BUNNELL-LAMMONS ENGINEERING, INC.

GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

REPORT OF GROUNDWATER QUALITY RESULTS & STATISTICAL ANALYSIS

FIRST SEMI-ANNUAL SAMPLING EVENT OF 2014

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

June 26, 2014

BLE Project Number J14-1957-40

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

June 26, 2014

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

Attention: Mr. Stephen King
Solid Waste Director

Subject: **Report of Groundwater Quality Results & Statistical Analysis**
First Semi-Annual Sampling Event of 2014
White Oak Landfill
Permit Number: 44-07
Haywood County, North Carolina
BLE Project Number J14-1957-40

Dear Mr. King:

As authorized, Bunnell-Lammons Engineering, Inc. (BLE) has performed the statistical analysis of groundwater quality data obtained during the first semi-annual sampling event of 2014 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 DENR Solid Waste Section, 401 Oberlin Road, Suite 150, Raleigh, North Carolina 27605
Mr. Marty Stamey – County Manager, Haywood County, 215 N. Main Street, Waynesville, North Carolina 28786
Mr. Will Martin – Santek Waste Services, Inc., 650 25th Street, NW, Suite 100, Cleveland, Tennessee 37311

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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 2014. Historical data from multiple sources and in multiple formats had to be gathered from multiple sources and formats, and synthesized into this report. Water quality data available to BLE extends back to April 1993, however, many of the currently existing wells were not present during the earlier sampling events. As a result, the statistical database in this report uses data from sampling events ranging from April 2000 to the current sampling event (April 2014).

This report presents data from the first semi-annual sampling event in 2014 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 April 24, 2014. 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 antimony (one well), total barium (thirteen wells), total cadmium (one well), total chromium (two wells), total cobalt (two wells), total copper (one well), total nickel (six wells), total thallium (one well), total vanadium (one well), and total zinc (four wells) were detected in the groundwater monitoring wells during the current sampling event. Total barium (MW-2 and MW-2D) and total chromium (MW-11S) were detected at concentrations above the North Carolina maximum contaminant level[1] (MCL). The only VOC detected in the groundwater samples was dichloromethane (dichloromethane), but at concentrations below the NC MCL.

Surface Water

Concentrations of total metals were detected in each of the six surface water samples, and the LSP sample during the current sampling event. The detections included total arsenic (LSP), total barium (six surface waters and the LSP), total beryllium (LSP), total chromium (LSP), total cobalt (two surface waters and the LSP), total nickel (one surface water and the LSP), total vanadium (LSP), and total zinc (two surface waters). No VOCs were detected in the samples from the surface water locations. However, benzene, chlorobenzene, chloroethane 1,4-dichlorobenzene, ethylbenzene, 2-hexanone, toluene, xylenes, phosphorus, nitrate, nitrite, nitrate/nitrite, sulfate, BOD, and COD were detected in the LSP sample. Only the concentrations of total arsenic, total nickel, and toluene in the LSP sample were detected above North Carolina's established surface water MCL[2]; the other detections were either below the MCL or a MCL has not been established for the detected constituents.

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. 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;

[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.

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 tests performed for total antimony, total arsenic, total selenium, total silver, total thallium, acetone, carbon disulfide, 2-butanone, chloroethane, and dichloromethane 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 nickel, total vanadium, and total zinc; however, the tests calculated SSIs for total barium in wells MW-2 and MW-2D.

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 chromium (MW-11S), and total arsenic (LSP), total nickel (LSP), and dichloromethane (LSP) 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 were calculated to be statistically significant.

The current sampling event represents the eighth (N8) baseline sampling event for new wells MW-16 and MW-17 installed in association with Phase No. 3 and the construction of the future Phase No. 4. Interwell comparisons (background wells versus compliance wells) indicate statistical significance for total cobalt in monitoring well MW-16, but the database for this new well is too small for intrawell comparisons (statistical comparisons of its own history). As additional laboratory data becomes available during subsequent sampling events, other intrawell statistical methods, such at the Shewhart-CUSUM Control Charts (a minimum of nine sampling events required), will be used to evaluate statistical significance.

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 J14-1957-40

April 24, 2014															
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	15.68	17.73	2502.29	UK	10.4 - 25.4	2507.6 - 2492.6	UK	Deep Residuum	UK	UK
MW-2	721,460.76	812,309.44	2,496.71	2,494.43	26.90	29.18	2467.53	UK	19.9 - 34.9	2474.5 - 2459.5	UK	Deep Residuum/PWR	UK	UK
MW-2D	721,456.01	812,311.87	2,496.89	2,494.69	26.93	29.13	2467.76	UK	44.6 - 54.6	2450.1 - 2440.1	UK	Bedrock	36.9	2457.8
MW-3r	721,943.38	812,063.70	2,462.61	2,459.53	27.16	30.24	2432.37	41.5	26.3 - 41.3	2433.2 - 2418.2	II	Deep Residuum	NE	NE
MW-3Dr	721,940.67	812,082.82	2,461.89	2,458.42	31.93	35.40	2426.49	65.0	49.8 - 64.8	2408.6 - 2393.6	IIIs	Bedrock	44.0	2414.4
MW-4A	721,693.04	811,976.64	2,493.85	2,491.60	41.36	43.61	2450.24	UK	80.6 - 95.6	2411.0 - 2396.0	UK	Bedrock	23.3	2468.3
MW-8	721,704.50	812,155.03	2,477.33	2,474.84	27.27	29.76	2447.57	UK	31.0 - 41.0	2443.8 - 2433.8	UK	Deep Residuum	UK	UK
MW-11S	719,905.88	811,642.89	2,674.58	UK	UK	78.61	2595.97	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-11D	719,909.34	811,651.55	2,674.89	2,672.01	76.63	79.51	2595.38	UK	118.0 - 127.6	2554.0 - 2544.4	UK	Bedrock	97.0	2575.0
MW-14	UK	UK	2,711.69	UK	UK	97.40	2614.29	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-15	UK	UK	2,547.41	UK	UK	9.10	2538.31	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-16	721,821.98	811,660.70	2,519.35	2,516.07	31.86	35.14	2484.21	41.0	25.8 - 40.8	2490.3 - 2475.3	II	Fill / Residuum	40.0	2476.1
MW-17	721,783.47	811,219.93	2,542.55	2,539.13	52.90	56.32	2486.23	63.0	43.0 - 58.0	2496.1 - 2481.1	II	Bedrock	40.0	2499.1

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 4/24/14 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:PJVH

TABLE 2

GROUNDWATER FLOW DATA
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J14-1957-40

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	0.0793	0.114	0.30	107.96
MW-2	1.50E-04	2.95E-04	4.31E+00	0.0793	0.114	2.99	1,093.12
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	0.0793	0.114	2.99	1,093.12
MW-11S	2.40E-06	4.72E-06	6.89E-02	0.0899	0.114	0.05	19.83
MW-14	1.38E-05	2.72E-05	3.96E-01	0.0714	0.17	0.17	60.75
MW-15	2.10E-05	4.13E-05	6.03E-01	0.0714	0.17	0.25	92.44

Notes:

1. Hydraulic conductivity and effective porosity values are from prior site hydrogeologic studies performed by others.
2. Hydraulic gradients and flow velocities calculated from measurements taken during the April 24, 2014 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:PJVH

TABLE 3

SUMMARY OF STATISTICAL ANALYSIS RESULTS
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J14-1957-40

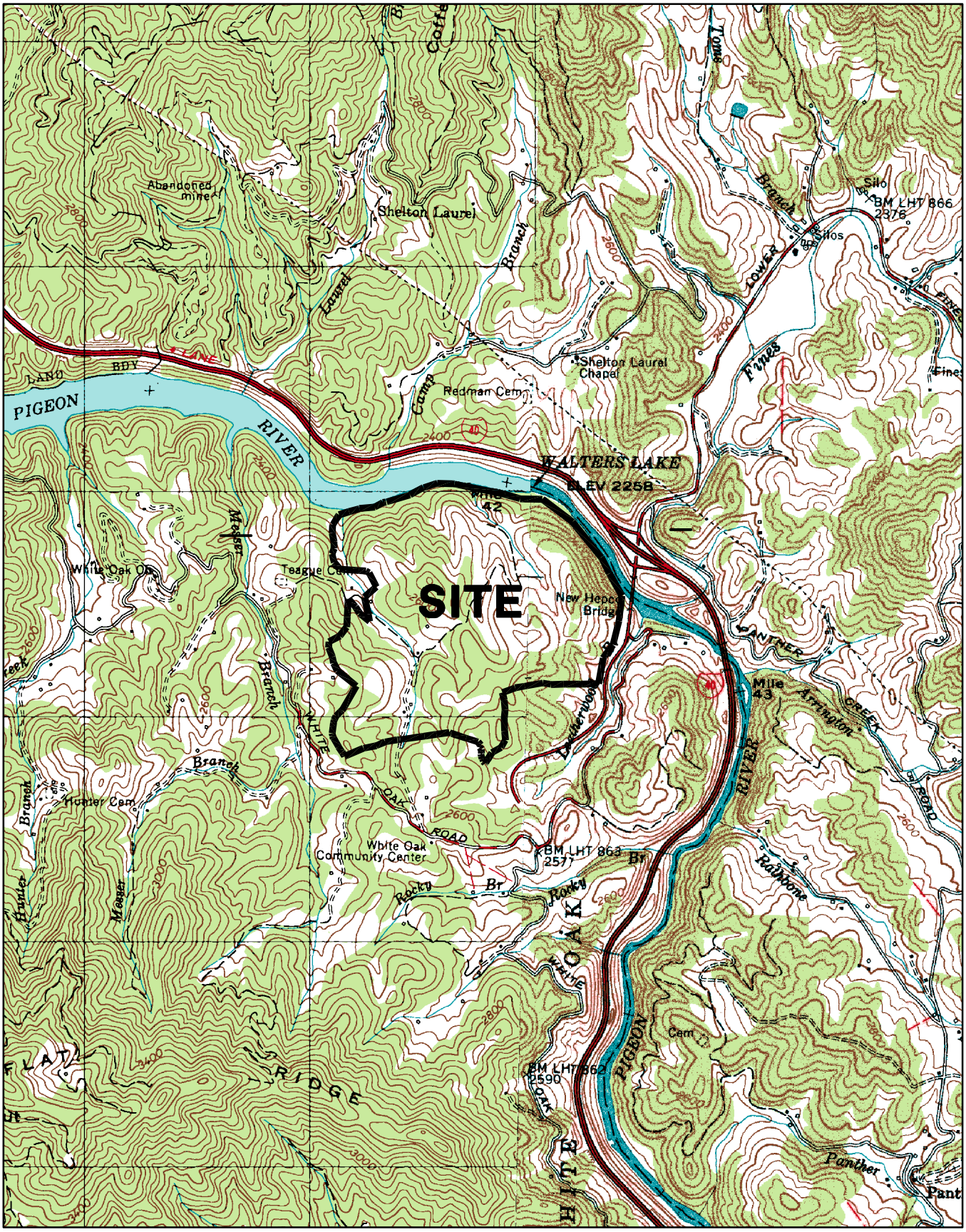
Chemical/ Compound	Percent ND	Primary Statistical Test	Primary Pass/Fail	Secondary Statistical Test	Secondary Pass/Fail	SSI Calculated	SSI Validated as Leachate	SSI Concentration Above MCL During Current Event
Total Antimony	98%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Arsenic	91%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Barium (3)	5%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Fail	MW-2, MW-2D (4)	No (4)	Yes (MW-2, MW-2D)
Total Beryllium	85%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Cadmium	86%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Chromium	54%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Cobalt	63%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass(5)	Insufficient data (5)	-	-
Total Copper	60%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Lead	75%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Nickel	46%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Selenium	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Silver	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Thallium	94%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Vanadium	56%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Zinc	33%	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	-	-	-	-	-
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. The dataset for total barium was not homogeneous and normally distributed. Therefore, a non-parametric ANOVA testing procedure was used (Kruskal-Wallis) rather than parametric ANOVA.
4. Total barium is a naturally occuring metal throughout much of North Carolina and is likely related to sample turbidity.
5. New monitoring well MW-16 does not have a sufficient background database for intrawell analysis.

Prepared by:IAI
Checked by:PJVH/MSP

FIGURES

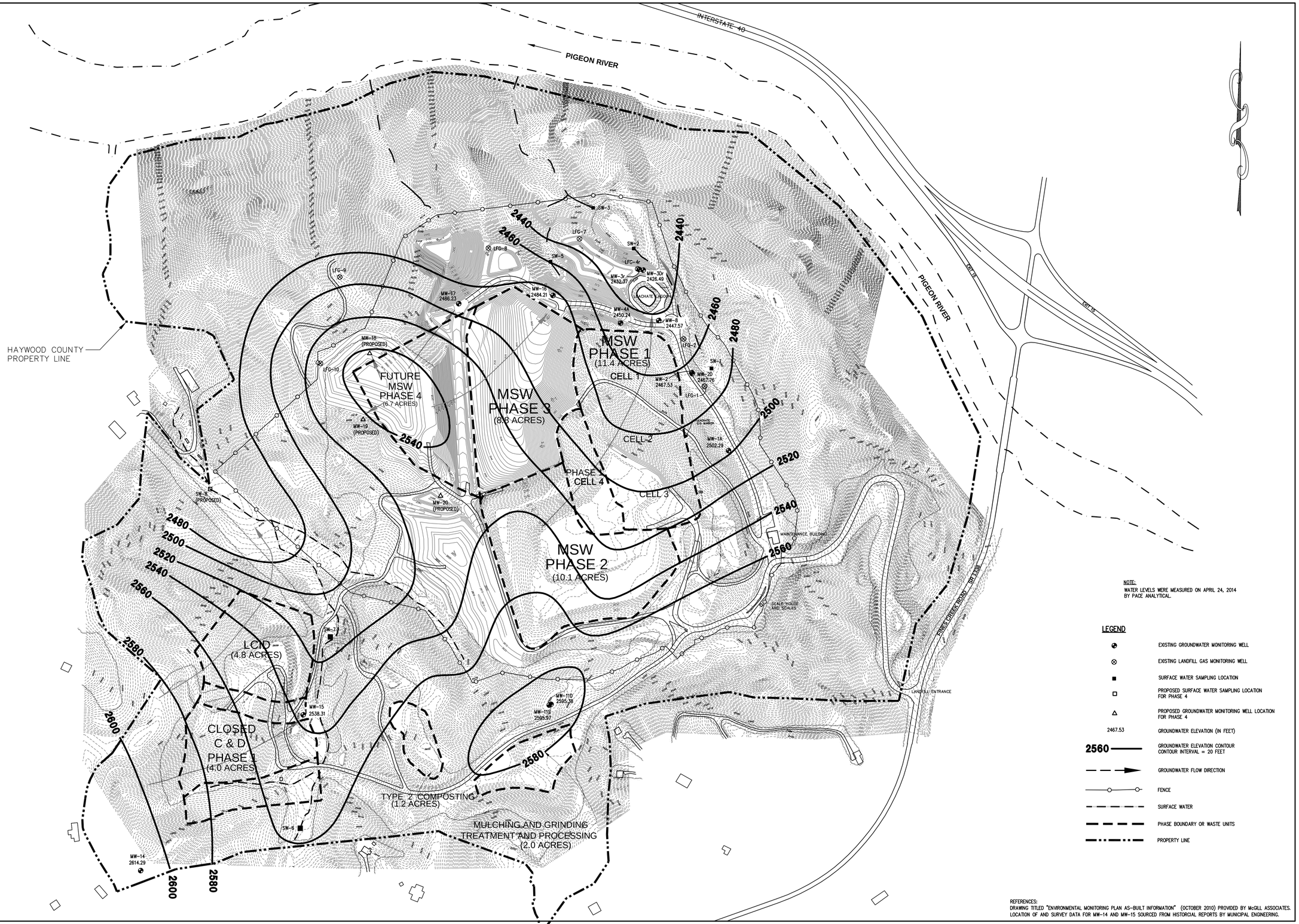


2000 1000 0 2000 4000

APPROXIMATE SCALE IN FEET

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

DRAWN: ACE	DATE: 06-19-14	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: HCWOLF40-SLM			
APPROVED:	JOB NO: J14-1957-40			



NOTE:
WATER LEVELS WERE MEASURED ON APRIL 24, 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
2467.53	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 HISTORCIAL REPORTS BY MUNICIPAL ENGINEERING.

REVISIONS		
No.	DESCRIPTION	BY

DRAWN:	ACE
CHECKED:	IAI
APPROVED:	TJB

DATE:	06-12-14
CAD FILE:	HCWOLF40-WTM042414
JOB NO:	J14-1957-40

BLE INC.

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GROUNDWATER ELEVATION CONTOUR MAP – APRIL 24, 2014
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:

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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:

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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

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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:

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ND = Not Detected at the method detection limit

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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:

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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:

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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

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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:

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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:

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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

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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:

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MRL = Laboratory Method Reporting Limit

ND = Not Detected at the method detection limit

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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:

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MRL = Laboratory Method Reporting Limit

ND = Not Detected at the method detection limit

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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:

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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:

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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

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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:

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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:

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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:

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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:

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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

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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

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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:

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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

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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:

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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

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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:

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NS = Not Sampled

NT = Not Tested

NE = Not Established; North Carolina has not established a MCL

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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:

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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:

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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

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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:

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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:

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NS = Not Sampled

NT = Not Tested

NE = Not Established; North Carolina has not established a MCL

NP = Not Present during sampling event

Shaded cells 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:

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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:

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NT = Not Tested

NE = Not Established; North Carolina has not established a MCL

NP = Not Present during sampling event

Shaded cells 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:

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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:

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NT = Not Tested

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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:

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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

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NT = Not Tested

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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:

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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
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**

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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
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
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**

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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
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**

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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
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:

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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
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**

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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
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**

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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
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:

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NS = Not Sampled

NT = Not Tested

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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
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**

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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
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**

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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
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.

APPENDIX C

LABORATORY ANALYTICAL RESULTS

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

May 01, 2014

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

RE: Project: White Oak LF MWs
Pace Project No.: 92198744

Dear Mr. Martin:
Enclosed are the analytical results for sample(s) received by the laboratory on April 24, 2014. 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,

Jon D Bradley
jon.bradley@pacelabs.com
Project Manager

Enclosures

cc: Will Martin, Santek Environmental

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Asheville, NC 28804
(828)254-7176

CERTIFICATIONS

Project: White Oak LF MWs
Pace Project No.: 92198744

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 Dr., 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

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SAMPLE SUMMARY

Project: White Oak LF MWs
Pace Project No.: 92198744

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92198744001	**MW-17**	Water	04/24/14 14:55	04/24/14 17:00
92198744002	**Trip Blank**	Water	04/24/14 00:00	04/24/14 17:00
92198744003	**Equip Blank**	Water	04/24/14 00:00	04/24/14 17:00

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SAMPLE ANALYTE COUNT

Project: White Oak LF MWs
Pace Project No.: 92198744

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92198744001	**MW-17**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198744002	**Trip Blank**	EPA 8260	MCK	52	PASI-C
92198744003	**Equip Blank**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C

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ANALYTICAL RESULTS

Project: White Oak LF MWs
Pace Project No.: 92198744

Sample: MW-17 **Lab ID: 92198744001** Collected: 04/24/14 14:55 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:36		
Collected Date	**04/24/14**				1		04/25/14 11:36		
Collected Time	**14:55**				1		04/25/14 11:36		
Field pH	**5.8**	Std. Units	0.10	0.10	1		04/25/14 11:36		
Field Temperature	**16.5**	deg C	0.50	0.50	1		04/25/14 11:36		
Static Water Level	**56.32**	feet			1		04/25/14 11:36		
Field Specific Conductance	**187**	umhos/cm	1.0	1.0	1		04/25/14 11:36		
Turbidity	**2.24**	NTU	1.0	1.0	1		04/25/14 11:36		
Odor	**NONE**				1		04/25/14 11:36		
Appearance	**CLEAR**				1		04/25/14 11:36		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7440-38-2	
Barium	**189**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:21	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:21	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:21	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 02:21	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:21	7440-62-2	
Zinc	**10.1**	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:21	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/26/14 00:58	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/26/14 00:58	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/26/14 00:58	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/26/14 00:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/26/14 00:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/26/14 00:58	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/26/14 00:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/26/14 00:58	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/26/14 00:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/26/14 00:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/26/14 00:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/26/14 00:58	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/26/14 00:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/26/14 00:58	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/26/14 00:58	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/14 00:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/26/14 00:58	106-93-4	

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ANALYTICAL RESULTS

Project: White Oak LF MWs
Pace Project No.: 92198744

Sample: MW-17 **Lab ID: 92198744001** Collected: 04/24/14 14:55 Received: 04/24/14 17:00 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		04/26/14 00:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/26/14 00:58	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/26/14 00:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/26/14 00:58	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/26/14 00:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/14 00:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/26/14 00:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/26/14 00:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/26/14 00:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/26/14 00:58	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/26/14 00:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/26/14 00:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/26/14 00:58	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/26/14 00:58	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/26/14 00:58	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/26/14 00:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/26/14 00:58	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/26/14 00:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/26/14 00:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/26/14 00:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/26/14 00:58	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/26/14 00:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/26/14 00:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/26/14 00:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/26/14 00:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/26/14 00:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/26/14 00:58	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/26/14 00:58	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/26/14 00:58	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/26/14 00:58	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/26/14 00:58	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/26/14 00:58	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		04/26/14 00:58	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		04/26/14 00:58	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/26/14 00:58	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF MWs
Pace Project No.: 92198744

Sample: Trip Blank **Lab ID: 92198744002** Collected: 04/24/14 00:00 Received: 04/24/14 17:00 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		04/26/14 01:16	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/26/14 01:16	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/26/14 01:16	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/26/14 01:16	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/26/14 01:16	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/26/14 01:16	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/26/14 01:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/26/14 01:16	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/26/14 01:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/26/14 01:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/26/14 01:16	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/26/14 01:16	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/26/14 01:16	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/26/14 01:16	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/26/14 01:16	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/14 01:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/26/14 01:16	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		04/26/14 01:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/26/14 01:16	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/26/14 01:16	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/26/14 01:16	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/26/14 01:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/14 01:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/26/14 01:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/26/14 01:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/26/14 01:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/26/14 01:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/26/14 01:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/26/14 01:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/26/14 01:16	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/26/14 01:16	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/26/14 01:16	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/26/14 01:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/26/14 01:16	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/26/14 01:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/26/14 01:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/26/14 01:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/26/14 01:16	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/26/14 01:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/26/14 01:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/26/14 01:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/26/14 01:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/26/14 01:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/26/14 01:16	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/26/14 01:16	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/26/14 01:16	75-01-4	

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ANALYTICAL RESULTS

Project: White Oak LF MWs
Pace Project No.: 92198744

Sample: Trip Blank **Lab ID: 92198744002** Collected: 04/24/14 00:00 Received: 04/24/14 17:00 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		04/26/14 01:16	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/26/14 01:16	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/26/14 01:16	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		04/26/14 01:16	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		04/26/14 01:16	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/26/14 01:16	2037-26-5	

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ANALYTICAL RESULTS

Project: White Oak LF MWs
Pace Project No.: 92198744

Sample: Equip Blank **Lab ID: 92198744003** Collected: 04/24/14 00:00 Received: 04/24/14 17:00 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	5.0	1	04/25/14 13:50	04/30/14 02:30	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 02:30	7440-38-2	
Barium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:30	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:30	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:30	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:30	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:30	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:30	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:30	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:30	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:30	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:30	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 02:30	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:30	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:30	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/26/14 01:35	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/26/14 01:35	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/26/14 01:35	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/26/14 01:35	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/26/14 01:35	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/26/14 01:35	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/26/14 01:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/26/14 01:35	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/26/14 01:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/26/14 01:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/26/14 01:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/26/14 01:35	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/26/14 01:35	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/26/14 01:35	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/26/14 01:35	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/14 01:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/26/14 01:35	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		04/26/14 01:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/26/14 01:35	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/26/14 01:35	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/26/14 01:35	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/26/14 01:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/14 01:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/26/14 01:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/26/14 01:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/26/14 01:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/26/14 01:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/26/14 01:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/26/14 01:35	10061-02-6	

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ANALYTICAL RESULTS

Project: White Oak LF MWs
Pace Project No.: 92198744

Sample: Equip Blank **Lab ID: 92198744003** Collected: 04/24/14 00:00 Received: 04/24/14 17:00 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		04/26/14 01:35	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/26/14 01:35	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/26/14 01:35	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/26/14 01:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/26/14 01:35	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/26/14 01:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/26/14 01:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/26/14 01:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/26/14 01:35	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/26/14 01:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/26/14 01:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/26/14 01:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/26/14 01:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/26/14 01:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/26/14 01:35	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/26/14 01:35	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/26/14 01:35	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/26/14 01:35	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/26/14 01:35	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/26/14 01:35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/26/14 01:35	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		04/26/14 01:35	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/26/14 01:35	2037-26-5	

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QUALITY CONTROL DATA

Project: White Oak LF MWs
Pace Project No.: 92198744

QC Batch: MPRP/15790
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92198744001, 92198744003

METHOD BLANK: 1185462
Matrix: Water
Associated Lab Samples: 92198744001, 92198744003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	04/30/14 02:06	
Arsenic	ug/L	ND	10.0	04/30/14 02:06	
Barium	ug/L	ND	5.0	04/30/14 02:06	
Beryllium	ug/L	ND	1.0	04/30/14 02:06	
Cadmium	ug/L	ND	1.0	04/30/14 02:06	
Chromium	ug/L	ND	5.0	04/30/14 02:06	
Cobalt	ug/L	ND	5.0	04/30/14 02:06	
Copper	ug/L	ND	5.0	04/30/14 02:06	
Lead	ug/L	ND	5.0	04/30/14 02:06	
Nickel	ug/L	ND	5.0	04/30/14 02:06	
Selenium	ug/L	ND	10.0	04/30/14 02:06	
Silver	ug/L	ND	5.0	04/30/14 02:06	
Thallium	ug/L	ND	5.4	04/30/14 02:06	
Vanadium	ug/L	ND	5.0	04/30/14 02:06	
Zinc	ug/L	ND	10.0	04/30/14 02:06	

LABORATORY CONTROL SAMPLE: 1185463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	467	93	80-120	
Arsenic	ug/L	500	453	91	80-120	
Barium	ug/L	500	454	91	80-120	
Beryllium	ug/L	500	455	91	80-120	
Cadmium	ug/L	500	457	91	80-120	
Chromium	ug/L	500	464	93	80-120	
Cobalt	ug/L	500	463	93	80-120	
Copper	ug/L	500	455	91	80-120	
Lead	ug/L	500	462	92	80-120	
Nickel	ug/L	500	457	91	80-120	
Selenium	ug/L	500	460	92	80-120	
Silver	ug/L	250	228	91	80-120	
Thallium	ug/L	500	446	89	80-120	
Vanadium	ug/L	500	454	91	80-120	
Zinc	ug/L	500	458	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1185464 1185465

Parameter	Units	92198744001 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	485	478	97	95	75-125	2	25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: White Oak LF MWs
Pace Project No.: 92198744

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1185464 1185465

Parameter	Units	92198744001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	471	460	94	92	75-125	2	25	
Barium	ug/L	189	500	500	648	640	92	90	75-125	1	25	
Beryllium	ug/L	ND	500	500	468	463	94	93	75-125	1	25	
Cadmium	ug/L	ND	500	500	470	462	94	92	75-125	2	25	
Chromium	ug/L	ND	500	500	476	467	95	93	75-125	2	25	
Cobalt	ug/L	ND	500	500	472	464	94	93	75-125	2	25	
Copper	ug/L	ND	500	500	469	459	94	92	75-125	2	25	
Lead	ug/L	ND	500	500	472	463	94	92	75-125	2	25	
Nickel	ug/L	ND	500	500	466	458	92	91	75-125	2	25	
Selenium	ug/L	ND	500	500	474	466	95	93	75-125	2	25	
Silver	ug/L	ND	250	250	235	230	94	92	75-125	2	25	
Thallium	ug/L	ND	500	500	456	450	91	90	75-125	1	25	
Vanadium	ug/L	ND	500	500	468	461	93	92	75-125	2	25	
Zinc	ug/L	10.1	500	500	474	463	93	91	75-125	2	25	

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QUALITY CONTROL DATA

Project: White Oak LF MWs
Pace Project No.: 92198744

QC Batch: MSV/26591 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92198744001, 92198744002, 92198744003

METHOD BLANK: 1185938 Matrix: Water
Associated Lab Samples: 92198744001, 92198744002, 92198744003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	04/25/14 18:33	
1,1,1-Trichloroethane	ug/L	ND	1.0	04/25/14 18:33	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/25/14 18:33	
1,1,2-Trichloroethane	ug/L	ND	1.0	04/25/14 18:33	
1,1-Dichloroethane	ug/L	ND	1.0	04/25/14 18:33	
1,1-Dichloroethene	ug/L	ND	1.0	04/25/14 18:33	
1,2,3-Trichloropropane	ug/L	ND	1.0	04/25/14 18:33	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/25/14 18:33	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	04/25/14 18:33	
1,2-Dichlorobenzene	ug/L	ND	1.0	04/25/14 18:33	
1,2-Dichloroethane	ug/L	ND	1.0	04/25/14 18:33	
1,2-Dichloropropane	ug/L	ND	1.0	04/25/14 18:33	
1,4-Dichlorobenzene	ug/L	ND	1.0	04/25/14 18:33	
2-Butanone (MEK)	ug/L	ND	5.0	04/25/14 18:33	
2-Hexanone	ug/L	ND	5.0	04/25/14 18:33	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	04/25/14 18:33	
Acetone	ug/L	ND	25.0	04/25/14 18:33	
Acrylonitrile	ug/L	ND	10.0	04/25/14 18:33	
Benzene	ug/L	ND	1.0	04/25/14 18:33	
Bromochloromethane	ug/L	ND	1.0	04/25/14 18:33	
Bromodichloromethane	ug/L	ND	1.0	04/25/14 18:33	
Bromoform	ug/L	ND	1.0	04/25/14 18:33	
Bromomethane	ug/L	ND	2.0	04/25/14 18:33	
Carbon disulfide	ug/L	ND	2.0	04/25/14 18:33	
Carbon tetrachloride	ug/L	ND	1.0	04/25/14 18:33	
Chlorobenzene	ug/L	ND	1.0	04/25/14 18:33	
Chloroethane	ug/L	ND	1.0	04/25/14 18:33	
Chloroform	ug/L	ND	1.0	04/25/14 18:33	
Chloromethane	ug/L	ND	1.0	04/25/14 18:33	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/25/14 18:33	
cis-1,3-Dichloropropene	ug/L	ND	1.0	04/25/14 18:33	
Dibromochloromethane	ug/L	ND	1.0	04/25/14 18:33	
Dibromomethane	ug/L	ND	1.0	04/25/14 18:33	
Ethylbenzene	ug/L	ND	1.0	04/25/14 18:33	
Iodomethane	ug/L	ND	5.0	04/25/14 18:33	
m&p-Xylene	ug/L	ND	2.0	04/25/14 18:33	
Methylene Chloride	ug/L	ND	2.0	04/25/14 18:33	
o-Xylene	ug/L	ND	1.0	04/25/14 18:33	
Styrene	ug/L	ND	1.0	04/25/14 18:33	
Tetrachloroethene	ug/L	ND	1.0	04/25/14 18:33	
Toluene	ug/L	ND	1.0	04/25/14 18:33	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/25/14 18:33	
trans-1,3-Dichloropropene	ug/L	ND	1.0	04/25/14 18:33	

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QUALITY CONTROL DATA

Project: White Oak LF MWs
Pace Project No.: 92198744

METHOD BLANK: 1185938 Matrix: Water
Associated Lab Samples: 92198744001, 92198744002, 92198744003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	04/25/14 18:33	
Trichloroethene	ug/L	ND	1.0	04/25/14 18:33	
Trichlorofluoromethane	ug/L	ND	1.0	04/25/14 18:33	
Vinyl acetate	ug/L	ND	2.0	04/25/14 18:33	
Vinyl chloride	ug/L	ND	1.0	04/25/14 18:33	
Xylene (Total)	ug/L	ND	2.0	04/25/14 18:33	
1,2-Dichloroethane-d4 (S)	%	97	70-130	04/25/14 18:33	
4-Bromofluorobenzene (S)	%	100	70-130	04/25/14 18:33	
Toluene-d8 (S)	%	103	70-130	04/25/14 18:33	

LABORATORY CONTROL SAMPLE: 1185939

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.7	103	70-130	
1,1,1-Trichloroethane	ug/L	50	48.9	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	51.4	103	70-130	
1,1,2-Trichloroethane	ug/L	50	50.3	101	70-130	
1,1-Dichloroethane	ug/L	50	51.9	104	70-130	
1,1-Dichloroethene	ug/L	50	49.8	100	70-132	
1,2,3-Trichloropropane	ug/L	50	52.1	104	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	46.5	93	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.6	101	70-130	
1,2-Dichlorobenzene	ug/L	50	50.7	101	70-130	
1,2-Dichloroethane	ug/L	50	55.8	112	70-130	
1,2-Dichloropropane	ug/L	50	51.1	102	70-130	
1,4-Dichlorobenzene	ug/L	50	49.5	99	70-130	
2-Butanone (MEK)	ug/L	100	119	119	70-145	
2-Hexanone	ug/L	100	89.1	89	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.0	94	70-140	
Acetone	ug/L	100	110	110	50-175	
Acrylonitrile	ug/L	250	290	116	70-143	
Benzene	ug/L	50	53.5	107	70-130	
Bromochloromethane	ug/L	50	48.0	96	70-130	
Bromodichloromethane	ug/L	50	50.0	100	70-130	
Bromoform	ug/L	50	52.1	104	70-130	
Bromomethane	ug/L	50	47.3	95	54-130	
Carbon disulfide	ug/L	50	55.3	111	70-131	
Carbon tetrachloride	ug/L	50	48.5	97	70-132	
Chlorobenzene	ug/L	50	48.9	98	70-130	
Chloroethane	ug/L	50	37.9	76	64-134	
Chloroform	ug/L	50	51.3	103	70-130	
Chloromethane	ug/L	50	45.8	92	64-130	
cis-1,2-Dichloroethene	ug/L	50	54.1	108	70-131	
cis-1,3-Dichloropropene	ug/L	50	47.7	95	70-130	
Dibromochloromethane	ug/L	50	48.6	97	70-130	

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(828)254-7176

QUALITY CONTROL DATA

Project: White Oak LF MWs
Pace Project No.: 92198744

LABORATORY CONTROL SAMPLE: 1185939

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromomethane	ug/L	50	47.5	95	70-131	
Ethylbenzene	ug/L	50	53.7	107	70-130	
Iodomethane	ug/L	100	93.7	94	49-180	
m&p-Xylene	ug/L	100	108	108	70-130	
Methylene Chloride	ug/L	50	50.7	101	63-130	
o-Xylene	ug/L	50	53.2	106	70-130	
Styrene	ug/L	50	55.2	110	70-130	
Tetrachloroethene	ug/L	50	51.5	103	70-130	
Toluene	ug/L	50	53.3	107	70-130	
trans-1,2-Dichloroethene	ug/L	50	54.3	109	70-130	
trans-1,3-Dichloropropene	ug/L	50	49.0	98	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	56.9	114	70-141	
Trichloroethene	ug/L	50	50.5	101	70-130	
Trichlorofluoromethane	ug/L	50	52.4	105	62-133	
Vinyl acetate	ug/L	100	168	168	66-157	F3,L3
Vinyl chloride	ug/L	50	64.9	130	69-130	
Xylene (Total)	ug/L	150	161	107	70-130	
1,2-Dichloroethane-d4 (S)	%			113	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1187063 1187064

Parameter	Units	92198744001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	44.8	43.9	90	88	70-166	2	30	
Benzene	ug/L	ND	50	50	49.0	49.4	98	99	70-148	1	30	
Chlorobenzene	ug/L	ND	50	50	50.5	50.5	101	101	70-146	0	30	
Toluene	ug/L	ND	50	50	45.5	46.4	91	93	70-155	2	30	
Trichloroethene	ug/L	ND	50	50	50.5	51.1	101	102	69-151	1	30	
1,2-Dichloroethane-d4 (S)	%						106	106	70-130			
4-Bromofluorobenzene (S)	%						103	101	70-130			
Toluene-d8 (S)	%						97	97	70-130			

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(828)254-7176

QUALIFIERS

Project: White Oak LF MWs
Pace Project No.: 92198744

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

F3	The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

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(828)254-7176

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: White Oak LF MWs
Pace Project No.: 92198744

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92198744001	**MW-17**		FLD/		
92198744001	**MW-17**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198744003	**Equip Blank**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198744001	**MW-17**	EPA 8260	MSV/26591		
92198744002	**Trip Blank**	EPA 8260	MSV/26591		
92198744003	**Equip Blank**	EPA 8260	MSV/26591		

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Pace Analytical www.pacelabs.com	Sample Condition Upon Receipt (SCUR)	Document Revised: June 4, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.11	Issuing Authorities: Pace Asheville Quality Office

Client Name: Hayward

Where Received: ☐ Huntersville ☐ Asheville ☐ Eden ☐ Raleigh

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_____

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

IR Gun #2- 80344039

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 4.9 C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KDB 4/24/14

		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.
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.
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: AMB Date: 4-24-14

SRF Review: LC Date: 4-24-14

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)

Place label here

OR

Handwrite project number (if no label available)

92198744

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

1697655

Section A Required Client Information:

Company: Hardwood Walk, LLC OAK
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Steve King
Copy To: SAN TRK
Purchase Order No.:
Project Name: Wh. k OAK LF Mw 3
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 4493-1

REGULATORY AGENCY

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

Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): Fe	Sulfate	H_2S Total	VOC	Mn Total	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-17					4.24.14	1455		4			1	3					Y	Y	Y	X			001
2																								
3	TRIP BLK								2				2							X				002
4	EQUIP BLK								3			1	2							X	X			003
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		4.24.14	1600	[signature]	4.24.14	1600				
	[signature]	4.24.14	1700	[signature]	4/24/14	1700	4.9	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK A. SWEEN

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4.24.14

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

ORIGINAL

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

May 01, 2014

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

RE: Project: WHITE OAK SW'S
Pace Project No.: 92198746

Dear Mr. Martin:
Enclosed are the analytical results for sample(s) received by the laboratory on April 24, 2014. 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,

Jon D Bradley
jon.bradley@pacelabs.com
Project Manager

Enclosures

cc: Will Martin, Santek Environmental

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CERTIFICATIONS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

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 Dr., 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

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SAMPLE SUMMARY

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92198746001	**SW-1**	Water	04/24/14 12:30	04/24/14 17:00
92198746002	**SW-2**	Water	04/24/14 13:35	04/24/14 17:00
92198746003	**SW-3**	Water	04/24/14 13:50	04/24/14 17:00
92198746004	**SW-5**	Water	04/24/14 13:15	04/24/14 17:00
92198746005	**SW-6**	Water	04/24/14 11:00	04/24/14 17:00
92198746006	**SW-7**	Water	04/24/14 10:40	04/24/14 17:00

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SAMPLE ANALYTE COUNT

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92198746001	**SW-1**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198746002	**SW-2**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198746003	**SW-3**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198746004	**SW-5**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198746005	**SW-6**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198746006	**SW-7**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-1 **Lab ID: 92198746001** Collected: 04/24/14 12:30 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:20		
Collected Date	**04/24/14**				1		04/25/14 11:20		
Collected Time	**12:30**				1		04/25/14 11:20		
Field pH	**7.3**	Std. Units	0.10	0.10	1		04/25/14 11:20		
Field Temperature	**14.6**	deg C	0.50	0.50	1		04/25/14 11:20		
Field Specific Conductance	**183**	umhos/cm	1.0	1.0	1		04/25/14 11:20		
Turbidity	**3.64**	NTU	1.0	1.0	1		04/25/14 11:20		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7440-38-2	
Barium	**142**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:33	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:33	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:33	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 02:33	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:33	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:33	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 19:09	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 19:09	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 19:09	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 19:09	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 19:09	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 19:09	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 19:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 19:09	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 19:09	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 19:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 19:09	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 19:09	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 19:09	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 19:09	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 19:09	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 19:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 19:09	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		04/25/14 19:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 19:09	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 19:09	106-46-7	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-1 **Lab ID: 92198746001** Collected: 04/24/14 12:30 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 19:09	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 19:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 19:09	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 19:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 19:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 19:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 19:09	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 19:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 19:09	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 19:09	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 19:09	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 19:09	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 19:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 19:09	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 19:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 19:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 19:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 19:09	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 19:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 19:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 19:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 19:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 19:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 19:09	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 19:09	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 19:09	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 19:09	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 19:09	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 19:09	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		04/25/14 19:09	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		04/25/14 19:09	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/25/14 19:09	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-2 **Lab ID: 92198746002** Collected: 04/24/14 13:35 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:20		
Collected Date	**04/24/14**				1		04/25/14 11:20		
Collected Time	**13:35**				1		04/25/14 11:20		
Field pH	**6.4**	Std. Units	0.10	0.10	1		04/25/14 11:20		
Field Temperature	**14.1**	deg C	0.50	0.50	1		04/25/14 11:20		
Field Specific Conductance	**285**	umhos/cm	1.0	1.0	1		04/25/14 11:20		
Turbidity	**2.67**	NTU	1.0	1.0	1		04/25/14 11:20		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7440-38-2	
Barium	**187**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:36	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:36	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7440-47-3	
Cobalt	**6.4**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7439-92-1	
Nickel	**5.5**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:36	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 02:36	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:36	7440-62-2	
Zinc	**23.8**	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:36	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 19:28	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 19:28	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 19:28	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 19:28	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 19:28	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 19:28	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 19:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 19:28	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 19:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 19:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 19:28	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 19:28	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 19:28	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 19:28	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 19:28	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 19:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 19:28	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		04/25/14 19:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 19:28	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 19:28	106-46-7	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-2 **Lab ID: 92198746002** Collected: 04/24/14 13:35 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 19:28	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 19:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 19:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 19:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 19:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 19:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 19:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 19:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 19:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 19:28	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 19:28	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 19:28	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 19:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 19:28	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 19:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 19:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 19:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 19:28	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 19:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 19:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 19:28	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 19:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 19:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 19:28	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 19:28	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 19:28	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 19:28	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 19:28	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 19:28	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/25/14 19:28	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		04/25/14 19:28	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/25/14 19:28	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-3 **Lab ID: 92198746003** Collected: 04/24/14 13:50 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:21		
Collected Date	**04/24/14**				1		04/25/14 11:21		
Collected Time	**13:50**				1		04/25/14 11:21		
Field pH	**7.7**	Std. Units	0.10	0.10	1		04/25/14 11:21		
Field Temperature	**17.9**	deg C	0.50	0.50	1		04/25/14 11:21		
Field Specific Conductance	**294**	umhos/cm	1.0	1.0	1		04/25/14 11:21		
Turbidity	**5.10**	NTU	1.0	1.0	1		04/25/14 11:21		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7440-38-2	
Barium	**133**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:40	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:40	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:40	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 02:40	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:40	7440-62-2	
Zinc	**10.8**	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:40	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 19:46	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 19:46	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 19:46	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 19:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 19:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 19:46	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 19:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 19:46	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 19:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 19:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 19:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 19:46	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 19:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 19:46	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 19:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 19:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 19:46	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		04/25/14 19:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 19:46	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 19:46	106-46-7	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-3 **Lab ID: 92198746003** Collected: 04/24/14 13:50 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 19:46	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 19:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 19:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 19:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 19:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 19:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 19:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 19:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 19:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 19:46	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 19:46	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 19:46	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 19:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 19:46	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 19:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 19:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 19:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 19:46	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 19:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 19:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 19:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 19:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 19:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 19:46	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 19:46	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 19:46	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 19:46	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 19:46	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 19:46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		04/25/14 19:46	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		04/25/14 19:46	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/25/14 19:46	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-5 **Lab ID: 92198746004** Collected: 04/24/14 13:15 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:22		
Collected Date	**04/24/14**				1		04/25/14 11:22		
Collected Time	**13:15**				1		04/25/14 11:22		
Field pH	**6.2**	Std. Units	0.10	0.10	1		04/25/14 11:22		
Field Temperature	**15.9**	deg C	0.50	0.50	1		04/25/14 11:22		
Field Specific Conductance	**262**	umhos/cm	1.0	1.0	1		04/25/14 11:22		
Turbidity	**4.46**	NTU	1.0	1.0	1		04/25/14 11:22		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7440-38-2	
Barium	**125**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:43	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:43	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7440-47-3	
Cobalt	**9.7**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:43	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 02:43	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:43	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:43	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 20:05	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 20:05	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 20:05	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 20:05	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 20:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 20:05	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 20:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 20:05	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 20:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 20:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 20:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 20:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 20:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 20:05	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 20:05	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 20:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 20:05	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		04/25/14 20:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 20:05	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 20:05	106-46-7	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-5 **Lab ID: 92198746004** Collected: 04/24/14 13:15 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 20:05	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 20:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 20:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 20:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 20:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 20:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 20:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 20:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 20:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 20:05	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 20:05	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 20:05	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 20:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 20:05	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 20:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 20:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 20:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 20:05	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 20:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 20:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 20:05	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 20:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 20:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 20:05	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 20:05	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 20:05	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 20:05	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 20:05	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 20:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/25/14 20:05	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		04/25/14 20:05	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		04/25/14 20:05	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-6 **Lab ID: 92198746005** Collected: 04/24/14 11:00 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:22		
Collected Date	**04/24/14**				1		04/25/14 11:22		
Collected Time	**11:00**				1		04/25/14 11:22		
Field pH	**6.6**	Std. Units	0.10	0.10	1		04/25/14 11:22		
Field Temperature	**13.8**	deg C	0.50	0.50	1		04/25/14 11:22		
Field Specific Conductance	**42**	umhos/cm	1.0	1.0	1		04/25/14 11:22		
Turbidity	**3.74**	NTU	1.0	1.0	1		04/25/14 11:22		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7440-38-2	
Barium	**38.5**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:46	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 02:46	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:46	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 02:46	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 02:46	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 02:46	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 20:23	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 20:23	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 20:23	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 20:23	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 20:23	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 20:23	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 20:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 20:23	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 20:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 20:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 20:23	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 20:23	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 20:23	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 20:23	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 20:23	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 20:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 20:23	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		04/25/14 20:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 20:23	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 20:23	106-46-7	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-6 **Lab ID: 92198746005** Collected: 04/24/14 11:00 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 20:23	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 20:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 20:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 20:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 20:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 20:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 20:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 20:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 20:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 20:23	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 20:23	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 20:23	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 20:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 20:23	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 20:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 20:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 20:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 20:23	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 20:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 20:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 20:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 20:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 20:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 20:23	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 20:23	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 20:23	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 20:23	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 20:23	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 20:23	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		04/25/14 20:23	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		04/25/14 20:23	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/25/14 20:23	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-7 **Lab ID: 92198746006** Collected: 04/24/14 10:40 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:23		
Collected Date	**04/24/14**				1		04/25/14 11:23		
Collected Time	**10:40**				1		04/25/14 11:23		
Field pH	**6.8**	Std. Units	0.10	0.10	1		04/25/14 11:23		
Field Temperature	**12.1**	deg C	0.50	0.50	1		04/25/14 11:23		
Field Specific Conductance	**6.6**	umhos/cm	1.0	1.0	1		04/25/14 11:23		
Turbidity	**3.07**	NTU	1.0	1.0	1		04/25/14 11:23		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7440-38-2	
Barium	**35.5**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:18	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:18	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:18	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:18	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:18	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:18	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 20:41	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 20:41	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 20:41	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 20:41	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 20:41	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 20:41	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 20:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 20:41	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 20:41	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 20:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 20:41	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 20:41	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 20:41	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 20:41	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 20:41	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 20:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 20:41	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		04/25/14 20:41	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 20:41	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 20:41	106-46-7	

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ANALYTICAL RESULTS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Sample: SW-7 **Lab ID: 92198746006** Collected: 04/24/14 10:40 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 20:41	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 20:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 20:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 20:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 20:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 20:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 20:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 20:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 20:41	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 20:41	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 20:41	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 20:41	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 20:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 20:41	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 20:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 20:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 20:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 20:41	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 20:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 20:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 20:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 20:41	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 20:41	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 20:41	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 20:41	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 20:41	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 20:41	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 20:41	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 20:41	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/25/14 20:41	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		04/25/14 20:41	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		04/25/14 20:41	2037-26-5	

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QUALITY CONTROL DATA

Project: WHITE OAK SW'S
Pace Project No.: 92198746

QC Batch: MPRP/15790 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92198746001, 92198746002, 92198746003, 92198746004, 92198746005, 92198746006

METHOD BLANK: 1185462 Matrix: Water
Associated Lab Samples: 92198746001, 92198746002, 92198746003, 92198746004, 92198746005, 92198746006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	04/30/14 02:06	
Arsenic	ug/L	ND	10.0	04/30/14 02:06	
Barium	ug/L	ND	5.0	04/30/14 02:06	
Beryllium	ug/L	ND	1.0	04/30/14 02:06	
Cadmium	ug/L	ND	1.0	04/30/14 02:06	
Chromium	ug/L	ND	5.0	04/30/14 02:06	
Cobalt	ug/L	ND	5.0	04/30/14 02:06	
Copper	ug/L	ND	5.0	04/30/14 02:06	
Lead	ug/L	ND	5.0	04/30/14 02:06	
Nickel	ug/L	ND	5.0	04/30/14 02:06	
Selenium	ug/L	ND	10.0	04/30/14 02:06	
Silver	ug/L	ND	5.0	04/30/14 02:06	
Thallium	ug/L	ND	5.4	04/30/14 02:06	
Vanadium	ug/L	ND	5.0	04/30/14 02:06	
Zinc	ug/L	ND	10.0	04/30/14 02:06	

LABORATORY CONTROL SAMPLE: 1185463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	467	93	80-120	
Arsenic	ug/L	500	453	91	80-120	
Barium	ug/L	500	454	91	80-120	
Beryllium	ug/L	500	455	91	80-120	
Cadmium	ug/L	500	457	91	80-120	
Chromium	ug/L	500	464	93	80-120	
Cobalt	ug/L	500	463	93	80-120	
Copper	ug/L	500	455	91	80-120	
Lead	ug/L	500	462	92	80-120	
Nickel	ug/L	500	457	91	80-120	
Selenium	ug/L	500	460	92	80-120	
Silver	ug/L	250	228	91	80-120	
Thallium	ug/L	500	446	89	80-120	
Vanadium	ug/L	500	454	91	80-120	
Zinc	ug/L	500	458	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1185464 1185465

Parameter	Units	92198744001 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	485	478	97	95	75-125	2	25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WHITE OAK SW'S
Pace Project No.: 92198746

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1185464 1185465

Parameter	Units	92198744001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	471	460	94	92	75-125	2	25	
Barium	ug/L	189	500	500	648	640	92	90	75-125	1	25	
Beryllium	ug/L	ND	500	500	468	463	94	93	75-125	1	25	
Cadmium	ug/L	ND	500	500	470	462	94	92	75-125	2	25	
Chromium	ug/L	ND	500	500	476	467	95	93	75-125	2	25	
Cobalt	ug/L	ND	500	500	472	464	94	93	75-125	2	25	
Copper	ug/L	ND	500	500	469	459	94	92	75-125	2	25	
Lead	ug/L	ND	500	500	472	463	94	92	75-125	2	25	
Nickel	ug/L	ND	500	500	466	458	92	91	75-125	2	25	
Selenium	ug/L	ND	500	500	474	466	95	93	75-125	2	25	
Silver	ug/L	ND	250	250	235	230	94	92	75-125	2	25	
Thallium	ug/L	ND	500	500	456	450	91	90	75-125	1	25	
Vanadium	ug/L	ND	500	500	468	461	93	92	75-125	2	25	
Zinc	ug/L	10.1	500	500	474	463	93	91	75-125	2	25	

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QUALITY CONTROL DATA

Project: WHITE OAK SW'S
Pace Project No.: 92198746

QC Batch: MSV/26582 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92198746001, 92198746002, 92198746003, 92198746004, 92198746005, 92198746006

METHOD BLANK: 1185768 Matrix: Water
Associated Lab Samples: 92198746001, 92198746002, 92198746003, 92198746004, 92198746005, 92198746006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1,1-Trichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1-Dichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1-Dichloroethene	ug/L	ND	1.0	04/25/14 18:51	
1,2,3-Trichloropropane	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/25/14 18:51	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dichlorobenzene	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dichloropropane	ug/L	ND	1.0	04/25/14 18:51	
1,4-Dichlorobenzene	ug/L	ND	1.0	04/25/14 18:51	
2-Butanone (MEK)	ug/L	ND	5.0	04/25/14 18:51	
2-Hexanone	ug/L	ND	5.0	04/25/14 18:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	04/25/14 18:51	
Acetone	ug/L	ND	25.0	04/25/14 18:51	
Acrylonitrile	ug/L	ND	10.0	04/25/14 18:51	
Benzene	ug/L	ND	1.0	04/25/14 18:51	
Bromochloromethane	ug/L	ND	1.0	04/25/14 18:51	
Bromodichloromethane	ug/L	ND	1.0	04/25/14 18:51	
Bromoform	ug/L	ND	1.0	04/25/14 18:51	
Bromomethane	ug/L	ND	2.0	04/25/14 18:51	
Carbon disulfide	ug/L	ND	2.0	04/25/14 18:51	
Carbon tetrachloride	ug/L	ND	1.0	04/25/14 18:51	
Chlorobenzene	ug/L	ND	1.0	04/25/14 18:51	
Chloroethane	ug/L	ND	1.0	04/25/14 18:51	
Chloroform	ug/L	ND	1.0	04/25/14 18:51	
Chloromethane	ug/L	ND	1.0	04/25/14 18:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/25/14 18:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	04/25/14 18:51	
Dibromochloromethane	ug/L	ND	1.0	04/25/14 18:51	
Dibromomethane	ug/L	ND	1.0	04/25/14 18:51	
Ethylbenzene	ug/L	ND	1.0	04/25/14 18:51	
Iodomethane	ug/L	ND	5.0	04/25/14 18:51	
m&p-Xylene	ug/L	ND	2.0	04/25/14 18:51	
Methylene Chloride	ug/L	ND	2.0	04/25/14 18:51	
o-Xylene	ug/L	ND	1.0	04/25/14 18:51	
Styrene	ug/L	ND	1.0	04/25/14 18:51	
Tetrachloroethene	ug/L	ND	1.0	04/25/14 18:51	
Toluene	ug/L	ND	1.0	04/25/14 18:51	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/25/14 18:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	04/25/14 18:51	

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QUALITY CONTROL DATA

Project: WHITE OAK SW'S
Pace Project No.: 92198746

METHOD BLANK: 1185768 Matrix: Water
Associated Lab Samples: 92198746001, 92198746002, 92198746003, 92198746004, 92198746005, 92198746006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	04/25/14 18:51	
Trichloroethene	ug/L	ND	1.0	04/25/14 18:51	
Trichlorofluoromethane	ug/L	ND	1.0	04/25/14 18:51	
Vinyl acetate	ug/L	ND	2.0	04/25/14 18:51	
Vinyl chloride	ug/L	ND	1.0	04/25/14 18:51	
Xylene (Total)	ug/L	ND	2.0	04/25/14 18:51	
1,2-Dichloroethane-d4 (S)	%	107	70-130	04/25/14 18:51	
4-Bromofluorobenzene (S)	%	99	70-130	04/25/14 18:51	
Toluene-d8 (S)	%	102	70-130	04/25/14 18:51	

LABORATORY CONTROL SAMPLE: 1185769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.8	104	70-130	
1,1,1-Trichloroethane	ug/L	50	48.2	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.6	105	70-130	
1,1,2-Trichloroethane	ug/L	50	50.4	101	70-130	
1,1-Dichloroethane	ug/L	50	53.2	106	70-130	
1,1-Dichloroethene	ug/L	50	51.7	103	70-132	
1,2,3-Trichloropropane	ug/L	50	52.1	104	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.5	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.8	102	70-130	
1,2-Dichlorobenzene	ug/L	50	50.1	100	70-130	
1,2-Dichloroethane	ug/L	50	55.3	111	70-130	
1,2-Dichloropropane	ug/L	50	51.7	103	70-130	
1,4-Dichlorobenzene	ug/L	50	49.2	98	70-130	
2-Butanone (MEK)	ug/L	100	121	121	70-145	
2-Hexanone	ug/L	100	91.3	91	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.7	92	70-140	
Acetone	ug/L	100	113	113	50-175	
Acrylonitrile	ug/L	250	282	113	70-143	
Benzene	ug/L	50	53.4	107	70-130	
Bromochloromethane	ug/L	50	49.3	99	70-130	
Bromodichloromethane	ug/L	50	49.5	99	70-130	
Bromoform	ug/L	50	51.3	103	70-130	
Bromomethane	ug/L	50	38.4	77	54-130	
Carbon disulfide	ug/L	50	57.6	115	70-131	
Carbon tetrachloride	ug/L	50	47.7	95	70-132	
Chlorobenzene	ug/L	50	49.3	99	70-130	
Chloroethane	ug/L	50	23.1	46	64-134	L0
Chloroform	ug/L	50	51.4	103	70-130	
Chloromethane	ug/L	50	46.8	94	64-130	
cis-1,2-Dichloroethene	ug/L	50	55.2	110	70-131	
cis-1,3-Dichloropropene	ug/L	50	47.6	95	70-130	
Dibromochloromethane	ug/L	50	49.0	98	70-130	

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QUALITY CONTROL DATA

Project: WHITE OAK SW'S
Pace Project No.: 92198746

LABORATORY CONTROL SAMPLE: 1185769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromomethane	ug/L	50	46.1	92	70-131	
Ethylbenzene	ug/L	50	53.4	107	70-130	
Iodomethane	ug/L	100	100	100	49-180	
m&p-Xylene	ug/L	100	108	108	70-130	
Methylene Chloride	ug/L	50	52.5	105	63-130	
o-Xylene	ug/L	50	53.9	108	70-130	
Styrene	ug/L	50	55.5	111	70-130	
Tetrachloroethene	ug/L	50	51.5	103	70-130	
Toluene	ug/L	50	52.1	104	70-130	
trans-1,2-Dichloroethene	ug/L	50	56.0	112	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.6	97	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	61.1	122	70-141	
Trichloroethene	ug/L	50	49.5	99	70-130	
Trichlorofluoromethane	ug/L	50	34.4	69	62-133	
Vinyl acetate	ug/L	100	158	158	66-157	F3,L3
Vinyl chloride	ug/L	50	62.5	125	69-130	
Xylene (Total)	ug/L	150	162	108	70-130	
1,2-Dichloroethane-d4 (S)	%			107	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1185770 1185771

Parameter	Units	92198746006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	51.2	54.6	102	109	70-166	6	30	
Benzene	ug/L	ND	50	50	59.9	62.6	120	125	70-148	4	30	
Chlorobenzene	ug/L	ND	50	50	56.9	57.7	114	115	70-146	1	30	
Toluene	ug/L	ND	50	50	55.8	57.7	112	115	70-155	3	30	
Trichloroethene	ug/L	ND	50	50	60.6	62.4	121	125	69-151	3	30	
1,2-Dichloroethane-d4 (S)	%						99	101	70-130			
4-Bromofluorobenzene (S)	%						101	98	70-130			
Toluene-d8 (S)	%						100	99	70-130			

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(828)254-7176

QUALIFIERS

Project: WHITE OAK SW'S
Pace Project No.: 92198746

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

F3	The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHITE OAK SW'S
Pace Project No.: 92198746

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92198746001	**SW-1**		FLD/		
92198746002	**SW-2**		FLD/		
92198746003	**SW-3**		FLD/		
92198746004	**SW-5**		FLD/		
92198746005	**SW-6**		FLD/		
92198746006	**SW-7**		FLD/		
92198746001	**SW-1**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198746002	**SW-2**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198746003	**SW-3**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198746004	**SW-5**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198746005	**SW-6**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198746006	**SW-7**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198746001	**SW-1**	EPA 8260	MSV/26582		
92198746002	**SW-2**	EPA 8260	MSV/26582		
92198746003	**SW-3**	EPA 8260	MSV/26582		
92198746004	**SW-5**	EPA 8260	MSV/26582		
92198746005	**SW-6**	EPA 8260	MSV/26582		
92198746006	**SW-7**	EPA 8260	MSV/26582		

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Pace Analytical www.pacelabs.com	Receipt (SCUR)	Page 1 of 2
	Document No.: F-ASV-CS-003-rev.11	Issuing Authorities: Pace Asheville Quality Office

Client Name: Hayward

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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_____

Circle Thermometer Used: IR Gun#3 -130265963 IR Gun #2- 80344039 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 1.3 C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: AB 4/24/14

		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.
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: WW		
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.
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:	MVD	Date:	4-24-14
SRF Review:	AMB	Date:	4-25-14

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)

Place label here

OR

Handwrite project number (if no label available)

92198746

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 4 of 4

1697653

Section A Required Client Information:
Company: Hayworth Co
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:
Report To: Steve King
Copy To: Sandra
Purchase Order No.:
Project Name: White Oak LF SW-3
Project Number:

Section C Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 4493-1

REGULATORY AGENCY
NPDES GROUND WATER DRINKING WATER
UST ~~RCRA~~ OTHER
Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test: Fe	Mn	Mercury	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SW-1				1230	4-24-14	[illegible]		4			1	3					X	X	X		92198746 001
2	SW-2						1335		4			1	3					X	X	X		002
3	SW-3						1350		4			1	3					X	X	X		003
4	SW-5						1315		4			1	3					X	X	X		004
5	SW-6						1100		4			1	3					X	X	X		005
6	SW-7						1040		4			1	3					X	X	X		006
7	~~Leak~~																					
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		4-24-14	1600	[signature]	4-24-14	1600				
	[signature] Pace	4-24-14	1700	[signature]	4/24/14	1700	1.5	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 C. SUMNER
SIGNATURE of SAMPLER: [signature] Pace
DATE Signed (MM/DD/YY): 4-24-14

*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.

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

May 01, 2014

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

RE: Project: WHITE OAK MW'S
Pace Project No.: 92198747

Dear Mr. Martin:
Enclosed are the analytical results for sample(s) received by the laboratory on April 24, 2014. 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,

Jon D Bradley
jon.bradley@pacelabs.com
Project Manager

Enclosures

cc: Will Martin, Santek Environmental

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CERTIFICATIONS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

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 Dr., 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

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SAMPLE SUMMARY

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92198747001	**MW-1A**	Water	04/24/14 11:30	04/24/14 17:00
92198747002	**MW-2**	Water	04/24/14 11:45	04/24/14 17:00
92198747003	**MW-2D**	Water	04/24/14 12:00	04/24/14 17:00
92198747004	**MW-3R**	Water	04/24/14 12:45	04/24/14 17:00
92198747005	**MW-3DR**	Water	04/24/14 13:00	04/24/14 17:00
92198747006	**MW-4A**	Water	04/24/14 14:40	04/24/14 17:00
92198747007	**MW-8**	Water	04/24/14 12:10	04/24/14 17:00
92198747008	**MW-11S**	Water	04/24/14 09:50	04/24/14 17:00
92198747009	**MW-11D**	Water	04/24/14 10:00	04/24/14 17:00
92198747010	**MW-14**	Water	04/24/14 15:20	04/24/14 17:00
92198747011	**MW-15**	Water	04/24/14 10:30	04/24/14 17:00
92198747012	**MW-16**	Water	04/24/14 14:30	04/24/14 17:00

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SAMPLE ANALYTE COUNT

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92198747001	**MW-1A**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747002	**MW-2**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747003	**MW-2D**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747004	**MW-3R**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747005	**MW-3DR**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747006	**MW-4A**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747007	**MW-8**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747008	**MW-11S**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747009	**MW-11D**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747010	**MW-14**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747011	**MW-15**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C
92198747012	**MW-16**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-1A **Lab ID: 92198747001** Collected: 04/24/14 11:30 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:25		
Collected Date	**04/24/14**				1		04/25/14 11:25		
Collected Time	**11:30**				1		04/25/14 11:25		
Field pH	**6.3**	Std. Units	0.10	0.10	1		04/25/14 11:25		
Field Temperature	**14.5**	deg C	0.50	0.50	1		04/25/14 11:25		
Static Water Level	**17.73**	feet			1		04/25/14 11:25		
Field Specific Conductance	**126**	umhos/cm	1.0	1.0	1		04/25/14 11:25		
Turbidity	**1.82**	NTU	1.0	1.0	1		04/25/14 11:25		
Odor	**NONE**				1		04/25/14 11:25		
Appearance	**CLEAR**				1		04/25/14 11:25		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7440-38-2	
Barium	**148**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:21	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:21	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:21	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:21	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:21	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:21	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 21:00	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 21:00	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 21:00	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 21:00	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 21:00	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 21:00	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 21:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 21:00	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 21:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 21:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 21:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 21:00	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 21:00	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 21:00	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 21:00	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 21:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 21:00	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-1A **Lab ID: 92198747001** Collected: 04/24/14 11:30 Received: 04/24/14 17:00 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		04/25/14 21:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 21:00	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 21:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 21:00	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 21:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 21:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 21:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 21:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 21:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 21:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 21:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 21:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 21:00	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 21:00	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 21:00	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 21:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 21:00	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 21:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 21:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 21:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 21:00	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 21:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 21:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 21:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 21:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 21:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 21:00	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 21:00	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 21:00	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 21:00	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 21:00	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 21:00	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		04/25/14 21:00	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		04/25/14 21:00	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/25/14 21:00	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-2 **Lab ID: 92198747002** Collected: 04/24/14 11:45 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:26		
Collected Date	**04/24/14**				1		04/25/14 11:26		
Collected Time	**11:45**				1		04/25/14 11:26		
Field pH	**6.5**	Std. Units	0.10	0.10	1		04/25/14 11:26		
Field Temperature	**15.5**	deg C	0.50	0.50	1		04/25/14 11:26		
Static Water Level	**29.18**	feet			1		04/25/14 11:26		
Field Specific Conductance	**1364**	umhos/cm	1.0	1.0	1		04/25/14 11:26		
Turbidity	**1.49**	NTU	1.0	1.0	1		04/25/14 11:26		
Odor	**NONE**				1		04/25/14 11:26		
Appearance	**CLEAR**				1		04/25/14 11:26		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7440-38-2	
Barium	**941**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:24	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:24	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7440-47-3	
Cobalt	**5.7**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7439-92-1	
Nickel	**9.3**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:24	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:24	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:24	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:24	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 21:18	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 21:18	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 21:18	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 21:18	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 21:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 21:18	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 21:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 21:18	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 21:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 21:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 21:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 21:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 21:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 21:18	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 21:18	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 21:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 21:18	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-2 **Lab ID: 92198747002** Collected: 04/24/14 11:45 Received: 04/24/14 17:00 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		04/25/14 21:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 21:18	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 21:18	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 21:18	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 21:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 21:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 21:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 21:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 21:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 21:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 21:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 21:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 21:18	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 21:18	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 21:18	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 21:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 21:18	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 21:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 21:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 21:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 21:18	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 21:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 21:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 21:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 21:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 21:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 21:18	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 21:18	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 21:18	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 21:18	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 21:18	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 21:18	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		04/25/14 21:18	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		04/25/14 21:18	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/25/14 21:18	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-2D **Lab ID: 92198747003** Collected: 04/24/14 12:00 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:26		
Collected Date	**04/24/14**				1		04/25/14 11:26		
Collected Time	**12:00**				1		04/25/14 11:26		
Field pH	**6.4**	Std. Units	0.10	0.10	1		04/25/14 11:26		
Field Temperature	**15.3**	deg C	0.50	0.50	1		04/25/14 11:26		
Static Water Level	**29.13**	feet			1		04/25/14 11:26		
Field Specific Conductance	**1652**	umhos/cm	1.0	1.0	1		04/25/14 11:26		
Turbidity	**2.86**	NTU	1.0	1.0	1		04/25/14 11:26		
Odor	**NONE**				1		04/25/14 11:26		
Appearance	**CLEAR**				1		04/25/14 11:26		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7440-38-2	
Barium	**1290**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:28	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:28	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7439-92-1	
Nickel	**10.1**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:28	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:28	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:28	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:28	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 21:36	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 21:36	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 21:36	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 21:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 21:36	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 21:36	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 21:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 21:36	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 21:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 21:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 21:36	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 21:36	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 21:36	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 21:36	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 21:36	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 21:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 21:36	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-2D **Lab ID: 92198747003** Collected: 04/24/14 12:00 Received: 04/24/14 17:00 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		04/25/14 21:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 21:36	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 21:36	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 21:36	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 21:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 21:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 21:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 21:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 21:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 21:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 21:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 21:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 21:36	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 21:36	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 21:36	74-88-4	
Methylene Chloride	**2.0**	ug/L	2.0	0.97	1		04/25/14 21:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 21:36	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 21:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 21:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 21:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 21:36	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 21:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 21:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 21:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 21:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 21:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 21:36	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 21:36	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 21:36	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 21:36	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 21:36	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 21:36	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/25/14 21:36	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		04/25/14 21:36	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/25/14 21:36	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-3R **Lab ID: 92198747004** Collected: 04/24/14 12:45 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:27		
Collected Date	**04/24/14**				1		04/25/14 11:27		
Collected Time	**12:45**				1		04/25/14 11:27		
Field pH	**5.8**	Std. Units	0.10	0.10	1		04/25/14 11:27		
Field Temperature	**15.8**	deg C	0.50	0.50	1		04/25/14 11:27		
Static Water Level	**30.24**	feet			1		04/25/14 11:27		
Field Specific Conductance	**517**	umhos/cm	1.0	1.0	1		04/25/14 11:27		
Turbidity	**2.25**	NTU	1.0	1.0	1		04/25/14 11:27		
Odor	**NONE**				1		04/25/14 11:27		
Appearance	**CLEAR**				1		04/25/14 11:27		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7440-38-2	
Barium	**378**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:31	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:31	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7439-92-1	
Nickel	**23.6**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:31	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:31	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:31	7440-62-2	
Zinc	**18.9**	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:31	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 21:55	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 21:55	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 21:55	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 21:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 21:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 21:55	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 21:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 21:55	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 21:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 21:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 21:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 21:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 21:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 21:55	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 21:55	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 21:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 21:55	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-3R **Lab ID: 92198747004** Collected: 04/24/14 12:45 Received: 04/24/14 17:00 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		04/25/14 21:55	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 21:55	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 21:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 21:55	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 21:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 21:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 21:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 21:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 21:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 21:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 21:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 21:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 21:55	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 21:55	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 21:55	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 21:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 21:55	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 21:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 21:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 21:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 21:55	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 21:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 21:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 21:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 21:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 21:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 21:55	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 21:55	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 21:55	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 21:55	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 21:55	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 21:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/25/14 21:55	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		04/25/14 21:55	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/25/14 21:55	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-3DR **Lab ID: 92198747005** Collected: 04/24/14 13:00 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:28		
Collected Date	**04/24/14**				1		04/25/14 11:28		
Collected Time	**13:00**				1		04/25/14 11:28		
Field pH	**5.8**	Std. Units	0.10	0.10	1		04/25/14 11:28		
Field Temperature	**14.2**	deg C	0.50	0.50	1		04/25/14 11:28		
Static Water Level	**35.40**	feet			1		04/25/14 11:28		
Field Specific Conductance	**418**	umhos/cm	1.0	1.0	1		04/25/14 11:28		
Turbidity	**1.24**	NTU	1.0	1.0	1		04/25/14 11:28		
Odor	**NONE**				1		04/25/14 11:28		
Appearance	**CLEAR**				1		04/25/14 11:28		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7440-38-2	
Barium	**248**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:34	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:34	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7439-92-1	
Nickel	**33.9**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:34	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:34	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:34	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:34	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 22:13	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 22:13	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 22:13	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 22:13	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 22:13	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 22:13	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 22:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 22:13	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 22:13	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 22:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 22:13	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 22:13	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 22:13	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 22:13	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 22:13	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 22:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 22:13	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-3DR **Lab ID: 92198747005** Collected: 04/24/14 13:00 Received: 04/24/14 17:00 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		04/25/14 22:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 22:13	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 22:13	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 22:13	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 22:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 22:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 22:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 22:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 22:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 22:13	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 22:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 22:13	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 22:13	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 22:13	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 22:13	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 22:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 22:13	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 22:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 22:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 22:13	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 22:13	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 22:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 22:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 22:13	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 22:13	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 22:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 22:13	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 22:13	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 22:13	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 22:13	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 22:13	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 22:13	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		04/25/14 22:13	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		04/25/14 22:13	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/25/14 22:13	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-4A **Lab ID: 92198747006** Collected: 04/24/14 14:40 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:29		
Collected Date	**04/24/14**				1		04/25/14 11:29		
Collected Time	**14:40**				1		04/25/14 11:29		
Field pH	**8.3**	Std. Units	0.10	0.10	1		04/25/14 11:29		
Field Temperature	**16.0**	deg C	0.50	0.50	1		04/25/14 11:29		
Static Water Level	**43.61**	feet			1		04/25/14 11:29		
Field Specific Conductance	**147**	umhos/cm	1.0	1.0	1		04/25/14 11:29		
Turbidity	**1.51**	NTU	1.0	1.0	1		04/25/14 11:29		
Odor	**NONE**				1		04/25/14 11:29		
Appearance	**CLEAR**				1		04/25/14 11:29		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7440-38-2	
Barium	**8.3**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:37	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:37	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:37	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:37	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:37	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:37	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 22:31	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 22:31	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 22:31	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 22:31	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 22:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 22:31	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 22:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 22:31	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 22:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 22:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 22:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 22:31	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 22:31	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 22:31	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 22:31	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 22:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 22:31	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-4A **Lab ID: 92198747006** Collected: 04/24/14 14:40 Received: 04/24/14 17:00 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		04/25/14 22:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 22:31	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 22:31	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 22:31	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 22:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 22:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 22:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 22:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 22:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 22:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 22:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 22:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 22:31	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 22:31	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 22:31	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 22:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 22:31	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 22:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 22:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 22:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 22:31	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 22:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 22:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 22:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 22:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 22:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 22:31	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 22:31	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 22:31	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 22:31	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 22:31	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 22:31	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		04/25/14 22:31	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		04/25/14 22:31	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/25/14 22:31	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-8 **Lab ID: 92198747007** Collected: 04/24/14 12:10 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:30		
Collected Date	**04/24/14**				1		04/25/14 11:30		
Collected Time	**12:10**				1		04/25/14 11:30		
Field pH	**5.6**	Std. Units	0.10	0.10	1		04/25/14 11:30		
Field Temperature	**15.6**	deg C	0.50	0.50	1		04/25/14 11:30		
Static Water Level	**29.76**	feet			1		04/25/14 11:30		
Field Specific Conductance	**919**	umhos/cm	1.0	1.0	1		04/25/14 11:30		
Turbidity	**2.38**	NTU	1.0	1.0	1		04/25/14 11:30		
Odor	**NONE**				1		04/25/14 11:30		
Appearance	**CLEAR**				1		04/25/14 11:30		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7440-38-2	
Barium	**238**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:40	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:40	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:40	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:40	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:40	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:40	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 22:50	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 22:50	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 22:50	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 22:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 22:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 22:50	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 22:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 22:50	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 22:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 22:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 22:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 22:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 22:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 22:50	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 22:50	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 22:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 22:50	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-8 **Lab ID: 92198747007** Collected: 04/24/14 12:10 Received: 04/24/14 17:00 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		04/25/14 22:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 22:50	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 22:50	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 22:50	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 22:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 22:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 22:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 22:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 22:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 22:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 22:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 22:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 22:50	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 22:50	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 22:50	74-88-4	
Methylene Chloride	**2.2**	ug/L	2.0	0.97	1		04/25/14 22:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 22:50	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 22:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 22:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 22:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 22:50	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 22:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 22:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 22:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 22:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 22:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 22:50	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 22:50	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 22:50	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 22:50	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 22:50	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 22:50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/25/14 22:50	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		04/25/14 22:50	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/25/14 22:50	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-11S **Lab ID: 92198747008** Collected: 04/24/14 09:50 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:31		
Collected Date	**04/24/14**				1		04/25/14 11:31		
Collected Time	**09:50**				1		04/25/14 11:31		
Field pH	**6.8**	Std. Units	0.10	0.10	1		04/25/14 11:31		
Field Temperature	**12.9**	deg C	0.50	0.50	1		04/25/14 11:31		
Static Water Level	**78.61**	feet			1		04/25/14 11:31		
Field Specific Conductance	**30**	umhos/cm	1.0	1.0	1		04/25/14 11:31		
Turbidity	**39**	NTU	1.0	1.0	1		04/25/14 11:31		
Odor	**NONE**				1		04/25/14 11:31		
Appearance	**CLOUDY**				1		04/25/14 11:31		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7440-38-2	
Barium	**174**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:52	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:52	7440-43-9	
Chromium	**12.8**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7440-48-4	
Copper	**7.9**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7439-92-1	
Nickel	**7.0**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:52	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:52	7440-28-0	
Vanadium	**22.8**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:52	7440-62-2	
Zinc	**25.8**	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:52	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 23:08	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 23:08	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 23:08	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 23:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 23:08	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 23:08	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 23:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 23:08	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 23:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 23:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 23:08	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 23:08	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 23:08	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 23:08	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 23:08	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 23:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 23:08	106-93-4	

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(828)254-7176

ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-11S **Lab ID: 92198747008** Collected: 04/24/14 09:50 Received: 04/24/14 17:00 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		04/25/14 23:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 23:08	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 23:08	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 23:08	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 23:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 23:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 23:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 23:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 23:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 23:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 23:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 23:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 23:08	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 23:08	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 23:08	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 23:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 23:08	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 23:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 23:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 23:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 23:08	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 23:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 23:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 23:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 23:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 23:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 23:08	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 23:08	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 23:08	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 23:08	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 23:08	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 23:08	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/25/14 23:08	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		04/25/14 23:08	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/25/14 23:08	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-11D **Lab ID: 92198747009** Collected: 04/24/14 10:00 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:32		
Collected Date	**04/24/14**				1		04/25/14 11:32		
Collected Time	**10:00**				1		04/25/14 11:32		
Field pH	**7.0**	Std. Units	0.10	0.10	1		04/25/14 11:32		
Field Temperature	**13.8**	deg C	0.50	0.50	1		04/25/14 11:32		
Static Water Level	**79.51**	feet			1		04/25/14 11:32		
Field Specific Conductance	**48**	umhos/cm	1.0	1.0	1		04/25/14 11:32		
Turbidity	**1.43**	NTU	1.0	1.0	1		04/25/14 11:32		
Odor	**NONE**				1		04/25/14 11:32		
Appearance	**CLEAR**				1		04/25/14 11:32		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7440-38-2	
Barium	**17.7**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:55	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:55	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:55	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:55	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:55	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:55	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 23:26	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 23:26	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 23:26	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 23:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 23:26	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 23:26	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 23:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 23:26	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 23:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 23:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 23:26	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 23:26	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 23:26	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 23:26	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 23:26	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 23:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 23:26	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-11D **Lab ID: 92198747009** Collected: 04/24/14 10:00 Received: 04/24/14 17:00 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		04/25/14 23:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 23:26	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 23:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 23:26	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 23:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 23:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 23:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 23:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 23:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 23:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 23:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 23:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 23:26	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 23:26	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 23:26	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 23:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 23:26	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 23:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 23:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 23:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 23:26	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 23:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 23:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 23:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 23:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 23:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 23:26	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 23:26	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 23:26	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 23:26	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 23:26	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 23:26	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/25/14 23:26	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		04/25/14 23:26	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		04/25/14 23:26	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-14 **Lab ID: 92198747010** Collected: 04/24/14 15:20 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:33		
Collected Date	**04/24/14**				1		04/25/14 11:33		
Collected Time	**15:20**				1		04/25/14 11:33		
Field pH	**6.6**	Std. Units	0.10	0.10	1		04/25/14 11:33		
Field Temperature	**14.9**	deg C	0.50	0.50	1		04/25/14 11:33		
Static Water Level	**97.40**	feet			1		04/25/14 11:33		
Field Specific Conductance	**50**	umhos/cm	1.0	1.0	1		04/25/14 11:33		
Turbidity	**4.85**	NTU	1.0	1.0	1		04/25/14 11:33		
Odor	**NONE**				1		04/25/14 11:33		
Appearance	**CLEAR**				1		04/25/14 11:33		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7440-38-2	
Barium	**127**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:58	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 18:58	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:58	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 18:58	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 18:58	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 18:58	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/25/14 23:45	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/25/14 23:45	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/25/14 23:45	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/25/14 23:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/25/14 23:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/25/14 23:45	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/25/14 23:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/25/14 23:45	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/25/14 23:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/25/14 23:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/25/14 23:45	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/25/14 23:45	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/25/14 23:45	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/25/14 23:45	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/25/14 23:45	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/25/14 23:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/25/14 23:45	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-14 **Lab ID: 92198747010** Collected: 04/24/14 15:20 Received: 04/24/14 17:00 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		04/25/14 23:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/25/14 23:45	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/25/14 23:45	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/25/14 23:45	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/25/14 23:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/25/14 23:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/25/14 23:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/25/14 23:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/25/14 23:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/25/14 23:45	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/25/14 23:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/25/14 23:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/25/14 23:45	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/25/14 23:45	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/25/14 23:45	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/25/14 23:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/25/14 23:45	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/25/14 23:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/25/14 23:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/25/14 23:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/25/14 23:45	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/25/14 23:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/25/14 23:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/25/14 23:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/25/14 23:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/25/14 23:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/25/14 23:45	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/25/14 23:45	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/25/14 23:45	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/25/14 23:45	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/25/14 23:45	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/25/14 23:45	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/25/14 23:45	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		04/25/14 23:45	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		04/25/14 23:45	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-15 **Lab ID: 92198747011** Collected: 04/24/14 10:30 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:34		
Collected Date	**04/24/14**				1		04/25/14 11:34		
Collected Time	**10:30**				1		04/25/14 11:34		
Field pH	**5.8**	Std. Units	0.10	0.10	1		04/25/14 11:34		
Field Temperature	**12.8**	deg C	0.50	0.50	1		04/25/14 11:34		
Static Water Level	**9.10**	feet			1		04/25/14 11:34		
Field Specific Conductance	**57**	umhos/cm	1.0	1.0	1		04/25/14 11:34		
Turbidity	**9.39**	NTU	1.0	1.0	1		04/25/14 11:34		
Odor	**NONE**				1		04/25/14 11:34		
Appearance	**CLEAR**				1		04/25/14 11:34		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7440-38-2	
Barium	**27.5**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 19:01	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 19:01	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7439-92-1	
Nickel	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 19:01	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 19:01	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:01	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 19:01	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/26/14 00:03	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/26/14 00:03	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/26/14 00:03	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/26/14 00:03	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/26/14 00:03	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/26/14 00:03	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/26/14 00:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/26/14 00:03	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/26/14 00:03	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/26/14 00:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/26/14 00:03	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/26/14 00:03	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/26/14 00:03	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/26/14 00:03	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/26/14 00:03	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/14 00:03	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/26/14 00:03	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-15 **Lab ID: 92198747011** Collected: 04/24/14 10:30 Received: 04/24/14 17:00 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		04/26/14 00:03	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/26/14 00:03	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/26/14 00:03	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/26/14 00:03	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/26/14 00:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/14 00:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/26/14 00:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/26/14 00:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/26/14 00:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/26/14 00:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/26/14 00:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/26/14 00:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/26/14 00:03	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/26/14 00:03	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/26/14 00:03	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/26/14 00:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/26/14 00:03	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/26/14 00:03	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/26/14 00:03	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/26/14 00:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/26/14 00:03	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/26/14 00:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/26/14 00:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/26/14 00:03	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/26/14 00:03	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/26/14 00:03	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/26/14 00:03	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/26/14 00:03	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/26/14 00:03	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/26/14 00:03	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/26/14 00:03	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/26/14 00:03	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		04/26/14 00:03	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		04/26/14 00:03	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/26/14 00:03	2037-26-5	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-16 **Lab ID: 92198747012** Collected: 04/24/14 14:30 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:35		
Collected Date	**04/24/14**				1		04/25/14 11:35		
Collected Time	**14:30**				1		04/25/14 11:35		
Field pH	**6.1**	Std. Units	0.10	0.10	1		04/25/14 11:35		
Field Temperature	**16.5**	deg C	0.50	0.50	1		04/25/14 11:35		
Static Water Level	**35.14**	feet			1		04/25/14 11:35		
Field Specific Conductance	**240**	umhos/cm	1.0	1.0	1		04/25/14 11:35		
Turbidity	**1.95**	NTU	1.0	1.0	1		04/25/14 11:35		
Odor	**NONE**				1		04/25/14 11:35		
Appearance	**CLEAR**				1		04/25/14 11:35		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	**6.1**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7440-38-2	
Barium	**148**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 19:04	7440-41-7	
Cadmium	**1.2**	ug/L	1.0	1.0	1	04/25/14 13:50	04/30/14 19:04	7440-43-9	
Chromium	**5.1**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7440-47-3	
Cobalt	**65.1**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7439-92-1	
Nickel	**12.5**	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 19:04	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7440-22-4	
Thallium	**5.6**	ug/L	5.4	5.4	1	04/25/14 13:50	04/30/14 19:04	7440-28-0	
Vanadium	ND	ug/L	5.0	5.0	1	04/25/14 13:50	04/30/14 19:04	7440-62-2	
Zinc	**14.9**	ug/L	10.0	10.0	1	04/25/14 13:50	04/30/14 19:04	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/26/14 00:21	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/26/14 00:21	107-13-1	
Benzene	ND	ug/L	1.0	0.25	1		04/26/14 00:21	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/26/14 00:21	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/26/14 00:21	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/26/14 00:21	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/26/14 00:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/26/14 00:21	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/26/14 00:21	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/26/14 00:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		04/26/14 00:21	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		04/26/14 00:21	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/26/14 00:21	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/26/14 00:21	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/26/14 00:21	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/14 00:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/26/14 00:21	106-93-4	

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ANALYTICAL RESULTS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Sample: MW-16 **Lab ID: 92198747012** Collected: 04/24/14 14:30 Received: 04/24/14 17:00 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		04/26/14 00:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/26/14 00:21	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		04/26/14 00:21	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/26/14 00:21	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/26/14 00:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/14 00:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/26/14 00:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/26/14 00:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/26/14 00:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/26/14 00:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/26/14 00:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/26/14 00:21	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		04/26/14 00:21	100-41-4	
2-Hexanone	ND	ug/L	5.0	0.46	1		04/26/14 00:21	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/26/14 00:21	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/26/14 00:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/26/14 00:21	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/26/14 00:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/26/14 00:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/26/14 00:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/26/14 00:21	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		04/26/14 00:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/26/14 00:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/26/14 00:21	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/26/14 00:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/26/14 00:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/26/14 00:21	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/26/14 00:21	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/26/14 00:21	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		04/26/14 00:21	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		04/26/14 00:21	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		04/26/14 00:21	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		04/26/14 00:21	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		04/26/14 00:21	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		04/26/14 00:21	2037-26-5	

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QUALITY CONTROL DATA

Project: WHITE OAK MW'S
Pace Project No.: 92198747

QC Batch: MPRP/15790 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92198747001, 92198747002, 92198747003, 92198747004, 92198747005, 92198747006, 92198747007, 92198747008, 92198747009, 92198747010, 92198747011, 92198747012

METHOD BLANK: 1185462 | Matrix: Water
Associated Lab Samples: 92198747001, 92198747002, 92198747003, 92198747004, 92198747005, 92198747006, 92198747007, 92198747008, 92198747009, 92198747010, 92198747011, 92198747012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	04/30/14 02:06	
Arsenic	ug/L	ND	10.0	04/30/14 02:06	
Barium	ug/L	ND	5.0	04/30/14 02:06	
Beryllium	ug/L	ND	1.0	04/30/14 02:06	
Cadmium	ug/L	ND	1.0	04/30/14 02:06	
Chromium	ug/L	ND	5.0	04/30/14 02:06	
Cobalt	ug/L	ND	5.0	04/30/14 02:06	
Copper	ug/L	ND	5.0	04/30/14 02:06	
Lead	ug/L	ND	5.0	04/30/14 02:06	
Nickel	ug/L	ND	5.0	04/30/14 02:06	
Selenium	ug/L	ND	10.0	04/30/14 02:06	
Silver	ug/L	ND	5.0	04/30/14 02:06	
Thallium	ug/L	ND	5.4	04/30/14 02:06	
Vanadium	ug/L	ND	5.0	04/30/14 02:06	
Zinc	ug/L	ND	10.0	04/30/14 02:06	

LABORATORY CONTROL SAMPLE: 1185463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	467	93	80-120	
Arsenic	ug/L	500	453	91	80-120	
Barium	ug/L	500	454	91	80-120	
Beryllium	ug/L	500	455	91	80-120	
Cadmium	ug/L	500	457	91	80-120	
Chromium	ug/L	500	464	93	80-120	
Cobalt	ug/L	500	463	93	80-120	
Copper	ug/L	500	455	91	80-120	
Lead	ug/L	500	462	92	80-120	
Nickel	ug/L	500	457	91	80-120	
Selenium	ug/L	500	460	92	80-120	
Silver	ug/L	250	228	91	80-120	
Thallium	ug/L	500	446	89	80-120	
Vanadium	ug/L	500	454	91	80-120	
Zinc	ug/L	500	458	92	80-120	

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Asheville, NC 28804
(828)254-7176

QUALITY CONTROL DATA

Project: WHITE OAK MW'S
Pace Project No.: 92198747

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1185464 1185465

Parameter	Units	92198744001 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	485	478	97	95	75-125	2	25	
Arsenic	ug/L	ND	500	500	471	460	94	92	75-125	2	25	
Barium	ug/L	189	500	500	648	640	92	90	75-125	1	25	
Beryllium	ug/L	ND	500	500	468	463	94	93	75-125	1	25	
Cadmium	ug/L	ND	500	500	470	462	94	92	75-125	2	25	
Chromium	ug/L	ND	500	500	476	467	95	93	75-125	2	25	
Cobalt	ug/L	ND	500	500	472	464	94	93	75-125	2	25	
Copper	ug/L	ND	500	500	469	459	94	92	75-125	2	25	
Lead	ug/L	ND	500	500	472	463	94	92	75-125	2	25	
Nickel	ug/L	ND	500	500	466	458	92	91	75-125	2	25	
Selenium	ug/L	ND	500	500	474	466	95	93	75-125	2	25	
Silver	ug/L	ND	250	250	235	230	94	92	75-125	2	25	
Thallium	ug/L	ND	500	500	456	450	91	90	75-125	1	25	
Vanadium	ug/L	ND	500	500	468	461	93	92	75-125	2	25	
Zinc	ug/L	10.1	500	500	474	463	93	91	75-125	2	25	

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QUALITY CONTROL DATA

Project: WHITE OAK MW'S
Pace Project No.: 92198747

QC Batch: MSV/26582 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92198747001, 92198747002, 92198747003, 92198747004, 92198747005, 92198747006, 92198747007, 92198747008, 92198747009, 92198747010, 92198747011, 92198747012

METHOD BLANK: 1185768 Matrix: Water
Associated Lab Samples: 92198747001, 92198747002, 92198747003, 92198747004, 92198747005, 92198747006, 92198747007, 92198747008, 92198747009, 92198747010, 92198747011, 92198747012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1,1-Trichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1-Dichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1-Dichloroethene	ug/L	ND	1.0	04/25/14 18:51	
1,2,3-Trichloropropane	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/25/14 18:51	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dichlorobenzene	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dichloropropane	ug/L	ND	1.0	04/25/14 18:51	
1,4-Dichlorobenzene	ug/L	ND	1.0	04/25/14 18:51	
2-Butanone (MEK)	ug/L	ND	5.0	04/25/14 18:51	
2-Hexanone	ug/L	ND	5.0	04/25/14 18:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	04/25/14 18:51	
Acetone	ug/L	ND	25.0	04/25/14 18:51	
Acrylonitrile	ug/L	ND	10.0	04/25/14 18:51	
Benzene	ug/L	ND	1.0	04/25/14 18:51	
Bromochloromethane	ug/L	ND	1.0	04/25/14 18:51	
Bromodichloromethane	ug/L	ND	1.0	04/25/14 18:51	
Bromoform	ug/L	ND	1.0	04/25/14 18:51	
Bromomethane	ug/L	ND	2.0	04/25/14 18:51	
Carbon disulfide	ug/L	ND	2.0	04/25/14 18:51	
Carbon tetrachloride	ug/L	ND	1.0	04/25/14 18:51	
Chlorobenzene	ug/L	ND	1.0	04/25/14 18:51	
Chloroethane	ug/L	ND	1.0	04/25/14 18:51	
Chloroform	ug/L	ND	1.0	04/25/14 18:51	
Chloromethane	ug/L	ND	1.0	04/25/14 18:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/25/14 18:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	04/25/14 18:51	
Dibromochloromethane	ug/L	ND	1.0	04/25/14 18:51	
Dibromomethane	ug/L	ND	1.0	04/25/14 18:51	
Ethylbenzene	ug/L	ND	1.0	04/25/14 18:51	
Iodomethane	ug/L	ND	5.0	04/25/14 18:51	
m&p-Xylene	ug/L	ND	2.0	04/25/14 18:51	
Methylene Chloride	ug/L	ND	2.0	04/25/14 18:51	
o-Xylene	ug/L	ND	1.0	04/25/14 18:51	
Styrene	ug/L	ND	1.0	04/25/14 18:51	
Tetrachloroethene	ug/L	ND	1.0	04/25/14 18:51	
Toluene	ug/L	ND	1.0	04/25/14 18:51	

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QUALITY CONTROL DATA

Project: WHITE OAK MW'S
Pace Project No.: 92198747

METHOD BLANK: 1185768 Matrix: Water

Associated Lab Samples: 92198747001, 92198747002, 92198747003, 92198747004, 92198747005, 92198747006, 92198747007, 92198747008, 92198747009, 92198747010, 92198747011, 92198747012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/25/14 18:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	04/25/14 18:51	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	04/25/14 18:51	
Trichloroethene	ug/L	ND	1.0	04/25/14 18:51	
Trichlorofluoromethane	ug/L	ND	1.0	04/25/14 18:51	
Vinyl acetate	ug/L	ND	2.0	04/25/14 18:51	
Vinyl chloride	ug/L	ND	1.0	04/25/14 18:51	
Xylene (Total)	ug/L	ND	2.0	04/25/14 18:51	
1,2-Dichloroethane-d4 (S)	%	107	70-130	04/25/14 18:51	
4-Bromofluorobenzene (S)	%	99	70-130	04/25/14 18:51	
Toluene-d8 (S)	%	102	70-130	04/25/14 18:51	

LABORATORY CONTROL SAMPLE: 1185769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.8	104	70-130	
1,1,1-Trichloroethane	ug/L	50	48.2	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.6	105	70-130	
1,1,2-Trichloroethane	ug/L	50	50.4	101	70-130	
1,1-Dichloroethane	ug/L	50	53.2	106	70-130	
1,1-Dichloroethene	ug/L	50	51.7	103	70-132	
1,2,3-Trichloropropane	ug/L	50	52.1	104	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.5	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.8	102	70-130	
1,2-Dichlorobenzene	ug/L	50	50.1	100	70-130	
1,2-Dichloroethane	ug/L	50	55.3	111	70-130	
1,2-Dichloropropane	ug/L	50	51.7	103	70-130	
1,4-Dichlorobenzene	ug/L	50	49.2	98	70-130	
2-Butanone (MEK)	ug/L	100	121	121	70-145	
2-Hexanone	ug/L	100	91.3	91	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.7	92	70-140	
Acetone	ug/L	100	113	113	50-175	
Acrylonitrile	ug/L	250	282	113	70-143	
Benzene	ug/L	50	53.4	107	70-130	
Bromochloromethane	ug/L	50	49.3	99	70-130	
Bromodichloromethane	ug/L	50	49.5	99	70-130	
Bromoform	ug/L	50	51.3	103	70-130	
Bromomethane	ug/L	50	38.4	77	54-130	
Carbon disulfide	ug/L	50	57.6	115	70-131	
Carbon tetrachloride	ug/L	50	47.7	95	70-132	
Chlorobenzene	ug/L	50	49.3	99	70-130	
Chloroethane	ug/L	50	23.1	46	64-134	L0
Chloroform	ug/L	50	51.4	103	70-130	
Chloromethane	ug/L	50	46.8	94	64-130	

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QUALITY CONTROL DATA

Project: WHITE OAK MW'S
Pace Project No.: 92198747

LABORATORY CONTROL SAMPLE: 1185769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	55.2	110	70-131	
cis-1,3-Dichloropropene	ug/L	50	47.6	95	70-130	
Dibromochloromethane	ug/L	50	49.0	98	70-130	
Dibromomethane	ug/L	50	46.1	92	70-131	
Ethylbenzene	ug/L	50	53.4	107	70-130	
Iodomethane	ug/L	100	100	100	49-180	
m&p-Xylene	ug/L	100	108	108	70-130	
Methylene Chloride	ug/L	50	52.5	105	63-130	
o-Xylene	ug/L	50	53.9	108	70-130	
Styrene	ug/L	50	55.5	111	70-130	
Tetrachloroethene	ug/L	50	51.5	103	70-130	
Toluene	ug/L	50	52.1	104	70-130	
trans-1,2-Dichloroethene	ug/L	50	56.0	112	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.6	97	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	61.1	122	70-141	
Trichloroethene	ug/L	50	49.5	99	70-130	
Trichlorofluoromethane	ug/L	50	34.4	69	62-133	
Vinyl acetate	ug/L	100	158	158	66-157	F3,L3
Vinyl chloride	ug/L	50	62.5	125	69-130	
Xylene (Total)	ug/L	150	162	108	70-130	
1,2-Dichloroethane-d4 (S)	%			107	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1185770 1185771

Parameter	Units	92198746006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	51.2	54.6	102	109	70-166	6	30	
Benzene	ug/L	ND	50	50	59.9	62.6	120	125	70-148	4	30	
Chlorobenzene	ug/L	ND	50	50	56.9	57.7	114	115	70-146	1	30	
Toluene	ug/L	ND	50	50	55.8	57.7	112	115	70-155	3	30	
Trichloroethene	ug/L	ND	50	50	60.6	62.4	121	125	69-151	3	30	
1,2-Dichloroethane-d4 (S)	%						99	101	70-130			
4-Bromofluorobenzene (S)	%						101	98	70-130			
Toluene-d8 (S)	%						100	99	70-130			

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QUALIFIERS

Project: WHITE OAK MW'S
Pace Project No.: 92198747

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

F3	The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WHITE OAK MW'S
Pace Project No.: 92198747

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92198747001	**MW-1A**		FLD/		
92198747002	**MW-2**		FLD/		
92198747003	**MW-2D**		FLD/		
92198747004	**MW-3R**		FLD/		
92198747005	**MW-3DR**		FLD/		
92198747006	**MW-4A**		FLD/		
92198747007	**MW-8**		FLD/		
92198747008	**MW-11S**		FLD/		
92198747009	**MW-11D**		FLD/		
92198747010	**MW-14**		FLD/		
92198747011	**MW-15**		FLD/		
92198747012	**MW-16**		FLD/		
92198747001	**MW-1A**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747002	**MW-2**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747003	**MW-2D**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747004	**MW-3R**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747005	**MW-3DR**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747006	**MW-4A**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747007	**MW-8**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747008	**MW-11S**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747009	**MW-11D**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747010	**MW-14**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747011	**MW-15**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747012	**MW-16**	EPA 3010	MPRP/15790	EPA 6010	ICP/14296
92198747001	**MW-1A**	EPA 8260	MSV/26582		
92198747002	**MW-2**	EPA 8260	MSV/26582		
92198747003	**MW-2D**	EPA 8260	MSV/26582		
92198747004	**MW-3R**	EPA 8260	MSV/26582		
92198747005	**MW-3DR**	EPA 8260	MSV/26582		
92198747006	**MW-4A**	EPA 8260	MSV/26582		
92198747007	**MW-8**	EPA 8260	MSV/26582		
92198747008	**MW-11S**	EPA 8260	MSV/26582		
92198747009	**MW-11D**	EPA 8260	MSV/26582		
92198747010	**MW-14**	EPA 8260	MSV/26582		
92198747011	**MW-15**	EPA 8260	MSV/26582		
92198747012	**MW-16**	EPA 8260	MSV/26582		

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Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: June 4, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.11	Issuing Authorities: Pace Asheville Quality Office

Client Name: Hayward co

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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_____

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

IR Gun #2- 80344039

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 5.7 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KDB 4/24/14

		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.
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.
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: MD **Date:** 4-24-14

SRF Review: AMB **Date:** 4-24-14

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)

Place label here

OR

Handwrite project number (if no label available)

92198747

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 4

1697654

Section A Required Client Information:

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

Section B Required Project Information:

Report To: STEVE KING
Copy To: SAM TRK
Purchase Order No.:
Project Name: HARWOOD WHITE OAK MW'S
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 4493-1

REGULATORY AGENCY: NPDES, GROUND WATER, DRINKING WATER, UST, RCRA (✓), OTHER

Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N): Y/N; Analysis Test: Fe2, Sulfi, VOC, Metals

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	Fe2	Sulfi	VOC	Metals	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1A					4.24.14	1130		4			1	3					X	X	X	X		92198747
2	MW-2						1145		4			1	3					X	X	X	X		001
3	MW-2D						1200		4			1	3					X	X	X	X		002
4	MW-3A						1245		4			1	3					X	X	X	X		003
5	MW-3D						1300		4			1	3					X	X	X	X		004
6	MW-4A						1440		4			1	3					X	X	X	X		005
7	MW-8						1210		4			1	3					X	X	X	X		006
8	MW-11S						950		4			1	3					X	X	X	X		007
9	MW-11D						1000		4			1	3					X	X	X	X		008
10	MW-14						1520		4			1	3					X	X	X	X		009
11	MW-15						1030		4			1	3					X	X	X	X		010
12	MW-16						1430		4			1	3					X	X	X	X		011

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		4.24.14	1600	[signature]	4.24.14	1600				
	[signature]	4.24.14	1700	[signature]	4/24/14	1700	5.7	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK L. SWANN

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4.24.14

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

ORIGINAL

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

May 06, 2014

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

RE: Project: Leachate White Oak LF
Pace Project No.: 92198748

Dear Mr. Martin:
Enclosed are the analytical results for sample(s) received by the laboratory on April 24, 2014. 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,

Jon D Bradley
jon.bradley@pacelabs.com
Project Manager

Enclosures

cc: Will Martin, Santek Environmental

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CERTIFICATIONS

Project:	Leachate White Oak LF
Pace Project No.:	92198748

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 Dr., 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

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SAMPLE SUMMARY

Project: Leachate White Oak LF
Pace Project No.: 92198748

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92198748001	**Leachate**	Water	04/24/14 13:10	04/24/14 17:00
92198748002	**Leachate**	Water	04/24/14 13:10	04/24/14 17:00

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SAMPLE ANALYTE COUNT

Project: Leachate White Oak LF
Pace Project No.: 92198748

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92198748001	**Leachate**	EPA 180.1	MDW	1	PASI-A
		SM 5210B	TEP	1	PASI-A
		EPA 300.0	SAE	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	JDA	1	PASI-A
		SM 4500-CN-E	JDA	1	PASI-A
		SM 5220D	EWS	1	PASI-A
92198748002	**Leachate**	EPA 6010	JMW	15	PASI-A
		EPA 8260	MCK	52	PASI-C

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ANALYTICAL RESULTS

Project: Leachate White Oak LF
Pace Project No.: 92198748

Sample: Leachate **Lab ID: 92198748001** Collected: 04/24/14 13:10 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
180.1 Turbidity	Analytical Method: EPA 180.1								
Turbidity	**74.5**	NTU	1.0	0.50	1		04/25/14 12:00		
5210B BOD, 5 day	Analytical Method: SM 5210B								
BOD, 5 day	**53.3**	mg/L	2.0	2.0	1	04/25/14 16:07	04/30/14 10:20		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**4450**	mg/L	500	500	250		05/01/14 16:31	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	**0.84**	mg/L	0.020	0.020	1		04/24/14 22:31		
Nitrogen, Nitrite	**0.43**	mg/L	0.020	0.020	1		04/24/14 22:31		
Nitrogen, NO2 plus NO3	**1.3**	mg/L	0.020	0.020	1		04/24/14 22:31		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1								
Phosphorus	**1.7**	mg/L	0.050	0.050	1		05/04/14 14:21	7723-14-0	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		05/06/14 14:20	57-12-5	
5220D COD	Analytical Method: SM 5220D								
Chemical Oxygen Demand	**964**	mg/L	25.0	25.0	1		05/05/14 15:53		

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ANALYTICAL RESULTS

Project: Leachate White Oak LF
Pace Project No.: 92198748

Sample: Leachate **Lab ID: 92198748002** Collected: 04/24/14 13:10 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		04/25/14 11:38		
Collected Date	**04/24/14**				1		04/25/14 11:38		
Collected Time	**13:10**				1		04/25/14 11:38		
Field pH	**7.3**	Std. Units	0.10	0.10	1		04/25/14 11:38		
Field Temperature	**16.9**	deg C	0.50	0.50	1		04/25/14 11:38		
Field Specific Conductance	**9040**	umhos/cm	1.0	1.0	1		04/25/14 11:38		
Turbidity	**36.3**	NTU	1.0	1.0	1		04/25/14 11:38		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7440-36-0	
Arsenic	**14.3**	ug/L	10.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7440-38-2	
Barium	**376**	ug/L	5.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7440-39-3	
Beryllium	**1.8**	ug/L	1.0	1.0	1	05/02/14 11:00	05/05/14 17:21	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	05/02/14 11:00	05/05/14 17:21	7440-43-9	
Chromium	**14.6**	ug/L	5.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7440-47-3	
Cobalt	**24.8**	ug/L	5.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7439-92-1	
Nickel	**157**	ug/L	5.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	05/02/14 11:00	05/05/14 17:21	7782-49-2	M1
Silver	ND	ug/L	5.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	05/02/14 11:00	05/05/14 17:21	7440-28-0	M1
Vanadium	**15.9**	ug/L	5.0	5.0	1	05/02/14 11:00	05/05/14 17:21	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	05/02/14 11:00	05/05/14 17:21	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		04/26/14 00:40	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1.9	1		04/26/14 00:40	107-13-1	
Benzene	**2.0**	ug/L	1.0	0.25	1		04/26/14 00:40	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		04/26/14 00:40	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		04/26/14 00:40	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		04/26/14 00:40	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		04/26/14 00:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		04/26/14 00:40	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		04/26/14 00:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		04/26/14 00:40	56-23-5	
Chlorobenzene	**3.1**	ug/L	1.0	0.23	1		04/26/14 00:40	108-90-7	
Chloroethane	**5.9**	ug/L	1.0	0.54	1		04/26/14 00:40	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		04/26/14 00:40	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		04/26/14 00:40	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		04/26/14 00:40	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		04/26/14 00:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		04/26/14 00:40	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		04/26/14 00:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		04/26/14 00:40	95-50-1	
1,4-Dichlorobenzene	**3.6**	ug/L	1.0	0.33	1		04/26/14 00:40	106-46-7	

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ANALYTICAL RESULTS

Project: Leachate White Oak LF
Pace Project No.: 92198748

Sample: Leachate **Lab ID: 92198748002** Collected: 04/24/14 13:10 Received: 04/24/14 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260								
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		04/26/14 00:40	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		04/26/14 00:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		04/26/14 00:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		04/26/14 00:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		04/26/14 00:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		04/26/14 00:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		04/26/14 00:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		04/26/14 00:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		04/26/14 00:40	10061-02-6	
Ethylbenzene	**15.6**	ug/L	1.0	0.30	1		04/26/14 00:40	100-41-4	
2-Hexanone	**34.8**	ug/L	5.0	0.46	1		04/26/14 00:40	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		04/26/14 00:40	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		04/26/14 00:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		04/26/14 00:40	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		04/26/14 00:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		04/26/14 00:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		04/26/14 00:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		04/26/14 00:40	127-18-4	
Toluene	**2.6**	ug/L	1.0	0.26	1		04/26/14 00:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		04/26/14 00:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		04/26/14 00:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		04/26/14 00:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/26/14 00:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		04/26/14 00:40	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		04/26/14 00:40	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		04/26/14 00:40	75-01-4	
Xylene (Total)	**41.4**	ug/L	2.0	0.66	1		04/26/14 00:40	1330-20-7	
m&p-Xylene	**29.7**	ug/L	2.0	0.66	1		04/26/14 00:40	179601-23-1	
o-Xylene	**11.7**	ug/L	1.0	0.23	1		04/26/14 00:40	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		04/26/14 00:40	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		04/26/14 00:40	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		04/26/14 00:40	2037-26-5	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

QC Batch: MPRP/15832
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92198748002

METHOD BLANK: 1189464
Matrix: Water
Associated Lab Samples: 92198748002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	05/05/14 17:14	
Arsenic	ug/L	ND	10.0	05/05/14 17:14	
Barium	ug/L	ND	5.0	05/05/14 17:14	
Beryllium	ug/L	ND	1.0	05/05/14 17:14	
Cadmium	ug/L	ND	1.0	05/05/14 17:14	
Chromium	ug/L	ND	5.0	05/05/14 17:14	
Cobalt	ug/L	ND	5.0	05/05/14 17:14	
Copper	ug/L	ND	5.0	05/05/14 17:14	
Lead	ug/L	ND	5.0	05/05/14 17:14	
Nickel	ug/L	ND	5.0	05/05/14 17:14	
Selenium	ug/L	ND	10.0	05/05/14 17:14	
Silver	ug/L	ND	5.0	05/05/14 17:14	
Thallium	ug/L	ND	5.4	05/05/14 17:14	
Vanadium	ug/L	ND	5.0	05/05/14 17:14	
Zinc	ug/L	ND	10.0	05/05/14 17:14	

LABORATORY CONTROL SAMPLE: 1189465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	491	98	80-120	
Arsenic	ug/L	500	468	94	80-120	
Barium	ug/L	500	490	98	80-120	
Beryllium	ug/L	500	466	93	80-120	
Cadmium	ug/L	500	450	90	80-120	
Chromium	ug/L	500	458	92	80-120	
Cobalt	ug/L	500	472	94	80-120	
Copper	ug/L	500	492	98	80-120	
Lead	ug/L	500	478	96	80-120	
Nickel	ug/L	500	474	95	80-120	
Selenium	ug/L	500	470	94	80-120	
Silver	ug/L	250	234	94	80-120	
Thallium	ug/L	500	475	95	80-120	
Vanadium	ug/L	500	476	95	80-120	
Zinc	ug/L	500	450	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1189466 1189467

Parameter	Units	92198748002 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	539	552	107	110	75-125	2	25	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1189466 1189467

Parameter	Units	92198748002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	14.3	500	500	561	586	109	114	75-125	4	25	
Barium	ug/L	376	500	500	803	831	85	91	75-125	3	25	
Beryllium	ug/L	1.8	500	500	409	415	81	83	75-125	1	25	
Cadmium	ug/L	ND	500	500	384	391	77	78	75-125	2	25	
Chromium	ug/L	14.6	500	500	444	454	86	88	75-125	2	25	
Cobalt	ug/L	24.8	500	500	422	430	79	81	75-125	2	25	
Copper	ug/L	ND	500	500	559	575	112	115	75-125	3	25	
Lead	ug/L	ND	500	500	373	382	75	76	75-125	2	25	
Nickel	ug/L	157	500	500	540	554	77	79	75-125	3	25	
Selenium	ug/L	ND	500	500	637	651	127	130	75-125	2	25	M1
Silver	ug/L	ND	250	250	285	293	114	117	75-125	3	25	
Thallium	ug/L	ND	500	500	332	334	66	67	75-125	1	25	M1
Vanadium	ug/L	15.9	500	500	470	482	91	93	75-125	3	25	
Zinc	ug/L	ND	500	500	485	499	97	100	75-125	3	25	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

QC Batch: MSV/26582
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92198748002

METHOD BLANK: 1185768
Matrix: Water
Associated Lab Samples: 92198748002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1,1-Trichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1-Dichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,1-Dichloroethene	ug/L	ND	1.0	04/25/14 18:51	
1,2,3-Trichloropropane	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	04/25/14 18:51	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dichlorobenzene	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dichloroethane	ug/L	ND	1.0	04/25/14 18:51	
1,2-Dichloropropane	ug/L	ND	1.0	04/25/14 18:51	
1,4-Dichlorobenzene	ug/L	ND	1.0	04/25/14 18:51	
2-Butanone (MEK)	ug/L	ND	5.0	04/25/14 18:51	
2-Hexanone	ug/L	ND	5.0	04/25/14 18:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	04/25/14 18:51	
Acetone	ug/L	ND	25.0	04/25/14 18:51	
Acrylonitrile	ug/L	ND	10.0	04/25/14 18:51	
Benzene	ug/L	ND	1.0	04/25/14 18:51	
Bromochloromethane	ug/L	ND	1.0	04/25/14 18:51	
Bromodichloromethane	ug/L	ND	1.0	04/25/14 18:51	
Bromoform	ug/L	ND	1.0	04/25/14 18:51	
Bromomethane	ug/L	ND	2.0	04/25/14 18:51	
Carbon disulfide	ug/L	ND	2.0	04/25/14 18:51	
Carbon tetrachloride	ug/L	ND	1.0	04/25/14 18:51	
Chlorobenzene	ug/L	ND	1.0	04/25/14 18:51	
Chloroethane	ug/L	ND	1.0	04/25/14 18:51	
Chloroform	ug/L	ND	1.0	04/25/14 18:51	
Chloromethane	ug/L	ND	1.0	04/25/14 18:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/25/14 18:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	04/25/14 18:51	
Dibromochloromethane	ug/L	ND	1.0	04/25/14 18:51	
Dibromomethane	ug/L	ND	1.0	04/25/14 18:51	
Ethylbenzene	ug/L	ND	1.0	04/25/14 18:51	
Iodomethane	ug/L	ND	5.0	04/25/14 18:51	
m&p-Xylene	ug/L	ND	2.0	04/25/14 18:51	
Methylene Chloride	ug/L	ND	2.0	04/25/14 18:51	
o-Xylene	ug/L	ND	1.0	04/25/14 18:51	
Styrene	ug/L	ND	1.0	04/25/14 18:51	
Tetrachloroethene	ug/L	ND	1.0	04/25/14 18:51	
Toluene	ug/L	ND	1.0	04/25/14 18:51	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/25/14 18:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	04/25/14 18:51	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

METHOD BLANK: 1185768 Matrix: Water
Associated Lab Samples: 92198748002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	04/25/14 18:51	
Trichloroethene	ug/L	ND	1.0	04/25/14 18:51	
Trichlorofluoromethane	ug/L	ND	1.0	04/25/14 18:51	
Vinyl acetate	ug/L	ND	2.0	04/25/14 18:51	
Vinyl chloride	ug/L	ND	1.0	04/25/14 18:51	
Xylene (Total)	ug/L	ND	2.0	04/25/14 18:51	
1,2-Dichloroethane-d4 (S)	%	107	70-130	04/25/14 18:51	
4-Bromofluorobenzene (S)	%	99	70-130	04/25/14 18:51	
Toluene-d8 (S)	%	102	70-130	04/25/14 18:51	

LABORATORY CONTROL SAMPLE: 1185769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.8	104	70-130	
1,1,1-Trichloroethane	ug/L	50	48.2	96	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.6	105	70-130	
1,1,2-Trichloroethane	ug/L	50	50.4	101	70-130	
1,1-Dichloroethane	ug/L	50	53.2	106	70-130	
1,1-Dichloroethene	ug/L	50	51.7	103	70-132	
1,2,3-Trichloropropane	ug/L	50	52.1	104	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	47.5	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.8	102	70-130	
1,2-Dichlorobenzene	ug/L	50	50.1	100	70-130	
1,2-Dichloroethane	ug/L	50	55.3	111	70-130	
1,2-Dichloropropane	ug/L	50	51.7	103	70-130	
1,4-Dichlorobenzene	ug/L	50	49.2	98	70-130	
2-Butanone (MEK)	ug/L	100	121	121	70-145	
2-Hexanone	ug/L	100	91.3	91	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.7	92	70-140	
Acetone	ug/L	100	113	113	50-175	
Acrylonitrile	ug/L	250	282	113	70-143	
Benzene	ug/L	50	53.4	107	70-130	
Bromochloromethane	ug/L	50	49.3	99	70-130	
Bromodichloromethane	ug/L	50	49.5	99	70-130	
Bromoform	ug/L	50	51.3	103	70-130	
Bromomethane	ug/L	50	38.4	77	54-130	
Carbon disulfide	ug/L	50	57.6	115	70-131	
Carbon tetrachloride	ug/L	50	47.7	95	70-132	
Chlorobenzene	ug/L	50	49.3	99	70-130	
Chloroethane	ug/L	50	23.1	46	64-134	L0
Chloroform	ug/L	50	51.4	103	70-130	
Chloromethane	ug/L	50	46.8	94	64-130	
cis-1,2-Dichloroethene	ug/L	50	55.2	110	70-131	
cis-1,3-Dichloropropene	ug/L	50	47.6	95	70-130	
Dibromochloromethane	ug/L	50	49.0	98	70-130	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

LABORATORY CONTROL SAMPLE: 1185769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromomethane	ug/L	50	46.1	92	70-131	
Ethylbenzene	ug/L	50	53.4	107	70-130	
Iodomethane	ug/L	100	100	100	49-180	
m&p-Xylene	ug/L	100	108	108	70-130	
Methylene Chloride	ug/L	50	52.5	105	63-130	
o-Xylene	ug/L	50	53.9	108	70-130	
Styrene	ug/L	50	55.5	111	70-130	
Tetrachloroethene	ug/L	50	51.5	103	70-130	
Toluene	ug/L	50	52.1	104	70-130	
trans-1,2-Dichloroethene	ug/L	50	56.0	112	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.6	97	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	61.1	122	70-141	
Trichloroethene	ug/L	50	49.5	99	70-130	
Trichlorofluoromethane	ug/L	50	34.4	69	62-133	
Vinyl acetate	ug/L	100	158	158	66-157	F3,L3
Vinyl chloride	ug/L	50	62.5	125	69-130	
Xylene (Total)	ug/L	150	162	108	70-130	
1,2-Dichloroethane-d4 (S)	%			107	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1185770 1185771

Parameter	Units	92198746006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	51.2	54.6	102	109	70-166	6	30	
Benzene	ug/L	ND	50	50	59.9	62.6	120	125	70-148	4	30	
Chlorobenzene	ug/L	ND	50	50	56.9	57.7	114	115	70-146	1	30	
Toluene	ug/L	ND	50	50	55.8	57.7	112	115	70-155	3	30	
Trichloroethene	ug/L	ND	50	50	60.6	62.4	121	125	69-151	3	30	
1,2-Dichloroethane-d4 (S)	%						99	101	70-130			
4-Bromofluorobenzene (S)	%						101	98	70-130			
Toluene-d8 (S)	%						100	99	70-130			

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

QC Batch: WET/30714 | Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 | Analysis Description: 180.1 Turbidity
Associated Lab Samples: 92198748001

METHOD BLANK: 1185300 | Matrix: Water
Associated Lab Samples: 92198748001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	ND	1.0	04/25/14 12:00	

LABORATORY CONTROL SAMPLE: 1185301

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	9.9	99	90-110	

SAMPLE DUPLICATE: 1185302

Parameter	Units	92198754001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	3.4	3.3	2	20	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

QC Batch: WET/30725 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92198748001

METHOD BLANK: 1185827 | Matrix: Water
Associated Lab Samples: 92198748001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	04/30/14 10:20	

LABORATORY CONTROL SAMPLE: 1185828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	178	90	84.5-115.4	

SAMPLE DUPLICATE: 1185831

Parameter	Units	92198745002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	1140	1380	19	20	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

QC Batch: WETA/18830 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92198748001

METHOD BLANK: 1187369 | Matrix: Water
Associated Lab Samples: 92198748001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	04/30/14 18:07	

LABORATORY CONTROL SAMPLE: 1187370

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.1	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1187371 1187372

Parameter	Units	92199034001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	5520	20	20	5720	5740	977	1071	90-110	0	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1187373 1187374

Parameter	Units	92198074025 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	3.7	20	20	21.9	21.8	91	91	90-110	0	20	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

QC Batch: WETA/18793
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92198748001

METHOD BLANK: 1185198
Matrix: Water
Associated Lab Samples: 92198748001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	04/24/14 22:06	
Nitrogen, Nitrite	mg/L	ND	0.020	04/24/14 22:06	
Nitrogen, NO2 plus NO3	mg/L	ND	0.020	04/24/14 22:06	

LABORATORY CONTROL SAMPLE: 1185199

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.5	101	90-110	
Nitrogen, Nitrite	mg/L	1	0.99	99	90-110	
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1185200 1185201

Parameter	Units	92198436001 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	2.5	2.5	98	98	90-110	0	20	
Nitrogen, Nitrite	mg/L	ND	1	1	0.99	0.98	99	98	90-110	0	20	
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.5	2.5	98	98	90-110	0	20	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

QC Batch: WETA/18880 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 92198748001

METHOD BLANK: 1191007 | Matrix: Water
Associated Lab Samples: 92198748001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	05/04/14 12:58	

LABORATORY CONTROL SAMPLE: 1191008

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: 1191009 1191010

Parameter	Units	92198466001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	8.7	2.5	2.5	11.5	11.3	110	102	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1191011 1191012

Parameter	Units	92199005001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus	mg/L	4.5	2.5	2.5	7.2	7.0	109	101	90-110	3	20	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

QC Batch: WETA/18878 | Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E | Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92198748001

METHOD BLANK: 1190995 | Matrix: Water
Associated Lab Samples: 92198748001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	05/06/14 14:03	

LABORATORY CONTROL SAMPLE: 1190996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1190997 1190998

Parameter	Units	92198521001 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	0.019	0.024	19	24	75-125	22	20	M1,R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1190999 1191000

Parameter	Units	92198745003 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	0.11	0.11	106	106	75-125	0	20	

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QUALITY CONTROL DATA

Project: Leachate White Oak LF
Pace Project No.: 92198748

QC Batch: WETA/18853 | Analysis Method: SM 5220D
QC Batch Method: SM 5220D | Analysis Description: 5220D COD
Associated Lab Samples: 92198748001

METHOD BLANK: 1189026 | Matrix: Water
Associated Lab Samples: 92198748001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	05/05/14 15:53	

LABORATORY CONTROL SAMPLE: 1189027

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	751	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1189028 1189029

Parameter	Units	92199187002 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	30800	30000	30000	57100	57400	88	89	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1189030 1189031

Parameter	Units	92199158001 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	3590	7500	7500	10600	10400	93	91	75-125	1	20	

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QUALIFIERS

Project: Leachate White Oak LF
Pace Project No.: 92198748

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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TNI - The NELAC Institute.

LABORATORIES

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

ANALYTE QUALIFIERS

F3	The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Leachate White Oak LF
Pace Project No.: 92198748

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92198748002	**Leachate**		FLD/		
92198748002	**Leachate**	EPA 3010	MPRP/15832	EPA 6010	ICP/14343
92198748002	**Leachate**	EPA 8260	MSV/26582		
92198748001	**Leachate**	EPA 180.1	WET/30714		
92198748001	**Leachate**	SM 5210B	WET/30725	SM 5210B	WET/30728
92198748001	**Leachate**	EPA 300.0	WETA/18830		
92198748001	**Leachate**	EPA 353.2	WETA/18793		
92198748001	**Leachate**	EPA 365.1	WETA/18880		
92198748001	**Leachate**	SM 4500-CN-E	WETA/18878		
92198748001	**Leachate**	SM 5220D	WETA/18853		

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Pace Analytical® www.pacelabs.com	Work Name: Sample Condition Upon Receipt (SCUR)	Document Revised: June 4, 2013 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.11	Issuing Authorities: Pace Asheville Quality Office

Client Name: Hayward co

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

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_____

Circle Thermometer Used: IR Gun#3 -130265963 IR Gun #2- 80344039 Type of Ice: (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 5.7 C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: BOB 4/24/14

		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.
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.
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: logged in cyanide even though not on COC

SCURF Review:	AMB	Date:	4-24-14
SRF Review:	MMD	Date:	4.25.14

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)

Place label here

OR

Handwrite project number (if no label available)

92198748

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 4

1697652

Section A Required Client Information:

Company: Hanwoon LO
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Steve King
Copy To: SAN TEK
Purchase Order No.:
Project Name: Leachate White Oak
Project Number: LF

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference
Pace Project Manager:
Pace Profile #: 4493-2

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	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): Alkalinity, Ca, Mg	Turb	BOD	$NO_{3,N}$	SO_4	TP	COD	Metals	VOC	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Leachate					4-24-14	810		9	3	2	1	3					Y	Y	Y	Y	Y	Y	Y	Y	Y		001
2																												002
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		4-24-14	1600	[signature] Pace	4-24-14	1600				
	[signature] Pace	4-24-14	1700	Bill Davis Blue	4/24/14	1700	5.7	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 F. SWAN

SIGNATURE of SAMPLER: [signature] Pace

DATE Signed (MM/DD/YY): 4-24-14

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

APPENDIX D

STATISTICAL CALCULATIONS

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J14-1957-40

COMPOUND	TOTAL	ND	DETECTED	%ND	STATISTICAL TEST
Total Antimony	302	295	7	97.7%	Poisson Prediction Limits
Total Arsenic	302	275	27	91.1%	Poisson Prediction Limits
Total Barium	305	16	289	5.2%	Kruskal-Wallis
Total Beryllium	303	259	44	85.5%	Kruskal-Wallis
Total Cadmium	303	262	41	86.5%	Kruskal-Wallis
Total Chromium	303	165	138	54.5%	Kruskal-Wallis
Total Cobalt	303	190	113	62.7%	Kruskal-Wallis
Total Copper	303	183	120	60.4%	Kruskal-Wallis
Total Lead	304	227	77	74.7%	Kruskal-Wallis
Total Nickel	304	141	163	46.4%	Kruskal-Wallis
Total Selenium	303	299	4	98.7%	Poisson Prediction Limits
Total Silver	303	300	3	99.0%	Poisson Prediction Limits
Total Thallium	303	284	19	93.7%	Poisson Prediction Limits
Total Vanadium	303	170	133	56.1%	Kruskal-Wallis
Total Zinc	303	99	204	32.7%	Kruskal-Wallis
Acetone	252	251	1	99.6%	Poisson Prediction Limits
Carbon Disulfide	252	249	3	98.8%	Poisson Prediction Limits
Chloroethane	252	251	1	99.6%	Poisson Prediction Limits
Dichloromethane	252	250	2	99.2%	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
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

LEGEND FOR THE FOLLOWING PAGES:

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

Total Detected Concentrations (per compound) =	1390
Total Detected Concentrations (per event) =	1390
Are all accounted for ?	Yes
Statistical Package Prepared By:	IAI
Statistical Package Checked By:	PJVH/MSP

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J14-1957-40

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**

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' = 28.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 77$
$T_{n1} = 279$

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).

$k = 1$
$n = 77$
$T_{n1} = 279$
$t\,[76,.01] = 2.3815$

$c = 0.013$

$T^*_k = 8.2$

	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	6.1	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 J14-1957-40

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**

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' = 28.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 77$
$T_{n1} = 243.6$

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).

$k = 1$
$n = 77$
$T_{n1} = 243.6$
$t\,[76,.01] = 2.3815$

$c = 0.013$

$T^*_k = 7.5$

	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 J14-1957-40

Compound: **Total Barium**
NC MCL (µg/l): 700
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	**250**	NS	NS	**240**	**420**	**200**	**63**	**300**	**93**	**230**	NS	NP	NP	**5**
06/26/00	**300**	**67**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
07/26/00	**330**	**30**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
09/18/00	NS	NS	NS	**330**	**92**	NS	NS	NS	NT	NS	NS	NP	NP	**500**
04/09/01	**1300**	**380**	NS	**180**	**330**	**120**	**80**	**290**	**360**	**970**	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	**500**
04/15/02	**1300**	**41**	NS	ND	ND	**160**	**23**	**190**	**460**	**1400**	NS	NP	NP	**5**
09/26/02	**330**	**500**	**750**	**4200**	**120**	**230**	**93**	**410**	**910**	**1400**	**11000**	NP	NP	**5**
04/28/03	**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**
04/20/04	**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**
04/18/05	**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**
04/25/06	**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**
04/25/07	**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**
04/23/08	**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**
04/22/09	**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**
04/22/10	**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**
04/29/11	**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**
04/20/12	**304**	**17.5**	**129**	**153**	**1020**	**1140**	**442**	**215**	**9.5**	**232**	**65**	**249**	**169**	**5**
10/24/12	**389**	**19**	**124**	**167**	**889**	**1030**	**393**	**229**	**26.1**	**235**	**43**	**177**	**181**	**5**
04/24/13	**241**	**16.8**	**100**	**164**	**842**	**964**	**344**	**226**	**9.3**	**218**	**97**	**116**	**190**	**5**
10/24/13	**255**	**18.1**	**156**	**166**	**839**	**1160**	**510**	**256**	**9.1**	**250**	**55**	**171**	**218**	**5**
04/24/14	**174**	**17.7**	**127**	**148**	**941**	**1290**	**378**	**248**	**8.3**	**238**	**28**	**148**	**189**	**5**
N_i	29	28	23	28	28	27	25	25	26	27	23	8	8	
sum of rank values (R_i)	5642.5	1482.5	2960.5	4690.5	6500.0	5303.5	3336.5	3505.0	1975.5	4992.5	4246.5	1045.0	984.5	
avg rank value (Rbar)	194.6	52.9	128.7	167.5	232.1	196.4	133.5	140.2	76.0	184.9	184.6	130.6	123.1	

	Number of each rank value													Rank Value
rank value of NDs =	0	2	1	2	1	2	2	2	2	2	0	0	0	8.5
rank value of 8.2s =	0	0	0	0	0	0	0	0	1	0	0	0	0	17
rank value of 8.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	18
rank value of 9.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	19
rank value of 9.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	20
rank value of 9.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	21
rank value of 12s =	0	0	0	0	0	0	0	0	2	0	0	0	0	22.5
rank value of 13.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	24
rank value of 15.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	25
rank value of 16.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	26
rank value of 16.8s =	0	2	0	0	0	0	0	0	0	0	0	0	0	27.5
rank value of 17.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	29

rank value of 17.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	30
rank value of 18.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	31
rank value of 19s =	0	1	0	0	0	0	0	0	0	0	0	0	0	32
rank value of 19.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	33
rank value of 20s =	0	0	0	0	0	0	0	0	1	0	0	0	0	34
rank value of 20.9s =	0	0	0	0	0	0	0	0	1	0	0	0	0	35
rank value of 22s =	0	1	0	0	0	0	0	0	0	0	0	0	0	36
rank value of 23s =	0	0	0	0	0	0	1	0	0	0	0	0	0	37
rank value of 26.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	38
rank value of 27s =	0	0	0	0	0	0	0	0	1	0	0	0	0	39
rank value of 27.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	40
rank value of 30s =	0	1	0	0	0	0	0	0	0	0	0	0	0	41
rank value of 30.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	42
rank value of 31.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	43
rank value of 37s =	0	1	0	0	0	0	0	0	0	0	0	0	0	44
rank value of 40s =	0	1	0	0	0	0	0	0	0	0	0	0	0	45
rank value of 41s =	0	1	0	0	0	0	0	0	0	0	0	0	0	46
rank value of 41.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	47
rank value of 43.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	48
rank value of 43.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	49
rank value of 47.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	50
rank value of 55s =	0	1	0	0	0	0	0	0	0	0	0	0	0	51
rank value of 55.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	52
rank value of 56s =	0	1	0	0	0	0	0	0	0	0	0	0	0	53
rank value of 61.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	54
rank value of 62s =	0	0	0	0	0	0	0	0	1	0	0	0	0	55
rank value of 62.4s =	0	0	0	0	0	0	0	0	1	0	0	0	0	56
rank value of 63s =	0	0	0	0	0	0	1	0	0	0	0	0	0	57
rank value of 64.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	58
rank value of 66s =	0	2	0	0	0	0	0	0	0	0	0	0	0	59.5
rank value of 67s =	0	1	0	0	0	0	0	0	0	0	0	0	0	61
rank value of 74.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	62
rank value of 77s =	0	0	0	0	0	0	0	0	1	0	0	0	0	63
rank value of 80s =	0	0	0	0	0	0	1	0	0	0	0	0	0	64
rank value of 84.4s =	0	0	0	0	0	0	0	0	0	0	0	0	1	65
rank value of 92s =	0	0	0	0	1	0	0	1	0	0	0	0	0	66.5
rank value of 93s =	0	0	0	0	0	0	1	0	1	0	0	0	0	68.5
rank value of 95s =	0	0	0	0	0	0	1	0	0	0	0	0	0	70
rank value of 96.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	71
rank value of 100s =	0	1	1	0	0	0	0	0	0	0	0	0	0	72.5
rank value of 110s =	0	0	0	0	0	0	1	1	0	0	0	0	0	74.5
rank value of 111s =	0	0	0	0	0	0	0	0	0	0	1	0	0	76
rank value of 116s =	0	0	0	0	0	0	0	0	0	0	0	1	0	77
rank value of 120s =	0	0	2	0	1	1	0	0	0	0	0	0	0	79.5
rank value of 123s =	0	0	0	0	0	0	0	0	0	0	1	0	0	82
rank value of 124s =	0	0	1	0	0	0	0	0	0	0	0	0	0	83
rank value of 125s =	0	0	0	0	0	0	0	0	0	0	1	0	0	84
rank value of 126s =	1	0	0	0	0	0	0	0	0	0	0	0	0	85
rank value of 127s =	0	0	1	0	0	0	0	0	0	0	0	0	0	86
rank value of 129s =	0	0	1	0	0	0	0	0	0	0	0	0	0	87
rank value of 130s =	0	0	0	0	0	1	1	1	0	0	0	0	0	89
rank value of 131s =	1	0	0	0	0	0	0	0	0	0	0	0	0	91
rank value of 133s =	0	0	0	0	0	0	0	0	0	0	0	0	1	92
rank value of 140s =	0	0	0	0	0	2	2	2	0	0	0	0	0	95.5
rank value of 144s =	0	0	1	0	0	0	0	0	0	0	0	0	0	99
rank value of 147s =	1	0	0	0	0	0	0	0	0	0	0	0	0	100
rank value of 148s =	0	0	0	1	0	0	0	0	0	0	0	1	0	101.5
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	0	0	0	103
rank value of 151s =	0	0	0	0	0	0	0	0	0	1	0	0	0	104
rank value of 153s =	0	0	1	1	0	0	0	0	0	0	0	0	0	105.5
rank value of 154s =	0	0	0	0	0	0	0	0	0	0	0	0	1	107
rank value of 156s =	0	0	1	0	0	0	0	0	0	0	0	0	0	108
rank value of 157s =	0	0	0	1	0	0	0	0	0	0	0	0	0	109
rank value of 160s =	0	0	2	0	1	1	2	0	1	0	0	0	0	113
rank value of 161s =	0	0	0	0	0	0	0	0	0	0	0	1	0	117

rank value of 162s =	0	0	1	0	0	0	0	0	0	0	0	0	0	118
rank value of 163s =	0	0	0	0	0	0	0	0	0	1	0	0	0	119
rank value of 164s =	0	0	0	1	0	0	1	0	0	0	0	0	0	120.5
rank value of 166s =	0	0	0	1	0	0	0	0	0	0	0	0	0	122
rank value of 167s =	0	0	0	1	0	0	0	0	0	0	0	0	0	123
rank value of 168s =	0	0	0	1	0	0	0	0	0	0	0	0	0	124
rank value of 169s =	0	0	0	0	0	0	0	0	0	0	0	0	1	125
rank value of 170s =	0	0	0	0	0	1	0	0	0	0	0	0	0	126
rank value of 171s =	0	0	0	0	0	0	0	0	0	0	0	1	0	127
rank value of 173s =	0	0	0	0	0	0	0	1	0	0	0	0	0	128
rank value of 174s =	1	0	0	0	0	0	0	0	0	0	0	0	0	129
rank value of 177s =	0	0	0	0	0	0	0	0	0	0	0	1	0	130
rank value of 178s =	0	0	0	1	0	0	0	0	0	0	1	0	0	131.5
rank value of 180s =	0	0	1	1	0	1	0	1	0	0	0	0	0	134.5
rank value of 181s =	0	0	0	0	0	0	0	0	0	0	0	0	1	137
rank value of 182s =	0	0	0	1	0	0	0	0	0	1	0	0	0	138.5
rank value of 184s =	0	0	0	0	0	0	1	0	0	0	0	0	0	140
rank value of 185s =	1	0	0	0	0	0	0	0	0	0	0	0	0	141
rank value of 188s =	0	0	1	1	0	0	0	0	0	0	0	0	0	142.5
rank value of 189s =	0	0	0	0	0	0	0	0	0	0	0	0	1	144
rank value of 190s =	0	0	0	0	0	0	0	1	0	1	0	0	1	146
rank value of 191s =	1	0	0	0	0	0	0	0	0	0	0	1	0	148.5
rank value of 194s =	1	0	0	0	0	0	0	0	0	0	0	0	0	150
rank value of 196s =	0	0	0	0	0	0	0	0	0	1	0	0	0	151
rank value of 198s =	0	0	0	1	0	0	0	0	0	0	0	0	0	152
rank value of 200s =	0	0	2	0	0	1	0	0	0	0	0	0	0	154
rank value of 201s =	0	0	0	0	0	0	0	0	0	0	0	1	0	156
rank value of 202s =	0	0	0	0	0	0	0	1	0	0	0	0	0	157
rank value of 205s =	0	0	0	0	0	0	0	1	0	0	0	0	0	158
rank value of 208s =	1	0	0	0	0	0	0	1	0	0	0	0	0	159.5
rank value of 209s =	0	0	0	0	0	0	0	0	0	1	0	0	0	161
rank value of 210s =	0	0	0	1	0	0	0	1	0	0	0	0	0	162.5
rank value of 215s =	0	0	0	0	0	0	0	1	0	0	0	0	0	164
rank value of 216s =	0	0	0	0	0	0	1	2	0	0	0	0	0	166
rank value of 218s =	0	0	0	0	0	0	0	0	0	1	0	0	1	168.5
rank value of 220s =	0	0	1	0	0	0	0	0	0	0	0	0	0	170
rank value of 223s =	0	0	1	0	0	0	0	0	0	0	0	0	0	171
rank value of 224s =	0	0	0	1	0	0	0	0	0	0	0	0	0	172
rank value of 226s =	0	0	0	0	0	0	0	1	0	0	0	0	0	173
rank value of 229s =	0	0	0	0	0	0	0	1	0	0	0	0	0	174
rank value of 230s =	0	0	0	0	0	1	1	0	0	1	0	0	0	176
rank value of 232s =	0	0	0	0	0	0	0	0	0	1	0	0	0	178
rank value of 234s =	0	0	0	0	0	0	0	1	0	0	0	0	0	179
rank value of 235s =	0	0	0	0	0	0	0	0	0	1	0	0	0	180
rank value of 238s =	0	0	0	0	0	0	0	0	0	2	0	0	0	181.5
rank value of 240s =	0	0	0	2	0	0	0	0	0	0	0	0	0	183.5
rank value of 241s =	1	0	0	0	0	0	0	0	0	0	0	0	0	185
rank value of 245s =	0	0	0	0	0	0	0	0	0	0	1	0	0	186
rank value of 248s =	0	0	0	0	0	0	0	1	0	0	0	0	0	187
rank value of 249s =	0	0	0	0	0	0	0	0	0	0	0	1	0	188
rank value of 250s =	1	0	0	0	0	1	0	0	0	1	0	0	0	190
rank value of 253s =	0	0	1	0	0	0	0	0	0	0	0	0	0	192
rank value of 255s =	1	0	0	0	0	0	0	0	0	0	0	0	0	193
rank value of 256s =	0	0	0	0	0	0	0	1	0	0	0	0	0	194
rank value of 270s =	0	0	0	0	0	0	0	0	0	1	0	0	0	195
rank value of 290s =	1	0	0	0	0	0	0	1	0	0	0	0	0	196.5
rank value of 300s =	1	0	0	1	0	0	0	1	0	0	0	0	0	199
rank value of 304s =	1	0	0	0	0	0	0	0	0	0	0	0	0	201
rank value of 309s =	0	0	0	1	0	0	0	0	0	0	0	0	0	202
rank value of 310s =	0	0	0	0	2	0	0	0	0	0	0	0	0	203.5
rank value of 313s =	0	0	1	0	0	0	0	0	0	0	0	0	0	205
rank value of 320s =	3	0	0	0	0	0	0	0	0	0	0	0	0	207
rank value of 330s =	2	0	0	1	1	0	0	0	0	0	0	0	0	210.5
rank value of 332s =	0	0	0	1	0	0	0	0	0	0	0	0	0	213
rank value of 344s =	0	0	0	0	0	0	1	0	0	0	0	0	0	214

rank value of 360s =	0	0	0	0	0	0	0	0	2	0	0	0	0	215.5
rank value of 361s =	0	0	0	0	0	0	0	0	0	0	1	0	0	217
rank value of 378s =	0	0	0	0	0	0	1	0	0	0	0	0	0	218
rank value of 380s =	0	1	0	0	0	0	0	0	0	0	0	0	0	219
rank value of 389s =	1	0	0	0	0	0	0	0	0	0	0	0	0	220
rank value of 393s =	0	0	0	0	0	0	1	0	0	0	0	0	0	221
rank value of 410s =	1	0	0	1	0	0	0	1	0	0	0	0	0	223
rank value of 420s =	0	0	0	0	1	0	0	0	0	0	0	0	0	225
rank value of 428s =	0	0	0	0	0	0	1	0	0	0	0	0	0	226
rank value of 442s =	0	0	0	0	0	0	1	0	0	0	0	0	0	227
rank value of 460s =	0	0	0	0	1	0	0	0	1	0	0	0	0	228.5
rank value of 470s =	0	0	0	1	0	0	0	0	0	0	0	0	0	230
rank value of 474s =	1	0	0	0	0	0	0	0	0	0	0	0	0	231
rank value of 480s =	1	0	0	0	0	0	0	0	0	0	0	0	0	232
rank value of 500s =	0	1	0	0	0	0	0	0	0	0	0	0	0	233
rank value of 501s =	1	0	0	0	0	0	0	0	0	0	0	0	0	234
rank value of 510s =	0	0	0	0	0	0	1	0	0	0	0	0	0	235
rank value of 516s =	0	0	0	0	0	0	0	0	0	1	0	0	0	236
rank value of 531s =	0	0	0	0	0	0	1	0	0	0	0	0	0	237
rank value of 591s =	0	0	1	0	0	1	0	0	0	0	0	0	0	238.5
rank value of 600s =	1	0	0	0	0	0	0	0	0	0	1	0	0	240.5
rank value of 610s =	0	0	0	0	1	0	0	0	0	0	0	0	0	242
rank value of 650s =	1	0	0	0	0	0	0	0	0	0	1	0	0	243.5
rank value of 661s =	0	0	0	0	0	1	0	0	0	0	0	0	0	245
rank value of 750s =	0	0	1	0	0	0	0	0	0	1	0	0	0	246.5
rank value of 770s =	1	0	0	0	0	0	0	0	0	0	0	0	0	248
rank value of 800s =	0	0	0	0	0	0	0	0	0	1	0	0	0	249
rank value of 810s =	0	0	0	0	0	0	0	0	0	1	0	0	0	250
rank value of 817s =	0	0	0	0	0	1	0	0	0	0	0	0	0	251
rank value of 839s =	0	0	0	0	1	0	0	0	0	0	0	0	0	252
rank value of 842s =	0	0	0	0	1	0	0	0	0	0	0	0	0	253
rank value of 870s =	0	0	0	0	1	0	0	0	0	0	0	0	0	254
rank value of 872s =	0	0	0	0	0	0	0	0	0	0	1	0	0	255
rank value of 889s =	0	0	0	0	1	0	0	0	0	0	0	0	0	256
rank value of 894s =	0	0	0	0	0	1	0	0	0	0	0	0	0	257
rank value of 900s =	0	0	0	0	0	0	0	0	0	1	0	0	0	258
rank value of 910s =	0	0	0	0	0	0	0	0	1	0	0	0	0	259
rank value of 940s =	0	0	0	0	0	0	0	0	0	1	0	0	0	260
rank value of 941s =	0	0	0	0	1	0	0	0	0	0	0	0	0	261
rank value of 945s =	0	0	0	0	0	0	1	0	0	0	0	0	0	262
rank value of 964s =	0	0	0	0	0	1	0	0	0	0	0	0	0	263
rank value of 970s =	0	0	0	0	0	0	0	0	0	1	0	0	0	264
rank value of 987s =	0	0	0	0	0	1	0	0	0	0	0	0	0	265
rank value of 1000s =	0	0	0	0	0	0	0	0	0	1	0	0	0	266
rank value of 1020s =	0	0	0	0	1	0	0	0	0	0	0	0	0	267
rank value of 1030s =	0	0	0	0	0	1	0	0	0	0	0	0	0	268
rank value of 1100s =	0	0	0	0	2	0	0	0	0	0	0	0	0	269.5
rank value of 1140s =	0	0	0	0	0	1	0	0	0	0	0	0	0	271
rank value of 1160s =	0	0	0	0	0	1	0	0	0	0	0	0	0	272
rank value of 1200s =	0	0	0	0	1	0	0	0	1	0	0	0	0	273.5
rank value of 1210s =	0	0	0	0	1	0	0	0	0	0	0	0	0	275
rank value of 1230s =	0	0	0	0	1	0	0	0	0	0	0	0	0	276
rank value of 1290s =	0	0	0	0	0	1	0	0	0	0	0	0	0	277
rank value of 1300s =	2	0	0	0	2	1	0	0	0	0	0	0	0	280
rank value of 1350s =	0	0	0	0	1	0	0	0	0	0	0	0	0	283
rank value of 1380s =	0	0	0	0	0	1	0	0	0	0	0	0	0	284
rank value of 1390s =	0	0	0	0	0	1	0	0	0	0	0	0	0	285
rank value of 1400s =	0	0	0	0	0	0	0	0	0	2	0	0	0	286.5
rank value of 1500s =	0	0	0	0	0	1	0	0	0	0	0	0	0	288
rank value of 1550s =	0	0	0	0	0	1	0	0	0	0	0	0	0	289
rank value of 1620s =	0	0	0	0	1	0	0	0	0	0	0	0	0	290
rank value of 1700s =	0	0	0	1	0	0	0	0	0	0	0	0	0	291
rank value of 1720s =	0	0	0	0	1	0	0	0	0	0	0	0	0	292
rank value of 1760s =	0	0	0	0	1	0	0	0	0	0	0	0	0	293
rank value of 1800s =	0	0	0	1	0	0	0	0	0	0	0	0	0	294

rank value of 1920s =	0	0	0	0	1	0	0	0	0	0	0	0	0	295
rank value of 2000s =	0	0	0	0	0	0	0	0	0	0	1	0	0	296
rank value of 2700s =	0	0	0	0	0	0	0	0	0	0	2	0	0	297.5
rank value of 2800s =	0	0	0	0	0	0	0	0	0	0	1	0	0	299
rank value of 3700s =	0	0	0	0	0	0	0	0	0	0	1	0	0	300
rank value of 4200s =	0	0	0	1	0	0	0	0	0	0	0	0	0	301
rank value of 4900s =	0	0	0	0	0	0	0	0	0	0	2	0	0	302.5
rank value of 7200s =	0	0	0	1	0	0	0	0	0	0	0	0	0	304
rank value of 11000s =	0	0	0	0	0	0	0	0	0	0	1	0	0	305
n =	**29**	**28**	**23**	**28**	**28**	**27**	**25**	**25**	**26**	**27**	**23**	**8**	**8**	

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 =	1271466.4	785743	2E+06	1E+06	445289	491401	150100	923150	784033	136503	121155

$N_{i\,bg}$ = 80
N = 305
H = 66.83

Adjust H for ties:

T_i = 5334 sum of T1..T48

$H' = H/(1-(T_i/(N^3-N)))$
H' = 66.84
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' =66.84.
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) =	167.5	232.1	196.4	133.5	140.2	76.0	184.9	184.6	130.6	123.1
avg Rbar (background) =	126.1	126.1	126.1	126.1	126.1	126.1	126.1	126.1	126.1	126.1
Dx =	41.4	106.1	70.4	7.4	14.1	-50.1	58.8	58.6	4.6	-3.0
Cx =	45.1	45.1	45.7	47.1	47.1	46.4	45.7	48.6	76.2	76.2
Statistical Significance ?	No	**Yes**	**Yes**	No	No	No	**Yes**	**Yes**	No	No
If SSI, is current event above MCL?	-	**Yes**	**Yes**	-	-	-	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 Barium 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 J14-1957-40

Compound: **Total Barium**
NC MCL (µg/l): 700
Method: Levene's Test for Homogeneity
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-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

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

n =	29	28	23	28	28	27	25	25	26	27	23	8	8
bar x_i =	396.21	73.954	218.39	723.8	893.77	689.87	248.46	202.9	166.28	470.02	1666.4	176.75	164.8
bar z_i =	201.32	66.728	93.153	857.48	447.02	476.57	158.79	53.56	195.56	354.5	1858.2	27.75	30.75
n_i * bar z_i^2 =	1E+06	124672	199583	2E+07	6E+06	6E+06	630347	71717	994364	3E+06	8E+07	6160.5	7564.5

bar z = 370.87
N = 305

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	8E+07	12	6E+06	9.56	1.67
Error	2E+08	292	665775		
Total	3E+08	304			

Since the F-ratio = 9.56 exceeds the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 12 and 292 df, the assumption of equal variances should be rejected.
Re-test the data set using the natural log of the above values.

n =	29	28	23	28	28	27	25	25	26	27	23	8	8
bar x_i =	5.7887	3.7347	5.2444	5.6131	6.3818	6.0101	5.087	5.128	3.9375	5.6661	6.1117	5.1529	5.0706
bar z_i =	0.45	0.6872	0.3479	0.8027	0.9065	1.0728	0.7823	0.4703	1.2626	0.8525	1.5889	0.1594	0.2122
n_i * bar z_i^2 =	5.8737	13.224	2.7831	18.04	23.011	31.074	15.3	5.529	41.45	19.622	58.063	0.2033	0.3603

bar z = 0.7381
N = 305

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	68.37	12	5.70	6.56	1.67
Error	253.73	292	0.87		
Total	322.10	304			

Since the F-ratio = 6.56 exceeds the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 12 and 292 df, the assumption of equal variances should be rejected.
A non-parametric testing procedure should be used on the data set.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J14-1957-40

Compound: **Total Barium**
NC MCL (µg/l): 700
Method: Skewness Test for Normality
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-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

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

X_{bar} = 506.59
SD = 993.45
N = 292
$1/N\Sigma_i(X_i-X_{bar})^3$ = 6E+09
γ_1= 6.1692

Since the Coefficient of Skewness of 6.17 is greater than 1.0, the data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

X_{bar} = 5.3418
SD = 1.4165
N = 292
$1/N\Sigma_i(X_i-X_{bar})^3$ = -1.507
γ_1= 0.533

Since the Coefficient of Skewness of 0.53 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J14-1957-40

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**

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

X_{bar} = 1007.5417
SD = 499.77482
N = 24
$1/N\Sigma_i(X_i-X_{bar})^3$ = -13845854
γ_1= 0.1182284

Since the Coefficient of Skewness of 0.12 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} = 6.7255183
SD = 0.7335293
N = 24
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.490638
γ_1= 1.325055

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)

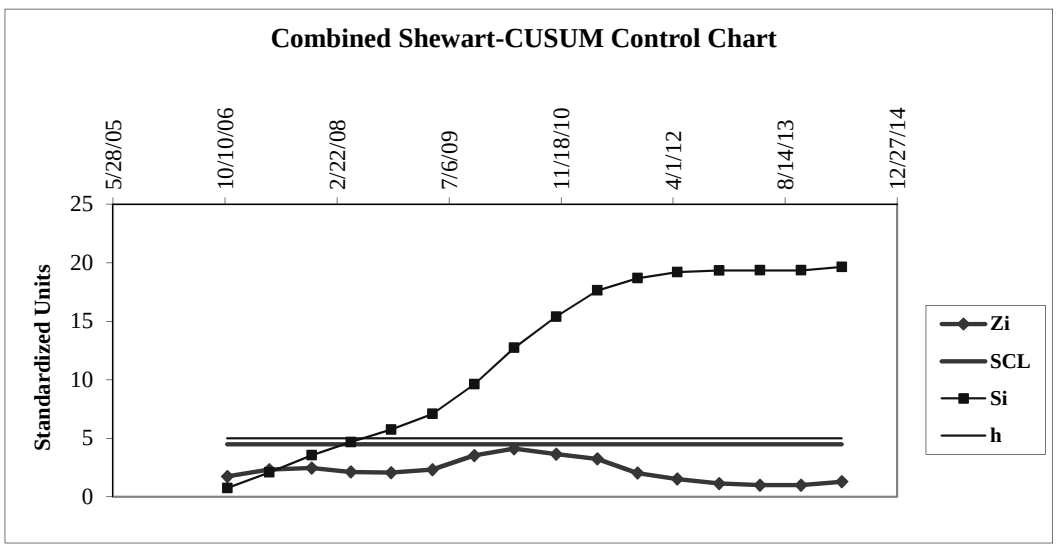
5 = h (constant, upper control limit for the CUSUM scheme)

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

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 J14-1957-40

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**

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

X_{bar} = 756.10417
SD = 522.54619
N = 24
$1/N\Sigma_i(X_i-X_{bar})^3$ = -2254767.1
γ_1= 0.0168443

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

X_{bar} = 6.1296025
SD = 1.4232249
N = 24
$1/N\Sigma_i(X_i-X_{bar})^3$ = -5.740867
γ_1= 2.1226675

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)

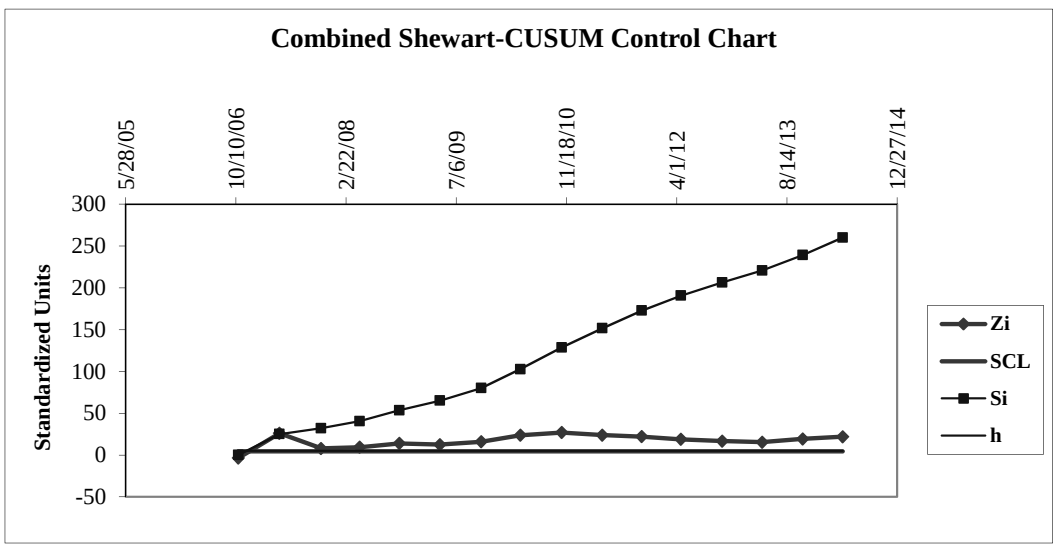
5 = h (constant, upper control limit for the CUSUM scheme)

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

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 J14-1957-40

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

Part 1: Check for Normality

	MW-8	MDL
4/15/02	**1400**	**5**
9/26/02	**1400**	**5**
4/28/03	**800**	**5**
10/30/03	**270**	**5**
4/20/04	**940**	**5**
10/21/04	**900**	**5**
4/18/05	**1000**	**5**
10/13/05	**810**	**5**
4/25/06	**750**	**500**
10/20/06	ND	**5**
4/25/07	ND	**100**
10/31/07	**516**	**5**
4/23/08	**151**	**5**
10/20/08	**182**	**5**
4/22/09	**163**	**5**
10/26/09	**209**	**5**
4/22/10	**150**	**5**
10/27/10	**190**	**5**
4/29/11	**196**	**5**
10/25/11	**238**	**5**
4/20/12	**232**	**5**
10/24/12	**235**	**5**
4/24/13	**218**	**5**
10/24/13	**250**	**5**
4/24/14	**238**	**5**

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

X_{bar} = 459.62
SD = 412.72219
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = 68993692
γ_1= 1.0433477

Since the Coefficient of Skewness of 1.04 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} = 5.6267605
SD = 1.2949354
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = -3.7108597
γ_1= 1.8168681

Since the Coefficient of Skewness of 1.82 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 J14-1957-40

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

Part 1: Check for Normality

	MW-15	MDL
9/26/02	**11000**	**5**
4/28/03	**2800**	**5**
10/30/03	**4900**	**5**
4/20/04	**2000**	**5**
10/21/04	**4900**	**5**
4/18/05	**3700**	**5**
10/13/05	**2700**	**5**
4/25/06	**2700**	**500**
10/20/06	**650**	**5**
4/25/07	**600**	**100**
10/31/07	**872**	**5**
4/23/08	**361**	**5**
10/20/08	**245**	**5**
4/22/09	NS	**5**
10/26/09	**178**	**5**
4/22/10	**74.8**	**5**
10/27/10	**111**	**5**
4/29/11	**125**	**5**
10/25/11	**123**	**5**
4/20/12	**64.8**	**5**
10/24/12	**43.2**	**5**
4/24/13	**96.5**	**5**
10/24/13	**55.2**	**5**
4/24/14	**27.5**	**5**

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

X_{bar} = 1666.3913
SD = 2585.7563
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3.677E+10
γ_1= 2.27348

Since the Coefficient of Skewness of 2.27 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

X_{bar} = 6.111709
SD = 1.8130281
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.9256123
γ_1= 0.1660249

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

Part 2: Shewhart-CUSUM Control Chart

Compute the mean and standard deviation of the historical data:

8.2320014 = x_{mean} (Mean of N1-N8 historical data)

0.5342043 = s (Standard Deviation of N1-N8 historical data)

1 = k (constant, reference value)

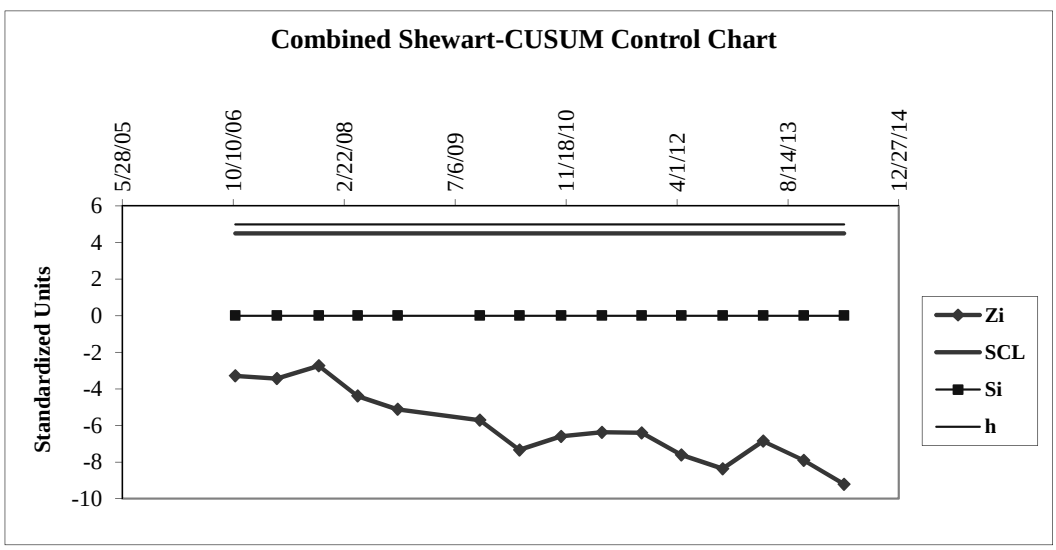
5 = h (constant, upper control limit for the CUSUM scheme)

4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	6.4769724	-3.2853144	0	5	4.5
4/25/07	6.3969297	-3.4351498	0	5	4.5
10/31/07	6.7707894	-2.7353056	0	5	4.5
4/23/08	5.888878	-4.3861937	0	5	4.5
10/20/08	5.5012582	-5.1117958	0	5	4.5
10/26/09	5.1817836	-5.7098342	0	5	4.5
4/22/10	4.3148179	-7.3327445	0	5	4.5
10/27/10	4.7095302	-6.5938655	0	5	4.5
4/29/11	4.8283137	-6.3715095	0	5	4.5
10/25/11	4.8121844	-6.4017028	0	5	4.5
4/20/12	4.1713056	-7.6013914	0	5	4.5
10/24/12	3.7658405	-8.360399	0	5	4.5
4/24/13	4.569543	-6.8559136	0	5	4.5
10/24/13	4.010963	-7.9015437	0	5	4.5
4/24/14	3.314186	-9.2058705	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 J14-1957-40

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**
N_i	29	28	23	27	27	27	25	25	26	27	23	8	8	
sum of rank values (R_i)	4209.0	4094.5	3265.0	3980.5	3648.5	3675.0	3393.5	3250.0	4264.5	4554.5	5641.0	1040.0	1040.0	
avg rank value (Rbar)	145.1	146.2	142.0	147.4	135.1	136.1	135.7	130.0	164.0	168.7	245.3	130.0	130.0	

	Number of each rank value													Rank Value
rank value of NDs =	26	25	21	24	26	26	24	25	20	20	6	8	8	130
rank value of 1.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	260
rank value of 1.2s =	0	1	0	0	0	0	0	0	0	0	1	0	0	261.5
rank value of 1.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	263
rank value of 1.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	264

rank value of 1.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	265
rank value of 1.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	266
rank value of 1.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	267
rank value of 2s =	0	0	0	0	1	0	0	0	1	0	0	0	0	268.5
rank value of 2.1s =	1	0	1	0	0	0	0	0	1	0	0	0	0	271
rank value of 2.2s =	0	0	0	0	0	0	1	0	0	1	0	0	0	273.5
rank value of 2.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	275
rank value of 2.4s =	0	0	0	0	0	0	0	0	2	0	0	0	0	276.5
rank value of 2.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	278
rank value of 3s =	0	0	0	1	0	0	0	0	0	0	1	0	0	279.5
rank value of 3.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	281
rank value of 3.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	282
rank value of 4.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	283
rank value of 4.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	284
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	285
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	286
rank value of 4.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	287
rank value of 5.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	288
rank value of 5.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	289
rank value of 6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	290
rank value of 7s =	0	2	0	0	0	0	0	0	0	0	0	0	0	291.5
rank value of 7.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	293
rank value of 8.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	294
rank value of 14s =	0	0	0	0	0	1	0	0	0	0	0	0	0	295
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	1	0	0	296
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	1	0	0	297
rank value of 21s =	0	0	0	0	0	0	0	0	0	0	2	0	0	298.5
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	1	0	0	300
rank value of 28s =	0	0	0	0	0	0	0	0	0	0	1	0	0	301
rank value of 33s =	0	0	0	0	0	0	0	0	0	0	1	0	0	302
rank value of 95s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
n =	**29**	**28**	**23**	**27**	**27**	**27**	**25**	**25**	**26**	**27**	**23**	**8**	**8**	

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 =	1672877.4	586829	493020	500208	460634	422500	699460	768277	1E+06	135200	135200

$N_{i\ bg}$ = 80

N = 303

H = 33.51

Adjust H for ties:

T_i = 2E+07 sum of T1..T9

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

H' = 89.25

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' =89.25.
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) =	147.4	135.1	136.1	135.7	130.0	164.0	168.7	245.3	130.0	130.0
avg Rbar (background) =	144.6	144.6	144.6	144.6	144.6	144.6	144.6	144.6	144.6	144.6
Dx =	2.8	-9.5	-8.5	-8.9	-14.6	19.4	24.1	100.7	-14.6	-14.6
Cx =	45.4	45.4	45.4	46.8	46.8	46.1	45.4	48.3	75.7	75.7
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 J14-1957-40

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**

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

X_{bar} = 12.656522
SD = 20.862533
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 24114.621
γ_1= 2.8388147

Since the Coefficient of Skewness of 2.84 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} = 1.3278254
SD = 1.6986873
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 1.0001347
γ_1= 0.2181102

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 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)

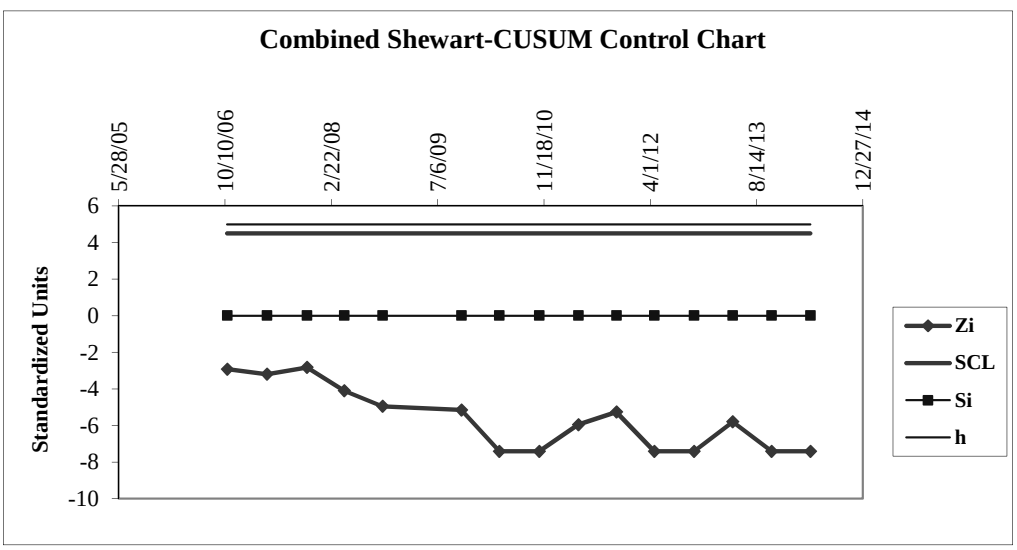
5 = h (constant, upper control limit for the CUSUM scheme)

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

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 J14-1957-40

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**
N_i	29	28	23	27	27	27	25	25	26	27	23	8	8	
sum of rank values (R_i)	4864.0	3974.5	3178.5	3879.5	3686.5	3992.5	3716.5	3720.0	4165.0	4532.5	3821.5	1473.0	1052.0	
avg rank value (Rbar)	167.7	141.9	138.2	143.7	136.5	147.9	148.7	148.8	160.2	167.9	166.2	184.1	131.5	

	Number of each rank value													Rank Value
rank value of NDs =	22	26	22	25	26	24	22	22	21	21	18	5	8	131.5
rank value of 1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	263
rank value of 1.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	264
rank value of 1.2s =	0	0	0	0	0	1	0	0	0	0	0	1	0	265.5
rank value of 1.3s =	0	0	0	0	1	0	1	0	0	0	0	0	0	267.5
rank value of 1.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	269

rank value of 1.6s =	1	0	0	0	0	0	0	0	0	0	1	0	0	270.5
rank value of 1.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	272
rank value of 1.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	273
rank value of 2s =	1	1	0	0	0	0	0	0	0	0	0	0	0	274.5
rank value of 2.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	276
rank value of 2.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	277
rank value of 2.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	278
rank value of 2.7s =	0	0	0	0	0	0	0	0	1	0	0	0	0	279
rank value of 2.9s =	0	0	0	0	0	0	0	0	1	0	0	0	0	280
rank value of 3.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	281
rank value of 3.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	282
rank value of 3.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	283
rank value of 4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	284
rank value of 4.2s =	0	0	1	0	0	0	0	0	1	0	0	0	0	285.5
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	287
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	288
rank value of 5.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	289
rank value of 5.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	290
rank value of 6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	291
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	292
rank value of 8.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	293
rank value of 10s =	0	0	0	0	0	1	0	0	0	0	0	0	0	294
rank value of 13s =	1	0	0	0	0	0	0	0	0	0	0	0	0	295
rank value of 16s =	0	0	0	0	0	0	0	0	0	1	0	0	0	296
rank value of 19s =	0	0	0	0	0	0	0	0	0	3	0	0	0	298
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	1	0	0	300
rank value of 21s =	0	0	0	1	0	0	0	0	0	0	0	0	0	301
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	302
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
n =	**29**	**28**	**23**	**27**	**27**	**27**	**25**	**25**	**26**	**27**	**23**	**8**	**8**	

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 =	1805103.6	557427	503344	590372	552495	553536	667201	760872	634951	271216	138338

$N_{i\,bg}$ = 80

N = 303

H = 4.47

Adjust H for ties:

T_i = 2E+07 sum of T1..T7

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

$$H' = 12.66$$

$$\text{Chi-square} = 18.31$$

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 greater than H' =12.66.

Therefore, the null hypothesis of no contamination at the 5% level holds true

and significant evidence of contamination does not exist.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J14-1957-40

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**
N_i	29	28	23	27	27	27	25	25	26	27	23	8	8	
sum of rank values (R_i)	7091.5	2960.0	4036.0	5203.5	3503.0	2791.0	2554.5	3071.5	3709.5	4972.5	4599.5	899.5	664.0	
avg rank value (Rbar)	244.5	105.7	175.5	192.7	129.7	103.4	102.2	122.9	142.7	184.2	200.0	112.4	83.0	

	Number of each rank value													Rank Value
rank value of NDs =	1	23	7	8	16	23	21	18	15	12	7	6	8	83
rank value of 2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	166
rank value of 2.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	167
rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	168
rank value of 2.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	169

rank value of 3.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	170
rank value of 3.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	171
rank value of 3.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	172
rank value of 4.6s =	0	0	0	0	0	0	0	0	0	1	0	0	0	173
rank value of 4.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	174
rank value of 5.1s =	0	0	0	1	1	0	0	0	1	0	1	1	0	177
rank value of 5.2s =	0	0	0	0	0	1	0	0	0	0	1	0	0	180.5
rank value of 5.4s =	0	1	0	0	0	0	0	0	1	0	0	0	0	182.5
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	184
rank value of 6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	185
rank value of 6.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	186
rank value of 6.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	187
rank value of 6.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	188
rank value of 6.8s =	0	0	0	0	1	0	0	0	0	0	1	0	0	189.5
rank value of 7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	191
rank value of 7.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	192
rank value of 7.3s =	0	0	0	0	0	0	0	0	1	1	0	0	0	193.5
rank value of 7.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	195
rank value of 7.8s =	0	0	0	1	1	0	0	0	0	0	0	0	0	196.5
rank value of 7.9s =	0	0	0	0	0	0	1	0	0	0	0	0	0	198
rank value of 8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	199
rank value of 8.1s =	0	0	1	0	0	0	1	0	0	0	1	0	0	201
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	203
rank value of 8.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	204
rank value of 8.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	205
rank value of 8.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	206
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	1	0	0	0	207.5
rank value of 10s =	1	0	0	0	0	0	0	1	0	0	0	0	0	209.5
rank value of 10.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	211
rank value of 10.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	212
rank value of 10.9s =	0	1	0	1	0	0	0	0	0	1	0	0	0	214
rank value of 11s =	0	0	1	1	0	1	0	1	0	0	0	0	0	217.5
rank value of 11.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	220
rank value of 12s =	0	1	0	0	0	0	1	0	0	0	0	0	0	221.5
rank value of 12.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	223
rank value of 12.3s =	1	0	0	0	0	0	0	0	0	0	0	1	0	224.5
rank value of 12.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	226
rank value of 12.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	227
rank value of 13s =	0	0	0	0	1	0	0	0	0	0	0	0	0	228
rank value of 13.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	229
rank value of 14.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	230
rank value of 14.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	231
rank value of 14.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	232
rank value of 15s =	2	0	0	0	0	0	0	0	0	0	0	0	0	233.5
rank value of 16s =	0	0	1	2	0	0	0	0	1	0	0	0	0	236.5
rank value of 16.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	239
rank value of 17s =	0	0	0	0	1	0	0	0	1	0	1	0	0	241
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	0	0	243
rank value of 18.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	244
rank value of 19s =	1	0	0	0	0	0	0	0	0	0	0	0	0	245
rank value of 19.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	246
rank value of 20s =	1	1	0	0	0	0	0	1	0	0	0	0	0	248
rank value of 21s =	1	0	0	0	0	0	0	0	0	0	0	0	0	250
rank value of 21.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	251
rank value of 22s =	1	0	0	0	0	0	0	0	0	0	0	0	0	252
rank value of 24s =	0	0	0	1	0	0	0	0	0	0	0	0	0	253
rank value of 24.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	254
rank value of 26s =	0	0	0	0	0	0	0	1	0	0	0	0	0	255

rank value of 27s =	0	0	0	0	0	0	0	0	1	0	2	0	0	257
rank value of 28.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	259
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	260
rank value of 29.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	261
rank value of 30s =	1	0	0	0	0	0	0	0	0	0	0	0	0	262
rank value of 30.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	263
rank value of 31s =	0	0	0	0	0	0	0	0	1	0	0	0	0	264
rank value of 33s =	2	0	1	0	0	0	0	0	0	0	0	0	0	266
rank value of 33.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	268
rank value of 36s =	0	0	0	0	0	0	0	0	1	0	0	0	0	269
rank value of 37s =	0	0	0	0	0	0	0	1	0	0	0	0	0	270
rank value of 38.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	271
rank value of 40.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	272
rank value of 45s =	0	0	0	1	0	0	0	0	0	0	0	0	0	273
rank value of 49s =	1	0	0	0	0	0	0	0	0	0	0	0	0	274
rank value of 50s =	1	0	0	0	0	0	0	0	0	1	0	0	0	275.5
rank value of 52s =	1	0	0	0	0	0	0	0	0	0	0	0	0	277
rank value of 56s =	0	0	0	0	0	0	0	0	1	0	0	0	0	278
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	279
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	1	0	0	280
rank value of 75.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	281
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	0	0	282
rank value of 89s =	0	0	0	1	0	0	0	0	0	0	0	0	0	283
rank value of 93s =	0	0	0	0	0	0	0	0	0	0	1	0	0	284
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	1	0	0	285.5
rank value of 110s =	0	0	0	0	0	0	0	0	0	1	0	0	0	287
rank value of 120s =	0	0	0	0	0	0	0	0	0	1	0	0	0	288
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	289
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	2	0	0	290.5
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	0	0	0	292
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	0	0	293
rank value of 170s =	1	0	0	0	0	0	0	0	0	0	0	0	0	294
rank value of 180s =	0	0	0	0	0	0	0	0	0	1	0	0	0	295
rank value of 190s =	0	0	0	0	0	0	0	0	0	1	0	0	0	296
rank value of 210s =	0	0	0	0	0	0	0	0	0	1	0	0	0	297
rank value of 230s =	0	0	0	1	0	0	0	0	0	1	0	0	0	298.5
rank value of 410s =	0	0	0	0	0	1	0	0	0	0	0	0	0	300
rank value of 510s =	0	0	0	1	0	0	0	0	0	0	0	0	0	301
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	302
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
n =	**29**	**28**	**23**	**27**	**27**	**27**	**25**	**25**	**26**	**27**	**23**	**8**	**8**	

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 =	2480720.7	1E+06	454482	288507	261019	377364	529246	915769	919800	101138	55112

$N_{i\ bg}$ = 80

N = 303

H = 50.22

Adjust H for ties:

T_i = 4E+06 sum of T1..T24

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

H' = 59.89

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' =59.89.

Therefore, there is evidence of significant differences between the well groups.

Post-hoc pairwise comparisons are necessary (see below).

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

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

P = 2.33 Percentile of Standard Normal Distribution

from Table 4 of IFG

N = total sample size

$N_{i\,bg}$ = total samples (N_i) of background data

N_x = total samples (N_i) of well x

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

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
Rbar (well x) =	192.7	129.7	103.4	102.2	122.9	142.7	184.2	200.0	112.4	83.0
avg Rbar (background) =	176.1	176.1	176.1	176.1	176.1	176.1	176.1	176.1	176.1	176.1
Dx =	16.6	-46.4	-72.7	-73.9	-53.2	-33.4	8.1	23.9	-63.7	-93.1
Cx =	45.4	45.4	45.4	46.8	46.8	46.1	45.4	48.3	75.7	75.7
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 J14-1957-40

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**
N_i	29	28	23	27	27	27	25	25	26	27	23	8	8	
sum of rank values (R_i)	5822.5	3029.5	2681.5	3857.0	4012.0	3042.0	4503.0	3306.5	3558.5	4543.0	4647.5	2289.0	764.0	
avg rank value (Rbar)	200.8	108.2	116.6	142.9	148.6	112.7	180.1	132.3	136.9	168.3	202.1	286.1	95.5	

	Number of each rank value													Rank Value
rank value of NDs =	8	25	20	19	15	24	9	18	19	16	9	0	8	95.5
rank value of 5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	191
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	192
rank value of 5.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	193
rank value of 5.3s =	1	0	0	0	0	0	0	1	0	0	0	0	0	194.5

rank value of 5.4s =	0	1	0	0	0	1	0	0	0	0	0	0	0	196.5
rank value of 5.6s =	1	0	0	0	1	0	1	1	0	0	0	0	0	199.5
rank value of 5.7s =	0	0	0	0	2	0	1	0	0	0	0	0	0	203
rank value of 6s =	0	0	0	0	1	0	0	0	0	0	1	0	0	205.5
rank value of 6.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	207
rank value of 6.3s =	0	1	0	0	1	0	0	0	0	0	0	0	0	208.5
rank value of 6.4s =	0	0	0	1	0	0	1	1	1	0	0	0	0	211.5
rank value of 6.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	214
rank value of 6.9s =	1	0	0	0	1	0	1	0	0	0	0	0	0	216
rank value of 7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	218
rank value of 7.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	219
rank value of 7.4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	220
rank value of 7.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	221
rank value of 7.7s =	0	0	0	1	1	0	0	0	0	0	0	0	0	222.5
rank value of 7.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	224
rank value of 8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	225
rank value of 8.2s =	0	0	0	0	1	0	0	1	0	0	0	0	0	226.5
rank value of 8.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	228
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	229
rank value of 8.9s =	0	0	0	0	0	0	1	0	0	0	1	0	0	230.5
rank value of 9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	232
rank value of 9.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	233
rank value of 9.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	234
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	235
rank value of 10s =	1	0	0	0	0	0	0	0	0	0	0	0	0	236
rank value of 10.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	237
rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	238
rank value of 10.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	239
rank value of 11.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	240
rank value of 12s =	1	0	0	0	0	0	0	1	0	0	0	0	0	241.5
rank value of 12.6s =	0	0	0	0	0	0	1	0	0	0	0	0	0	243
rank value of 13s =	1	0	0	0	0	0	2	0	1	0	0	0	0	245.5
rank value of 14s =	0	0	0	0	0	0	0	1	0	0	0	0	0	248
rank value of 15.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	249
rank value of 16s =	1	0	1	0	0	1	0	0	0	1	0	0	0	251.5
rank value of 16.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	254
rank value of 16.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	255
rank value of 17s =	0	0	0	0	0	0	0	0	1	0	0	0	0	256
rank value of 17.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	257
rank value of 17.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	258
rank value of 17.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	259
rank value of 18s =	0	0	0	0	0	0	1	0	0	0	0	0	0	260
rank value of 18.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	261
rank value of 19s =	0	0	0	0	0	0	0	0	1	0	0	0	0	262
rank value of 19.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	263
rank value of 21s =	2	0	0	0	0	0	1	1	1	0	0	0	0	266
rank value of 22.3s =	0	0	0	0	0	0	0	0	0	0	1	0	0	269
rank value of 25s =	0	0	0	0	0	0	0	0	0	1	0	0	0	270
rank value of 26.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	271
rank value of 27s =	1	0	0	0	0	0	0	0	0	0	0	0	0	272
rank value of 29s =	0	0	0	0	0	0	0	0	0	1	0	0	0	273
rank value of 29.6s =	0	0	0	0	0	0	0	0	0	0	0	1	0	274
rank value of 31s =	0	0	0	0	0	0	0	0	0	1	0	0	0	275
rank value of 32s =	0	0	0	1	0	0	0	0	0	0	0	0	0	276
rank value of 36s =	0	0	0	0	0	0	0	0	0	1	0	0	0	277
rank value of 37s =	0	0	0	1	0	0	0	0	0	0	0	0	0	278
rank value of 42.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	279
rank value of 43s =	0	0	0	0	0	0	0	0	0	1	0	0	0	280

rank value of 48.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	281
rank value of 50s =	0	0	0	0	0	0	0	0	0	1	1	0	0	282.5
rank value of 52s =	0	0	0	0	0	0	0	0	1	0	0	0	0	284
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	285
rank value of 56s =	0	0	0	0	0	0	0	0	0	0	1	0	0	286
rank value of 57s =	0	0	0	0	0	0	0	0	0	0	1	0	0	287
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	288
rank value of 59s =	0	0	0	0	0	0	0	0	0	1	0	0	0	289
rank value of 65.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	290
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	1	0	0	291
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	1	0	0	292
rank value of 82s =	0	0	0	0	0	0	0	0	0	1	0	0	0	293
rank value of 84.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	294
rank value of 85s =	0	0	0	0	0	0	0	0	0	1	0	0	0	295
rank value of 100s =	0	0	0	1	0	0	0	0	0	0	0	0	0	296
rank value of 110s =	0	0	0	1	0	0	0	0	0	0	1	0	0	297.5
rank value of 115s =	0	0	0	0	0	0	0	0	0	0	0	1	0	299
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	1	0	0	300
rank value of 134s =	0	0	0	0	0	0	0	0	0	0	0	1	0	301
rank value of 260s =	0	0	0	0	0	1	0	0	0	0	0	0	0	302
rank value of 560s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
n =	**29**	**28**	**23**	**27**	**27**	**27**	**25**	**25**	**26**	**27**	**23**	**8**	**8**	

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 =	1662770.3	550980	596153	342732	811080	437318	487035	764402	939098	654940	72962

$N_{i\,bg}$ = 80
N = 303
H = 41.55

Adjust H for ties:

T_i = 7E+06 sum of T1..T18

$H' = H/(1-(T_i/(N^3-N)))$
H' = 55.15
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' =55.15.
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) =	142.9	148.6	112.7	180.1	132.3	136.9	168.3	202.1	286.1	95.5
avg Rbar (background) =	144.2	144.2	144.2	144.2	144.2	144.2	144.2	144.2	144.2	144.2
Dx =	-1.3	4.4	-31.5	36.0	-11.9	-7.3	24.1	57.9	142.0	-48.7
Cx =	45.4	45.4	45.4	46.8	46.8	46.1	45.4	48.3	75.7	75.7
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.
However, the databases for the new wells are too small for intrawell comparisons. As additional laboratory data becomes available during subsequent sampling events, other intrawell statistical methods, such at the Shewhart-CUSUM Control Charts, will be used to evaluate statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J14-1957-40

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**

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

X_{bar} = 52.608696
SD = 116.42128
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 5636923
γ_1= 3.8185869

Since the Coefficient of Skewness of 3.82 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} = 2.6215571
SD = 1.6523225
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 2.0146229
γ_1= 0.4773831

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:

4.5549099 = x_{mean} (Mean of N1-N8 historical data)

0.7832425 = s (Standard Deviation of N1-N8 historical data)

1 = k (constant, reference value)

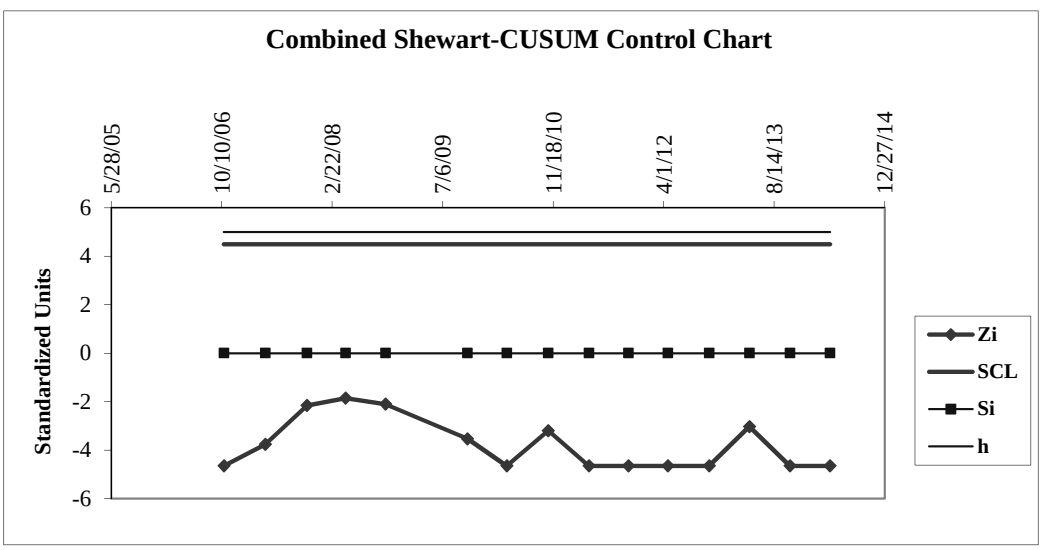
5 = h (constant, upper control limit for the CUSUM scheme)

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

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 J14-1957-40

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**
N_i	29	28	23	27	27	27	25	25	26	27	23	8	8	
sum of rank values (R_i)	7042.5	3198.5	2900.0	3922.0	3578.0	3880.5	2636.5	3502.5	4233.5	4639.5	4924.5	862.0	736.0	
avg rank value (Rbar)	242.8	114.2	126.1	145.3	132.5	143.7	105.5	140.1	162.8	171.8	214.1	107.8	92.0	

	Number of each rank value													Rank Value
rank value of NDs =	1	23	17	18	18	16	22	17	14	15	7	7	8	92
rank value of 2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	184
rank value of 2.3s =	0	0	0	0	1	1	0	0	0	0	0	0	0	185.5
rank value of 2.6s =	0	1	1	0	0	1	1	0	0	0	0	0	0	188.5
rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	191
rank value of 3s =	0	0	0	0	0	0	0	1	1	0	0	0	0	192.5

rank value of 3.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	194
rank value of 3.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	195
rank value of 4.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	196
rank value of 4.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	197
rank value of 5.1s =	1	0	0	0	0	0	0	0	1	1	0	0	0	199
rank value of 5.2s =	0	0	0	0	0	1	0	0	0	0	1	0	0	201.5
rank value of 5.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	203
rank value of 5.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	204
rank value of 5.8s =	1	0	0	0	1	1	0	0	0	0	0	0	0	206
rank value of 5.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	208
rank value of 6s =	0	1	0	1	1	1	0	0	0	0	0	0	0	210.5
rank value of 6.1s =	0	1	0	0	0	1	0	0	0	0	0	0	0	213.5
rank value of 6.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	215
rank value of 6.4s =	1	0	0	0	1	0	0	0	0	0	0	0	0	216.5
rank value of 6.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	218
rank value of 6.7s =	1	0	0	0	1	0	0	0	0	0	0	0	0	219.5
rank value of 6.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	221
rank value of 6.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	222
rank value of 7.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	223
rank value of 7.2s =	1	0	0	0	0	0	0	0	1	0	0	0	0	224.5
rank value of 7.4s =	0	0	0	0	0	0	0	0	1	0	0	0	0	226
rank value of 7.5s =	0	0	0	0	1	0	0	0	0	0	0	0	0	227
rank value of 7.6s =	0	0	0	0	0	0	1	0	0	0	0	0	0	228
rank value of 7.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	229
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	230
rank value of 8.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	231
rank value of 8.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	232
rank value of 9.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	233
rank value of 9.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	234
rank value of 9.6s =	1	0	0	1	0	0	0	0	0	0	0	0	0	235.5
rank value of 9.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	237
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	238
rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	0	0	239
rank value of 11s =	1	0	0	0	0	0	0	0	0	0	0	0	0	240
rank value of 11.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	241
rank value of 12s =	2	0	0	1	0	0	0	0	0	0	0	0	0	243
rank value of 12.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	245
rank value of 12.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	246
rank value of 13s =	0	0	0	0	0	1	0	2	0	0	0	0	0	248
rank value of 13.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	250
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	251
rank value of 15.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	252
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	1	0	0	253.5
rank value of 18s =	2	0	0	0	0	0	0	0	0	0	0	0	0	255.5
rank value of 20s =	1	0	0	0	0	0	0	0	1	0	0	0	0	257.5
rank value of 22s =	0	0	0	0	0	0	0	0	0	1	0	0	0	259
rank value of 22.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	260
rank value of 22.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	261
rank value of 24s =	1	0	0	0	0	0	0	0	0	0	0	0	0	262
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	1	0	0	263
rank value of 26s =	1	0	0	0	0	0	0	1	0	0	1	0	0	265
rank value of 26.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	267
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	268
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	269
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	270
rank value of 29.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	271
rank value of 31s =	1	0	1	0	0	0	0	0	0	0	0	0	0	272.5
rank value of 38s =	0	0	0	0	0	0	0	0	1	0	0	0	0	274

rank value of 40s =	0	0	0	1	0	0	0	0	0	0	0	0	0	275
rank value of 40.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	276
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	277
rank value of 47.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	278
rank value of 53.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	279
rank value of 63s =	0	0	0	0	0	0	0	0	0	1	0	0	0	280
rank value of 68s =	0	0	0	0	0	0	0	0	1	0	0	0	0	281
rank value of 69s =	1	0	0	0	0	0	0	0	0	0	0	0	0	282
rank value of 70s =	0	0	0	1	0	0	0	0	0	0	0	0	0	283
rank value of 71s =	0	0	0	0	0	0	0	0	0	0	1	0	0	284
rank value of 77s =	1	0	0	0	0	0	0	0	0	0	0	0	0	285
rank value of 82s =	0	0	0	0	0	0	0	0	0	1	0	0	0	286
rank value of 85s =	0	0	0	0	0	0	0	0	1	0	0	0	0	287
rank value of 88s =	0	0	0	0	0	0	0	0	1	0	0	0	0	288
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	1	0	0	289
rank value of 94s =	0	0	0	0	0	0	0	0	0	1	0	0	0	290
rank value of 96s =	0	0	0	0	0	0	0	0	0	0	1	0	0	291
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	0	0	0	292
rank value of 110s =	0	0	0	0	0	0	0	0	0	1	0	0	0	293
rank value of 120s =	0	0	0	0	0	0	0	0	0	2	0	0	0	294.5
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	1	0	0	296
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	1	0	0	297
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	1	0	0	298.5
rank value of 220s =	0	0	0	1	0	0	0	0	0	0	0	0	0	300
rank value of 240s =	0	0	0	1	0	0	0	0	0	0	0	0	0	301
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	302
rank value of 450s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
n =	**29**	**28**	**23**	**27**	**27**	**27**	**25**	**25**	**26**	**27**	**23**	**8**	**8**	

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 =	2158573.5	569707	474151	557714	278045	490700	689328	797221	1E+06	92881	67712

$N_{i\,bg}$ = 80

N = 303

H = 29.95

Adjust H for ties:

T_i = 6E+06 sum of T1..T22

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

H' = 38.41

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' =38.41.

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) =	145.3	132.5	143.7	105.5	140.1	162.8	171.8	214.1	107.8	92.0
avg Rbar (background) =	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3	164.3
Dx =	-19.0	-31.7	-20.5	-58.8	-24.2	-1.4	7.6	49.8	-56.5	-72.3
Cx =	45.4	45.4	45.4	46.8	46.8	46.1	45.4	48.3	75.7	75.7
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 Copper averaged over these compliance wells
are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J14-1957-40

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

Part 1: Check for Normality

	MW-15	MDL
9/26/02	**450**	**2**
4/28/03	**71**	**2**
10/30/03	**150**	**2**
4/20/04	**89**	**2**
10/21/04	**140**	**2**
4/18/05	**130**	**2**
10/13/05	**96**	**2**
4/25/06	ND	**200**
10/20/06	**25**	**5**
4/25/07	**26**	**10**
10/31/07	**47.4**	**5**
4/23/08	**17**	**5**
10/20/08	**9.7**	**5**
4/22/09	NS	**5**
10/26/09	**7.1**	**5**
4/22/10	ND	**5**
10/27/10	**53.9**	**5**
4/29/11	**5.2**	**5**
10/25/11	**6.9**	**5**
4/20/12	ND	**5**
10/24/12	ND	**5**
4/24/13	ND	**5**
10/24/13	ND	**5**
4/24/14	ND	**5**

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

X_{bar} = 62.573913
SD = 97.845018
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 2500803.1
γ_1= 2.853784

Since the Coefficient of Skewness of 2.85 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} = 3.0137382
SD = 1.682552
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.2115888
γ_1= 0.0474837

Since the Coefficient of Skewness of 0.05 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

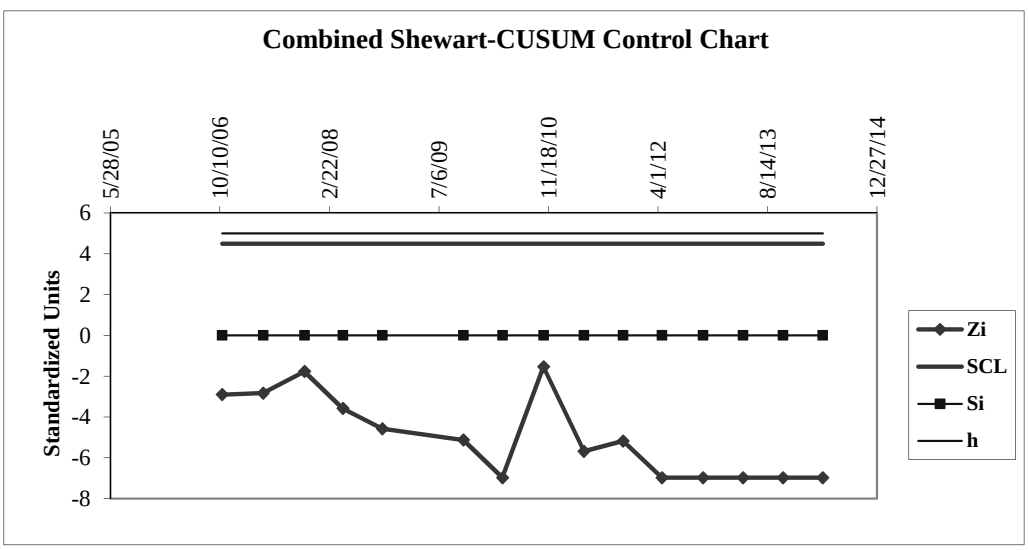
Compute the mean and standard deviation of the historical data:

4.8562368 = x_{mean} (Mean of N1-N8 historical data)
0.5653027 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	3.2188758	-2.8964323	0	5	4.5
4/25/07	3.2580965	-2.8270522	0	5	4.5
10/31/07	3.8586222	-1.764744	0	5	4.5
4/23/08	2.8332133	-3.5786552	0	5	4.5
10/20/08	2.2721259	-4.5711986	0	5	4.5
10/26/09	1.9600948	-5.1231703	0	5	4.5
4/22/10	0.9162907	-6.9696219	0	5	4.5
10/27/10	3.9871305	-1.5374176	0	5	4.5
4/29/11	1.6486586	-5.6740896	0	5	4.5
10/25/11	1.9315214	-5.1737156	0	5	4.5
4/20/12	0.9162907	-6.9696219	0	5	4.5
10/24/12	0.9162907	-6.9696219	0	5	4.5
4/24/13	0.9162907	-6.9696219	0	5	4.5
10/24/13	0.9162907	-6.9696219	0	5	4.5
4/24/14	0.9162907	-6.9696219	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 J14-1957-40

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**
N_i	29	28	23	27	27	27	25	25	27	27	23	8	8	
sum of rank values (R_i)	4893.5	4882.0	3562.0	3536.5	3195.0	3258.0	2972.0	2991.5	4638.5	4614.0	5993.0	912.0	912.0	
avg rank value (Rbar)	168.7	174.4	154.9	131.0	118.3	120.7	118.9	119.7	171.8	170.9	260.6	114.0	114.0	

	Number of each rank value													Rank Value
rank value of NDs =	18	16	16	24	26	26	24	24	17	17	3	8	8	114
rank value of 2.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	228
rank value of 5.2s =	0	0	2	0	0	0	0	0	0	0	0	0	0	229.5
rank value of 5.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	231
rank value of 5.6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	232
rank value of 5.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	233
rank value of 5.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	234
rank value of 5.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	235

rank value of 6.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	236
rank value of 6.4s =	0	0	0	1	0	0	0	0	0	0	1	0	0	237.5
rank value of 6.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	239
rank value of 7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	240
rank value of 7.2s =	2	0	0	0	0	0	0	0	0	0	0	0	0	241.5
rank value of 7.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	243
rank value of 7.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	244
rank value of 8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	245
rank value of 8.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	246
rank value of 8.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	247
rank value of 8.7s =	1	1	0	0	0	0	0	0	0	0	0	0	0	248.5
rank value of 9.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	250
rank value of 9.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	251
rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	0	0	252
rank value of 10.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	253
rank value of 10.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	254
rank value of 11s =	0	0	0	0	0	0	0	1	0	0	1	0	0	255.5
rank value of 12s =	0	1	0	0	0	0	0	0	1	0	0	0	0	257.5
rank value of 12.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	259
rank value of 13s =	2	0	0	0	0	0	0	0	1	0	0	0	0	261
rank value of 13.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	263
rank value of 14s =	1	0	0	0	0	0	0	0	0	0	0	0	0	264
rank value of 14.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	265
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	266
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	1	0	0	267
rank value of 17.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	268
rank value of 18s =	0	0	0	0	0	0	0	0	1	0	0	0	0	269
rank value of 19s =	0	0	0	0	0	0	0	0	0	1	0	0	0	270
rank value of 20s =	1	0	0	1	0	0	0	0	0	1	0	0	0	272
rank value of 24s =	0	0	0	0	0	0	0	0	0	1	0	0	0	274
rank value of 24.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	275
rank value of 24.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	276
rank value of 25s =	0	0	0	0	0	0	0	0	1	0	0	0	0	277
rank value of 25.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	278
rank value of 29s =	0	0	1	0	0	0	0	0	0	2	0	0	0	280
rank value of 32s =	0	0	0	0	0	0	0	0	1	0	0	0	0	282
rank value of 35s =	1	0	0	0	0	0	0	0	0	0	0	0	0	283
rank value of 39s =	0	0	0	0	0	0	0	0	1	2	0	0	0	285
rank value of 50.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	287
rank value of 53s =	0	0	0	0	0	0	0	0	1	0	0	0	0	288
rank value of 59s =	0	1	0	0	0	0	0	0	0	0	0	0	0	289
rank value of 69s =	0	0	0	0	0	0	0	0	0	0	1	0	0	290
rank value of 73s =	0	0	0	1	0	0	0	0	0	0	0	0	0	291
rank value of 76s =	0	1	0	0	0	0	0	0	0	0	0	0	0	292
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	1	0	0	293
rank value of 96s =	0	0	0	0	0	1	0	0	0	0	0	0	0	294
rank value of 123s =	0	0	0	0	0	0	0	0	0	0	1	0	0	295
rank value of 150s =	0	0	0	0	0	0	0	0	1	0	0	0	0	296
rank value of 250s =	0	0	0	0	0	0	0	0	0	0	1	0	0	297
rank value of 290s =	0	0	0	0	0	0	0	0	0	0	1	0	0	298
rank value of 300s =	0	0	0	0	0	0	0	0	0	0	2	0	0	299.5
rank value of 380s =	0	0	0	0	0	0	0	0	0	0	1	0	0	301
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	1	0	0	302
rank value of 640s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
rank value of 740s =	0	0	0	0	0	0	0	0	0	0	1	0	0	304

n =	**29**	**28**	**23**	**27**	**27**	**27**	**25**	**25**	**27**	**27**	**23**	**8**	**8**

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 =	2223611.3	463216	378075	393132	353311	357963	796877	788481	2E+06	103968	103968

$N_{i\,bg}$ = 80
N = 304
H = 58.79

Adjust H for ties:

T_i = 1E+07 sum of T1..T12

$H' = H/(1-(T_i/(N^3-N)))$
H' = 100.73
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' =100.73.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

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

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
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) =	131.0	118.3	120.7	118.9	119.7	171.8	170.9	260.6	114.0	114.0
avg Rbar (background) =	166.7	166.7	166.7	166.7	166.7	166.7	166.7	166.7	166.7	166.7
Dx =	-35.7	-48.4	-46.1	-47.8	-47.1	5.1	4.2	93.8	-52.7	-52.7
Cx =	45.6	45.6	45.6	46.9	46.9	45.6	45.6	48.5	75.9	75.9
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 J14-1957-40

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**

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

X_{bar} = 164.64783
SD = 215.53841
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 12666588
γ_1= 1.3522075

Since the Coefficient of Skewness of 1.35 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} = 3.8522024
SD = 1.8863898
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.650449
γ_1= 0.1035801

Since the Coefficient of Skewness of 0.10 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

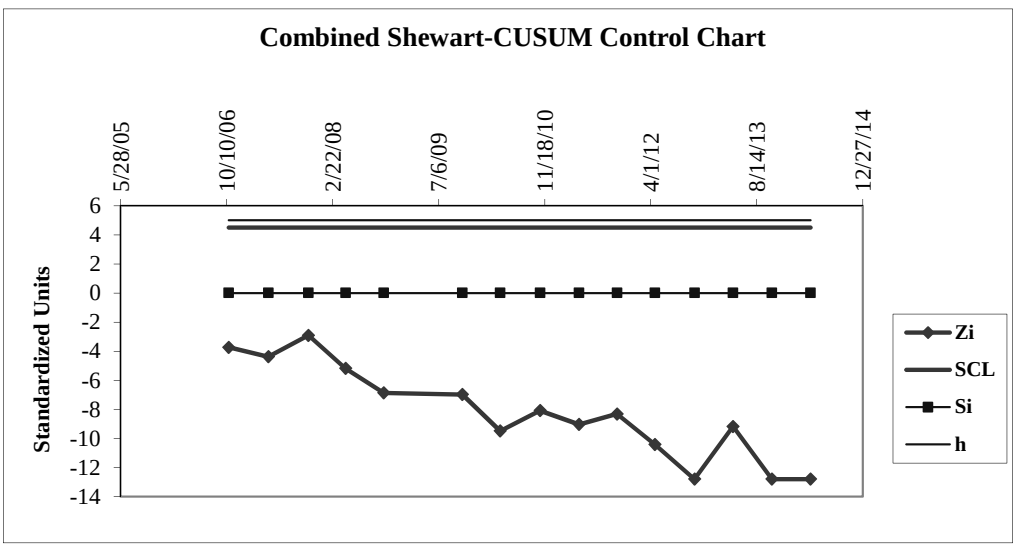
Compute the mean and standard deviation of the historical data:

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

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 J14-1957-40

Compound: **Total Nickel**
NC MCL (µg/l): 100
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-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**
N_i	29	28	23	28	27	27	25	25	26	27	23	8	8	
sum of rank values (R_i)	5886.5	2681.5	3049.0	4740.5	4298.0	3477.5	3588.0	4904.0	3160.5	3943.5	4358.0	1705.0	568.0	
avg rank value (Rbar)	203.0	95.8	132.6	169.3	159.2	128.8	143.5	196.2	121.6	146.1	189.5	213.1	71.0	

	Number of each rank value													Rank Value
rank value of NDs =	4	22	13	11	8	14	13	6	17	16	9	0	8	71
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	142
rank value of 5.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	143
rank value of 5.3s =	0	0	0	0	1	0	0	0	2	0	0	0	0	145
rank value of 5.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	147
rank value of 5.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	148

rank value of 5.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	149
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	150
rank value of 5.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	151
rank value of 6s =	0	0	0	1	0	1	0	0	1	1	0	0	0	153.5
rank value of 6.1s =	0	0	0	0	0	0	0	1	0	1	0	0	0	156.5
rank value of 6.2s =	0	0	0	0	1	0	1	0	0	0	0	0	0	158.5
rank value of 6.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	160
rank value of 6.7s =	1	0	0	0	0	0	0	0	1	0	0	0	0	161.5
rank value of 6.8s =	0	1	0	0	1	0	0	0	0	0	0	0	0	163.5
rank value of 6.9s =	1	0	0	1	1	0	0	0	0	0	0	0	0	166
rank value of 7s =	2	0	0	0	0	1	0	0	0	0	0	0	0	169
rank value of 7.2s =	0	2	0	0	0	0	0	0	0	0	0	0	0	171.5
rank value of 7.3s =	1	0	0	0	1	0	0	0	0	0	0	0	0	173.5
rank value of 7.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	175
rank value of 7.5s =	0	0	0	0	1	3	0	0	0	0	1	0	0	178
rank value of 7.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	181
rank value of 7.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	182
rank value of 8s =	0	0	1	0	0	0	0	0	0	0	0	1	0	183.5
rank value of 8.3s =	0	0	2	0	0	1	0	0	0	0	0	0	0	186
rank value of 8.4s =	0	0	0	1	0	0	0	0	0	0	1	0	0	188.5
rank value of 8.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	190
rank value of 8.6s =	1	0	0	0	0	2	0	0	0	0	0	0	0	192
rank value of 8.8s =	0	0	0	1	1	0	0	0	0	0	0	0	0	194.5
rank value of 8.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	196
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	0	0	1	0	197.5
rank value of 9.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	199
rank value of 9.4s =	0	0	0	0	1	1	0	0	0	0	0	0	0	200.5
rank value of 9.6s =	0	2	0	1	0	0	0	0	0	0	0	1	0	203.5
rank value of 9.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	206
rank value of 9.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	207
rank value of 10s =	1	0	0	0	0	0	0	0	0	0	0	0	0	208
rank value of 10.1s =	0	0	0	0	1	1	0	0	0	0	0	0	0	209.5
rank value of 10.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	211
rank value of 10.5s =	0	0	0	0	1	0	0	0	0	0	0	0	0	212
rank value of 10.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	213
rank value of 10.8s =	0	0	0	0	1	0	0	0	0	0	0	1	0	214.5
rank value of 10.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	216
rank value of 11.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	217
rank value of 11.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	218
rank value of 12s =	1	0	0	0	2	0	0	1	0	0	0	0	0	220.5
rank value of 12.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	223
rank value of 12.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	224
rank value of 12.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	225
rank value of 12.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	226
rank value of 13s =	0	0	0	1	0	0	0	0	1	0	0	0	0	227.5
rank value of 13.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	229
rank value of 14s =	0	0	0	0	0	0	0	2	0	0	0	0	0	230.5
rank value of 14.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	232
rank value of 15s =	2	0	0	0	0	0	0	0	0	0	0	0	0	233.5
rank value of 15.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	235
rank value of 16s =	2	0	0	0	0	0	0	0	0	0	0	0	0	236.5
rank value of 16.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	238
rank value of 17s =	0	0	1	1	0	0	0	0	0	0	0	0	0	239.5
rank value of 18s =	0	0	0	0	1	0	0	1	0	0	0	0	0	241.5
rank value of 18.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	243
rank value of 19s =	1	0	0	0	0	0	0	1	0	0	1	0	0	245
rank value of 19.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	247
rank value of 19.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	248

rank value of 19.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	249
rank value of 19.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	250
rank value of 20s =	1	0	0	0	0	0	1	0	0	0	0	0	0	251.5
rank value of 20.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	253
rank value of 20.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	254
rank value of 21s =	0	0	1	0	0	0	0	0	0	0	0	0	0	255
rank value of 21.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	256
rank value of 21.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	257
rank value of 22s =	1	0	0	0	0	0	0	0	0	1	0	0	0	258.5
rank value of 23s =	1	0	0	0	0	0	0	0	0	0	0	0	0	260
rank value of 23.6s =	0	0	0	0	0	0	1	0	0	0	0	0	0	261
rank value of 23.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	262
rank value of 24s =	1	0	0	0	0	0	0	1	0	0	1	0	0	264
rank value of 24.6s =	0	0	0	0	0	0	0	1	0	0	0	0	0	266
rank value of 25s =	0	0	0	1	0	0	0	0	0	0	0	0	0	267
rank value of 25.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	268
rank value of 26s =	0	0	0	0	0	0	0	0	0	1	0	0	0	269
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	270
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	271
rank value of 29s =	2	0	0	0	0	0	0	0	0	0	0	0	0	272.5
rank value of 29.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	274
rank value of 30s =	0	0	0	1	0	0	0	0	0	0	0	0	0	275
rank value of 30.2s =	0	0	0	0	0	0	1	0	0	0	0	0	0	276
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	0	0	277
rank value of 32.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	278
rank value of 33.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	279
rank value of 35s =	0	0	0	0	0	0	0	0	0	1	0	0	0	280
rank value of 36.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	281
rank value of 40s =	0	0	0	0	0	0	0	0	1	0	0	0	0	282
rank value of 44s =	0	0	0	0	0	0	0	0	1	0	0	0	0	283
rank value of 46s =	0	0	0	0	0	0	0	0	0	1	0	0	0	284
rank value of 48s =	0	0	0	0	0	0	0	0	1	0	0	0	0	285
rank value of 49s =	0	0	0	0	0	0	0	0	0	1	0	0	0	286
rank value of 59s =	0	0	0	0	0	0	0	0	0	1	0	0	0	287
rank value of 68s =	0	0	0	0	0	0	0	0	0	1	0	0	0	288
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	1	0	0	289
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	0	290
rank value of 76s =	1	0	0	0	0	0	0	0	0	0	0	0	0	291
rank value of 78s =	0	0	0	0	0	0	0	0	0	1	0	0	0	292
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	0	0	293
rank value of 90s =	0	0	0	1	0	0	0	0	0	0	0	0	0	294
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	1	0	0	295
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	1	0	0	296
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	1	0	0	297.5
rank value of 170s =	0	0	0	0	0	0	0	0	0	0	1	0	0	299
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	1	0	0	300
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	301
rank value of 400s =	0	0	0	1	0	0	0	0	0	0	0	0	0	302
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
rank value of 460s =	0	0	0	1	0	0	0	0	0	0	0	0	0	304
n =	**29**	**28**	**23**	**28**	**27**	**27**	**25**	**25**	**26**	**27**	**23**	**8**	**8**	

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 =	1686933.6	802584	684178	447889	514950	961969	384183	575970	825746	363378	40328

$N_{i\ bg}$ = 80
N = 304
H = 28.24

Adjust H for ties:

T_i = 3E+06 sum of T1..T35

$H' = H/(1-(T_i/(N^3-N)))$
H' = 31.37
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' =31.37.
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) =	169.3	159.2	128.8	143.5	196.2	121.6	146.1	189.5	213.1	71.0
avg Rbar (background) =	145.2	145.2	145.2	145.2	145.2	145.2	145.2	145.2	145.2	145.2
Dx =	24.1	14.0	-16.4	-1.7	50.9	-23.7	0.8	44.3	67.9	-74.2
Cx =	45.0	45.6	45.6	46.9	46.9	46.2	45.6	48.5	75.9	75.9
Statistical Significance ?	No	No	No	No	**Yes**	No	No	No	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 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 J14-1957-40

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**	**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**	**5**
10/13/05	**6**	**5**
4/25/06	ND	**50**
10/20/06	ND	**5**
4/25/07	ND	**50**
10/31/07	**10**	**5**
4/23/08	**11**	**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**	**5**
10/25/11	**20**	**5**
4/20/12	**25**	**5**
10/24/12	**25**	**5**
4/24/13	**33**	**5**
10/24/13	**30**	**5**
4/24/14	**34**	**5**

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

X_{bar} =	16.456
SD =	9.9939598
N =	25
$1/N\Sigma_i(X_i-X_{bar})^3$ =	79.072262
γ_1=	0.0842179

Since the Coefficient of Skewness of 0.08 is less than 1.0, the data appear not to be significantly skewed. Proceed with further statistical tests using the real detected values shown above.

X_{bar} = 2.5261193
SD = 0.8649526
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.514133
γ_1 = 0.8446795

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

Part 2: Shewhart-CUSUM Control Chart

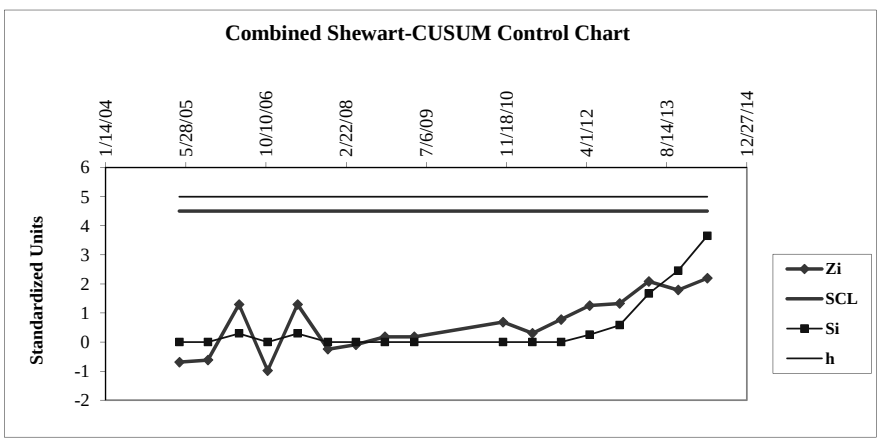
Compute the mean and standard deviation of the historical data:

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

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 J14-1957-40

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**

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' = 28.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 77$
$T_{n1} = 447$

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).

$k = 1$
$n = 77$
$T_{n1} = 447$
$t\,[76,.01] = 2.3815$

$c = 0.013$

$T^*_k = 11.6$

	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 J14-1957-40

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**

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' = 28.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 77$
$T_{n1} = 168.6$

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).

$k = 1$
$n = 77$
$T_{n1} = 168.6$
$t\,[76,.01] = 2.3815$

$c = 0.013$

$T^*_k = 5.8$

	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 J14-1957-40

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**

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' = 28.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 77$
$T_{n1} = 336.7$

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).

$k = 1$
$n = 77$
$T_{n1} = 336.7$
$t\,[76,.01] = 2.3815$

$c = 0.013$

$T^*_k = 9.4$

	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	5.6	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 J14-1957-40

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**
N_i	29	28	23	27	27	27	25	25	26	27	23	8	8	
sum of rank values (R_i)	7462.0	2714.0	2865.0	5058.5	3857.0	3000.0	2664.0	3064.0	3902.5	5030.5	4835.5	919.0	684.0	
avg rank value (Rbar)	257.3	96.9	124.6	187.4	142.9	111.1	106.6	122.6	150.1	186.3	210.2	114.9	85.5	

	Number of each rank value													Rank Value
rank value of NDs =	0	25	16	8	15	22	21	18	14	12	5	6	8	85.5
rank value of 1.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	171
rank value of 5.1s =	0	0	1	0	0	0	0	1	1	0	0	0	0	173
rank value of 5.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	175
rank value of 5.4s =	0	0	0	0	1	0	0	0	1	0	1	0	0	177

rank value of 5.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	179
rank value of 5.9s =	0	0	0	1	0	0	0	0	0	0	1	0	0	180.5
rank value of 6.3s =	0	1	0	0	0	0	0	0	0	0	1	0	0	182.5
rank value of 6.6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	184
rank value of 6.8s =	0	0	0	0	1	1	0	0	0	0	0	0	0	185.5
rank value of 6.9s =	0	0	0	1	0	0	0	0	0	0	0	0	0	187
rank value of 7.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	188
rank value of 7.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	189
rank value of 7.7s =	0	0	0	1	1	0	0	0	0	0	0	0	0	190.5
rank value of 8.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	192
rank value of 8.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	193
rank value of 8.9s =	0	0	0	0	1	0	0	0	1	0	0	0	0	194.5
rank value of 9.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	196
rank value of 9.6s =	0	0	1	0	1	0	0	0	0	0	0	0	0	197.5
rank value of 9.7s =	0	0	0	1	0	0	0	0	1	1	0	0	0	200
rank value of 10s =	0	0	0	0	0	0	1	0	0	1	0	0	0	202.5
rank value of 10.1s =	0	0	0	0	1	0	0	0	0	0	0	0	0	204
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	205
rank value of 11.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	206
rank value of 11.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	207
rank value of 12.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	208
rank value of 13s =	0	0	0	1	0	0	0	1	0	0	0	0	0	209.5
rank value of 13.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	211
rank value of 14s =	0	0	0	0	0	0	0	1	0	1	0	0	0	212.5
rank value of 14.2s =	0	0	0	0	0	0	1	0	0	0	0	0	0	214
rank value of 14.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	215
rank value of 14.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	216
rank value of 15s =	0	0	0	0	0	0	0	0	0	0	0	1	0	217
rank value of 15.1s =	0	0	1	0	0	0	1	0	0	0	0	0	0	218.5
rank value of 15.8s =	1	0	0	1	0	0	0	0	0	0	0	0	0	220.5
rank value of 16s =	1	1	0	0	1	0	0	0	0	0	0	0	0	223
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	0	0	0	225
rank value of 17.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	226
rank value of 17.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	227
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	0	0	228
rank value of 19s =	0	0	0	1	1	0	0	0	0	0	0	0	0	229.5
rank value of 19.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	231
rank value of 20s =	0	0	0	0	1	0	0	0	0	0	0	0	0	232
rank value of 21s =	0	0	0	0	0	1	1	0	0	0	0	0	0	233.5
rank value of 22.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	235
rank value of 23s =	0	0	0	1	0	0	0	0	1	0	0	0	0	236.5
rank value of 23.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	238
rank value of 24s =	0	0	0	0	0	0	0	1	0	0	0	0	0	239
rank value of 25s =	0	0	0	0	1	0	0	0	0	0	0	0	0	240
rank value of 25.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	241
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	1	0	0	242
rank value of 26.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	243
rank value of 27.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	244
rank value of 28s =	0	0	0	1	0	0	0	0	0	0	0	0	0	245
rank value of 29s =	0	0	0	0	0	0	0	1	0	0	0	0	0	246
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	1	0	0	247
rank value of 30.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	248
rank value of 32s =	0	0	0	0	1	0	0	0	0	0	0	0	0	249
rank value of 32.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	250
rank value of 33.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	251
rank value of 33.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	252
rank value of 37s =	0	0	0	0	0	0	0	0	1	0	0	0	0	253
rank value of 40s =	1	0	0	0	0	0	0	0	0	0	0	0	0	254

rank value of 41s =	1	0	0	0	0	0	0	0	1	0	0	0	0	255.5
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	257
rank value of 43s =	1	0	0	0	0	0	0	0	0	0	0	0	0	258
rank value of 44s =	0	0	1	0	0	0	0	0	0	0	0	0	0	259
rank value of 44.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	260
rank value of 45s =	1	0	0	1	0	0	0	0	0	0	0	0	0	261.5
rank value of 48.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	263
rank value of 50s =	0	0	0	0	0	0	0	0	1	0	0	0	0	264
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	265
rank value of 55s =	1	0	0	0	0	0	0	0	0	0	0	0	0	266
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	267
rank value of 59s =	1	0	0	0	0	0	0	0	0	0	0	0	0	268
rank value of 69s =	0	0	0	0	0	0	0	0	1	0	0	0	0	269
rank value of 78s =	0	0	0	0	0	0	0	0	0	1	0	0	0	270
rank value of 79s =	2	0	0	0	0	0	0	0	0	0	0	0	0	271.5
rank value of 82s =	1	0	0	0	0	0	0	0	0	0	1	0	0	273.5
rank value of 85s =	1	0	0	0	0	0	0	0	0	0	1	0	0	275.5
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	0	0	277
rank value of 89s =	2	0	0	0	0	0	0	0	0	0	0	0	0	278.5
rank value of 92s =	0	0	0	0	0	0	0	0	1	0	0	0	0	280
rank value of 103s =	0	0	0	0	0	0	0	0	0	1	0	0	0	281
rank value of 110s =	1	0	0	0	0	0	0	0	0	0	1	0	0	282.5
rank value of 120s =	0	0	0	0	0	0	0	0	0	1	0	0	0	284
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	1	0	0	285
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	0	0	286
rank value of 170s =	0	0	0	1	0	0	0	0	0	1	0	0	0	287.5
rank value of 200s =	0	0	0	0	0	0	0	0	0	0	1	0	0	289
rank value of 210s =	0	0	0	1	0	0	0	0	0	0	1	0	0	290.5
rank value of 230s =	0	0	0	0	0	0	0	0	0	2	0	0	0	292.5
rank value of 240s =	1	0	0	0	0	0	0	0	0	2	0	0	0	295
rank value of 250s =	1	0	0	0	0	0	0	0	0	0	0	0	0	297
rank value of 260s =	0	0	0	0	0	0	0	0	0	1	0	0	0	298
rank value of 300s =	0	0	0	0	0	1	0	0	0	0	0	0	0	299
rank value of 310s =	0	0	0	0	0	0	0	0	0	1	0	0	0	300
rank value of 640s =	0	0	0	1	0	0	0	0	0	0	0	0	0	301
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	302
rank value of 1000s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
n =	**29**	**28**	**23**	**27**	**27**	**27**	**25**	**25**	**26**	**27**	**23**	**8**	**8**	

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 =	2125846.0	947719	550980	333333	283876	375524	585750	937257	1E+06	105570	58482

$N_{i\,bg}$ = 80

N = 303

H = 41.75

Adjust H for ties:

T_i = 5E+06 sum of T1..T30

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

H' = 50.70
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' =50.70.
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) =	187.4	142.9	111.1	106.6	122.6	150.1	186.3	210.2	114.9	85.5
avg Rbar (background) =	163.0	163.0	163.0	163.0	163.0	163.0	163.0	163.0	163.0	163.0
Dx =	24.3	-20.2	-51.9	-56.5	-40.5	-12.9	23.3	47.2	-48.1	-77.5
Cx =	45.4	45.4	45.4	46.8	46.8	46.1	45.4	48.3	75.7	75.7
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 J14-1957-40

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**
N_i	29	28	23	27	27	27	25	25	26	27	23	8	8	
sum of rank values (R_i)	6812.5	3159.5	3411.5	4060.5	3481.0	3551.0	2899.0	2660.0	3782.0	4752.5	5795.5	1107.0	584.0	
avg rank value (Rbar)	234.9	112.8	148.3	150.4	128.9	131.5	116.0	106.4	145.5	176.0	252.0	138.4	73.0	

	Number of each rank value													Rank Value
rank value of NDs =	0	14	7	9	10	9	10	13	10	8	1	2	6	50
rank value of 10s =	0	1	0	0	0	1	0	1	1	0	0	0	0	101.5
rank value of 10.1s =	0	0	0	0	0	2	0	0	0	0	0	0	1	105
rank value of 10.3s =	0	0	0	0	0	0	1	1	0	0	0	0	0	107.5
rank value of 10.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	109
rank value of 10.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	110

rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	111
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	112
rank value of 11.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	113
rank value of 11.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	114
rank value of 11.6s =	0	0	1	0	1	0	0	0	1	0	0	0	0	116
rank value of 11.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	118
rank value of 12s =	0	1	1	1	0	0	2	1	0	1	0	0	0	122
rank value of 12.2s =	0	0	0	1	0	0	0	0	0	1	0	0	0	126.5
rank value of 12.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	128
rank value of 12.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	129
rank value of 12.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	130
rank value of 12.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	131
rank value of 13s =	0	1	0	0	0	1	1	0	0	0	0	0	0	133
rank value of 13.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	135
rank value of 14s =	0	1	0	1	0	1	1	0	1	0	0	0	0	138
rank value of 14.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	141
rank value of 14.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	142
rank value of 14.9s =	0	0	0	0	0	1	0	0	1	0	0	2	0	144.5
rank value of 15s =	0	0	0	1	0	0	0	1	1	0	0	0	0	148
rank value of 15.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	150
rank value of 15.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	151
rank value of 15.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	152
rank value of 15.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	153
rank value of 16s =	0	1	0	0	1	0	0	0	0	0	0	0	0	154.5
rank value of 16.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	156
rank value of 16.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	157
rank value of 17s =	0	0	0	2	0	0	1	0	0	0	0	0	0	159
rank value of 17.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	161
rank value of 17.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	162
rank value of 17.6s =	0	0	0	0	0	1	0	0	0	0	0	0	0	163
rank value of 17.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	164
rank value of 17.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	165
rank value of 18s =	0	0	0	0	0	1	0	0	0	0	0	0	0	166
rank value of 18.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	167
rank value of 18.9s =	0	0	0	0	0	0	1	0	0	0	0	0	0	168
rank value of 19s =	0	0	0	0	1	0	0	1	0	0	0	0	0	169.5
rank value of 19.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	171
rank value of 19.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	172
rank value of 19.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	173
rank value of 20s =	0	0	1	0	0	1	0	0	0	0	0	0	0	174.5
rank value of 20.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	176
rank value of 21s =	0	1	0	0	0	0	0	0	0	0	0	0	0	177
rank value of 21.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	178
rank value of 21.5s =	0	0	0	0	0	0	0	0	0	0	0	0	1	179
rank value of 21.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	180
rank value of 22s =	0	1	0	0	1	0	1	0	0	0	0	0	0	182
rank value of 22.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	184
rank value of 22.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	185
rank value of 23s =	0	0	0	0	0	0	0	0	1	0	0	0	0	186
rank value of 23.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	187
rank value of 23.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	188
rank value of 23.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	189
rank value of 23.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	190
rank value of 24s =	0	0	0	0	1	0	0	0	0	0	0	0	0	191
rank value of 24.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	192
rank value of 24.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	193
rank value of 25s =	0	0	0	0	0	1	0	0	0	0	0	0	0	194
rank value of 25.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	195

rank value of 25.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	196
rank value of 25.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	197
rank value of 26s =	0	0	0	0	1	0	0	0	0	1	0	0	0	198.5
rank value of 27.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	200
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	201
rank value of 28.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	202
rank value of 28.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	203
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	204
rank value of 29.1s =	0	0	0	0	0	1	0	0	0	0	0	0	0	205
rank value of 30s =	0	0	1	1	1	1	0	0	0	0	0	0	0	207.5
rank value of 30.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	210
rank value of 30.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	211
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	0	0	212
rank value of 32.4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	213
rank value of 32.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	214
rank value of 33s =	0	0	0	0	0	0	1	1	0	0	0	0	0	215.5
rank value of 33.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	217
rank value of 33.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	218
rank value of 34.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	219
rank value of 35s =	0	0	0	1	0	0	0	0	0	0	0	0	0	220
rank value of 35.2s =	0	0	0	0	0	0	0	0	1	0	0	0	0	221
rank value of 36s =	0	0	0	0	0	1	0	0	0	0	0	0	0	222
rank value of 36.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	223
rank value of 37s =	1	0	0	1	0	0	0	0	0	0	0	0	0	224.5
rank value of 37.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	226
rank value of 37.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	227
rank value of 38s =	0	0	0	0	0	0	0	1	0	0	0	0	0	228
rank value of 38.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	229
rank value of 39.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	230
rank value of 42.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	231
rank value of 43s =	0	0	0	0	0	0	0	1	0	0	0	0	0	232
rank value of 43.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	233
rank value of 44s =	0	0	0	1	0	0	0	0	0	0	0	0	0	234
rank value of 47.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	235
rank value of 48s =	0	0	0	0	1	0	0	0	0	0	0	0	0	236
rank value of 49.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	237
rank value of 50.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	238
rank value of 50.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	239
rank value of 55s =	3	0	0	0	0	0	0	0	1	0	0	0	0	241.5
rank value of 56s =	0	0	0	0	0	0	0	1	0	0	0	0	0	244
rank value of 56.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	245
rank value of 57s =	1	0	0	0	0	0	0	0	0	0	0	0	0	246
rank value of 59.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	247
rank value of 60.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	248
rank value of 63.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	249
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	250
rank value of 66s =	0	1	0	0	0	0	0	0	0	0	0	0	0	251
rank value of 66.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	252
rank value of 66.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	253
rank value of 68s =	0	0	0	0	0	0	0	0	0	1	0	0	0	254
rank value of 70s =	0	0	0	0	0	0	0	0	0	1	0	0	0	255
rank value of 71.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	256
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	0	257
rank value of 75s =	0	0	0	0	0	0	0	0	1	0	0	0	0	258
rank value of 81s =	0	0	0	0	0	0	0	0	1	0	0	0	0	259
rank value of 83s =	1	0	0	0	0	0	0	0	0	0	0	0	0	260
rank value of 86s =	2	0	0	0	0	0	0	0	0	0	0	0	0	261.5
rank value of 88s =	0	0	1	0	0	0	0	0	0	0	0	0	0	263

rank value of 91.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	264
rank value of 92s =	1	0	0	0	0	0	0	0	0	0	0	0	0	265
rank value of 93.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	266
rank value of 99.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	267
rank value of 110s =	0	0	1	0	0	0	0	0	1	0	0	0	0	268.5
rank value of 120s =	0	1	0	0	0	0	0	0	1	1	0	0	0	271
rank value of 130s =	1	1	0	0	0	0	0	0	0	0	0	0	0	273.5
rank value of 138s =	0	0	0	0	0	0	0	0	0	0	1	0	0	275
rank value of 140s =	0	0	0	0	0	0	0	0	1	0	0	0	0	276
rank value of 150s =	1	0	0	0	0	0	0	0	0	0	0	0	0	277
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	0	0	0	278
rank value of 170s =	0	0	0	0	0	0	0	0	0	1	0	0	0	279
rank value of 190s =	0	0	0	0	0	0	0	0	0	1	0	0	0	280
rank value of 200s =	0	0	0	0	0	0	0	0	0	1	2	0	0	282
rank value of 220s =	0	0	0	0	0	0	0	0	0	1	0	0	0	284
rank value of 230s =	2	0	0	1	0	0	0	0	0	1	0	0	0	286.5
rank value of 240s =	0	0	0	0	0	0	0	0	0	1	0	0	0	289
rank value of 250s =	0	0	0	0	0	0	0	0	1	0	0	0	0	290
rank value of 280s =	0	0	0	0	0	0	0	0	0	1	0	0	0	291
rank value of 336s =	0	0	0	0	0	0	0	0	0	0	1	0	0	292
rank value of 580s =	0	0	0	1	0	0	0	0	0	0	0	0	0	293
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	1	0	0	294
rank value of 780s =	0	0	0	1	0	0	0	0	0	0	1	0	0	295.5
rank value of 800s =	0	0	0	0	0	0	0	0	0	0	2	0	0	297.5
rank value of 830s =	0	0	0	0	0	1	0	0	0	0	0	0	0	299
rank value of 1200s =	0	0	0	0	0	0	0	0	0	0	2	0	0	300.5
rank value of 1800s =	0	0	0	0	0	0	0	0	0	0	1	0	0	302
rank value of 4800s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
n =	**29**	**28**	**23**	**27**	**27**	**27**	**25**	**25**	**26**	**27**	**23**	**8**	**8**	

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 =	2238975.9	610654	448791	467022	336168	283024	550136	836528	1E+06	153181	42632

$N_{i\,bg}$ = 80
N = 303
H = 55.62

Adjust H for ties:

T_i = 971232 sum of T1..T30

$H' = H/(1-(T_i/(N^3-N)))$
H' = 57.63
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' =57.63.
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) =	150.4	128.9	131.5	116.0	106.4	145.5	176.0	252.0	138.4	73.0
avg Rbar (background) =	167.3	167.3	167.3	167.3	167.3	167.3	167.3	167.3	167.3	167.3
Dx =	-16.9	-38.4	-35.8	-51.3	-60.9	-21.8	8.7	84.7	-28.9	-94.3
Cx =	45.4	45.4	45.4	46.8	46.8	46.1	45.4	48.3	75.7	75.7
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 J14-1957-40

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**

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

X_{bar} = 585.2869565
SD = 1044.379508
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3267293084
γ_1= 3.065990471

Since the Coefficient of Skewness of 3.07 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} = 5.066945572
SD = 1.783179537
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.449668307
γ_1= 0.084774414

Since the Coefficient of Skewness of 0.08 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

Date	MW-15	MDL	Data for Testing
9/26/02	**4800**	10	8.476371197
4/28/03	**800**	10	6.684611728
10/30/03	**1800**	10	7.495541944
4/20/04	**770**	10	6.646390515
10/21/04	**1200**	10	7.090076836
4/18/05	**1200**	10	7.090076836

10/13/05	**800**	10	6.684611728
4/25/06	**780**	50	6.65929392
10/20/06	**200**	10	5.298317367
4/25/07	**200**	10	5.298317367
10/31/07	**336**	10	5.81711116
4/23/08	**138**	10	4.927253685
10/20/08	**71.5**	10	4.26969745
4/22/09	NS	10	-
10/26/09	**63.8**	10	4.15575319
4/22/10	**24.6**	10	3.202746443
10/27/10	**60.7**	10	4.105943698
4/29/11	**42.9**	10	3.758871826
10/25/11	**49.9**	10	3.910021003
4/20/12	**30.7**	10	3.424262655
10/24/12	**15.7**	10	2.753660712
4/24/13	**33.2**	10	3.502549876
10/24/13	**39.6**	10	3.678829118
4/24/14	ND	10	1.609437912

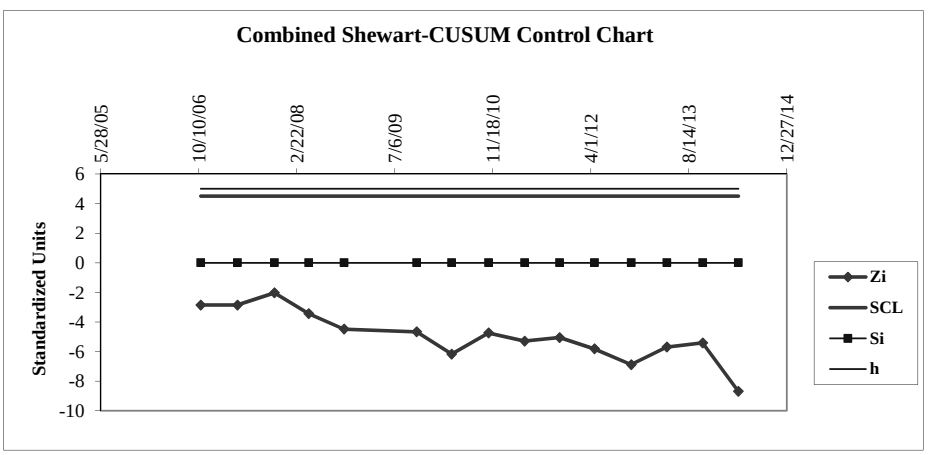
Compute the mean and standard deviation of the historical data:

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

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 J14-1957-40

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**

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' = 21.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 63$
$T_{n1} = 720$

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).

$k = 1$
$n = 63$
$T_{n1} = 720$
$t\,[62,.01] = 2.3889$

$c = 0.0159$

$T^*_k = 19.6$

	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 J14-1957-40

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**

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' = 21.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 63$
$T_{n1} = 178$

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).

$k = 1$
$n = 63$
$T_{n1} = 178$
$t\,[62,.01] = 2.3889$

$c = 0.0159$

$T^*_k = 6.9$

	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 J14-1957-40

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**

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' = 21.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 63$
$T_{n1} = 139.5$

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).

$k = 1$
$n = 63$
$T_{n1} = 139.5$
$t\,[62,.01] = 2.3889$

$c = 0.0159$

$T^*_k = 5.8$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	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 J14-1957-40

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**

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' = 21.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 63$
$T_{n1} = 99$

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).

$k = 1$
$n = 63$
$T_{n1} = 99$
$t\,[62,.01] = 2.3889$

$c = 0.0159$

$T^*_k = 4.6$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	1	1	2	1	1	1	2.2	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 J14-1957-40

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**

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' = 21.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 63$
$T_{n1} = 217.5$

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).

$k = 1$
$n = 63$
$T_{n1} = 217.5$
$t\,[62,.01] = 2.3889$

$c = 0.0159$

$T^*_k = 8.0$

	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.