4/25/06	**1100**	**500**
10/20/06	**1100**	**5**
4/25/07	**1300**	**100**
10/31/07	**1350**	**5**
4/23/08	**1230**	**5**
10/20/08	**1210**	**5**
4/22/09	**1300**	**5**
10/26/09	**1720**	**5**
4/22/10	**1920**	**5**
10/27/10	**1760**	**5**
4/29/11	**1620**	**5**
10/25/11	**1200**	**5**
4/20/12	**1020**	**5**
10/24/12	**889**	**5**
4/24/13	**842**	**5**
10/24/13	**839**	**5**
4/24/14	**941**	**5**
10/27/14	**1280**	**5**
4/28/15	**1330**	**5**
10/27/15	**1190**	**5**

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

X_{bar} = 1036.3333
SD = 477.73279
N = 27
$1/N\Sigma_i(X_i-X_{bar})^3$ = -29098538
γ_1= 0.282424

Since the Coefficient of Skewness of 0.28 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the real detected values shown above.

X_{bar} = 6.7719148
SD = 0.7029294
N = 27
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.494068
γ_1= 1.505349

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

Part 2: Shewhart-CUSUM Control Chart

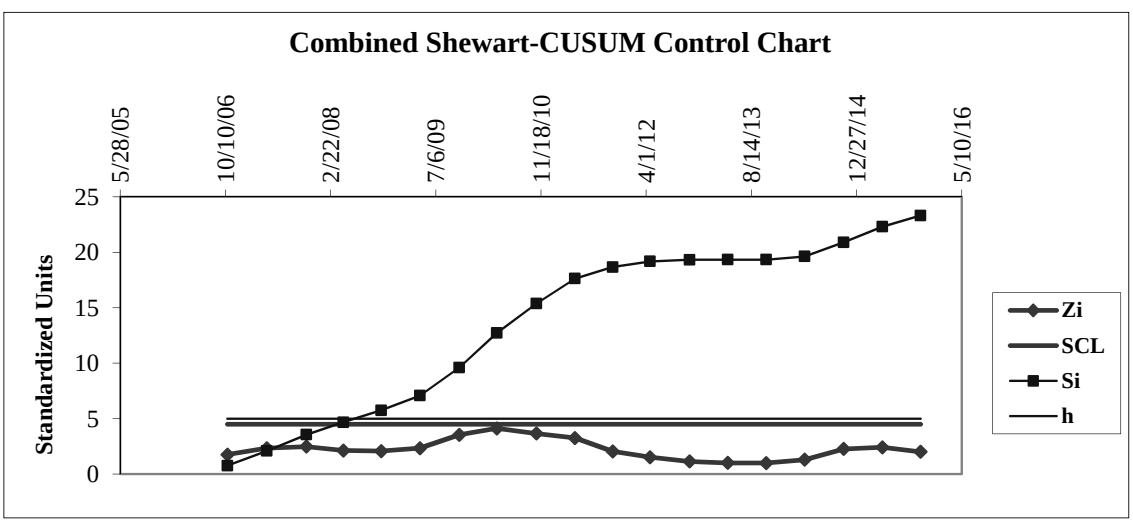
Compute the mean and standard deviation of the historical data:

492.5 = x_{mean} (Mean of N1-N8 historical data)
346.89438 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	1100	1.7512535	0.7512535	5	4.5
4/25/07	1300	2.3277978	2.0790513	5	4.5
10/31/07	1350	2.4719339	3.5509853	5	4.5
4/23/08	1230	2.1260073	4.6769926	5	4.5
10/20/08	**1210**	2.0683529	**5.7453454**	5	4.5
4/22/09	**1300**	2.3277978	**7.0731433**	5	4.5
10/26/09	**1720**	3.538541	**9.6116843**	5	4.5
4/22/10	**1920**	4.1150853	**12.72677**	5	4.5
10/27/10	**1760**	3.6538499	**15.380619**	5	4.5
4/29/11	**1620**	3.2502688	**17.630888**	5	4.5
10/25/11	**1200**	2.0395257	**18.670414**	5	4.5
4/20/12	**1020**	1.5206357	**19.19105**	5	4.5
10/24/12	**889**	1.1429992	**19.334049**	5	4.5
4/24/13	**842**	1.0075113	**19.34156**	5	4.5
10/24/13	**839**	0.9988631	**19.340423**	5	4.5
4/24/14	**941**	1.2929007	**19.633324**	5	4.5
10/27/14	**1280**	2.2701434	**20.903467**	5	4.5
4/28/15	**1330**	2.4142795	**22.317747**	5	4.5
10/27/15	**1190**	2.0106984	**23.328445**	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 J15-1957-50

Compound: **Total Barium**
NC MCL (µg/l): 700
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-2D	MDL
9/26/02	**230**	**5**
4/28/03	**140**	**5**
10/30/03	**130**	**5**
4/20/04	**170**	**5**
10/21/04	**140**	**5**
4/18/05	**180**	**5**
10/13/05	**250**	**5**
4/25/06	ND	**500**
10/20/06	ND	**5**
4/25/07	**1500**	**100**
10/31/07	**591**	**5**
4/23/08	**661**	**5**
10/20/08	**894**	**5**
4/22/09	**817**	**5**
10/26/09	**987**	**5**
4/22/10	**1380**	**5**
10/27/10	**1550**	**5**
4/29/11	**1390**	**5**
10/25/11	**1300**	**5**
4/20/12	**1140**	**5**
10/24/12	**1030**	**5**
4/24/13	**964**	**5**
10/24/13	**1160**	**5**
4/24/14	**1290**	**5**
10/27/14	**1410**	**5**
4/28/15	**1380**	**5**
10/27/15	**1400**	**5**

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

X_{bar} = 827.27778
SD = 532.58832
N = 27
$1/N\Sigma_i(X_i-X_{bar})^3$ = -31449764
γ_1= 0.2203069

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.

X_{bar} = 6.2531804
SD = 1.3851822
N = 27
$1/N\Sigma_i(X_i-X_{bar})^3$ = -5.6369777
γ_1= 2.2444566

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

Part 2: Shewhart-CUSUM Control Chart

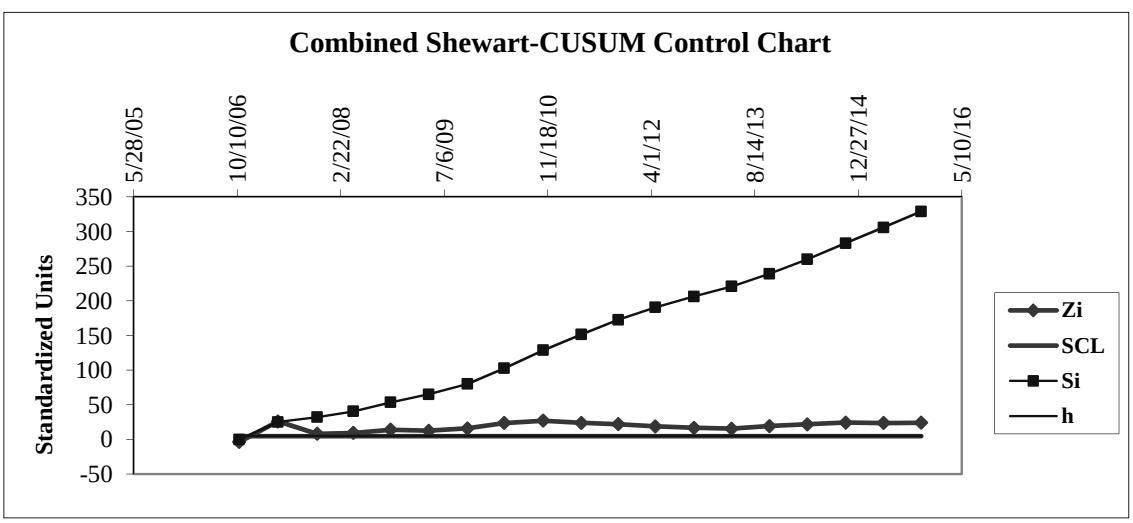
Compute the mean and standard deviation of the historical data:

186.25 = x_{mean} (Mean of N1-N8 historical data)
50.409041 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	2.5	-3.6451794	0	5	4.5
4/25/07	**1500**	**26.061793**	**25.061793**	5	4.5
10/31/07	**591**	**8.0293136**	**32.091107**	5	4.5
4/23/08	**661**	**9.4179534**	**40.50906**	5	4.5
10/20/08	**894**	**14.04014**	**53.5492**	5	4.5
4/22/09	**817**	**12.512636**	**65.061837**	5	4.5
10/26/09	**987**	**15.885047**	**79.946884**	5	4.5
4/22/10	**1380**	**23.681268**	**102.62815**	5	4.5
10/27/10	**1550**	**27.053679**	**128.68183**	5	4.5
4/29/11	**1390**	**23.879645**	**151.56148**	5	4.5
10/25/11	**1300**	**22.094251**	**172.65573**	5	4.5
4/20/12	**1140**	**18.920217**	**190.57594**	5	4.5
10/24/12	**1030**	**16.738069**	**206.31401**	5	4.5
4/24/13	**964**	**15.42878**	**220.74279**	5	4.5
10/24/13	**1160**	**19.316971**	**239.05976**	5	4.5
4/24/14	**1290**	**21.895874**	**259.95564**	5	4.5
10/27/14	**1410**	**24.276399**	**283.23204**	5	4.5
4/28/15	**1380**	**23.681268**	**305.9133**	5	4.5
10/27/15	**1400**	**24.078022**	**328.99133**	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 J15-1957-50

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-8	MW-15	MW-16	MW-17	MDL
04/24/00	**4.4**	NS	NS	ND	**2**	ND	**2.2**	ND	ND	ND	NS	NP	NP	**2**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**2**
04/09/01	**2.3**	**7**	NS	ND	ND	ND	ND	ND	**2.4**	**4.8**	NS	NP	NP	**2**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
04/15/02	**2.1**	ND	NS	ND	ND	ND	ND	ND	**2.5**	**5**	NS	NP	NP	**2**
09/26/02	ND	**7**	**2.1**	**5.1**	ND	ND	ND	ND	**8.5**	**4.7**	**95**	NP	NP	**2**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	**2**	**2.2**	**20**	NP	NP	**2**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	**2.4**	ND	**33**	NP	NP	**1**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21**	NP	NP	**1**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.4**	**28**	NP	NP	**1**
04/18/05	ND	ND	ND	**7.2**	ND	ND	ND	ND	ND	**3.8**	**26**	NP	NP	**1**
10/13/05	ND	ND	ND	**3**	ND	ND	ND	ND	ND	**3.4**	**21**	NP	NP	**1**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	**2.1**	ND	**17**	NP	NP	**2**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	NP	NP	**1**
04/25/07	ND	ND	ND	ND	ND	**14**	ND	ND	ND	ND	**4.9**	NP	NP	**1**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6**	NP	NP	**1**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3**	NP	NP	**1**
10/20/08	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	NP	NP	**1**
04/22/09	ND	ND	**1.5**	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**1**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**1.7**	NP	NP	**1**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**1**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.1**	ND	ND	**1**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	ND	ND	**1**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	ND	ND	**1**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/27/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
N_i	32	31	26	30	30	30	28	28	29	30	26	11	11	
sum of rank values (R_i)	5281.5	5147.5	4201.0	5014.0	4643.0	4669.5	4349.0	4186.0	5337.0	5666.0	6869.5	1644.5	1644.5	
avg rank value (Rbar)	165.0	166.0	161.6	167.1	154.8	155.7	155.3	149.5	184.0	188.9	264.2	149.5	149.5	

	Number of each rank value													Rank Value
rank value of NDs =	29	28	24	27	29	29	27	28	23	23	9	11	11	149.5
rank value of 1.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	299
rank value of 1.2s =	0	1	0	0	0	0	0	0	0	0	1	0	0	300.5

rank value of 1.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	302
rank value of 1.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	303
rank value of 1.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	304
rank value of 1.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	305
rank value of 1.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	306
rank value of 2s =	0	0	0	0	1	0	0	0	1	0	0	0	0	307.5
rank value of 2.1s =	1	0	1	0	0	0	0	0	1	0	0	0	0	310
rank value of 2.2s =	0	0	0	0	0	0	1	0	0	1	0	0	0	312.5
rank value of 2.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	314
rank value of 2.4s =	0	0	0	0	0	0	0	0	2	0	0	0	0	315.5
rank value of 2.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	317
rank value of 3s =	0	0	0	1	0	0	0	0	0	0	1	0	0	318.5
rank value of 3.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	320
rank value of 3.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	321
rank value of 4.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	322
rank value of 4.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	323
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	324
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	325
rank value of 4.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	326
rank value of 5.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	327
rank value of 5.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	328
rank value of 6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
rank value of 7s =	0	2	0	0	0	0	0	0	0	0	0	0	0	330.5
rank value of 7.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	332
rank value of 8.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	333
rank value of 14s =	0	0	0	0	0	1	0	0	0	0	0	0	0	334
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	1	0	0	335
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	1	0	0	336
rank value of 21s =	0	0	0	0	0	0	0	0	0	0	2	0	0	337.5
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	1	0	0	339
rank value of 28s =	0	0	0	0	0	0	0	0	0	0	1	0	0	340
rank value of 33s =	0	0	0	0	0	0	0	0	0	0	1	0	0	341
rank value of 95s =	0	0	0	0	0	0	0	0	0	0	1	0	0	342
n =	**32**	**31**	**26**	**30**	**30**	**30**	**28**	**28**	**29**	**30**	**26**	**11**	**11**	

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-8**	**MW-15**	**MW-16**	**MW-17**
Ri^2/N_i =	2404909.0	838007	718582	726808	675493	625807	982192	1E+06	2E+06	245853	245853

$N_{i\ bg}$ = 89

N = 342

H = 29.63

Adjust H for ties:

T_i = 3E+07 sum of T1..T9

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

H' = 87.54

Chi-square = 18.31

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 18.31 which is less than H' =87.54.
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-8	**MW-15**	MW-16	MW-17
Rbar (well x) =	167.1	154.8	155.7	155.3	149.5	184.0	188.9	264.2	149.5	149.5
avg Rbar (background) =	164.4	164.4	164.4	164.4	164.4	164.4	164.4	164.4	164.4	164.4
Dx =	2.8	-9.6	-8.7	-9.1	-14.9	19.7	24.5	99.8	-14.9	-14.9
Cx =	48.6	48.6	48.6	49.9	49.9	49.3	48.6	51.4	73.6	73.6
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	NE	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

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

Part 1: Check for Normality

	MW-15	MDL
9/26/02	**95**	**2**
4/28/03	**20**	**2**
10/30/03	**33**	**1**
4/20/04	**21**	**1**
10/21/04	**28**	**1**
4/18/05	**26**	**1**
10/13/05	**21**	**1**
4/25/06	**17**	**2**
10/20/06	**5.7**	**1**
4/25/07	**4.9**	**1**
10/31/07	**6**	**1**
4/23/08	**3**	**1**
10/20/08	**1.9**	**1**
4/22/09	NS	**1**
10/26/09	**1.7**	**1**
4/22/10	ND	**1**
10/27/10	ND	**1**
4/29/11	**1.1**	**1**
10/25/11	**1.6**	**1**
4/20/12	ND	**1**
10/24/12	ND	**1**
4/24/13	**1.2**	**1**
10/24/13	ND	**1**
4/24/14	ND	**1**
10/27/14	ND	**1**
4/28/15	ND	**1**
10/27/15	ND	**1**

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

X_{bar} = 11.253846
SD = 19.967558
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = 22740.861
γ_1= 3.0295773

Since the Coefficient of Skewness of 3.03 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

X_{bar} = 1.0946362
SD = 1.724193
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = 1.9447077
γ_1= 0.4023896

Since the Coefficient of Skewness of 0.40 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

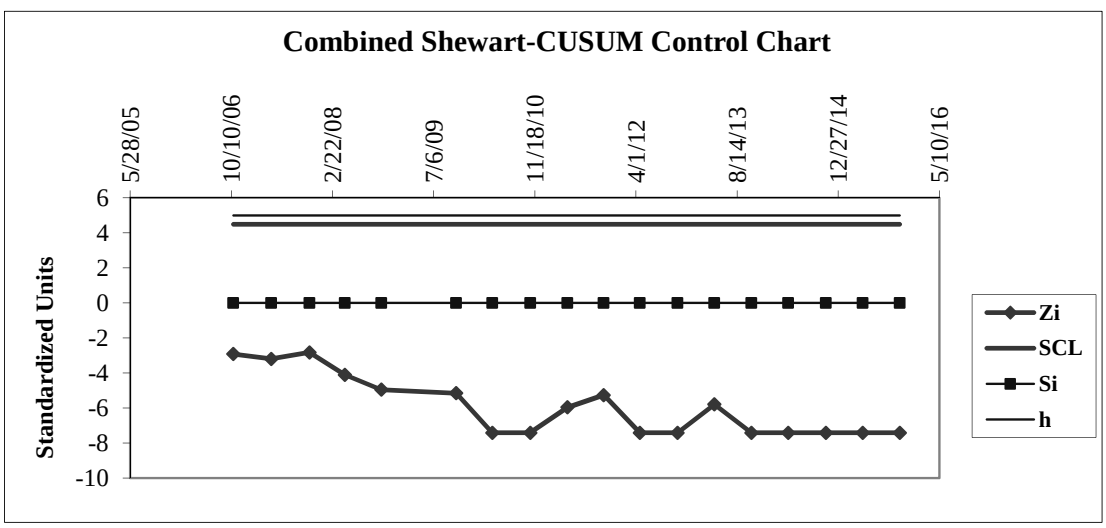
Compute the mean and standard deviation of the historical data:

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

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	1.7404662	-2.9174229	0	5	4.5
4/25/07	1.5892352	-3.1967781	0	5	4.5
10/31/07	1.7917595	-2.8226735	0	5	4.5
4/23/08	1.0986123	-4.103061	0	5	4.5
10/20/08	0.6418539	-4.9467891	0	5	4.5
10/26/09	0.5306283	-5.152246	0	5	4.5
4/22/10	-0.693147	-7.4128146	0	5	4.5
10/27/10	-0.693147	-7.4128146	0	5	4.5
4/29/11	0.0953102	-5.9563693	0	5	4.5
10/25/11	0.4700036	-5.2642324	0	5	4.5
4/20/12	-0.693147	-7.4128146	0	5	4.5
10/24/12	-0.693147	-7.4128146	0	5	4.5
4/24/13	0.1823216	-5.7956412	0	5	4.5
10/24/13	-0.693147	-7.4128146	0	5	4.5
4/24/14	-0.693147	-7.4128146	0	5	4.5
10/27/14	-0.693147	-7.4128146	0	5	4.5
4/28/15	-0.693147	-7.4128146	0	5	4.5
10/27/15	-0.693147	-7.4128146	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 J15-1957-50

Compound: **Total Cadmium**
NC MCL (µg/l): 2
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	**2**	NS	NS	ND	**1.3**	**1.2**	**1.3**	**2.1**	ND	**5.4**	NS	NP	NP	**1**
06/26/00	**1.6**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
07/26/00	**1.1**	**3.2**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**1**
04/09/01	**130**	**2**	NS	ND	ND	ND	**1.7**	**1.8**	**2.7**	**19**	NS	NP	NP	**1**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
04/15/02	**13**	ND	NS	ND	ND	ND	**4**	ND	**5.5**	**19**	NS	NP	NP	**10**
09/26/02	ND	ND	**4.2**	**21**	ND	**10**	ND	**2.3**	**4.2**	**19**	**180**	NP	NP	**1**
04/28/03	**3.6**	ND	ND	**6**	ND	ND	ND	ND	**2.9**	**16**	**20**	NP	NP	**1**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.8**	**8.9**	NP	NP	**1**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
10/20/06	**3.8**	ND	ND	ND	ND	ND	ND	ND	**1.5**	ND	**5.2**	NP	NP	**1**
04/25/07	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND	ND	ND	NP	NP	**1**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	NP	NP	**1**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**1**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**1**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**1**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.8**	ND	**1**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**	ND	**1**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	ND	**1**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.3**	ND	**1**
10/27/15	**1.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.1**	ND	**1**
N_i	32	31	26	30	30	30	28	28	29	30	26	11	11	
sum of rank values (R_i)	6134.0	4967.0	4062.0	4856.0	4639.0	4985.0	4672.0	4675.0	5181.5	5593.0	4786.0	2458.0	1644.5	
avg rank value (Rbar)	191.7	160.2	156.2	161.9	154.6	166.2	166.9	167.0	178.7	186.4	184.1	223.5	149.5	

	Number of each rank value													Rank Value
rank value of NDs =	24	29	25	28	29	27	25	25	24	24	21	6	11	149.5
rank value of 1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	299
rank value of 1.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	300

rank value of 1.2s =	0	0	0	0	0	1	0	0	0	0	0	1	0	301.5
rank value of 1.3s =	0	0	0	0	1	0	1	0	0	0	0	0	0	303.5
rank value of 1.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	305
rank value of 1.6s =	1	0	0	0	0	0	0	0	0	0	1	0	0	306.5
rank value of 1.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	308
rank value of 1.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	309
rank value of 1.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	310
rank value of 2s =	1	1	0	0	0	0	0	0	0	0	0	0	0	311.5
rank value of 2.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	313
rank value of 2.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	314
rank value of 2.3s =	0	0	0	0	0	0	0	1	0	0	0	1	0	315.5
rank value of 2.7s =	0	0	0	0	0	0	0	0	1	0	0	0	0	317
rank value of 2.9s =	0	0	0	0	0	0	0	0	1	0	0	0	0	318
rank value of 3.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	319
rank value of 3.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	320
rank value of 3.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	321
rank value of 3.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	322
rank value of 4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	323
rank value of 4.2s =	0	0	1	0	0	0	0	0	1	0	0	0	0	324.5
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	326
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	327
rank value of 5.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	328
rank value of 5.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	329
rank value of 6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	330
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	331
rank value of 8.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	332
rank value of 10s =	0	0	0	0	0	1	0	0	0	0	0	0	0	333
rank value of 13s =	1	0	0	0	0	0	0	0	0	0	0	0	0	334
rank value of 16s =	0	0	0	0	0	0	0	0	0	1	0	0	0	335
rank value of 19s =	0	0	0	0	0	0	0	0	0	3	0	0	0	337
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	1	0	0	339
rank value of 21s =	0	0	0	1	0	0	0	0	0	0	0	0	0	340
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	341
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	1	0	0	342
n =	**32**	**31**	**26**	**30**	**30**	**30**	**28**	**28**	**29**	**30**	**26**	**11**	**11**	

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-8**	**MW-15**	**MW-16**	**MW-17**
Ri^2/N_i =	2583332.2	786025	717344	828341	779557	780558	925791	1E+06	880992	549251	245853

$N_{i\,bg}$ = 89
N = 342
H = 6.22

Adjust H for ties:

T_i = 3E+07 sum of T1..T8

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

H' = 18.37

Chi-square = 18.31

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 18.31 which is less than H' =18.37.
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-8	MW-15	MW-16	MW-17
Rbar (well x) =	161.9	154.6	166.2	166.9	167.0	178.7	186.4	184.1	223.5	149.5
avg Rbar (background) =	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4
Dx =	-8.5	-15.7	-4.2	-3.5	-3.4	8.3	16.1	13.7	53.1	-20.9
Cx =	48.6	48.6	48.6	49.9	49.9	49.3	48.6	51.4	73.6	73.6
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Total Chromium**
NC MCL (µg/l): 10
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	**15**	NS	NS	**18**	**17**	**11**	ND	**26**	**5.4**	**50**	NS	NP	NP	**5**
06/26/00	**22**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
07/26/00	**29**	**20**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	**130**	ND	NS	**11**	**8.4**	ND	ND	**20**	**27**	**160**	NS	NP	NP	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	**170**	ND	NS	ND	ND	**5.7**	**7**	**10**	**56**	**180**	NS	NP	NP	**5**
09/26/02	**33**	**5.4**	**33**	**510**	ND	**5.2**	ND	**37**	**36**	**230**	**770**	NP	NP	**5**
04/28/03	ND	ND	ND	**89**	ND	ND	ND	ND	ND	**110**	**27**	NP	NP	**5**
10/30/03	**30**	ND	NT	ND	**6.2**	ND	ND	ND	**31**	**4.6**	**140**	NP	NP	**2**
04/20/04	**33**	ND	**2.1**	**45**	**13**	ND	ND	**11**	**3.5**	**190**	**68**	NP	NP	**2**
10/21/04	**21**	ND	**2.8**	**16**	**2**	ND	ND	ND	ND	**120**	**140**	NP	NP	**2**
04/18/05	**49**	**12**	**8.3**	**680**	**2.9**	ND	ND	**3.2**	ND	**210**	**100**	NP	NP	**2**
10/13/05	**52**	ND	**3.7**	**230**	**4.7**	ND	ND	ND	ND	**150**	**88**	NP	NP	**2**
04/25/06	**65**	ND	**16**	ND	ND	ND	ND	ND	**16**	**100**	**93**	NP	NP	**10**
10/20/06	**50**	ND	**11**	**24**	ND	ND	ND	ND	**17**	ND	**27**	NP	NP	**5**
04/25/07	**20**	ND	ND	**16**	ND	**410**	ND	ND	ND	ND	**17**	NP	NP	**10**
10/31/07	**40.9**	ND	**11.9**	**10.9**	**7.8**	ND	ND	ND	**5.1**	**75.5**	**33.7**	NP	NP	**5**
04/23/08	**10.7**	ND	**16.8**	**7.8**	ND	ND	ND	ND	**7.6**	**7.3**	**14.9**	NP	NP	**5**
10/20/08	**38.6**	ND	**29.4**	**12.7**	ND	ND	ND	ND	ND	ND	**6.8**	NP	NP	**5**
04/22/09	**12.3**	ND	**28.9**	**19.7**	**5.1**	ND	ND	ND	**7.3**	ND	NS	NP	NP	**5**
10/26/09	**10**	ND	**8.1**	ND	**18.7**	ND	NS	NS	NS	**10.9**	**8.1**	NP	NP	**5**
04/22/10	**14.3**	**10.9**	**13.1**	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	**10.1**	ND	**6.6**	**7.1**	ND	ND	**12**	**9.2**	ND	ND	**5.2**	ND	ND	**5**
04/29/11	**8**	ND	**8.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	**15**	ND	ND	**21.1**	ND	ND	**8.1**	ND	ND	**9.2**	**5.1**	ND	ND	**5**
04/20/12	**24.5**	ND	ND	**5.1**	ND	ND	**7.9**	ND	ND	ND	ND	**12.3**	ND	**5**
10/24/12	**30.4**	**6**	ND	**6.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	**19**	ND	ND	**8.8**	**6.8**	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	**14.5**	ND	**12.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	**12.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.1**	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	**10.3**	ND	**8.2**	**7.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/15	**31.4**	ND	ND	ND	ND	ND	ND	ND	ND	**7.7**	ND	ND	ND	**5**
N_i	32	31	26	30	30	30	28	28	29	30	26	11	11	
sum of rank values (R_i)	8830.5	3833.0	5183.0	6484.0	4465.0	3627.0	3355.0	3938.5	4664.5	6178.5	5620.5	1373.5	1100.0	
avg rank value (Rbar)	276.0	123.6	199.3	216.1	148.8	120.9	119.8	140.7	160.8	206.0	216.2	124.9	100.0	

	Number of each rank value													Rank Value
rank value of NDs =	2	26	9	10	19	26	24	21	18	14	10	9	11	100
rank value of 2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	200
rank value of 2.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	201

rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	202
rank value of 2.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	203
rank value of 3.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	204
rank value of 3.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	205
rank value of 3.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	206
rank value of 4.6s =	0	0	0	0	0	0	0	0	0	1	0	0	0	207
rank value of 4.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	208
rank value of 5.1s =	0	0	0	1	1	0	0	0	1	0	1	1	0	211
rank value of 5.2s =	0	0	0	0	0	1	0	0	0	0	1	0	0	214.5
rank value of 5.4s =	0	1	0	0	0	0	0	0	1	0	0	0	0	216.5
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	218
rank value of 6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	219
rank value of 6.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	220
rank value of 6.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	221
rank value of 6.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	222
rank value of 6.8s =	0	0	0	0	1	0	0	0	0	0	1	0	0	223.5
rank value of 7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	225
rank value of 7.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	226
rank value of 7.3s =	0	0	0	0	0	0	0	0	1	1	0	0	0	227.5
rank value of 7.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	229
rank value of 7.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	230
rank value of 7.8s =	0	0	0	1	1	0	0	0	0	0	0	0	0	231.5
rank value of 7.9s =	0	0	0	1	0	0	1	0	0	0	0	0	0	233.5
rank value of 8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	235
rank value of 8.1s =	0	0	1	0	0	0	1	0	0	0	1	0	0	237
rank value of 8.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	239
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	240
rank value of 8.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	241
rank value of 8.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	242
rank value of 8.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	243
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	1	0	0	0	244.5
rank value of 10s =	1	0	0	0	0	0	0	1	0	0	0	0	0	246.5
rank value of 10.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	248
rank value of 10.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	249
rank value of 10.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	250
rank value of 10.9s =	0	1	0	1	0	0	0	0	0	1	0	0	0	252
rank value of 11s =	0	0	1	1	0	1	0	1	0	0	0	0	0	255.5
rank value of 11.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	258
rank value of 12s =	0	1	0	0	0	0	1	0	0	0	0	0	0	259.5
rank value of 12.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	261
rank value of 12.3s =	1	0	0	0	0	0	0	0	0	0	0	1	0	262.5
rank value of 12.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	264
rank value of 12.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	265
rank value of 13s =	0	0	0	0	1	0	0	0	0	0	0	0	0	266
rank value of 13.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	267
rank value of 14.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	268
rank value of 14.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	269
rank value of 14.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	270
rank value of 15s =	2	0	0	0	0	0	0	0	0	0	0	0	0	271.5
rank value of 16s =	0	0	1	2	0	0	0	0	1	0	0	0	0	274.5
rank value of 16.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	277
rank value of 17s =	0	0	0	0	1	0	0	0	1	0	1	0	0	279
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	0	0	281
rank value of 18.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	282
rank value of 19s =	1	0	0	0	0	0	0	0	0	0	0	0	0	283
rank value of 19.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	284
rank value of 20s =	1	1	0	0	0	0	0	1	0	0	0	0	0	286
rank value of 21s =	1	0	0	0	0	0	0	0	0	0	0	0	0	288

rank value of 21.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	289
rank value of 22s =	1	0	0	0	0	0	0	0	0	0	0	0	0	290
rank value of 24s =	0	0	0	1	0	0	0	0	0	0	0	0	0	291
rank value of 24.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	292
rank value of 26s =	0	0	0	0	0	0	0	1	0	0	0	0	0	293
rank value of 27s =	0	0	0	0	0	0	0	0	1	0	2	0	0	295
rank value of 28.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	297
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	298
rank value of 29.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	299
rank value of 30s =	1	0	0	0	0	0	0	0	0	0	0	0	0	300
rank value of 30.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	301
rank value of 31s =	0	0	0	0	0	0	0	0	1	0	0	0	0	302
rank value of 31.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	303
rank value of 33s =	2	0	1	0	0	0	0	0	0	0	0	0	0	305
rank value of 33.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	307
rank value of 36s =	0	0	0	0	0	0	0	0	1	0	0	0	0	308
rank value of 37s =	0	0	0	0	0	0	0	1	0	0	0	0	0	309
rank value of 38.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	310
rank value of 40.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	311
rank value of 45s =	0	0	0	1	0	0	0	0	0	0	0	0	0	312
rank value of 49s =	1	0	0	0	0	0	0	0	0	0	0	0	0	313
rank value of 50s =	1	0	0	0	0	0	0	0	0	1	0	0	0	314.5
rank value of 52s =	1	0	0	0	0	0	0	0	0	0	0	0	0	316
rank value of 56s =	0	0	0	0	0	0	0	0	1	0	0	0	0	317
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	318
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	1	0	0	319
rank value of 75.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	320
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	0	0	321
rank value of 89s =	0	0	0	1	0	0	0	0	0	0	0	0	0	322
rank value of 93s =	0	0	0	0	0	0	0	0	0	0	1	0	0	323
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	1	0	0	324.5
rank value of 110s =	0	0	0	0	0	0	0	0	0	1	0	0	0	326
rank value of 120s =	0	0	0	0	0	0	0	0	0	1	0	0	0	327
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	328
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	2	0	0	329.5
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	0	0	0	331
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	0	0	332
rank value of 170s =	1	0	0	0	0	0	0	0	0	0	0	0	0	333
rank value of 180s =	0	0	0	0	0	0	0	0	0	1	0	0	0	334
rank value of 190s =	0	0	0	0	0	0	0	0	0	1	0	0	0	335
rank value of 210s =	0	0	0	0	0	0	0	0	0	1	0	0	0	336
rank value of 230s =	0	0	0	1	0	0	0	0	0	1	0	0	0	337.5
rank value of 410s =	0	0	0	0	0	1	0	0	0	0	0	0	0	339
rank value of 510s =	0	0	0	1	0	0	0	0	0	0	0	0	0	340
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	341
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	1	0	0	342
n =	**32**	**31**	**26**	**30**	**30**	**30**	**28**	**28**	**29**	**30**	**26**	**11**	**11**	

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-8**	**MW-15**	**MW-16**	**MW-17**
Ri^2/N_i =	3578624.3	1E+06	664541	438504	402001	553992	750261	1E+06	1E+06	171500	110000

$N_{i\,bg}$ = 89
N = 342
H = 51.08

Adjust H for ties:

T_i = 8E+06 sum of T1..T25

$H' = H/(1-(T_i/(N^3-N)))$
H' = 63.61
Chi-square = 18.31

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 18.31 which is less than H' =63.61.
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-8	MW-15	MW-16	MW-17
Rbar (well x) =	216.1	148.8	120.9	119.8	140.7	160.8	206.0	216.2	124.9	100.0
avg Rbar (background) =	200.5	200.5	200.5	200.5	200.5	200.5	200.5	200.5	200.5	200.5
Dx =	15.6	-51.7	-79.6	-80.7	-59.9	-39.7	5.4	15.7	-75.7	-100.5
Cx =	48.6	48.6	48.6	49.9	49.9	49.3	48.6	51.4	73.6	73.6
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

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-8	MW-15	MW-16	MW-17	MDL
04/24/00	ND	NS	NS	ND	**8.2**	**5.4**	ND	**14**	ND	**16**	NS	NP	NP	**5**
06/26/00	**10**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
07/26/00	**9.9**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	**54**	ND	NS	ND	ND	ND	**13**	**12**	**13**	**59**	NS	NP	NP	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	**58**	ND	NS	ND	ND	ND	**18**	**8**	**21**	**82**	NS	NP	NP	**5**
09/26/02	**13**	**5.4**	**16**	**100**	ND	**16**	**7.4**	**21**	**19**	**85**	**560**	NP	NP	**5**
04/28/03	**21**	ND	ND	**37**	ND	ND	**6.9**	ND	**17**	**50**	**81**	NP	NP	**5**
10/30/03	**9**	ND	NT	ND	ND	ND	**5.7**	ND	**52**	**8.8**	**110**	NP	NP	**5**
04/20/04	**9.5**	ND	ND	**7.7**	**5.2**	ND	**13**	**6.4**	ND	**43**	**50**	NP	NP	**5**
10/21/04	**6.2**	ND	ND	ND	ND	ND	ND	ND	ND	**31**	**120**	NP	NP	**5**
04/18/05	**12**	ND	ND	**110**	ND	ND	ND	ND	ND	**36**	**70**	NP	NP	**5**
10/13/05	**21**	ND	ND	**32**	ND	ND	**5.1**	ND	ND	**29**	**56**	NP	NP	**5**
04/25/06	**16**	ND	ND	ND	ND	ND	ND	ND	ND	**25**	**57**	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	**260**	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	**16.8**	ND	ND	ND	**10.6**	ND	ND	ND	ND	ND	**17.6**	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**22.3**	NP	NP	**5**
10/20/08	**27**	**10.4**	**19.5**	**9.4**	**7.7**	ND	**12.6**	**5.3**	**7.1**	ND	**18.4**	NP	NP	**5**
04/22/09	**5**	**6.3**	**17.1**	**8.5**	**5.7**	ND	**7**	ND	**6.4**	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	**6**	ND	NS	NS	NS	ND	**6**	NP	NP	**5**
04/22/10	**5.6**	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	**17.3**	**5.6**	ND	ND	**7.8**	**29.6**	ND	**5**
04/29/11	ND	ND	ND	ND	**6.9**	ND	**8.9**	ND	ND	ND	ND	**26.3**	ND	**5**
10/25/11	**5.3**	ND	ND	**6.4**	**6.3**	ND	**21**	ND	ND	ND	ND	**42.4**	ND	**5**
04/20/12	**6.9**	ND	ND	ND	ND	ND	**6.4**	ND	ND	ND	ND	**134**	ND	**5**
10/24/12	**15.7**	ND	ND	ND	**5.6**	ND	**6.5**	ND	ND	ND	ND	**48.5**	ND	**5**
04/24/13	**16.5**	ND	ND	ND	**10.8**	ND	**5.6**	ND	ND	ND	**8.9**	**115**	ND	**5**
10/24/13	**11.8**	ND	ND	ND	**8**	ND	**7.5**	ND	ND	ND	ND	**84.5**	ND	**5**
04/24/14	ND	ND	ND	ND	**5.7**	ND	ND	ND	ND	ND	ND	**65.1**	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24.2**	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**29.3**	ND	**5**
10/27/15	**6.2**	ND	ND	ND	**5.6**	ND	ND	ND	ND	ND	ND	**39**	ND	**5**
N_i	32	31	26	30	30	30	28	28	29	30	26	11	11	
sum of rank values (R_i)	7183.0	3898.0	3467.0	4815.5	5151.5	3896.5	5565.0	4198.5	4474.0	5569.5	5665.0	3532.0	1237.5	
avg rank value (Rbar)	224.5	125.7	133.3	160.5	171.7	129.9	198.8	149.9	154.3	185.7	217.9	321.1	112.5	

	Number of each rank value													Rank Value
rank value of NDs =	10	28	23	22	17	27	12	21	22	19	12	0	11	112.5
rank value of 5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	225
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	226

rank value of 5.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	227
rank value of 5.3s =	1	0	0	0	0	0	0	1	0	0	0	0	0	228.5
rank value of 5.4s =	0	1	0	0	0	1	0	0	0	0	0	0	0	230.5
rank value of 5.6s =	1	0	0	0	2	0	1	1	0	0	0	0	0	234
rank value of 5.7s =	0	0	0	0	2	0	1	0	0	0	0	0	0	238
rank value of 6s =	0	0	0	0	1	0	0	0	0	0	1	0	0	240.5
rank value of 6.2s =	2	0	0	0	0	0	0	0	0	0	0	0	0	242.5
rank value of 6.3s =	0	1	0	0	1	0	0	0	0	0	0	0	0	244.5
rank value of 6.4s =	0	0	0	1	0	0	1	1	1	0	0	0	0	247.5
rank value of 6.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	250
rank value of 6.9s =	1	0	0	0	1	0	1	0	0	0	0	0	0	252
rank value of 7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	254
rank value of 7.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	255
rank value of 7.4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	256
rank value of 7.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	257
rank value of 7.7s =	0	0	0	1	1	0	0	0	0	0	0	0	0	258.5
rank value of 7.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	260
rank value of 8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	261
rank value of 8.2s =	0	0	0	0	1	0	0	1	0	0	0	0	0	262.5
rank value of 8.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	264
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	265
rank value of 8.9s =	0	0	0	0	0	0	1	0	0	0	1	0	0	266.5
rank value of 9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	268
rank value of 9.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	269
rank value of 9.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	270
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	271
rank value of 10s =	1	0	0	0	0	0	0	0	0	0	0	0	0	272
rank value of 10.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	273
rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	274
rank value of 10.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	275
rank value of 11.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	276
rank value of 12s =	1	0	0	0	0	0	0	1	0	0	0	0	0	277.5
rank value of 12.6s =	0	0	0	0	0	0	1	0	0	0	0	0	0	279
rank value of 13s =	1	0	0	0	0	0	2	0	1	0	0	0	0	281.5
rank value of 14s =	0	0	0	0	0	0	0	1	0	0	0	0	0	284
rank value of 15.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	285
rank value of 16s =	1	0	1	0	0	1	0	0	0	1	0	0	0	287.5
rank value of 16.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	290
rank value of 16.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	291
rank value of 17s =	0	0	0	0	0	0	0	0	1	0	0	0	0	292
rank value of 17.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	293
rank value of 17.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	294
rank value of 17.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	295
rank value of 18s =	0	0	0	0	0	0	1	0	0	0	0	0	0	296
rank value of 18.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	297
rank value of 19s =	0	0	0	0	0	0	0	0	1	0	0	0	0	298
rank value of 19.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	299
rank value of 21s =	2	0	0	0	0	0	1	1	1	0	0	0	0	302
rank value of 22.3s =	0	0	0	0	0	0	0	0	0	0	1	0	0	305
rank value of 24.2s =	0	0	0	0	0	0	0	0	0	0	0	1	0	306
rank value of 25s =	0	0	0	0	0	0	0	0	0	1	0	0	0	307
rank value of 26.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	308
rank value of 27s =	1	0	0	0	0	0	0	0	0	0	0	0	0	309
rank value of 29s =	0	0	0	0	0	0	0	0	0	1	0	0	0	310
rank value of 29.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	311
rank value of 29.6s =	0	0	0	0	0	0	0	0	0	0	0	1	0	312
rank value of 31s =	0	0	0	0	0	0	0	0	0	1	0	0	0	313
rank value of 32s =	0	0	0	1	0	0	0	0	0	0	0	0	0	314

rank value of 36s =	0	0	0	0	0	0	0	0	0	1	0	0	0	315
rank value of 37s =	0	0	0	1	0	0	0	0	0	0	0	0	0	316
rank value of 39s =	0	0	0	0	0	0	0	0	0	0	0	1	0	317
rank value of 42.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	318
rank value of 43s =	0	0	0	0	0	0	0	0	0	1	0	0	0	319
rank value of 48.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	320
rank value of 50s =	0	0	0	0	0	0	0	0	0	1	1	0	0	321.5
rank value of 52s =	0	0	0	0	0	0	0	0	1	0	0	0	0	323
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	324
rank value of 56s =	0	0	0	0	0	0	0	0	0	0	1	0	0	325
rank value of 57s =	0	0	0	0	0	0	0	0	0	0	1	0	0	326
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	327
rank value of 59s =	0	0	0	0	0	0	0	0	0	1	0	0	0	328
rank value of 65.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	329
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	1	0	0	330
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	1	0	0	331
rank value of 82s =	0	0	0	0	0	0	0	0	0	1	0	0	0	332
rank value of 84.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	333
rank value of 85s =	0	0	0	0	0	0	0	0	0	1	0	0	0	334
rank value of 100s =	0	0	0	1	0	0	0	0	0	0	0	0	0	335
rank value of 110s =	0	0	0	1	0	0	0	0	0	0	1	0	0	336.5
rank value of 115s =	0	0	0	0	0	0	0	0	0	0	0	1	0	338
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	1	0	0	339
rank value of 134s =	0	0	0	0	0	0	0	0	0	0	0	1	0	340
rank value of 260s =	0	0	0	0	0	1	0	0	0	0	0	0	0	341
rank value of 560s =	0	0	0	0	0	0	0	0	0	0	1	0	0	342
n =	**32**	**31**	**26**	**30**	**30**	**30**	**28**	**28**	**29**	**30**	**26**	**11**	**11**	

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-8**	**MW-15**	**MW-16**	**MW-17**
Ri^2/N_i =	2378025.9	772968	884598	506090	1E+06	629550	690230	1E+06	1E+06	1E+06	139219

$N_{i\ bg}$ = 89
N = 342
H = 46.05

Adjust H for ties:

T_i = 1E+07 sum of T1..T19

$H' = H/(1-(T_i/(N^3-N)))$
H' = 64.04
Chi-square = 18.31

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 18.31 which is less than H' =64.04.

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-8	**MW-15**	**MW-16**	MW-17
Rbar (well x) =	160.5	171.7	129.9	198.8	149.9	154.3	185.7	217.9	321.1	112.5
avg Rbar (background) =	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5
Dx =	-2.9	8.3	-33.6	35.3	-13.5	-9.2	22.2	54.4	157.6	-51.0
Cx =	48.6	48.6	48.6	49.9	49.9	49.3	48.6	51.4	73.6	73.6
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**	**Yes**	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	NE	NE	-

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total 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 J15-1957-50

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

Part 1: Check for Normality

	MW-15	MDL
9/26/02	**560**	**5**
4/28/03	**81**	**5**
10/30/03	**110**	**5**
4/20/04	**50**	**5**
10/21/04	**120**	**5**
4/18/05	**70**	**5**
10/13/05	**56**	**5**
4/25/06	**57**	**10**
10/20/06	ND	**5**
4/25/07	ND	**10**
10/31/07	**17.6**	**5**
4/23/08	**22.3**	**5**
10/20/08	**18.4**	**5**
4/22/09	NS	**5**
10/26/09	**6**	**5**
4/22/10	ND	**5**
10/27/10	**7.8**	**5**
4/29/11	ND	**5**
10/25/11	ND	**5**
4/20/12	ND	**5**
10/24/12	ND	**5**
4/24/13	**8.9**	**5**
10/24/13	ND	**5**
4/24/14	ND	**5**
10/27/14	ND	**5**
4/28/15	ND	**5**
10/27/15	ND	**5**

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

X_{bar} = 46.826923
SD = 110.42638
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = 5175558.3
γ_1= 4.0765119

Since the Coefficient of Skewness of 4.08 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

X_{bar} = 2.4247956
SD = 1.6465836
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = 2.7564623
γ_1= 0.6548634

Since the Coefficient of Skewness of 0.65 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

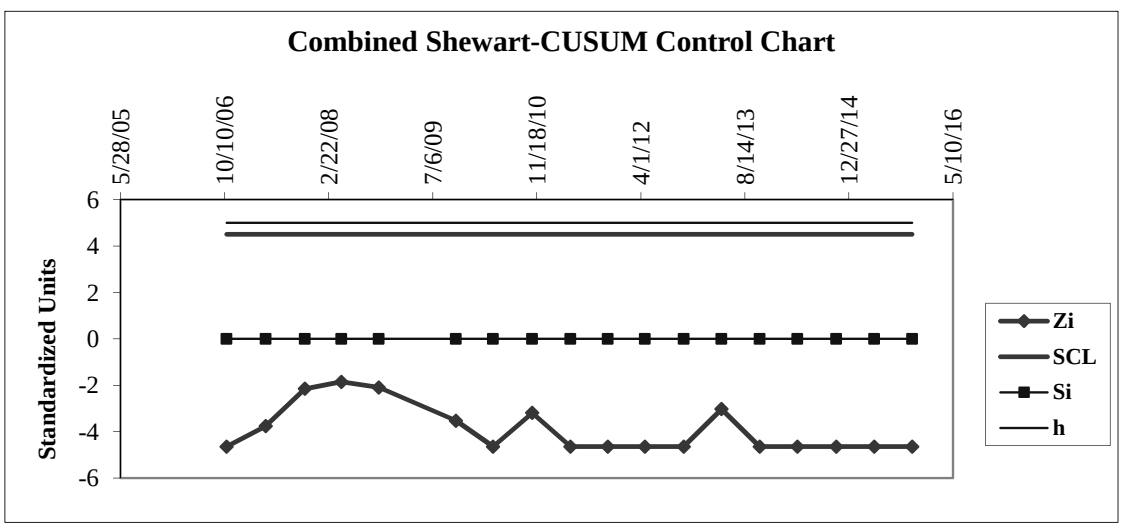
Compute the mean and standard deviation of the historical data:

4.5549099 = x_{mean} (Mean of N1-N8 historical data)
0.7832425 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	0.9162907	-4.6455844	0	5	4.5
4/25/07	1.6094379	-3.7606131	0	5	4.5
10/31/07	2.8678989	-2.1538808	0	5	4.5
4/23/08	3.1045867	-1.8516912	0	5	4.5
10/20/08	2.9123507	-2.0971273	0	5	4.5
10/26/09	1.7917595	-3.5278352	0	5	4.5
4/22/10	0.9162907	-4.6455844	0	5	4.5
10/27/10	2.0541237	-3.1928632	0	5	4.5
4/29/11	0.9162907	-4.6455844	0	5	4.5
10/25/11	0.9162907	-4.6455844	0	5	4.5
4/20/12	0.9162907	-4.6455844	0	5	4.5
10/24/12	0.9162907	-4.6455844	0	5	4.5
4/24/13	2.1860513	-3.0244255	0	5	4.5
10/24/13	0.9162907	-4.6455844	0	5	4.5
4/24/14	0.9162907	-4.6455844	0	5	4.5
10/27/14	0.9162907	-4.6455844	0	5	4.5
4/28/15	0.9162907	-4.6455844	0	5	4.5
10/27/15	0.9162907	-4.6455844	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 J15-1957-50

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

Part 1: Check for Normality

	MW-16	MDL
9/26/02	NP	**5**
4/28/03	NP	**5**
10/30/03	NP	**5**
4/20/04	NP	**5**
10/21/04	NP	**5**
4/18/05	NP	**5**
10/13/05	NP	**5**
4/25/06	NP	**10**
10/20/06	NP	**5**
4/25/07	NP	**10**
10/31/07	NP	**5**
4/23/08	NP	**5**
10/20/08	NP	**5**
4/22/09	NP	**5**
10/26/09	NP	**5**
4/22/10	NP	**5**
10/27/10	**29.6**	**5**
4/29/11	**26.3**	**5**
10/25/11	**42.4**	**5**
4/20/12	**134**	**5**
10/24/12	**48.5**	**5**
4/24/13	**115**	**5**
10/24/13	**84.5**	**5**
4/24/14	**65.1**	**5**
10/27/14	**24.2**	**5**
4/28/15	**29.3**	**5**
10/27/15	**39**	**5**

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

X_{bar} = 57.990909
SD = 37.748972
N = 11
$1/N\Sigma_i(X_i-X_{bar})^3$ = 46817.88
γ_1= 1.0041194

Since the Coefficient of Skewness of 1.00 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

X_{bar} = 3.8880914
SD = 0.5994917
N = 11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.0902745
$\gamma_1 =$ 0.4833975

Since the Coefficient of Skewness of 0.48 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

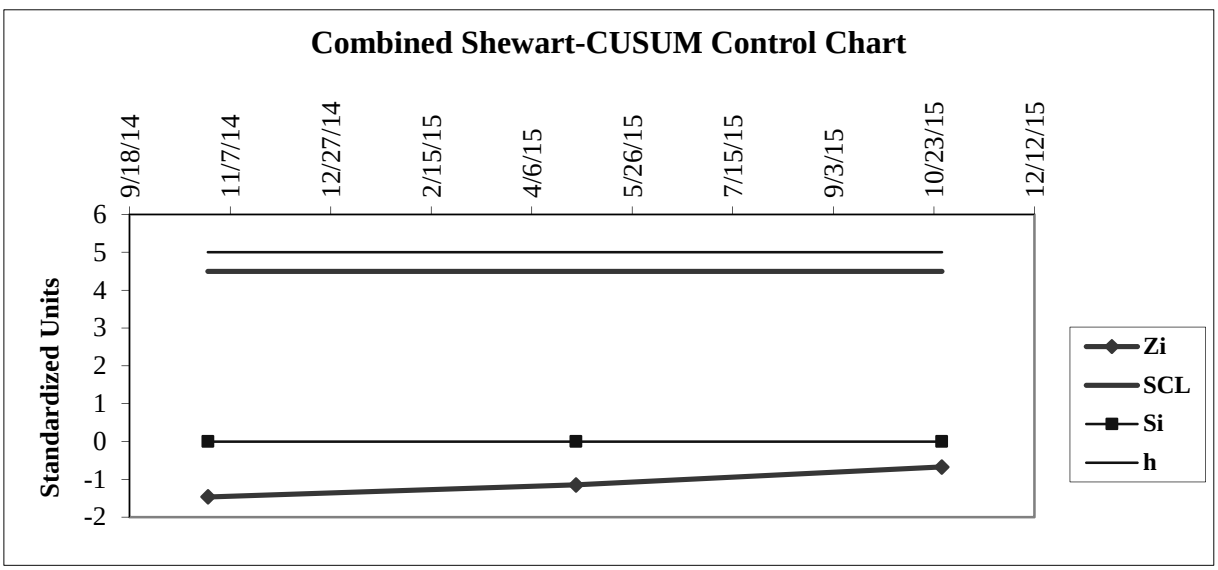
Compute the mean and standard deviation of the historical data:

4.0676879 = x_{mean} (Mean of N1-N8 historical data)
0.6014743 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/27/14	3.1863526	-1.4652918	0	5	4.5
4/28/15	3.3775875	-1.1473482	0	5	4.5
10/27/15	3.6635616	-0.6718929	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 J15-1957-50

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-8	MW-15	MW-16	MW-17	MDL
04/24/00	**12**	NS	NS	ND	ND	**13**	ND	**27**	ND	**22**	NS	NP	NP	**5**
06/26/00	**17**	**6**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
07/26/00	**12**	**6.1**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**200**
04/09/01	**77**	**8.4**	NS	ND	ND	**5.4**	ND	**26**	**38**	**110**	NS	NP	NP	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**200**
04/15/02	**69**	ND	NS	ND	ND	ND	ND	**13**	**68**	**120**	NS	NP	NP	**2**
09/26/02	**20**	**10**	**31**	**220**	ND	ND	**2.6**	**42**	**88**	**150**	**450**	NP	NP	**2**
04/28/03	**24**	ND	**2.6**	**40**	ND	ND	ND	ND	**28**	**94**	**71**	NP	NP	**2**
10/30/03	**18**	ND	NT	ND	**2.3**	**2.6**	ND	**3**	**85**	**4.4**	**150**	NP	NP	**2**
04/20/04	**18**	ND	**2.8**	**12**	**5.3**	**2.3**	**4.3**	**13**	**7.4**	**100**	**89**	NP	NP	**2**
10/21/04	**11**	ND	ND	**2**	ND	ND	ND	ND	ND	**63**	**140**	NP	NP	**2**
04/18/05	**29**	ND	ND	**240**	ND	ND	ND	**3.8**	ND	**120**	**130**	NP	NP	**2**
10/13/05	**31**	**2.6**	**3.5**	**70**	ND	ND	ND	ND	**3**	**82**	**96**	NP	NP	**2**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**200**
10/20/06	**26**	ND	ND	**9.6**	ND	ND	ND	ND	**20**	ND	**25**	NP	NP	**5**
04/25/07	**15**	ND	ND	ND	ND	**330**	ND	ND	ND	ND	**26**	NP	NP	**10**
10/31/07	**29.2**	ND	ND	ND	ND	ND	ND	ND	**6.3**	**40.3**	**47.4**	NP	NP	**5**
04/23/08	**7.2**	ND	ND	ND	ND	ND	ND	ND	**7.2**	ND	**17**	NP	NP	**5**
10/20/08	**26.5**	ND	**8.3**	ND	ND	ND	ND	ND	ND	ND	**9.7**	NP	NP	**5**
04/22/09	**5.1**	ND	**22.6**	**6**	ND	ND	ND	ND	**8.8**	ND	NS	NP	NP	**5**
10/26/09	**5.8**	ND	ND	ND	**6.4**	ND	NS	NS	NS	ND	**7.1**	NP	NP	**5**
04/22/10	**9.9**	ND	ND	ND	ND	**5.9**	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	**6.7**	ND	ND	ND	ND	ND	ND	**12.4**	ND	ND	**53.9**	ND	ND	**5**
04/29/11	**6.4**	ND	ND	ND	**6.7**	**6.1**	ND	ND	ND	ND	**5.2**	ND	ND	**5**
10/25/11	**9.6**	ND	ND	**9.4**	**6.8**	**11.2**	**7.6**	ND	ND	**5.1**	**6.9**	ND	ND	**5**
04/20/12	**15.6**	ND	ND	ND	**5.8**	**5.2**	ND	ND	ND	ND	ND	**6.5**	ND	**5**
10/24/12	**22.7**	ND	ND	ND	**6**	ND	ND	ND	**5.1**	ND	ND	ND	ND	**5**
04/24/13	**13.4**	ND	ND	ND	**9.3**	**6**	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	**12.6**	ND	ND	ND	**7.5**	**5.8**	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	**7.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	**7.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/15	**19.1**	ND	ND	ND	**5.4**	**7.3**	ND	ND	ND	ND	ND	**6**	ND	**5**
N_i	32	31	26	30	30	30	28	28	29	30	26	11	11	
sum of rank values (R_i)	8788.0	4098.0	3734.0	4894.5	4663.0	5025.5	3443.5	4417.5	5248.0	5679.5	5981.5	1481.0	1199.0	
avg rank value (Rbar)	274.6	132.2	143.6	163.2	155.4	167.5	123.0	157.8	181.0	189.3	230.1	134.6	109.0	

	Number of each rank value													Rank Value
rank value of NDs =	2	26	20	21	20	18	25	20	17	18	10	9	11	109
rank value of 2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	218
rank value of 2.3s =	0	0	0	0	1	1	0	0	0	0	0	0	0	219.5

rank value of 2.6s =	0	1	1	0	0	1	1	0	0	0	0	0	0	222.5
rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	225
rank value of 3s =	0	0	0	0	0	0	0	1	1	0	0	0	0	226.5
rank value of 3.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	228
rank value of 3.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	229
rank value of 4.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	230
rank value of 4.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	231
rank value of 5.1s =	1	0	0	0	0	0	0	0	1	1	0	0	0	233
rank value of 5.2s =	0	0	0	0	0	1	0	0	0	0	1	0	0	235.5
rank value of 5.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	237
rank value of 5.4s =	0	0	0	0	1	1	0	0	0	0	0	0	0	238.5
rank value of 5.8s =	1	0	0	0	1	1	0	0	0	0	0	0	0	241
rank value of 5.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	243
rank value of 6s =	0	1	0	1	1	1	0	0	0	0	0	1	0	246
rank value of 6.1s =	0	1	0	0	0	1	0	0	0	0	0	0	0	249.5
rank value of 6.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	251
rank value of 6.4s =	1	0	0	0	1	0	0	0	0	0	0	0	0	252.5
rank value of 6.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	254
rank value of 6.7s =	1	0	0	0	1	0	0	0	0	0	0	0	0	255.5
rank value of 6.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	257
rank value of 6.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	258
rank value of 7.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	259
rank value of 7.2s =	1	0	0	0	0	0	0	0	1	0	0	0	0	260.5
rank value of 7.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	262
rank value of 7.4s =	1	0	0	0	0	0	0	0	1	0	0	0	0	263.5
rank value of 7.5s =	0	0	0	0	1	0	0	0	0	0	0	0	0	265
rank value of 7.6s =	0	0	0	0	0	0	1	0	0	0	0	0	0	266
rank value of 7.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	267
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	268
rank value of 8.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	269
rank value of 8.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	270
rank value of 9.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	271
rank value of 9.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	272
rank value of 9.6s =	1	0	0	1	0	0	0	0	0	0	0	0	0	273.5
rank value of 9.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	275
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	276
rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	0	0	277
rank value of 11s =	1	0	0	0	0	0	0	0	0	0	0	0	0	278
rank value of 11.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	279
rank value of 12s =	2	0	0	1	0	0	0	0	0	0	0	0	0	281
rank value of 12.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	283
rank value of 12.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	284
rank value of 13s =	0	0	0	0	0	1	0	2	0	0	0	0	0	286
rank value of 13.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	288
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	289
rank value of 15.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	290
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	1	0	0	291.5
rank value of 18s =	2	0	0	0	0	0	0	0	0	0	0	0	0	293.5
rank value of 19.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	295
rank value of 20s =	1	0	0	0	0	0	0	0	1	0	0	0	0	296.5
rank value of 22s =	0	0	0	0	0	0	0	0	0	1	0	0	0	298
rank value of 22.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	299
rank value of 22.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	300
rank value of 24s =	1	0	0	0	0	0	0	0	0	0	0	0	0	301
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	1	0	0	302
rank value of 26s =	1	0	0	0	0	0	0	1	0	0	1	0	0	304
rank value of 26.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	306
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	307

rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	308
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	309
rank value of 29.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	310
rank value of 31s =	1	0	1	0	0	0	0	0	0	0	0	0	0	311.5
rank value of 38s =	0	0	0	0	0	0	0	0	1	0	0	0	0	313
rank value of 40s =	0	0	0	1	0	0	0	0	0	0	0	0	0	314
rank value of 40.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	315
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	316
rank value of 47.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	317
rank value of 53.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	318
rank value of 63s =	0	0	0	0	0	0	0	0	0	1	0	0	0	319
rank value of 68s =	0	0	0	0	0	0	0	0	1	0	0	0	0	320
rank value of 69s =	1	0	0	0	0	0	0	0	0	0	0	0	0	321
rank value of 70s =	0	0	0	1	0	0	0	0	0	0	0	0	0	322
rank value of 71s =	0	0	0	0	0	0	0	0	0	0	1	0	0	323
rank value of 77s =	1	0	0	0	0	0	0	0	0	0	0	0	0	324
rank value of 82s =	0	0	0	0	0	0	0	0	0	1	0	0	0	325
rank value of 85s =	0	0	0	0	0	0	0	0	1	0	0	0	0	326
rank value of 88s =	0	0	0	0	0	0	0	0	1	0	0	0	0	327
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	1	0	0	328
rank value of 94s =	0	0	0	0	0	0	0	0	0	1	0	0	0	329
rank value of 96s =	0	0	0	0	0	0	0	0	0	0	1	0	0	330
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	0	0	0	331
rank value of 110s =	0	0	0	0	0	0	0	0	0	1	0	0	0	332
rank value of 120s =	0	0	0	0	0	0	0	0	0	2	0	0	0	333.5
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	1	0	0	335
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	1	0	0	336
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	1	0	0	337.5
rank value of 220s =	0	0	0	1	0	0	0	0	0	0	0	0	0	339
rank value of 240s =	0	0	0	1	0	0	0	0	0	0	0	0	0	340
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	341
rank value of 450s =	0	0	0	0	0	0	0	0	0	0	1	0	0	342
n =	**32**	**31**	**26**	**30**	**30**	**30**	**28**	**28**	**29**	**30**	**26**	**11**	**11**	

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-8**	**MW-15**	**MW-16**	**MW-17**
Ri^2/N_i =	3103644.9	798538	724786	841855	423489	696940	949707	1E+06	1E+06	199396	130691

$N_{i\ bg}$ = 89
N = 342
H = 26.74

Adjust H for ties:

T_i = 1E+07 sum of T1..T24

$H' = H/(1-(T_i/(N^3-N)))$
H' = 35.91
Chi-square = 18.31

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 18.31 which is less than H' =35.91.

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-8	MW-15	MW-16	MW-17
Rbar (well x) =	163.2	155.4	167.5	123.0	157.8	181.0	189.3	230.1	134.6	109.0
avg Rbar (background) =	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
Dx =	-23.6	-31.3	-19.2	-63.8	-29.0	-5.8	2.6	43.3	-52.1	-77.7
Cx =	48.6	48.6	48.6	49.9	49.9	49.3	48.6	51.4	73.6	73.6
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

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-8	MW-15	MW-16	MW-17	MDL
04/24/00	**35**	NS	NS	ND	ND	ND	ND	**11**	ND	ND	NS	NP	NP	**10**
06/26/00	ND	**10**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	NP	NP	**10**
04/09/01	ND	**59**	NS	ND	ND	ND	ND	ND	**18**	**2.5**	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	**13**	ND	NS	ND	ND	ND	ND	ND	**13**	**29**	NS	NP	NP	**10**
09/26/02	ND	**76**	**29**	ND	ND	ND	ND	ND	**150**	**20**	**740**	NP	NP	**10**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	**25**	ND	**300**	NP	NP	**10**
10/30/03	**8.7**	**12**	NT	ND	ND	ND	ND	ND	**39**	**7.4**	**640**	NP	NP	**5**
04/20/04	**7.2**	**7**	**5.2**	**6.4**	**5.4**	ND	ND	ND	**12**	**39**	**250**	NP	NP	**5**
10/21/04	**7.2**	**5.6**	**5.7**	ND	ND	ND	ND	ND	ND	**24**	**430**	NP	NP	**5**
04/18/05	**13**	**8**	**5.2**	**73**	ND	ND	ND	ND	ND	**39**	**380**	NP	NP	**5**
10/13/05	**14**	**6.9**	ND	**20**	ND	ND	ND	ND	ND	**29**	**290**	NP	NP	**5**
04/25/06	**15**	ND	ND	ND	ND	ND	ND	ND	**53**	**19**	**300**	NP	NP	**10**
10/20/06	**20**	ND	ND	ND	ND	ND	ND	ND	**32**	ND	**89**	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	**96**	ND	ND	ND	ND	**69**	NP	NP	**10**
10/31/07	**17.5**	**8.1**	ND	ND	ND	ND	ND	ND	ND	**12.3**	**123**	NP	NP	**5**
04/23/08	ND	ND	**8.4**	ND	ND	ND	ND	ND	**5.8**	ND	**50.2**	NP	NP	**5**
10/20/08	ND	**13.5**	**7.6**	ND	ND	ND	ND	ND	ND	ND	**25.9**	NP	NP	**5**
04/22/09	ND	**8.7**	**24.4**	ND	ND	ND	ND	ND	**9.8**	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**24.7**	NP	NP	**5**
04/22/10	ND	**10.5**	ND	ND	ND	ND	NS	NS	ND	ND	**9.2**	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**16**	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11**	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	**6.3**	ND	ND	ND	**14.6**	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.4**	ND	ND	**5**
10/24/12	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10.4**	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/15	**7.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
N_i	32	31	26	30	30	30	28	28	30	30	26	11	11	
sum of rank values (R_i)	6210.5	6050.0	4534.0	4507.5	4126.0	4190.0	3865.0	3885.5	5749.5	5724.0	7228.0	1463.0	1463.0	
avg rank value (Rbar)	194.1	195.2	174.4	150.3	137.5	139.7	138.0	138.8	191.7	190.8	278.0	133.0	133.0	

	Number of each rank value													Rank Value
rank value of NDs =	20	19	19	27	29	29	27	27	20	20	6	11	11	133
rank value of 2.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	266
rank value of 5.2s =	0	0	2	0	0	0	0	0	0	0	0	0	0	267.5
rank value of 5.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	269
rank value of 5.6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	270
rank value of 5.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	271

rank value of 5.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	272
rank value of 5.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	273
rank value of 6.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	274
rank value of 6.4s =	0	0	0	1	0	0	0	0	0	0	1	0	0	275.5
rank value of 6.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	277
rank value of 7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	278
rank value of 7.2s =	2	0	0	0	0	0	0	0	0	0	0	0	0	279.5
rank value of 7.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	281
rank value of 7.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	282
rank value of 7.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	283
rank value of 8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	284
rank value of 8.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	285
rank value of 8.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	286
rank value of 8.7s =	1	1	0	0	0	0	0	0	0	0	0	0	0	287.5
rank value of 9.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	289
rank value of 9.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	290
rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	0	0	291
rank value of 10.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	292
rank value of 10.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	293
rank value of 11s =	0	0	0	0	0	0	0	1	0	0	1	0	0	294.5
rank value of 12s =	0	1	0	0	0	0	0	0	1	0	0	0	0	296.5
rank value of 12.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	298
rank value of 13s =	2	0	0	0	0	0	0	0	1	0	0	0	0	300
rank value of 13.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	302
rank value of 14s =	1	0	0	0	0	0	0	0	0	0	0	0	0	303
rank value of 14.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	304
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	305
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	1	0	0	306
rank value of 17.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	307
rank value of 18s =	0	0	0	0	0	0	0	0	1	0	0	0	0	308
rank value of 19s =	0	0	0	0	0	0	0	0	0	1	0	0	0	309
rank value of 20s =	1	0	0	1	0	0	0	0	0	1	0	0	0	311
rank value of 24s =	0	0	0	0	0	0	0	0	0	1	0	0	0	313
rank value of 24.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	314
rank value of 24.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	315
rank value of 25s =	0	0	0	0	0	0	0	0	1	0	0	0	0	316
rank value of 25.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	317
rank value of 29s =	0	0	1	0	0	0	0	0	0	2	0	0	0	319
rank value of 32s =	0	0	0	0	0	0	0	0	1	0	0	0	0	321
rank value of 35s =	1	0	0	0	0	0	0	0	0	0	0	0	0	322
rank value of 39s =	0	0	0	0	0	0	0	0	1	2	0	0	0	324
rank value of 50.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	326
rank value of 53s =	0	0	0	0	0	0	0	0	1	0	0	0	0	327
rank value of 59s =	0	1	0	0	0	0	0	0	0	0	0	0	0	328
rank value of 69s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
rank value of 73s =	0	0	0	1	0	0	0	0	0	0	0	0	0	330
rank value of 76s =	0	1	0	0	0	0	0	0	0	0	0	0	0	331
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	1	0	0	332
rank value of 96s =	0	0	0	0	0	1	0	0	0	0	0	0	0	333
rank value of 123s =	0	0	0	0	0	0	0	0	0	0	1	0	0	334
rank value of 150s =	0	0	0	0	0	0	0	0	1	0	0	0	0	335
rank value of 250s =	0	0	0	0	0	0	0	0	0	0	1	0	0	336
rank value of 290s =	0	0	0	0	0	0	0	0	0	0	1	0	0	337
rank value of 300s =	0	0	0	0	0	0	0	0	0	0	2	0	0	338.5
rank value of 380s =	0	0	0	0	0	0	0	0	0	0	1	0	0	340
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	1	0	0	341
rank value of 640s =	0	0	0	0	0	0	0	0	0	0	1	0	0	342
rank value of 740s =	0	0	0	0	0	0	0	0	0	0	1	0	0	343

n =	**32**	**31**	**26**	**30**	**30**	**30**	**28**	**28**	**30**	**30**	**26**	**11**	**11**

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-8**	**MW-15**	**MW-16**	**MW-17**
Ri^2/N_i =	3169159.9	677252	567463	585203	533508	539183	1E+06	1E+06	2E+06	194579	194579

$N_{i\,bg}$ = 89
N = 343
H = 52.58

Adjust H for ties:

T_i = 2E+07 sum of T1..T12

$H' = H/(1-(T_i/(N^3-N)))$
H' = 97.59
Chi-square = 18.31

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 18.31 which is less than H' =97.59.
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-8	**MW-15**	MW-16	MW-17
Rbar (well x) =	150.3	137.5	139.7	138.0	138.8	191.7	190.8	278.0	133.0	133.0
avg Rbar (background) =	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7	188.7
Dx =	-38.5	-51.2	-49.0	-50.7	-49.9	2.9	2.1	89.3	-55.7	-55.7
Cx =	48.8	48.8	48.8	50.1	50.1	48.8	48.8	51.5	73.8	73.8
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	No	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total 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 J15-1957-50

Compound: **Total Lead**
NC MCL (μg/l): 15
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/02	**740**	**10**
4/28/03	**300**	**10**
10/30/03	**640**	**5**
4/20/04	**250**	**5**
10/21/04	**430**	**5**
4/18/05	**380**	**5**
10/13/05	**290**	**5**
4/25/06	**300**	**10**
10/20/06	**89**	**5**
4/25/07	**69**	**10**
10/31/07	**123**	**5**
4/23/08	**50.2**	**5**
10/20/08	**25.9**	**5**
4/22/09	NS	**5**
10/26/09	**24.7**	**5**
4/22/10	**9.2**	**5**
10/27/10	**16**	**5**
4/29/11	**11**	**5**
10/25/11	**14.6**	**5**
4/20/12	**6.4**	**5**
10/24/12	ND	**5**
4/24/13	**10.4**	**5**
10/24/13	ND	**5**
4/24/14	ND	**5**
10/27/14	ND	**5**
4/28/15	ND	**5**
10/27/15	ND	**5**

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

X_{bar} = 145.93846
SD = 208.98081
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = 13076703
γ_1= 1.5195992

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.

X_{bar} = 3.5134434
SD = 2.0115794
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.4976688
γ_1= 0.0648454

Since the Coefficient of Skewness of 0.06 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

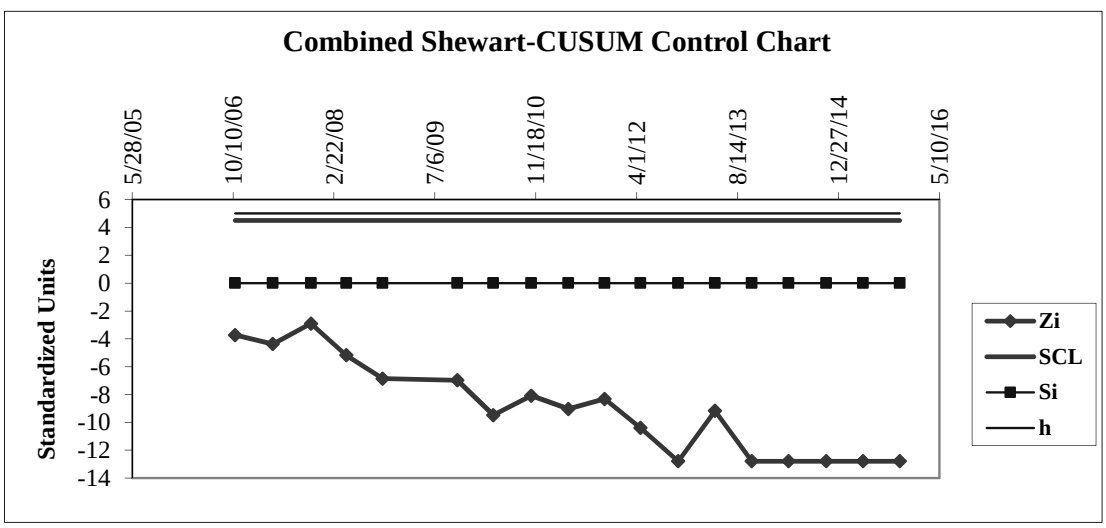
Compute the mean and standard deviation of the historical data:

5.9588727 = x_{mean} (Mean of N1-N8 historical data)
0.394346 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	4.4886364	-3.7282898	0	5	4.5
4/25/07	4.2341065	-4.3737378	0	5	4.5
10/31/07	4.8121844	-2.9078226	0	5	4.5
4/23/08	3.916015	-5.1803681	0	5	4.5
10/20/08	3.254243	-6.8585187	0	5	4.5
10/26/09	3.2068032	-6.9788185	0	5	4.5
4/22/10	2.2192035	-9.4832172	0	5	4.5
10/27/10	2.7725887	-8.0799187	0	5	4.5
4/29/11	2.3978953	-9.0300828	0	5	4.5
10/25/11	2.6810215	-8.3121188	0	5	4.5
4/20/12	1.856298	-10.403489	0	5	4.5
10/24/12	0.9162907	-12.787201	0	5	4.5
4/24/13	2.3418058	-9.1723169	0	5	4.5
10/24/13	0.9162907	-12.787201	0	5	4.5
4/24/14	0.9162907	-12.787201	0	5	4.5
10/27/14	0.9162907	-12.787201	0	5	4.5
4/28/15	0.9162907	-12.787201	0	5	4.5
10/27/15	0.9162907	-12.787201	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 J15-1957-50

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-3Dr	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	15	NS	NS	17	12	8.3	ND	24	6.7	22	NS	NP	NP	5
06/26/00	15	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
07/26/00	16	9.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
09/18/00	NS	NS	NS	8.8	NT	NS	NS	NS	NT	NS	NS	NP	NP	50
04/09/01	76	7.2	NS	9.6	5.3	ND	ND	18	28	6.1	NS	NP	NP	5
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	50
04/15/02	74	ND	NS	ND	ND	ND	6	9	44	68	NS	NP	NP	5
09/26/02	16	6.8	31	400	ND	ND	ND	27	40	78	430	NP	NP	5
04/28/03	ND	ND	ND	90	ND	ND	ND	ND	ND	26	70	NP	NP	5
10/30/03	19	ND	NT	6.9	6.9	ND	ND	ND	48	ND	190	NP	NP	5
04/20/04	20	ND	ND	30	7.3	ND	ND	12	5.3	49	110	NP	NP	5
10/21/04	12	ND	ND	13	ND	ND	ND	ND	ND	35	160	NP	NP	5
04/18/05	29	9.6	17	460	ND	ND	5.5	5.4	ND	59	170	NP	NP	5
10/13/05	29	ND	ND	160	6.8	ND	ND	6.1	ND	46	100	NP	NP	5
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	88	NP	NP	50
10/20/06	22	ND	8.3	25	ND	ND	ND	ND	13	ND	24	NP	NP	5
04/25/07	ND	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	NP	NP	50
10/31/07	24	ND	8	8.4	13.8	ND	5.8	9.8	ND	20.2	36.2	NP	NP	5
04/23/08	7.3	ND	12.9	6.3	10.8	5.7	ND	11.3	5.3	ND	19	NP	NP	5
10/20/08	23	ND	21	11.1	10.7	7.5	ND	14	ND	ND	8.5	NP	NP	5
04/22/09	5.6	7.2	19.7	16.7	10.9	6	5.1	14	6	ND	NS	NP	NP	5
10/26/09	6.7	ND	5.2	6	18	7.5	NS	NS	NS	6	8.4	NP	NP	5
04/22/10	8.6	9.6	7.6	ND	6.2	ND	NS	NS	ND	ND	ND	NP	NP	5
10/27/10	7	ND	ND	ND	7.4	ND	21.5	19	ND	ND	7.5	10.8	ND	5
04/29/11	ND	ND	ND	ND	10.5	8.6	19.5	15.2	ND	ND	ND	10.3	ND	5
10/25/11	6.9	ND	ND	14.7	8.8	7.5	20.8	19.9	ND	ND	ND	8	ND	5
04/20/12	12.2	ND	ND	ND	9.4	9.4	23.8	24.6	ND	ND	ND	19.3	ND	5
10/24/12	18.5	ND	ND	ND	10.1	8.9	20	25.3	ND	ND	ND	9.6	ND	5
04/24/13	10	ND	ND	ND	12	8.6	21.8	32.8	ND	ND	ND	9.2	ND	5
10/24/13	7.9	ND	8.3	ND	7.5	7	30.2	29.9	ND	ND	ND	12.1	ND	5
04/24/14	7	ND	ND	ND	9.3	10.1	23.6	33.9	ND	ND	ND	12.5	ND	5
10/27/14	ND	ND	ND	ND	10.7	10.1	29.5	31.4	ND	ND	ND	9.1	ND	5
04/28/15	6.3	ND	5.6	6.8	11.7	11.2	25.1	35.4	ND	ND	ND	8.3	5.1	5
10/27/15	21.3	ND	ND	ND	12.6	12.6	24.4	33.4	ND	5.9	ND	8.7	ND	5
N_i	32	31	26	31	30	30	28	28	29	30	26	11	11	
sum of rank values (R_i)	7209.5	3266.0	3770.5	5708.0	5607.5	4663.0	4957.5	6498.0	3818.5	4794.5	5166.0	2576.5	960.5	
avg rank value (Rbar)	225.3	105.4	145.0	184.1	186.9	155.4	177.1	232.1	131.7	159.8	198.7	234.2	87.3	

	Number of each rank value													Rank Value
rank value of NDs =	5	25	15	13	8	14	13	6	20	18	12	0	10	80
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	0	1	160.5
rank value of 5.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	162
rank value of 5.3s =	0	0	0	0	1	0	0	0	2	0	0	0	0	164
rank value of 5.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	166

rank value of 5.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	167
rank value of 5.6s =	1	0	1	0	0	0	0	0	0	0	0	0	0	168.5
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	170
rank value of 5.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	171
rank value of 5.9s =	0	0	0	0	0	0	0	0	0	1	0	0	0	172
rank value of 6s =	0	0	0	1	0	1	0	0	1	1	0	0	0	174.5
rank value of 6.1s =	0	0	0	0	0	0	0	1	0	1	0	0	0	177.5
rank value of 6.2s =	0	0	0	0	1	0	1	0	0	0	0	0	0	179.5
rank value of 6.3s =	1	0	0	1	0	0	0	0	0	0	0	0	0	181.5
rank value of 6.7s =	1	0	0	0	0	0	0	0	1	0	0	0	0	183.5
rank value of 6.8s =	0	1	0	1	1	0	0	0	0	0	0	0	0	186
rank value of 6.9s =	1	0	0	1	1	0	0	0	0	0	0	0	0	189
rank value of 7s =	2	0	0	0	0	1	0	0	0	0	0	0	0	192
rank value of 7.2s =	0	2	0	0	0	0	0	0	0	0	0	0	0	194.5
rank value of 7.3s =	1	0	0	0	1	0	0	0	0	0	0	0	0	196.5
rank value of 7.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	198
rank value of 7.5s =	0	0	0	0	1	3	0	0	0	0	1	0	0	201
rank value of 7.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	204
rank value of 7.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	205
rank value of 8s =	0	0	1	0	0	0	0	0	0	0	0	1	0	206.5
rank value of 8.3s =	0	0	2	0	0	1	0	0	0	0	0	1	0	209.5
rank value of 8.4s =	0	0	0	1	0	0	0	0	0	0	1	0	0	212.5
rank value of 8.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	214
rank value of 8.6s =	1	0	0	0	0	2	0	0	0	0	0	0	0	216
rank value of 8.7s =	0	0	0	0	0	0	0	0	0	0	0	1	0	218
rank value of 8.8s =	0	0	0	1	1	0	0	0	0	0	0	0	0	219.5
rank value of 8.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	221
rank value of 9.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	222
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	0	0	1	0	223.5
rank value of 9.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	225
rank value of 9.4s =	0	0	0	0	1	1	0	0	0	0	0	0	0	226.5
rank value of 9.6s =	0	2	0	1	0	0	0	0	0	0	0	1	0	229.5
rank value of 9.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	232
rank value of 9.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	233
rank value of 10s =	1	0	0	0	0	0	0	0	0	0	0	0	0	234
rank value of 10.1s =	0	0	0	0	1	2	0	0	0	0	0	0	0	236
rank value of 10.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	238
rank value of 10.5s =	0	0	0	0	1	0	0	0	0	0	0	0	0	239
rank value of 10.7s =	0	0	0	0	2	0	0	0	0	0	0	0	0	240.5
rank value of 10.8s =	0	0	0	0	1	0	0	0	0	0	0	1	0	242.5
rank value of 10.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	244
rank value of 11.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	245
rank value of 11.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	246
rank value of 11.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	247
rank value of 11.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	248
rank value of 12s =	1	0	0	0	2	0	0	1	0	0	0	0	0	250.5
rank value of 12.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	253
rank value of 12.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	254
rank value of 12.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	255
rank value of 12.6s =	0	0	0	0	1	1	0	0	0	0	0	0	0	256.5
rank value of 12.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	258
rank value of 13s =	0	0	0	1	0	0	0	0	1	0	0	0	0	259.5
rank value of 13.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	261
rank value of 14s =	0	0	0	0	0	0	0	2	0	0	0	0	0	262.5
rank value of 14.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	264
rank value of 15s =	2	0	0	0	0	0	0	0	0	0	0	0	0	265.5
rank value of 15.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	267
rank value of 16s =	2	0	0	0	0	0	0	0	0	0	0	0	0	268.5
rank value of 16.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	270

rank value of 17s =	0	0	1	1	0	0	0	0	0	0	0	0	0	271.5
rank value of 18s =	0	0	0	0	1	0	0	1	0	0	0	0	0	273.5
rank value of 18.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	275
rank value of 19s =	1	0	0	0	0	0	0	1	0	0	1	0	0	277
rank value of 19.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	279
rank value of 19.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	280
rank value of 19.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	281
rank value of 19.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	282
rank value of 20s =	1	0	0	0	0	0	1	0	0	0	0	0	0	283.5
rank value of 20.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	285
rank value of 20.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	286
rank value of 21s =	0	0	1	0	0	0	0	0	0	0	0	0	0	287
rank value of 21.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	288
rank value of 21.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	289
rank value of 21.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	290
rank value of 22s =	1	0	0	0	0	0	0	0	0	1	0	0	0	291.5
rank value of 23s =	1	0	0	0	0	0	0	0	0	0	0	0	0	293
rank value of 23.6s =	0	0	0	0	0	0	1	0	0	0	0	0	0	294
rank value of 23.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	295
rank value of 24s =	1	0	0	0	0	0	0	1	0	0	1	0	0	297
rank value of 24.4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	299
rank value of 24.6s =	0	0	0	0	0	0	0	1	0	0	0	0	0	300
rank value of 25s =	0	0	0	1	0	0	0	0	0	0	0	0	0	301
rank value of 25.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	302
rank value of 25.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	303
rank value of 26s =	0	0	0	0	0	0	0	0	0	1	0	0	0	304
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	305
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	306
rank value of 29s =	2	0	0	0	0	0	0	0	0	0	0	0	0	307.5
rank value of 29.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	309
rank value of 29.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	310
rank value of 30s =	0	0	0	1	0	0	0	0	0	0	0	0	0	311
rank value of 30.2s =	0	0	0	0	0	0	1	0	0	0	0	0	0	312
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	0	0	313
rank value of 31.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	314
rank value of 32.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	315
rank value of 33.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	316
rank value of 33.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	317
rank value of 35s =	0	0	0	0	0	0	0	0	0	1	0	0	0	318
rank value of 35.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	319
rank value of 36.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	320
rank value of 40s =	0	0	0	0	0	0	0	0	1	0	0	0	0	321
rank value of 44s =	0	0	0	0	0	0	0	0	1	0	0	0	0	322
rank value of 46s =	0	0	0	0	0	0	0	0	0	1	0	0	0	323
rank value of 48s =	0	0	0	0	0	0	0	0	1	0	0	0	0	324
rank value of 49s =	0	0	0	0	0	0	0	0	0	1	0	0	0	325
rank value of 59s =	0	0	0	0	0	0	0	0	0	1	0	0	0	326
rank value of 68s =	0	0	0	0	0	0	0	0	0	1	0	0	0	327
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	1	0	0	328
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	0	329
rank value of 76s =	1	0	0	0	0	0	0	0	0	0	0	0	0	330
rank value of 78s =	0	0	0	0	0	0	0	0	0	1	0	0	0	331
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	0	0	332
rank value of 90s =	0	0	0	1	0	0	0	0	0	0	0	0	0	333
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	1	0	0	334
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	1	0	0	335
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	1	0	0	336.5
rank value of 170s =	0	0	0	0	0	0	0	0	0	0	1	0	0	338
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	1	0	0	339

rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	340
rank value of 400s =	0	0	0	1	0	0	0	0	0	0	0	0	0	341
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	1	0	0	342
rank value of 460s =	0	0	0	1	0	0	0	0	0	0	0	0	0	343
n =	**32**	**31**	**26**	**31**	**30**	**30**	**28**	**28**	**29**	**30**	**26**	**11**	**11**	

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-3Dr**	**MW-4A**	**MW-8**	**MW-15**	**MW-16**	**MW-17**
Ri^2/N_i =	2280320.4	1E+06	1E+06	724786	877743	2E+06	502791	766241	1E+06	603487	83869

$N_{i\ bg}$ = 89
N = 343
H = 33.11

Adjust H for ties:

T_i = 4E+06 sum of T1..T40

$H' = H/(1-(T_i/(N^3-N)))$
H' = 36.77
Chi-square = 18.31

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 18.31 which is less than H' =36.77.
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-3Dr**	MW-4A	MW-8	MW-15	**MW-16**	MW-17
Rbar (well x) =	184.1	186.9	155.4	177.1	232.1	131.7	159.8	198.7	234.2	87.3
avg Rbar (background) =	160.1	160.1	160.1	160.1	160.1	160.1	160.1	160.1	160.1	160.1
Dx =	24.1	26.8	-4.6	17.0	72.0	-28.4	-0.3	38.6	74.2	-72.7
Cx =	48.2	48.8	48.8	50.1	50.1	49.4	48.8	51.5	73.8	73.8
Statistical Significance ?	No	No	No	No	**Yes**	No	No	No	**Yes**	No
If SSI, is current event above MCL?	-	-	-	-	No	-	-	-	No	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Total Nickel**
NC MCL (μg/l): 100
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-3D	MDL
4/24/00	**24**	**5**
6/26/00	NS	**5**
7/26/00	NS	**5**
9/18/00	NS	**50**
4/9/01	**18**	**5**
9/18/01	NS	**5**
10/29/01	NS	**5**
1/30/02	NS	**5**
2/28/02	NS	**50**
4/15/02	**9.2**	**5**
9/26/02	**27**	**5**
4/28/03	ND	**5**
10/30/03	ND	**5**
4/20/04	**12**	**5**
10/21/04	ND	**5**
4/18/05	**5.4**	**5**
10/13/05	**6.1**	**5**
4/25/06	ND	**50**
10/20/06	ND	**5**
4/25/07	ND	**50**
10/31/07	**9.8**	**5**
4/23/08	**11.3**	**5**
10/20/08	**14**	**5**
4/22/09	**14**	**5**
10/26/09	NS	**5**
4/22/10	NS	**5**
10/27/10	**19**	**5**
4/29/11	**15.2**	**5**
10/25/11	**19.9**	**5**
4/20/12	**24.6**	**5**
10/24/12	**25.3**	**5**
4/24/13	**32.8**	**5**
10/24/13	**29.9**	**5**
4/24/14	**33.9**	**5**
10/27/14	**31.4**	**5**
4/28/15	**35.4**	**5**
10/27/15	**33.4**	**5**

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

X_{bar} = 18.271429
SD = 10.842504
N = 28
$1/N\Sigma_i(X_i-X_{bar})^3$ = -17.04979
γ_1= 0.0141261

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 real detected values shown above.

X_{bar} = 2.631252
SD = 0.8722392
N = 28

$1/N\Sigma_i(X_i-X_{bar})^3 =$ -0.589615
$\gamma_1 =$ 0.9383241

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

Part 2: Shewhart-CUSUM Control Chart

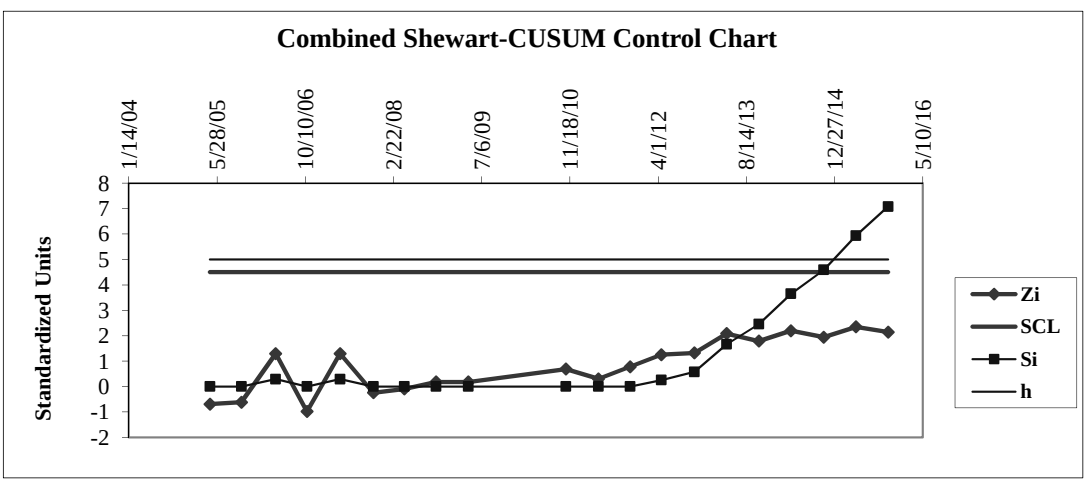
Compute the mean and standard deviation of the historical data:

12.2125 = x_{mean} (Mean of N1-N8 historical data)
9.8794791 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/05	5.4	-0.6895606	0	5	4.5
10/13/05	6.1	-0.6187067	0	5	4.5
4/25/06	25	1.2943496	0.2943496	5	4.5
10/20/06	2.5	-0.9830984	0	5	4.5
4/25/07	25	1.2943496	0.2943496	5	4.5
10/31/07	9.8	-0.244193	0	5	4.5
4/23/08	11.3	-0.0923632	0	5	4.5
10/20/08	14	0.1809306	0	5	4.5
4/22/09	14	0.1809306	0	5	4.5
10/27/10	19	0.6870301	0	5	4.5
4/29/11	15.2	0.3023945	0	5	4.5
10/25/11	19.9	0.7781281	0	5	4.5
4/20/12	24.6	1.2538617	0.2538617	5	4.5
10/24/12	25.3	1.3247156	0.5785772	5	4.5
4/24/13	32.8	2.0838649	1.6624422	5	4.5
10/24/13	29.9	1.7903272	2.4527694	5	4.5
4/24/14	33.9	2.1952068	3.6479762	5	4.5
10/27/14	31.4	1.9421571	4.5901332	5	4.5
4/28/15	**35.4**	2.3470367	**5.9371699**	5	4.5
10/27/15	**33.4**	2.1445969	**7.0817668**	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 J15-1957-50

Compound: **Total Nickel**
NC MCL (µg/l): 100
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-16	MDL
4/24/00	NP	**5**
6/26/00	NP	**5**
7/26/00	NP	**5**
9/18/00	NP	**50**
4/9/01	NP	**5**
9/18/01	NP	**5**
10/29/01	NP	**5**
1/30/02	NP	**5**
2/28/02	NP	**50**
4/15/02	NP	**5**
9/26/02	NP	**5**
4/28/03	NP	**5**
10/30/03	NP	**5**
4/20/04	NP	**5**
10/21/04	NP	**5**
4/18/05	NP	**5**
10/13/05	NP	**5**
4/25/06	NP	**50**
10/20/06	NP	**5**
4/25/07	NP	**50**
10/31/07	NP	**5**
4/23/08	NP	**5**
10/20/08	NP	**5**
4/22/09	NP	**5**
10/26/09	NP	**5**
4/22/10	NP	**5**
10/27/10	**10.8**	**5**
4/29/11	**10.3**	**5**
10/25/11	**8**	**5**
4/20/12	**19.3**	**5**
10/24/12	**9.6**	**5**
4/24/13	**9.2**	**5**
10/24/13	**12.1**	**5**
4/24/14	**12.5**	**5**
10/27/14	**9.1**	**5**
4/28/15	**8.3**	**5**
10/27/15	**8.7**	**5**

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

X_{bar} = 10.718182
SD = 3.1999432
N = 11

$1/N\Sigma_i(X_i-X_{bar})^3 =$ 53.51588
$\gamma_1 =$ 1.8842776

Since the Coefficient of Skewness of 1.88 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

$X_{bar} =$ 2.3399082
SD = 0.2512677
N = 11
$1/N\Sigma_i(X_i-X_{bar})^3 =$ 0.0190686
$\gamma_1 =$ 1.3867494

Since the Coefficient of Skewness of 1.39 is greater than 1.0, the data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
A non-parametric testing procedure should be used on the data set.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Total Nickel**
GA MCL (ug/l): 100
Method: Kendall-Mann Non-Parametric Trend Test (Concentration vs. Time)
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	15	NS	NS	17	12	8.3	ND	24	6.7	22	NS	NP	NP	5
06/26/00	15	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
07/26/00	16	9.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
09/18/00	NS	NS	NS	8.8	NT	NS	NS	NS	NT	NS	NS	NP	NP	50
04/09/01	76	7.2	NS	9.6	5.3	ND	ND	18	28	6.1	NS	NP	NP	5
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	5
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	50
04/15/02	74	ND	NS	ND	ND	ND	6.2	9.2	44	68	NS	NP	NP	5
09/26/02	16	6.8	31	400	ND	ND	ND	27	40	78	430	NP	NP	5
04/28/03	ND	ND	ND	90	ND	ND	ND	ND	ND	26	70	NP	NP	5
10/30/03	19	ND	NT	6.9	6.9	ND	ND	ND	48	ND	190	NP	NP	5
04/20/04	20	ND	ND	30	7.3	ND	ND	12	5.3	49	110	NP	NP	5
10/21/04	12	ND	ND	13	ND	ND	ND	ND	ND	35	160	NP	NP	5
04/18/05	29	9.6	17	460	ND	ND	5.5	5.4	ND	59	170	NP	NP	5
10/13/05	29	ND	ND	160	6.8	ND	ND	6.1	ND	46	100	NP	NP	5
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	88	NP	NP	50
10/20/06	22	ND	8.3	25	ND	ND	ND	ND	13	ND	24	NP	NP	5
04/25/07	ND	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	NP	NP	50
10/31/07	24	ND	8	8.4	13.8	ND	5.8	9.8	ND	20.2	36.2	NP	NP	5
04/23/08	7.3	ND	12.9	6.3	10.8	5.7	ND	11.3	5.3	ND	19	NP	NP	5
10/20/08	23	ND	21	11.1	10.7	7.5	ND	14	ND	ND	8.5	NP	NP	5
04/22/09	5.6	7.2	19.7	16.7	10.9	6	5.1	14	6	ND	NS	NP	NP	5
10/26/09	6.7	ND	5.2	6	18	7.5	NS	NS	NS	6	8.4	NP	NP	5
04/22/10	8.6	9.6	7.6	ND	6.2	ND	NS	NS	ND	ND	ND	NP	NP	5
10/27/10	7	ND	ND	ND	7.4	ND	21.5	19	ND	ND	7.5	10.8	ND	5
04/29/11	ND	ND	ND	ND	10.5	8.6	19.5	15.2	ND	ND	ND	10.3	ND	5
10/25/11	6.9	ND	ND	14.7	8.8	7.5	20.8	19.9	ND	ND	ND	8	ND	5
04/20/12	12.2	ND	ND	ND	9.4	9.4	23.8	24.6	ND	ND	ND	19.3	ND	5
10/24/12	18.5	ND	ND	ND	10.1	8.9	20	25.3	ND	ND	ND	9.6	ND	5
04/24/13	10	ND	ND	ND	12	8.6	21.8	32.8	ND	ND	ND	9.2	ND	5
10/24/13	7.9	ND	8.3	ND	7.5	7	30.2	29.9	ND	ND	ND	12.1	ND	5
04/24/14	7	ND	ND	ND	9.3	10.1	23.6	33.9	ND	ND	ND	12.5	ND	5
10/27/14	ND	ND	ND	ND	10.7	10.1	29.5	31.4	ND	ND	ND	9.1	ND	5
04/28/15	6.3	ND	5.6	6.8	11.7	11.2	25.1	35.4	ND	ND	ND	8.3	5.1	5
10/27/15	21.3	ND	ND	ND	12.6	12.6	24.4	33.4	ND	5.9	ND	8.7	ND	5

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

Trendline Slope =	-	-	-	-	-	-	-	-	-0.001	-
Standard Deviation =	-	-	-	-	-	-	-	-	3.1999	-
ımber of observations **n =**	-	-	-	-	-	-	-	-	11	-
S =	-	-	-	-	-	-	-	-	-15	-
uncorrected for ties **τ =**	-	-	-	-	-	-	-	-	-0.27	-
U =	-	-	-	-	-	-	-	-	0	-
corrected for ties τ =	-	-	-	-	-	-	-	-	**-0.27**	-
Concentration Trend	-	-	-	-	-	-	-	-	**decrease**	-

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Total Selenium**
MCL (µg/l): 20
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**20**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**20**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**20**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
04/15/02	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**20**
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**20**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**20**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/20/04	ND	ND	ND	ND	ND	**5**	ND	ND	ND	ND	ND	NP	NP	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**20**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	**12**	ND	ND	ND	ND	**460**	ND	ND	ND	ND	**18**	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**10**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**10**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/27/15	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.

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 31.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 86$
$T_{n1} = 492$

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).

$k = 1$
$n = 86$
$T_{n1} = 492$
$t\,[85,.01] = 2.3767$

$c = 0.0116$

$T^*_k = 11.5$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	5	5	5	5	5	5	5	5	5	5

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Total Silver**
MCL (µg/l): 20
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	**3.7**	NS	NS	ND	ND	ND	**6.9**	ND	ND	ND	NS	NP	NP	**2**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/13/05	**2.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/15	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.

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 31.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 86$
$T_{n1} = 191.1$

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).

$k = 1$
$n = 86$
$T_{n1} = 191.1$
$t\,[85,.01] = 2.3767$

$c = 0.0116$

$T^*_k = 5.8$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

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-8	MW-15	MW-16	MW-17	MDL
04/24/00	**2**	NS	NS	ND	**3**	**2**	**4**	ND	**2**	**5**	NS	NP	NP	**2**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**20**
04/09/01	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
04/15/02	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**65**	NP	NP	**2**
04/28/03	ND	ND	ND	**1.6**	ND	ND	ND	ND	**1.4**	ND	**15**	NP	NP	**1**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	**22**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	**35**	ND	ND	ND	ND	ND	NP	NP	**5.5**
10/31/07	**11.6**	ND	ND	ND	ND	ND	ND	ND	ND	**9.5**	ND	NP	NP	**5.5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5.5**
10/20/08	**7.2**	ND	ND	ND	ND	ND	ND	**6.1**	ND	ND	ND	NP	NP	**5.4**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5.4**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5.4**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5.4**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.6**	ND	**5.4**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
10/27/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**

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

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 31.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 86$
$T_{n1} = 361$

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).

$k = 1$
$n = 86$
$T_{n1} = 361$
$t\,[85,.01] = 2.3767$

$c = 0.0116$

$T^*_k = 9.1$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7

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 J15-1957-50

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-8	MW-15	MW-16	MW-17	MDL
04/24/00	**17**	NS	NS	**19**	**32**	**21**	ND	**29**	**8.9**	**78**	NS	NP	NP	**5**
06/26/00	**40**	**6.3**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
07/26/00	**45**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**40**
04/09/01	**250**	**1.4**	NS	**13**	**19**	**9.3**	ND	**24**	**41**	**230**	NS	NP	NP	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**40**
04/15/02	**240**	ND	NS	ND	ND	**11**	**21**	**14**	**69**	**260**	NS	NP	NP	**5**
09/26/02	**58**	**16**	**44**	**640**	ND	ND	ND	**42**	**50**	**310**	**1000**	NP	NP	**5**
04/28/03	**89**	ND	**9.6**	**170**	**6.8**	**6.8**	ND	ND	**37**	**230**	**130**	NP	NP	**5**
10/30/03	**54**	ND	NT	**6.6**	**16**	ND	ND	ND	**92**	**14**	**200**	NP	NP	**5**
04/20/04	**55**	ND	ND	**45**	**25**	ND	ND	**13**	**5.1**	**240**	**88**	NP	NP	**5**
10/21/04	**41**	ND	ND	**18**	ND	ND	ND	ND	ND	**160**	**210**	NP	NP	**5**
04/18/05	**85**	ND	ND	**680**	**5.4**	ND	ND	ND	ND	**240**	**110**	NP	NP	**5**
10/13/05	**82**	ND	ND	**210**	**8.9**	ND	ND	ND	ND	**170**	**82**	NP	NP	**5**
04/25/06	**110**	ND	ND	ND	ND	ND	ND	ND	ND	**120**	**85**	NP	NP	**40**
10/20/06	**79**	ND	ND	**28**	ND	ND	ND	ND	**23**	ND	**30**	NP	NP	**5**
04/25/07	**43**	ND	ND	ND	ND	**300**	ND	ND	ND	ND	**26**	NP	NP	**25**
10/31/07	**89**	ND	**8.8**	**14.7**	**20**	ND	ND	ND	**8.6**	**103**	**48.2**	NP	NP	**5**
04/23/08	**26.1**	ND	**11.4**	**9.7**	**10.1**	ND	ND	**5.1**	**9.7**	**10**	**23.1**	NP	NP	**5**
10/20/08	**79**	ND	**15.1**	**15.8**	ND	ND	ND	ND	**5.4**	ND	**14.8**	NP	NP	**5**
04/22/09	**16**	ND	**32.7**	**19.8**	**7.7**	ND	ND	ND	**13.3**	ND	NS	NP	NP	**5**
10/26/09	**17.9**	ND	ND	**5.3**	**33.6**	ND	NS	NS	NS	**12.2**	**11.9**	NP	NP	**5**
04/22/10	**27.9**	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	**17.4**	ND	ND	**6.9**	ND	ND	**14.2**	**7.1**	ND	ND	**5.9**	ND	ND	**5**
04/29/11	**15.8**	ND	**5.1**	ND	ND	ND	ND	ND	ND	ND	**5.5**	**7.3**	ND	**5**
10/25/11	**25.6**	ND	ND	**23**	ND	ND	**15.1**	ND	ND	**9.7**	**6.3**	ND	ND	**5**
04/20/12	**44.3**	ND	ND	ND	ND	ND	**10**	ND	ND	ND	ND	**15**	ND	**5**
10/24/12	**59**	ND	ND	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	**33.5**	ND	ND	**7.7**	**9.6**	ND	ND	ND	ND	ND	**5.4**	ND	ND	**5**
10/24/13	**30.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	**22.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	**15.5**	ND	ND	**8**	ND	ND	ND	ND	ND	ND	ND	**7**	ND	**5**
10/27/15	**44.5**	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**	ND	**9.8**	ND	**5**
N_i	32	31	26	30	30	30	28	28	29	30	26	11	11	
sum of rank values (R_i)	9236.0	3536.5	3690.0	6321.5	4848.5	3852.0	3465.5	3922.0	4881.5	6232.5	5895.0	1650.0	1122.0	
avg rank value (Rbar)	288.6	114.1	141.9	210.7	161.6	128.4	123.8	140.1	168.3	207.8	226.7	150.0	102.0	

	Number of each rank value													Rank Value
rank value of NDs =	1	28	19	10	18	25	24	21	17	14	8	7	11	102
rank value of 1.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	204
rank value of 5.1s =	0	0	1	0	0	0	0	1	1	0	0	0	0	206

rank value of 5.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	208
rank value of 5.4s =	0	0	0	0	1	0	0	0	1	0	1	0	0	210
rank value of 5.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	212
rank value of 5.9s =	0	0	0	1	0	0	0	0	0	0	1	0	0	213.5
rank value of 6.3s =	0	1	0	0	0	0	0	0	0	0	1	0	0	215.5
rank value of 6.6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	217
rank value of 6.8s =	0	0	0	0	1	1	0	0	0	0	0	0	0	218.5
rank value of 6.9s =	0	0	0	1	0	0	0	0	0	0	0	0	0	220
rank value of 7s =	0	0	0	0	0	0	0	0	0	0	0	1	0	221
rank value of 7.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	222
rank value of 7.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	223
rank value of 7.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	224
rank value of 7.7s =	0	0	0	1	1	0	0	0	0	0	0	0	0	225.5
rank value of 8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	227
rank value of 8.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	228
rank value of 8.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	229
rank value of 8.9s =	0	0	0	0	1	0	0	0	1	0	0	0	0	230.5
rank value of 9.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	232
rank value of 9.6s =	0	0	1	0	1	0	0	0	0	0	0	0	0	233.5
rank value of 9.7s =	0	0	0	1	0	0	0	0	1	1	0	0	0	236
rank value of 9.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	238
rank value of 10s =	0	0	0	0	0	0	1	0	0	1	0	0	0	239.5
rank value of 10.1s =	0	0	0	0	1	0	0	0	0	0	0	0	0	241
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	242
rank value of 11.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	243
rank value of 11.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	244
rank value of 12.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	245
rank value of 13s =	0	0	0	1	0	0	0	1	0	0	0	0	0	246.5
rank value of 13.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	248
rank value of 14s =	0	0	0	0	0	0	0	1	0	1	0	0	0	249.5
rank value of 14.2s =	0	0	0	0	0	0	1	0	0	0	0	0	0	251
rank value of 14.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	252
rank value of 14.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	253
rank value of 15s =	0	0	0	0	0	0	0	0	0	0	0	1	0	254
rank value of 15.1s =	0	0	1	0	0	0	1	0	0	0	0	0	0	255.5
rank value of 15.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	257
rank value of 15.8s =	1	0	0	1	0	0	0	0	0	0	0	0	0	258.5
rank value of 16s =	1	1	0	0	1	0	0	0	0	0	0	0	0	261
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	0	0	0	263
rank value of 17.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	264
rank value of 17.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	265
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	0	0	266
rank value of 19s =	0	0	0	1	1	0	0	0	0	0	0	0	0	267.5
rank value of 19.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	269
rank value of 20s =	0	0	0	0	1	0	0	0	0	0	0	0	0	270
rank value of 21s =	0	0	0	0	0	1	1	0	0	0	0	0	0	271.5
rank value of 22.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	273
rank value of 23s =	0	0	0	1	0	0	0	0	1	0	0	0	0	274.5
rank value of 23.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	276
rank value of 24s =	0	0	0	0	0	0	0	1	0	0	0	0	0	277
rank value of 25s =	0	0	0	0	1	0	0	0	0	0	0	0	0	278
rank value of 25.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	279
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	1	0	0	280
rank value of 26.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	281
rank value of 27.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	282
rank value of 28s =	0	0	0	1	0	0	0	0	0	0	0	0	0	283
rank value of 29s =	0	0	0	0	0	0	0	1	0	0	0	0	0	284
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	1	0	0	285

rank value of 30.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	286
rank value of 32s =	0	0	0	0	1	0	0	0	0	0	0	0	0	287
rank value of 32.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	288
rank value of 33.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	289
rank value of 33.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	290
rank value of 37s =	0	0	0	0	0	0	0	0	1	0	0	0	0	291
rank value of 40s =	1	0	0	0	0	0	0	0	0	0	0	0	0	292
rank value of 41s =	1	0	0	0	0	0	0	0	1	0	0	0	0	293.5
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	295
rank value of 43s =	1	0	0	0	0	0	0	0	0	0	0	0	0	296
rank value of 44s =	0	0	1	0	0	0	0	0	0	0	0	0	0	297
rank value of 44.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	298
rank value of 44.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	299
rank value of 45s =	1	0	0	1	0	0	0	0	0	0	0	0	0	300.5
rank value of 48.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	302
rank value of 50s =	0	0	0	0	0	0	0	0	1	0	0	0	0	303
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	304
rank value of 55s =	1	0	0	0	0	0	0	0	0	0	0	0	0	305
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	306
rank value of 59s =	1	0	0	0	0	0	0	0	0	0	0	0	0	307
rank value of 69s =	0	0	0	0	0	0	0	0	1	0	0	0	0	308
rank value of 78s =	0	0	0	0	0	0	0	0	0	1	0	0	0	309
rank value of 79s =	2	0	0	0	0	0	0	0	0	0	0	0	0	310.5
rank value of 82s =	1	0	0	0	0	0	0	0	0	0	1	0	0	312.5
rank value of 85s =	1	0	0	0	0	0	0	0	0	0	1	0	0	314.5
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	0	0	316
rank value of 89s =	2	0	0	0	0	0	0	0	0	0	0	0	0	317.5
rank value of 92s =	0	0	0	0	0	0	0	0	1	0	0	0	0	319
rank value of 103s =	0	0	0	0	0	0	0	0	0	1	0	0	0	320
rank value of 110s =	1	0	0	0	0	0	0	0	0	0	1	0	0	321.5
rank value of 120s =	0	0	0	0	0	0	0	0	0	1	0	0	0	323
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	1	0	0	324
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	0	0	325
rank value of 170s =	0	0	0	1	0	0	0	0	0	1	0	0	0	326.5
rank value of 200s =	0	0	0	0	0	0	0	0	0	0	1	0	0	328
rank value of 210s =	0	0	0	1	0	0	0	0	0	0	1	0	0	329.5
rank value of 230s =	0	0	0	0	0	0	0	0	0	2	0	0	0	331.5
rank value of 240s =	1	0	0	0	0	0	0	0	0	2	0	0	0	334
rank value of 250s =	1	0	0	0	0	0	0	0	0	0	0	0	0	336
rank value of 260s =	0	0	0	0	0	0	0	0	0	1	0	0	0	337
rank value of 300s =	0	0	0	0	0	1	0	0	0	0	0	0	0	338
rank value of 310s =	0	0	0	0	0	0	0	0	0	1	0	0	0	339
rank value of 640s =	0	0	0	1	0	0	0	0	0	0	0	0	0	340
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	341
rank value of 1000s =	0	0	0	0	0	0	0	0	0	0	1	0	0	342
n =	**32**	**31**	**26**	**30**	**30**	**30**	**28**	**28**	**29**	**30**	**26**	**11**	**11**	

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-8**	**MW-15**	**MW-16**	**MW-17**
Ri^2/N_i =	3045100.1	1E+06	783598	494597	428918	549360	821691	1E+06	1E+06	247500	114444
$N_{i\ bg}$ = 89											

N = 342
H = 39.86

Adjust H for ties:

T_i = 8E+06 sum of T1..T30

$H' = H/(1-(T_i/(N^3-N)))$
H' = 50.40
Chi-square = 18.31

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 18.31 which is less than H' =50.40.
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-8	MW-15	MW-16	MW-17
Rbar (well x) =	210.7	161.6	128.4	123.8	140.1	168.3	207.8	226.7	150.0	102.0
avg Rbar (background) =	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
Dx =	25.7	-23.4	-56.6	-61.2	-44.9	-16.6	22.8	41.8	-35.0	-83.0
Cx =	48.6	48.6	48.6	49.9	49.9	49.3	48.6	51.4	73.6	73.6
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Total Zinc**
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	**150**	NS	NS	**35**	**48**	**36**	**12**	**43**	**28**	**68**	NS	NP	NP	**10**
06/26/00	**37**	**12**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	**65**	**66**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**50**
04/09/01	**230**	**130**	NS	**12**	**24**	**18**	**17**	**33**	**75**	**200**	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**50**
04/15/02	**230**	**16**	NS	ND	ND	**13**	**33**	**38**	**120**	**230**	NS	NP	NP	**10**
09/26/02	**57**	**120**	**110**	**580**	ND	**20**	ND	**56**	**250**	**280**	**4800**	NP	NP	**10**
04/28/03	**86**	**14**	**31**	**160**	**16**	ND	ND	ND	**81**	**190**	**800**	NP	NP	**10**
10/30/03	**55**	**22**	NT	**17**	**26**	**10**	ND	ND	**140**	**26**	**1800**	NP	NP	**10**
04/20/04	**55**	**10**	ND	**44**	**30**	**11**	**14**	**19**	**23**	**220**	**770**	NP	NP	**10**
10/21/04	**29**	ND	ND	**17**	ND	**14**	ND	**12**	**15**	**70**	**1200**	NP	NP	**10**
04/18/05	**83**	ND	ND	**780**	ND	**30**	**13**	**10**	ND	**240**	**1200**	NP	NP	**10**
10/13/05	**92**	**13**	**12**	**230**	**19**	**25**	ND	ND	**14**	**170**	**800**	NP	NP	**10**
04/25/06	**130**	ND	**88**	ND	ND	ND	ND	ND	**110**	**120**	**780**	NP	NP	**50**
10/20/06	**74**	ND	**20**	**37**	ND	ND	ND	ND	**55**	ND	**200**	NP	NP	**10**
04/25/07	**55**	**21**	**30**	**30**	**22**	**830**	**22**	**15**	**10**	**12**	**200**	NP	NP	**10**
10/31/07	**86**	ND	**66.2**	**14**	**37.4**	**33.3**	**12**	ND	**11.6**	**91.1**	**336**	NP	NP	**10**
04/23/08	**27.3**	ND	**50.3**	**12.2**	**24.4**	**36.9**	ND	**10.3**	**17.5**	**38.8**	**138**	NP	NP	**10**
10/20/08	**66.5**	**19.9**	**59.2**	**15.3**	**10.6**	**29.1**	ND	**12.4**	ND	**17.4**	**71.5**	NP	NP	**10**
04/22/09	**23.1**	**43.5**	**99.9**	**25.3**	**17.9**	**17.6**	**10.5**	ND	**35.2**	ND	NS	NP	NP	**10**
10/26/09	**19.6**	ND	**14.8**	ND	**37.8**	ND	NS	NS	NS	ND	**63.8**	NP	NP	**10**
04/22/10	**22.2**	**14.2**	ND	ND	ND	ND	NS	NS	ND	ND	**24.6**	NP	NP	**10**
10/27/10	**19.1**	ND	**12.3**	**15**	ND	ND	**32.4**	**16.3**	ND	ND	**60.7**	ND	ND	**10**
04/29/11	**25.7**	ND	**21.9**	ND	**11.8**	**23.9**	**13.7**	ND	ND	ND	**42.9**	**20.5**	**21.5**	**10**
10/25/11	**34.5**	ND	**11.6**	**23.7**	**12.8**	**10.1**	**32.5**	ND	ND	**17.7**	**49.9**	**15.1**	ND	**10**
04/20/12	**47.6**	ND	**12.5**	ND	**11.6**	**10.1**	**21.1**	ND	ND	**11.1**	**30.7**	**50.8**	ND	**10**
10/24/12	**93.4**	**10.4**	**11.3**	**22.4**	**23.8**	ND	**10.3**	**16.1**	**14.9**	**12.2**	**15.7**	**15.8**	ND	**10**
04/24/13	**56.3**	ND	ND	ND	**18.6**	**14.9**	ND	ND	ND	ND	**33.2**	ND	ND	**10**
10/24/13	**30.6**	ND	ND	ND	ND	ND	**28.1**	ND	ND	**28.8**	**39.6**	**14.9**	ND	**10**
04/24/14	**25.8**	ND	ND	ND	ND	ND	**18.9**	ND	ND	ND	ND	**14.9**	**10.1**	**10**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/28/15	**51.7**	ND	**14.2**	**19**	**13.6**	ND	**14.8**	**12.9**	ND	ND	**11.3**	**13.3**	ND	**10**
10/27/15	**69.8**	ND	ND	ND	**14.3**	ND	ND	**11.8**	ND	**22.1**	ND	**36.4**	ND	**10**
N_i	32	31	26	30	30	30	28	28	29	30	26	11	11	
sum of rank values (R_i)	8533.5	3994.0	4344.0	5140.5	4584.0	4450.0	3811.5	3590.0	4667.0	5888.5	6911.0	1827.0	912.0	
avg rank value (Rbar)	266.7	128.8	167.1	171.4	152.8	148.3	136.1	128.2	160.9	196.3	265.8	166.1	82.9	

	Number of each rank value													Rank Value
rank value of NDs =	1	17	9	11	11	12	12	14	13	10	3	3	9	63
rank value of 10s =	0	1	0	0	0	1	0	1	1	0	0	0	0	127.5
rank value of 10.1s =	0	0	0	0	0	2	0	0	0	0	0	0	1	131

rank value of 10.3s =	0	0	0	0	0	0	1	1	0	0	0	0	0	133.5
rank value of 10.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	135
rank value of 10.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	136
rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	137
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	138
rank value of 11.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	139
rank value of 11.3s =	0	0	1	0	0	0	0	0	0	0	1	0	0	140.5
rank value of 11.6s =	0	0	1	0	1	0	0	0	1	0	0	0	0	143
rank value of 11.8s =	0	0	0	0	1	0	0	1	0	0	0	0	0	145.5
rank value of 12s =	0	1	1	1	0	0	2	1	0	1	0	0	0	150
rank value of 12.2s =	0	0	0	1	0	0	0	0	0	1	0	0	0	154.5
rank value of 12.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	156
rank value of 12.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	157
rank value of 12.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	158
rank value of 12.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	159
rank value of 12.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	160
rank value of 13s =	0	1	0	0	0	1	1	0	0	0	0	0	0	162
rank value of 13.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	164
rank value of 13.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	165
rank value of 13.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	166
rank value of 14s =	0	1	0	1	0	1	1	0	1	0	0	0	0	169
rank value of 14.2s =	0	1	1	0	0	0	0	0	0	0	0	0	0	172.5
rank value of 14.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	174
rank value of 14.8s =	0	0	1	0	0	0	1	0	0	0	0	0	0	175.5
rank value of 14.9s =	0	0	0	0	0	1	0	0	1	0	0	2	0	178.5
rank value of 15s =	0	0	0	1	0	0	0	1	1	0	0	0	0	182
rank value of 15.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	184
rank value of 15.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	185
rank value of 15.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	186
rank value of 15.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	187
rank value of 16s =	0	1	0	0	1	0	0	0	0	0	0	0	0	188.5
rank value of 16.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	190
rank value of 16.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	191
rank value of 17s =	0	0	0	2	0	0	1	0	0	0	0	0	0	193
rank value of 17.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	195
rank value of 17.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	196
rank value of 17.6s =	0	0	0	0	0	1	0	0	0	0	0	0	0	197
rank value of 17.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	198
rank value of 17.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	199
rank value of 18s =	0	0	0	0	0	1	0	0	0	0	0	0	0	200
rank value of 18.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	201
rank value of 18.9s =	0	0	0	0	0	0	1	0	0	0	0	0	0	202
rank value of 19s =	0	0	0	1	1	0	0	1	0	0	0	0	0	204
rank value of 19.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	206
rank value of 19.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	207
rank value of 19.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	208
rank value of 20s =	0	0	1	0	0	1	0	0	0	0	0	0	0	209.5
rank value of 20.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	211
rank value of 21s =	0	1	0	0	0	0	0	0	0	0	0	0	0	212
rank value of 21.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	213
rank value of 21.5s =	0	0	0	0	0	0	0	0	0	0	0	0	1	214
rank value of 21.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	215
rank value of 22s =	0	1	0	0	1	0	1	0	0	0	0	0	0	217
rank value of 22.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	219
rank value of 22.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	220
rank value of 22.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	221
rank value of 23s =	0	0	0	0	0	0	0	0	1	0	0	0	0	222
rank value of 23.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	223

rank value of 23.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	224
rank value of 23.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	225
rank value of 23.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	226
rank value of 24s =	0	0	0	0	1	0	0	0	0	0	0	0	0	227
rank value of 24.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	228
rank value of 24.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	229
rank value of 25s =	0	0	0	0	0	1	0	0	0	0	0	0	0	230
rank value of 25.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	231
rank value of 25.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	232
rank value of 25.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	233
rank value of 26s =	0	0	0	0	1	0	0	0	0	1	0	0	0	234.5
rank value of 27.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	236
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	237
rank value of 28.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	238
rank value of 28.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	239
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	240
rank value of 29.1s =	0	0	0	0	0	1	0	0	0	0	0	0	0	241
rank value of 30s =	0	0	1	1	1	1	0	0	0	0	0	0	0	243.5
rank value of 30.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	246
rank value of 30.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	247
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	0	0	248
rank value of 32.4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	249
rank value of 32.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	250
rank value of 33s =	0	0	0	0	0	0	1	1	0	0	0	0	0	251.5
rank value of 33.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	253
rank value of 33.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	254
rank value of 34.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	255
rank value of 35s =	0	0	0	1	0	0	0	0	0	0	0	0	0	256
rank value of 35.2s =	0	0	0	0	0	0	0	0	1	0	0	0	0	257
rank value of 36s =	0	0	0	0	0	1	0	0	0	0	0	0	0	258
rank value of 36.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	259
rank value of 36.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	260
rank value of 37s =	1	0	0	1	0	0	0	0	0	0	0	0	0	261.5
rank value of 37.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	263
rank value of 37.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	264
rank value of 38s =	0	0	0	0	0	0	0	1	0	0	0	0	0	265
rank value of 38.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	266
rank value of 39.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	267
rank value of 42.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	268
rank value of 43s =	0	0	0	0	0	0	0	1	0	0	0	0	0	269
rank value of 43.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	270
rank value of 44s =	0	0	0	1	0	0	0	0	0	0	0	0	0	271
rank value of 47.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	272
rank value of 48s =	0	0	0	0	1	0	0	0	0	0	0	0	0	273
rank value of 49.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	274
rank value of 50.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	275
rank value of 50.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	276
rank value of 51.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	277
rank value of 55s =	3	0	0	0	0	0	0	0	1	0	0	0	0	279.5
rank value of 56s =	0	0	0	0	0	0	0	1	0	0	0	0	0	282
rank value of 56.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	283
rank value of 57s =	1	0	0	0	0	0	0	0	0	0	0	0	0	284
rank value of 59.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	285
rank value of 60.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	286
rank value of 63.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	287
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	288
rank value of 66s =	0	1	0	0	0	0	0	0	0	0	0	0	0	289
rank value of 66.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	290

rank value of 66.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	291
rank value of 68s =	0	0	0	0	0	0	0	0	0	1	0	0	0	292
rank value of 69.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	293
rank value of 70s =	0	0	0	0	0	0	0	0	0	1	0	0	0	294
rank value of 71.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	295
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	0	296
rank value of 75s =	0	0	0	0	0	0	0	0	1	0	0	0	0	297
rank value of 81s =	0	0	0	0	0	0	0	0	1	0	0	0	0	298
rank value of 83s =	1	0	0	0	0	0	0	0	0	0	0	0	0	299
rank value of 86s =	2	0	0	0	0	0	0	0	0	0	0	0	0	300.5
rank value of 88s =	0	0	1	0	0	0	0	0	0	0	0	0	0	302
rank value of 91.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	303
rank value of 92s =	1	0	0	0	0	0	0	0	0	0	0	0	0	304
rank value of 93.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	305
rank value of 99.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	306
rank value of 110s =	0	0	1	0	0	0	0	0	1	0	0	0	0	307.5
rank value of 120s =	0	1	0	0	0	0	0	0	1	1	0	0	0	310
rank value of 130s =	1	1	0	0	0	0	0	0	0	0	0	0	0	312.5
rank value of 138s =	0	0	0	0	0	0	0	0	0	0	1	0	0	314
rank value of 140s =	0	0	0	0	0	0	0	0	1	0	0	0	0	315
rank value of 150s =	1	0	0	0	0	0	0	0	0	0	0	0	0	316
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	0	0	0	317
rank value of 170s =	0	0	0	0	0	0	0	0	0	1	0	0	0	318
rank value of 190s =	0	0	0	0	0	0	0	0	0	1	0	0	0	319
rank value of 200s =	0	0	0	0	0	0	0	0	0	1	2	0	0	321
rank value of 220s =	0	0	0	0	0	0	0	0	0	1	0	0	0	323
rank value of 230s =	2	0	0	1	0	0	0	0	0	1	0	0	0	325.5
rank value of 240s =	0	0	0	0	0	0	0	0	0	1	0	0	0	328
rank value of 250s =	0	0	0	0	0	0	0	0	1	0	0	0	0	329
rank value of 280s =	0	0	0	0	0	0	0	0	0	1	0	0	0	330
rank value of 336s =	0	0	0	0	0	0	0	0	0	0	1	0	0	331
rank value of 580s =	0	0	0	1	0	0	0	0	0	0	0	0	0	332
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	1	0	0	333
rank value of 780s =	0	0	0	1	0	0	0	0	0	0	1	0	0	334.5
rank value of 800s =	0	0	0	0	0	0	0	0	0	0	2	0	0	336.5
rank value of 830s =	0	0	0	0	0	1	0	0	0	0	0	0	0	338
rank value of 1200s =	0	0	0	0	0	0	0	0	0	0	2	0	0	339.5
rank value of 1800s =	0	0	0	0	0	0	0	0	0	0	1	0	0	341
rank value of 4800s =	0	0	0	0	0	0	0	0	0	0	1	0	0	342
n =	**32**	**31**	**26**	**30**	**30**	**30**	**28**	**28**	**29**	**30**	**26**	**11**	**11**	

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-8**	**MW-15**	**MW-16**	**MW-17**
Ri^2/N_i =	3198286.7	880825	700435	660083	518840	460289	751065	1E+06	2E+06	303448	75613

$N_{i\ bg}$ = 89

N = 342

H = 49.38

Adjust H for ties:

T_i = 2E+06 sum of T1..T34

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

$H' = 51.92$

Chi-square = 18.31

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 18.31 which is less than H' =51.92.
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-8	**MW-15**	MW-16	MW-17
Rbar (well x) =	171.4	152.8	148.3	136.1	128.2	160.9	196.3	265.8	166.1	82.9
avg Rbar (background) =	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6
Dx =	-18.2	-36.8	-41.2	-53.4	-61.4	-28.6	6.7	76.2	-23.5	-106.7
Cx =	48.6	48.6	48.6	49.9	49.9	49.3	48.6	51.4	73.6	73.6
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	No	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total 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 J15-1957-50

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

Part 1: Check for Normality

	MW-15	MDL
9/26/02	**4800**	**10**
4/28/03	**800**	**10**
10/30/03	**1800**	**10**
4/20/04	**770**	**10**
10/21/04	**1200**	**10**
4/18/05	**1200**	**10**
10/13/05	**800**	**10**
4/25/06	**780**	**50**
10/20/06	**200**	**10**
4/25/07	**200**	**10**
10/31/07	**336**	**10**
4/23/08	**138**	**10**
10/20/08	**71.5**	**10**
4/22/09	NS	**10**
10/26/09	**63.8**	**10**
4/22/10	**24.6**	**10**
10/27/10	**60.7**	**10**
4/29/11	**42.9**	**10**
10/25/11	**49.9**	**10**
4/20/12	**30.7**	**10**
10/24/12	**15.7**	**10**
4/24/13	**33.2**	**10**
10/24/13	**39.6**	**10**
4/24/14	ND	**10**
10/27/14	ND	**10**
4/28/15	**11.3**	**10**
10/27/15	ND	**10**

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

X_{bar} = 518.5730769
SD = 997.6619847
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3059835493
γ_1= 3.268118647

Since the Coefficient of Skewness of 3.27 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

X_{bar} = 4.699362566
SD = 1.973125765
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.686761745
γ_1= 0.094818221

Since the Coefficient of Skewness of 0.09 is less than 1.0, the data appear not to be significantly skewed.

Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

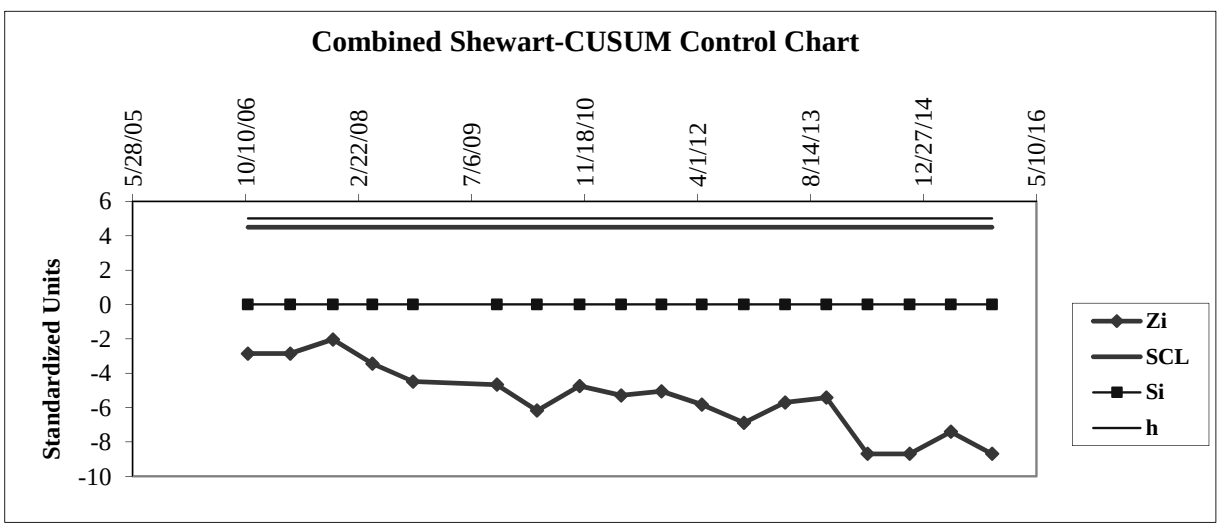
Compute the mean and standard deviation of the historical data:

7.103371838 = x_{mean} (Mean of N1-N8 historical data)
0.63200761 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	5.298317367	-2.8560645	0	5	4.5
4/25/07	5.298317367	-2.8560645	0	5	4.5
10/31/07	5.81711116	-2.0351981	0	5	4.5
4/23/08	4.927253685	-3.4431835	0	5	4.5
10/20/08	4.26969745	-4.483608	0	5	4.5
10/26/09	4.15575319	-4.6638974	0	5	4.5
4/22/10	3.202746443	-6.1718013	0	5	4.5
10/27/10	4.105943698	-4.7427089	0	5	4.5
4/29/11	3.758871826	-5.2918667	0	5	4.5
10/25/11	3.910021003	-5.0527095	0	5	4.5
4/20/12	3.424262655	-5.8213052	0	5	4.5
10/24/12	2.753660712	-6.8823714	0	5	4.5
4/24/13	3.502549876	-5.6974345	0	5	4.5
10/24/13	3.678829118	-5.418515	0	5	4.5
4/24/14	1.609437912	-8.6928288	0	5	4.5
10/27/14	1.609437912	-8.6928288	0	5	4.5
4/28/15	2.424802726	-7.4027101	0	5	4.5
10/27/15	1.609437912	-8.6928288	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 J15-1957-50

Compound: **Acetone**
MCL (µg/l): 6000
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**100**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**140**	NP	NP	**25**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**25**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**25**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**25**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/27/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**

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

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 24.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 72$
$T_{n1} = 832.5$

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).

$k = 1$
$n = 72$
$T_{n1} = 832.5$
$t\,[71,.01] = 2.3841$

$c = 0.0139$

$T^*_k = 19.8$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

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-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**100**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	**24**	ND	ND	ND	ND	ND	ND	**15**	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	**4.5**	ND	NS	NP	NP	**2**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**2**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**2**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/27/15	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.

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 24.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 72$
$T_{n1} = 187$

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).

$k = 1$
$n = 72$
$T_{n1} = 187$
$t\,[71,.01] = 2.3841$

$c = 0.0139$

$T^*_k = 6.5$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	1	1	1	1	1	1	1	1	1	1

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 J15-1957-50

Compound: **Chloroethane**
MCL (µg/l): 3000
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**1**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**1**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**1**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/24/12	ND	ND	ND	ND	**4.4**	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/27/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**

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

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 24.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 72$
$T_{n1} = 144$

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).

$k = 1$
$n = 72$
$T_{n1} = 144$
$t\,[71,.01] = 2.3841$

$c = 0.0139$

$T^*_k = 5.4$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Iodomethane**
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	**10.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/15	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.

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 24.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 72$
$T_{n1} = 240$

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).

$k = 1$
$n = 72$
$T_{n1} = 240$
$t\,[71,.01] = 2.3841$

$c = 0.0139$

$T^*_k = 7.8$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-50

Compound: **Dichloromethane (Methylene chloride)**
MCL (µg/l): 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-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**2**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**2**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/24/14	ND	ND	ND	ND	ND	**2**	ND	ND	ND	**2.2**	ND	ND	ND	**2**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.2**	ND	ND	**2**
10/27/15	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.

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 24.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 72$
$T_{n1} = 108$

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).

$k = 1$
$n = 72$
$T_{n1} = 108$
$t\,[71,.01] = 2.3841$

$c = 0.0139$

$T^*_k = 4.5$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	1	1	1	1	1	1	1	1	1	1

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 J15-1957-50

Compound: **2-Butanone**
MCL (µg/l): 4000
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-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**100**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**54.4**	NP	NP	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/15	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.

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 24.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 72$
$T_{n1} = 240$

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).

$k = 1$
$n = 72$
$T_{n1} = 240$
$t\,[71,.01] = 2.3841$

$c = 0.0139$

$T^*_k = 7.8$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.