BUNNELL-LAMMONS ENGINEERING, INC.

GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

REPORT OF GROUNDWATER QUALITY RESULTS & STATISTICAL ANALYSIS

FIRST SEMI-ANNUAL SAMPLING EVENT OF 2015

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

Prepared For:

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

Prepared By:

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

August 7, 2015

BLE Project Number J15-1957-49

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

August 7, 2015

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 2015
White Oak Landfill
Permit Number: 44-07
Haywood County, North Carolina
BLE Project Number J15-1957-49

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 2015 for the White Oak Municipal Solid Waste (MSW) and Construction and Demolition (C&D) Landfills. The enclosed report describes the work performed and presents the results obtained with our conclusions. The purpose of this work was to statistically compare the laboratory analytical results of groundwater samples from the background monitoring wells to the downgradient monitoring wells at the subject landfill in accordance with Title 15A NCAC 13B .1632 (g), (h), and (i). This report of the sampling and statistical analysis has been prepared for submittal to the North Carolina Division of Waste Management (NCDWM) in accordance with Rule 15A NCAC 13B .1632 (j).

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

Sincerely,
BUNNELL-LAMMONS ENGINEERING, INC.

Trevor J. Benton, L.G.
Project Geologist
Licensed, North Carolina No. 2025

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

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

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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 2015. Historical data from multiple sources and in multiple formats were 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 2015).

This report presents data from the first semi-annual sampling event in 2015 for the site. The water samples were collected and analyzed as required in North Carolina's regulations for operation of MSW and C&D landfills.

FIELD ACTIVITIES, SAMPLING, AND ANALYSIS

Groundwater and surface water samples were collected by personnel from Pace Analytical Services, Inc. (Pace) of Asheville, North Carolina on April 27 - 28, 2015. Sampling was performed in general accordance with the *Operations Plan* for the White Oak Landfill. Summary tables of historic and current analytical results are attached in **Appendix A** (groundwater) and **Appendix B** (surface water).

Water samples were collected from the monitoring wells, surface water points, and the LSP. The collected samples were analyzed in the laboratory for North Carolina's *Appendix I* list of constituents that include total metals and volatile organic compounds (VOCs) and in the field for pH, specific conductance, turbidity, and temperature. A copy of the Pace laboratory and field data is included in **Appendix C**.

GROUNDWATER FLOW

The water level data collected during the groundwater sampling is presented in **Table 1**. A water table surface elevation contour map is presented as **Figure 2** along with generalized groundwater

flow directions. Flow velocity calculations are provided on **Table 2**. Please note, hydraulic conductivity and effective porosity values for the existing wells were obtained from prior reports prepared by other consultants.

SUMMARY OF LABORATORY RESULTS

Groundwater

Concentrations of total barium (thirteen wells), total cadmium (one well), total chromium (three wells), total cobalt (one well), total copper (one well), total nickel (nine wells), total vanadium (three wells), and total zinc (eight wells) were detected in the groundwater monitoring wells during the current sampling event. Total barium (MW-2 and MW-2D), total cadmium (MW-16), total and chromium (MW-11S) were detected at concentrations above the North Carolina maximum contaminant level[1] (MCL). The only VOCs detected were iodomethane (MW-1A) and dichloromethane (MW-15); however, the concentration of dichloromethane was below is established North Carolina MCL and no MCL has been established for iodomethane.

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 antimony (LSP), total barium (six surface waters and the LSP), total chromium (LSP), total cobalt (one surface water and the LSP), total nickel (LSP), total vanadium (LSP) and total zinc (two surface waters). No VOCs were detected in the samples from the surface water locations. However, one VOC (acetone) was detected in the LSP sample. Additionally, phosphorus, nitrate, sulfate, BOD, and COD were detected in the LSP sample. None of the laboratory detections or field measurements exceeded an established North Carolina established surface water MCL[2].

STATISTICAL METHODS PERFORMED

The purpose of performing statistical analysis of groundwater quality data is to determine if a release of leachate has occurred from the landfill cells to the groundwater at the site. The US EPA has prepared a guidance document for evaluating groundwater quality data titled *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance* (March 2009). The procedures and methodology used for data analysis of this project are consistent with this US EPA guidance document, and meet or exceed the performance criteria specified in the North Carolina solid waste management rules Title 15A NCAC 13B .1632(g-i). Four methods of statistical analysis were performed depending on the number of detected concentrations and the distribution of the data for a specific compound, as follows:

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

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

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

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

3. Alternatively, if greater than 50% of the data were not detected, Poisson Prediction Limits may be performed, or if less than 50% of the data were not detected, Normal Prediction Limits may be performed. Wilcoxon rank-sum tests were performed for those compounds that failed the initial Poisson Prediction Limits test; and

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

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

SUMMARY OF STATISTICAL RESULTS

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

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

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

CONCLUSION

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

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

We recommend that sampling continue on a semi-annual basis for the *Appendix I* list of VOCs and total metals constituents.

TABLES

TABLE 1

GROUNDWATER MONITORING WELL CONSTRUCTION AND GROUNDWATER ELEVATION DATA
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

April 27, 2015															
Well	**Northing (feet)**	**Easting (feet)**	**Meas. Pt. Elevation**	**Gnd. Surface Elevation**	***Depth to Water (bgs)**	**Depth to Water (bmp)**	**Water Elevation**	**Total Borehole Depth (bgs)**	**Screen Depth (bgs)**	**Screen Elevation**	**Well Type**	**Well Monitors**	**Top of Rock Depth (bgs)**	**Top of Rock Elev.**
MW-1A	721,096.30	812,481.47	2,520.02	2,517.97	16.50	18.55	2,501.47	UK	10.4 - 25.4	2,507.6 - 2,492.6	UK	Deep Residuum	UK	UK
MW-2	721,460.76	812,309.44	2,496.71	2,494.43	26.74	29.02	2,467.69	UK	19.9 - 34.9	2,474.5 - 2,459.5	UK	Deep Residuum/PWR	UK	UK
MW-2D	721,456.01	812,311.87	2,496.89	2,494.69	26.80	29.00	2,467.89	UK	44.6 - 54.6	2,450.1 - 2,440.1	UK	Bedrock	36.9	2,457.8
MW-3r	721,943.38	812,063.70	2,462.61	2,459.53	27.93	31.01	2,431.60	41.5	26.3 - 41.3	2,433.2 - 2,418.2	II	Deep Residuum	NE	NE
MW-3Dr	721,940.67	812,082.82	2,461.89	2,458.42	32.59	36.06	2,425.83	65.0	49.8 - 64.8	2,408.6 - 2,393.6	IIIs	Bedrock	44.0	2,414.4
MW-4A	721,693.04	811,976.64	2,493.85	2,491.60	41.70	43.95	2,449.90	UK	80.6 - 95.6	2,411.0 - 2,396.0	UK	Bedrock	23.3	2,468.3
MW-8	721,704.50	812,155.03	2,477.33	2,474.84	27.41	29.90	2,447.43	UK	31.0 - 41.0	2,443.8 - 2,433.8	UK	Deep Residuum	UK	UK
MW-11S	719,905.88	811,642.89	2,674.58	UK	UK	79.59	2,594.99	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-11D	719,909.34	811,651.55	2,674.89	2,672.01	77.71	80.59	2,594.30	UK	118.0 - 127.6	2,554.0 - 2,544.4	UK	Bedrock	97.0	2,575.0
MW-14	UK	UK	2,711.69	UK	UK	99.22	2,612.47	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-15	UK	UK	2,547.41	UK	UK	9.04	2,538.37	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-16	721,821.98	811,660.70	2,519.35	2,516.07	31.83	35.11	2,484.24	41.0	25.8 - 40.8	2,490.3 - 2,475.3	II	Fill / Residuum	40.0	2,476.1
MW-17	721,783.47	811,219.93	2,542.55	2,539.13	53.43	56.85	2,485.70	63.0	43.0 - 58.0	2,496.1 - 2,481.1	II	Bedrock	40.0	2,499.1

Notes:
All survey data provided by McGill Associates, all units in feet. Data for MW-14 & MW-15 sourced from historical Municipal Engineering reports.
*DTW from bgs values have been calculated from survey data provided by McGill Associates.
All values shown to the nearest 0.1-ft have been rounded.
Water levels were measured on 4/27/15 by Pace Analytical.
MW-4A was lowered 4.59 feet by Haywood County. All bgs referenced depths for MW-4A have been adjusted accordingly on this table.

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

Prepared by: IAI
Checked by: DRM

TABLE 2

GROUNDWATER FLOW DATA
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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	0.0783	0.114	0.29	106.62
MW-2	1.50E-04	2.95E-04	4.31E+00	0.0783	0.114	2.96	1,079.54
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	0.0783	0.114	2.96	1,079.54
MW-11S	2.40E-06	4.72E-06	6.89E-02	0.0875	0.114	0.05	19.29
MW-14	1.38E-05	2.72E-05	3.96E-01	0.0659	0.17	0.15	56.02
MW-15	2.10E-05	4.13E-05	6.03E-01	0.0659	0.17	0.23	85.26

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 27, 2015 sampling event.
3. Groundwater flow velocities calculated using the equation $V = Ki/n_e$ where
4. V = velocity
5. K = hydraulic conductivity
6. i = hydraulic gradient
7. n_e = effective porosity
8. NA = information not available

Prepared by: IAI
Checked by: DRM

TABLE 3

SUMMARY OF STATISTICAL ANALYSIS RESULTS
White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

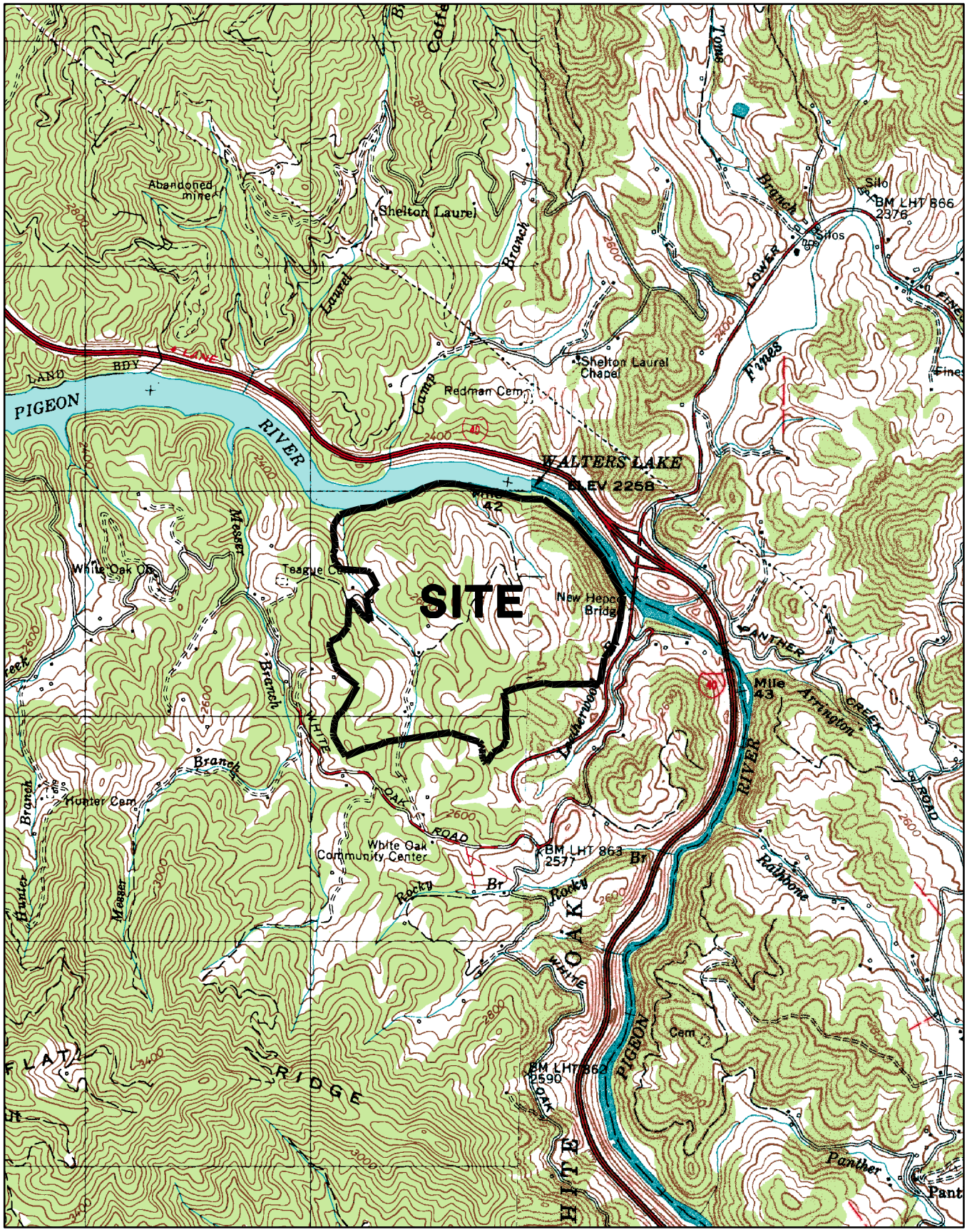
Chemical/ Compound	Percent ND	Primary Statistical Test	Primary Pass/Fail	Secondary Statistical Test	Secondary Pass/Fail	SSI Calculated	SSI Validated as Leachate	SSI Concentration Above MCL During Current Event
Total Antimony	98%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Arsenic	92%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Barium (3)	5%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Fail	MW-2, MW-2D (4)	No (4)	Yes (MW-2, MW-2D)
Total Beryllium	87%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Cadmium	87%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Chromium	57%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Cobalt	65%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Copper	63%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Lead	77%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Total Nickel	46%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Fail	MW-3Dr	No	No
Total Selenium	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Silver	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Thallium	94%	Poisson Prediction Limits	Pass	-	-	-	-	-
Total Vanadium	59%	Kruskal-Wallis	Pass	-	-	-	-	-
Total Zinc	36%	Kruskal-Wallis	Fail	Shewhart-CUSUM	Pass	-	-	-
Acetone	100%	Poisson Prediction Limits	Pass	-	-	-	-	-
Carbon Disulfide	99%	Poisson Prediction Limits	Pass	-	-	-	-	-
Chloroethane	100%	Poisson Prediction Limits	Pass	-	-	-	-	-
Iodomethane	100%	Poisson Prediction Limits	Fail	Wilcoxon	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.

Prepared by: IAI
Checked by: DRM/MSP

FIGURES



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

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

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

LEGEND

	EXISTING GROUNDWATER MONITORING WELL
	EXISTING LANDFILL GAS MONITORING WELL
	SURFACE WATER SAMPLING LOCATION
	PROPOSED SURFACE WATER SAMPLING LOCATION FOR PHASE 4
	PROPOSED GROUNDWATER MONITORING WELL LOCATION FOR PHASE 4
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 HISTORICAL REPORTS BY MUNICIPAL ENGINEERING.

REVISIONS		
No.	DESCRIPTION	BY

DRAWN:	ACE
CHECKED:	IAI
APPROVED:	TJB

DATE:	05-26-15
CAD FILE:	HCWOLF49-WTM042715
JOB NO:	J15-1957-49

BLE INC.
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GROUNDWATER ELEVATION CONTOUR MAP – APRIL 27, 2015
WHITE OAK LANDFILL
HAYWOOD COUNTY, NORTH CAROLINA

FIGURE NO.
2

APPENDICES

APPENDIX A

SUMMARY TABLES OF GROUNDWATER ANALYTICAL RESULTS

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

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

Notes:

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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

NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

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

Notes:

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NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

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

Notes:

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Shaded cells indicate exceedance of MCLs.

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

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

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting Limit
ND = Not Detected at the method detection limit
NS = Not Sampled

NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

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

Notes:
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ND = Not Detected at the method detection limit
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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:

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NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.01**	**6.42**	NS	**6.46**	**5.89**	**5.25**	**5.75**	**5.68**	**6.88**	**6.01**	NS	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**21**	**42**	NS	**75**	**82**	**84**	**101**	**93**	**94**	**125**	NS	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15.9**	**17.4**	NS	**15.3**	**15.7**	**16.8**	**16.2**	**13.2**	**16.3**	**17.3**	NS	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Total Antimony (Sb)	µg/l	10	NE	**15.0**	ND	NS	ND	ND	ND	NT	ND	ND	**11**	NS	NP	NP	ND
Total Arsenic (As)	µg/l	10	50	ND	ND	NS	ND	ND	ND	NT	ND	ND	ND	NS	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**1300**	**41**	NS	ND	ND	**160**	**23**	**190**	**460**	**1400**	NS	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	**2.1**	ND	NS	ND	ND	ND	ND	ND	**2.5**	**4.5**	NS	NP	NP	ND
Total Cadmium (Cd)	µg/l	10	5	**13**	ND	NS	ND	ND	ND	**4**	ND	**5.5**	**19**	NS	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**170**	ND	NS	ND	ND	**5.7**	**7**	**10**	**56**	**180**	NS	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**58**	ND	NS	ND	ND	ND	**18**	**8.2**	**21**	**82**	NS	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**69**	ND	NS	ND	ND	ND	ND	**13**	**68**	**120**	NS	NP	NP	**150**
Total Lead (Pb)	µg/l	10	15	**13**	ND	NS	ND	ND	ND	ND	ND	**13**	**29**	NS	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**74**	ND	NS	ND	ND	ND	**6.2**	**9.2**	**44**	**68**	NS	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Thallium (Tl)	µg/l	2	NE	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**240**	ND	NS	ND	ND	**11**	**21**	**14**	**69**	**260**	NS	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**230**	**16**	NS	ND	ND	**13**	**33**	**38**	**120**	**230**	NS	NP	NP	**15**
Acetone	µg/l	100	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Benzene	µg/l	5	1	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromoform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloroform	µg/l	5	0.19	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dibromomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Ethylbenzene	µg/l	5	29	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Hexanone	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Iodomethane	µg/l	10	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Styrene	µg/l	10	100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Toluene	µg/l	5	1000	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT
Xylene	µg/l	5	530	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	NT

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting Limit
ND = Not Detected at the method detection limit
NS = Not Sampled

NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.5**	**7.3**	**7.09**	**6.14**	**6.17**	**6.18**	**5.96**	**5.96**	**7.22**	**6.37**	**6.65**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**22**	**59**	**52**	**71**	**85**	**82**	**117**	**101**	**92**	**130**	**97**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15.1**	**13.5**	**13.7**	**13.5**	**13.9**	**14**	**15.8**	**14.6**	**15.1**	**17.7**	**16.6**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	ND	**12**	ND	ND	ND	ND	ND	ND	**98**	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	**5.7**	ND	ND	ND	ND	ND	ND	**27**	ND	**68**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**330**	**500**	**750**	**4200**	**120**	**230**	**93**	**410**	**910**	**1400**	**11000**	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	ND	**7**	**2.1**	**5.1**	ND	ND	ND	ND	**8.5**	**4.7**	**95**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	**4.2**	**21**	ND	**10**	ND	**2.3**	**4.2**	**19**	**180**	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**33**	**5.4**	**33**	**510**	ND	**5.2**	ND	**37**	**36**	**230**	**770**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**13**	**5.4**	**16**	**100**	ND	**16**	**7.4**	**21**	**19**	**85**	**560**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**20**	**10**	**31**	**220**	ND	ND	**2.6**	**42**	**88**	**150**	**450**	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	ND	**76**	**29**	ND	ND	ND	ND	ND	**150**	**20**	**740**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**16**	**6.8**	**31**	**400**	ND	ND	ND	**27**	**40**	**78**	**430**	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**65**	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**58**	**16**	**44**	**640**	ND	ND	ND	**42**	**50**	**310**	**1000**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**57**	**120**	**110**	**580**	ND	**20**	ND	**56**	**250**	**280**	**4800**	NP	NP	**2000**
Acetone	µg/l	100	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Benzene	µg/l	5	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromoform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Styrene	µg/l	10	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Toluene	µg/l	5	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Xylene	µg/l	5	530	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting Limit
ND = Not Detected at the method detection limit
NS = Not Sampled

NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**8.3**	**7.15**	**6.89**	**6.37**	**6.21**	**6.17**	**6.4**	**6.16**	**8.15**	**5.85**	**6.75**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**29**	**43**	**55**	**91**	**110**	**99**	**150**	**114**	**100**	**138**	**125**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**16.7**	**15.9**	**15.6**	**15.6**	**16.3**	**15.3**	**13.5**	**14.2**	**17.7**	**14.9**	**18.4**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**600**	**66**	**220**	**1800**	**160**	**140**	**110**	**92**	**360**	**800**	**2800**	NP	NP	ND
Total Beryllium (Be)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	**2**	**2.2**	**20**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	**3.6**	ND	ND	**6**	ND	ND	ND	ND	**2.9**	**16**	**20**	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	**89**	ND	ND	ND	ND	ND	**110**	**27**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**21**	ND	ND	**37**	ND	ND	**6.9**	ND	**17**	**50**	**81**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**24**	ND	**2.6**	**40**	ND	ND	ND	ND	**28**	**94**	**71**	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	ND	ND	ND	ND	ND	ND	ND	ND	**25**	ND	**300**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	ND	ND	ND	**90**	ND	ND	ND	ND	ND	**26**	**70**	NP	NP	ND
Total Selenium (Se)	µg/l	20	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	1	NE	ND	ND	ND	**1.6**	ND	ND	ND	ND	**1.4**	ND	**15**	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**89**	ND	**9.6**	**170**	**6.8**	**6.8**	ND	ND	**37**	**230**	**130**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**86**	**14**	**31**	**160**	**16**	ND	ND	ND	**81**	**190**	**800**	NP	NP	ND
Acetone	µg/l	100	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Benzene	µg/l	5	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromoform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Carbon tetrachloride	µg/l	10	0.3	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloroform	µg/l	5	0.19	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Ethylbenzene	µg/l	5	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Iodomethane	µg/l	10	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	10	5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	170	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Styrene	µg/l	10	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Toluene	µg/l	5	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Vinyl chloride	µg/l	10	0.015	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Xylene	µg/l	5	530	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT

Notes:

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NT = Not Tested
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NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.58**	**6.9**	**6.73**	**6.57**	**6.26**	**6.44**	**6.33**	**6.27**	**7.7**	**6.18**	**6.46**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**29**	**39**	**58**	**82**	**119**	**110**	**140**	**115**	**105**	**149**	**120**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15**	**15.1**	**14.9**	**15.8**	**15.9**	**16.7**	**15**	**14**	**17.5**	**16.3**	**16**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	NT	ND	ND	ND	ND	ND	ND	**5.3**	**81**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**320**	**100**	NT	**210**	**310**	**130**	**95**	**110**	**1200**	**270**	**4900**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	NT	ND	ND	ND	ND	ND	**2.4**	ND	**33**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	**30**	ND	NT	ND	**6.2**	ND	ND	ND	**31**	**4.6**	**140**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**9**	ND	NT	ND	ND	ND	**5.7**	ND	**52**	**8.8**	**110**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**18**	ND	NT	ND	**2.3**	**2.6**	ND	**3**	**85**	**4.4**	**150**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**8.7**	**12**	NT	ND	ND	ND	ND	ND	**39**	**7.4**	**640**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**19**	ND	NT	**6.9**	**6.9**	ND	ND	ND	**48**	ND	**190**	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**54**	ND	NT	**6.6**	**16**	ND	ND	ND	**92**	**14**	**200**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**55**	**22**	NT	**17**	**26**	**10**	ND	ND	**140**	**26**	**1800**	NP	NP	ND
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:

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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 (4-20-2004)

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.71**	**6.81**	**6.78**	**5.57**	**5.4**	**5.47**	**5.47**	**5.41**	**7.36**	**5.17**	**6.83**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**25**	**31**	**40**	**67**	**135**	**120**	**115**	**100**	**100**	**115**	**70**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**15.8**	**15.6**	**15.5**	**13.5**	**14.6**	**14.4**	**13.5**	**14.1**	**15.3**	**14.9**	**13.8**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**	**30**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**320**	**56**	**120**	**410**	**460**	**170**	**140**	**210**	**62**	**940**	**2000**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.8**	**8.9**	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	**33**	ND	**2.1**	**45**	**13**	ND	ND	**11**	**3.5**	**190**	**68**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**9.5**	ND	ND	**7.7**	**5.2**	ND	**13**	**6.4**	ND	**43**	**50**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**18**	ND	**2.8**	**12**	**5.3**	**2.3**	**4.3**	**13**	**7.4**	**100**	**89**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**7.2**	**7**	**5.2**	**6.4**	**5.4**	ND	ND	ND	**12**	**39**	**250**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**20**	ND	ND	**30**	**7.3**	ND	ND	**12**	**5.3**	**49**	**110**	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	**5**	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**55**	ND	ND	**45**	**25**	ND	ND	**13**	**5.1**	**240**	**88**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**55**	**10**	ND	**44**	**30**	**11**	**14**	**19**	**23**	**220**	**770**	NP	NP	**11**
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	NT

Notes:

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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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NT = Not Tested
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NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**7.21**	**7.38**	**7.79**	**6.36**	**6.07**	**6.25**	**6.08**	**6.6**	**7.73**	**6.08**	**6.72**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**21**	**35**	**40**	**85**	**580**	**201**	**185**	**160**	**102**	**180**	**52**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.2**	**14**	**13.3**	**13.3**	**14.9**	**14.3**	**16.5**	**15.5**	**15.3**	**16.5**	**16.8**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**44**	NP	NP	ND
Total Barium (Ba)	µg/l	5	1000	**770**	**37**	**160**	**1700**	**870**	**250**	**160**	**140**	**27**	**810**	**2700**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	**3**	ND	ND	ND	ND	ND	**3.4**	**21**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	**52**	ND	**3.7**	**230**	**4.7**	ND	ND	ND	ND	**150**	**88**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	**21**	ND	ND	**32**	ND	ND	**5.1**	ND	ND	**29**	**56**	NP	NP	ND
Total Copper (Cu)	µg/l	2	1000	**31**	**2.6**	**3.5**	**70**	ND	ND	ND	ND	**3**	**82**	**96**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**14**	**6.9**	ND	**20**	ND	ND	ND	ND	ND	**29**	**290**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**29**	ND	ND	**160**	**6.8**	ND	ND	**6.1**	ND	**46**	**100**	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	2	18	**2.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	**22**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**82**	ND	ND	**210**	**8.9**	ND	ND	ND	ND	**170**	**82**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	2100	**92**	**13**	**12**	**230**	**19**	**25**	ND	ND	**14**	**170**	**800**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	620	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:

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ND = Not Detected at the method detection limit
NS = Not Sampled

NT = Not Tested
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NP = Not Present during sampling event
Shaded cells 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
NS = Not Sampled

NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.47**	**6.81**	**6.51**	**6.74**	**5.56**	**6.14**	**5.87**	**5.74**	**8.2**	**5.61**	**5.97**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**229**	**48**	**53**	**108**	**876**	**564**	**149**	**200**	**12.8**	**330**	**33**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**12.2**	**11.9**	**12.8**	**12.5**	**12.7**	**12.9**	**14.9**	**13.7**	**13.5**	**13.3**	**14.9**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13**	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	**410**	**22**	**180**	**470**	**1100**	ND	ND	ND	**160**	ND	**650**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	**3.8**	ND	ND	ND	ND	ND	ND	ND	**1.5**	ND	**5.2**	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	**50**	ND	**11**	**24**	ND	ND	ND	ND	**17**	ND	**27**	NP	NP	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Copper (Cu)	µg/l	5	1000	**26**	ND	ND	**9.6**	ND	ND	ND	ND	**20**	ND	**25**	NP	NP	ND
Total Lead (Pb)	µg/l	5	15	**20**	ND	ND	ND	ND	ND	ND	ND	**32**	ND	**89**	NP	NP	ND
Total Nickel (Ni)	µg/l	5	100	**22**	ND	**8.3**	**25**	ND	ND	ND	ND	**13**	ND	**24**	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	5	NE	**79**	ND	ND	**28**	ND	ND	ND	ND	**23**	ND	**30**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**74**	ND	**20**	**37**	ND	ND	ND	ND	**55**	ND	**200**	NP	NP	ND
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
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Shaded cells indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.04**	**7.08**	**6.27**	**6.25**	**5.36**	**5.83**	**5.7**	**5.73**	**8.02**	**5.54**	**9.08**	NP	NP	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**31**	**50**	**54**	**105**	**1540**	**757**	**391**	**312**	**134**	**336**	**46**	NP	NP	NT
Temperature	°C (on-site)	-	NE	**13.4**	**14.2**	**14**	**13**	**14**	**14.6**	**14**	**13**	**15.7**	**15.4**	**12.5**	NP	NP	NT
Turbidity	NTU (on-site)	NT	NE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	NT
Total Antimony (Sb)	µg/l	6	NE	ND	ND	ND	ND	ND	**20**	ND	ND	ND	ND	ND	NP	NP	ND
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	**280**	ND	ND	ND	ND	**12**	NP	NP	ND
Total Barium (Ba)	µg/l	100	2000	**290**	ND	**200**	**240**	**1300**	**1500**	**130**	**180**	ND	ND	**600**	NP	NP	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	**14**	ND	ND	ND	ND	**4.9**	NP	NP	ND
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND	ND	ND	NP	NP	ND
Total Chromium (Cr)	µg/l	10	50	**20**	ND	ND	**16**	ND	**410**	ND	ND	ND	ND	**17**	NP	NP	ND
Total Cobalt (Co)	µg/l	10	NE	ND	ND	ND	ND	ND	**260**	ND	ND	ND	ND	ND	NP	NP	ND
Total Copper (Cu)	µg/l	10	1000	**15**	ND	ND	ND	ND	**330**	ND	ND	ND	ND	**26**	NP	NP	ND
Total Lead (Pb)	µg/l	10	15	ND	ND	ND	ND	ND	**96**	ND	ND	ND	ND	**69**	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	ND	ND	ND	ND	ND	**330**	ND	ND	ND	ND	ND	NP	NP	ND
Total Selenium (Se)	µg/l	10	50	**12**	ND	ND	ND	ND	**460**	ND	ND	ND	ND	**18**	NP	NP	ND
Total Silver (Ag)	µg/l	10	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Total Thallium (Tl)	µg/l	5.5	NE	ND	ND	ND	ND	ND	**35**	ND	ND	ND	ND	ND	NP	NP	ND
Total Vanadium (V)	µg/l	25	NE	**43**	ND	ND	ND	ND	**300**	ND	ND	ND	ND	**26**	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1050	**55**	**21**	**30**	**30**	**22**	**830**	**22**	**15**	**10**	**12**	**200**	NP	NP	**12**
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND
Xylene	µg/l	5	530	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	ND

Notes:
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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

Notes:

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MRL = Laboratory Method Reporting Limit
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Shaded cells indicate exceedance of MCLs.

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

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

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting Limit
ND = Not Detected at the method detection limit
NS = Not Sampled

NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

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

Notes:
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MRL = Laboratory Method Reporting Limit
ND = Not Detected at the method detection limit
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NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells 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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MRL = Laboratory Method Reporting Limit
ND = Not Detected at the method detection limit
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NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells 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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MRL = Laboratory Method Reporting Limit
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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

Notes:

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NT = Not Tested
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NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.3**	**6.8**	**6.3**	**6.3**	**6.1**	**6.0**	**5.6**	**5.7**	**8.1**	**5.3**	**5.6**	**5.9**	**5.8**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**28.0**	**49.0**	**49.0**	**122.0**	**1200**	**1332**	**540**	**395**	**140**	**867**	**50.0**	**260.0**	**171.0**	NT
Temperature	°C (on-site)	-	NE	**14.4**	**13.3**	**12.5**	**16.5**	**15.3**	**15.2**	**15.6**	**15.2**	**15.3**	**15.4**	**16.1**	**15.9**	**15.7**	NT
Turbidity	NTU (on-site)	NT	NE	**921**	**3.2**	**9.2**	**8.64**	**5.54**	**2.67**	**6.39**	**4.52**	**10.31**	**2.50**	**56.0**	**2.82**	**2.23**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**389**	**19.0**	**124**	**167**	**889**	**1030**	**393**	**229**	**26.1**	**235**	**43.2**	**177**	**181**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.0**	ND	ND
Total Chromium (Cr)	µg/l	5	10	**30.4**	**6.0**	ND	**6.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	**15.7**	ND	ND	ND	**5.6**	ND	**6.5**	ND	ND	ND	ND	**48.5**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**22.7**	ND	ND	ND	**6.0**	ND	ND	ND	**5.1**	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**18.5**	ND	ND	ND	**10.1**	**8.9**	**20.0**	**25.3**	ND	ND	ND	**9.6**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**59.0**	ND	ND	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**93.4**	**10.4**	**11.3**	**22.4**	**23.8**	ND	**10.3**	**16.1**	**14.9**	**12.2**	**15.7**	**15.8**	ND	ND
Acetone	µg/l	25	6000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	3000	ND	ND	ND	ND	**4.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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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

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Shaded cells indicate exceedance of MCLs.

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.55**	**8.52**	**6.50**	**6.27**	**6.18**	**6.13**	**5.71**	**5.25**	**7.70**	**5.81**	**6.50**	**5.92**	**5.89**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**21.7**	**108.1**	**32.4**	**115.1**	**1468.0**	**1646.0**	**466.3**	**353.0**	**163.1**	**698.0**	**50.9**	**223.7**	**172.0**	NT
Temperature	°C (on-site)	-	NE	**14.8**	**13.7**	**17.1**	**16.7**	**16.6**	**14.9**	**18.3**	**20.7**	**16.1**	**16.7**	**15.6**	**17.2**	**15.4**	NT
Turbidity	NTU (on-site)	NT	NE	**>50**	**>50**	**30.00**	**2.68**	**3.09**	**2.99**	**30.00**	**3.92**	**30.00**	**6.01**	**4.35**	**3.17**	**1.44**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**117**	**16.1**	**102**	**136**	**1280**	**1410**	**363**	**224**	**8.6**	**228**	**23.2**	**156**	**180**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24.2**	ND	ND
Total Copper (Cu)	µg/l	5	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	ND	ND	ND	ND	**10.7**	**10.1**	**29.5**	**31.4**	ND	ND	ND	**9.1**	ND	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	10	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	µg/l	25	6000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	3000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	2	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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

TEST	UNITS	MRL	MCL	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3R	MW-3DR	MW-4A	MW-8	MW-15	MW-16	MW-17	EQUIP. BLANK
pH	pH units (on-site)	-	NE	**6.60**	**6.50**	**7.50**	**6.40**	**6.00**	**6.10**	**6.50**	**6.20**	**6.30**	**6.10**	**6.30**	**6.10**	**6.10**	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	**26.0**	**44.0**	**53.0**	**112.7**	**1601.0**	**1621.0**	**464.0**	**387.0**	**236.0**	**843.0**	**66.0**	**253.0**	**169.0**	NT
Temperature	°C (on-site)	-	NE	**13.5**	**13.2**	**12.5**	**13.9**	**16.9**	**15.5**	**14.1**	**14.2**	**16.5**	**15.8**	**13.5**	**16.6**	**14.8**	NT
Turbidity	NTU (on-site)	NT	NE	**39.5**	**4.82**	**9.58**	**4.46**	**7.43**	**3.78**	**4.84**	**4.94**	**3.80**	**4.37**	**18.40**	**4.49**	**3.49**	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	700	**119**	**16.0**	**109**	**199**	**1330**	**1380**	**345**	**260**	**9.0**	**218**	**30.2**	**156**	**190**	ND
Total Beryllium (Be)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.3**	ND	ND
Total Chromium (Cr)	µg/l	5	10	**10.3**	ND	**8.2**	**7.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**29.3**	ND	ND
Total Copper (Cu)	µg/l	5	1000	**7.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	100	**6.3**	ND	**5.6**	**6.8**	**11.7**	**11.2**	**25.1**	**35.4**	ND	ND	ND	**8.3**	**5.1**	ND
Total Selenium (Se)	µg/l	10	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	**15.5**	ND	ND	**8.0**	ND	ND	ND	ND	ND	ND	ND	**7.0**	ND	ND
Total Zinc (Zn)	µg/l	10	1000	**51.7**	ND	**14.2**	**19.0**	**13.6**	ND	**14.8**	**12.9**	ND	ND	**11.3**	**13.3**	ND	ND
Acetone	µg/l	25	6000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	3000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	2	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	**10.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/l	2	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202.
MRL = Laboratory Method Reporting Limit
ND = Not Detected at the method detection limit
NS = Not Sampled

NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedance of MCLs.

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

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

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

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

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

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

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

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

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

Notes:
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ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
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NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

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

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

Notes:
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ND = Not Detected at the Method Reporting Limit
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NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

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

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

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

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

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

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

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

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

Notes:
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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 (10-13-2005)

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

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

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

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

Notes:
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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 (10-16-2006)

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

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

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

Notes:
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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 (10-31-07)

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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NP = Not Present during sampling event
Shaded cells indicate exceedances of MCLs.

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

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

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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 (10-21-08)

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

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

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

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

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

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

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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**

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

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**6.31**	**6.14**	**7.15**	**6.11**	**5.7**	**6.39**	**7.31**
Specific Conductance	µmhos/cm (on-site)	1	NE	**203**	**250**	**287**	**158**	**50**	**53**	**20400**
Temperature	°C (on-site)	-	29	**15.8**	**15.2**	**16.6**	**17.5**	**14.7**	**13.4**	**18.2**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT	NT	NT	NT	NT
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**5.5**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**6**
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.51**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**7670**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**40**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**96**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**13.9**
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**29.4**
Total Barium (Ba)	µg/l	5	NE	**209**	**180**	**350**	**126**	**40.1**	**32.9**	**172**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	**1.3**
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	**13.2**	ND	ND	ND	**10.7**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	**17.7**	**48.8**	ND	ND	ND
Total Copper (Cu)	µg/l	5	7	ND	ND	**9**	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	**9**	**5**	ND	ND	**44.4**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	**29.6**
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	**27.9**	ND	ND	ND	**21**
Total Zinc (Zn)	µg/l	10	50	ND	**31.2**	**60.6**	ND	ND	ND	ND
Mercury	µg/l	0.2	0.012	NT	NT	NT	ND	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	NT
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	**1**
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**3.4**
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NT
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.2**
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**6.8**
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NT
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	**8.4**
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
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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NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

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

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

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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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ND = Not Detected at the Method Reporting Limit
NS = Not Sampled
NT = Not Tested
NE = Not Established; North Carolina has not established a MCL
Shaded cells indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.0**	**6.8**	**7.8**	**6.3**	**6.4**	**7.0**	**7.6**
Specific Conductance	µmhos/cm (on-site)	1	NE	**146**	**218.4**	**261.2**	**111**	**41.3**	**65.8**	**260.4**
Temperature	°C (on-site)	-	29	**15.1**	**14.2**	**16.8**	**15.3**	**14.9**	**13.5**	**16.5**
Turbidity	NTU (on-site)	NT	50	**12.5**	**6.1**	**15.9**	**4.84**	**4.06**	**6.43**	**5.71**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**8.6**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.52**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**8.6**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**299**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**20.5**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**154**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**103**	**177**	**90.8**	**121**	**35.2**	**40.5**	**85.2**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**6**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	**14.4**	ND	ND	**7.6**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	**7.7**
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**33.3**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Zinc (Zn)	µg/l	10	50	ND	**37.6**	**15**	ND	ND	ND	**21.5**
Mercury	µg/l	0.2	0.012	NT	NT	NT	NT	NT	NT	NT
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	NT
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	NT
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	NT
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	NT
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
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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NT = Not Tested
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Shaded cells indicate exceedances of MCLs.

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

TEST	UNITS	MRL	MCL	SW-1	SW-2	SW-3	SW-5	SW-6	SW-7	Leachate
pH	pH units (on-site)	-	<6.0; >9.0	**7.1**	**6.9**	**7.9**	**6.2**	**6.1**	**7.2**	**7.5**
Specific Conductance	µmhos/cm (on-site)	1	NE	**217**	**272**	**329**	**227**	**39**	**54**	**16,940.0**
Temperature	°C (on-site)	-	29	**13.6**	**14.5**	**13.9**	**17.5**	**13.1**	**11.9**	**19.9**
Turbidity	NTU (on-site)	NT	50	**7.38**	**3.6**	**6.16**	**30.5**	**1.97**	**3.39**	**19.6**
Nitrate as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.18**
Nitrate/Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	NT
Nitrite as N	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.075**
Nitrogen	mg/l	0.1	NE	NT	NT	NT	NT	NT	NT	**0.26**
Total Nitrogen, Kjeldahl	mg/l	100	NE	NT	NT	NT	NT	NT	NT	NT
Sulfate	mg/l	75	NE	NT	NT	NT	NT	NT	NT	**5100**
Biochemical Oxygen Demand	mg/l	2	NE	NT	NT	NT	NT	NT	NT	**53.3**
Chemical Oxygen Demand	mg/l	25	NE	NT	NT	NT	NT	NT	NT	**860**
Total Dissolved Solids	mg/l	20	NE	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/l	2	5	NT	NT	NT	NT	NT	NT	NT
Total Antimony (Sb)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	5	10	ND	ND	ND	ND	ND	ND	**14**
Total Barium (Ba)	µg/l	5	NE	**172**	**175**	**124**	**164**	**38.7**	**31.2**	**390**
Total Beryllium (Be)	µg/l	1	6.5	ND	ND	ND	ND	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND	ND	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	ND	**32.6**
Total Cobalt (Co)	µg/l	5	NE	ND	ND	ND	**20.2**	ND	ND	**19**
Total Copper (Cu)	µg/l	5	7	ND	ND	ND	ND	ND	ND	ND
Total Lead (Pb)	µg/l	5	25	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5	88	ND	ND	ND	ND	ND	ND	**166**
Total Selenium (Se)	µg/l	10	5	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	**16.0**
Total Zinc (Zn)	µg/l	10	50	ND	**28.5**	**10.7**	ND	ND	ND	ND
Mercury	µg/l	0.2	0.012	ND	ND	ND	ND	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	**1.8**
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND	ND	ND	ND	ND
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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Section 15A NCAC 02B.0100, .0200, a .0300.
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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
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Shaded cells indicate exceedances of MCLs.

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

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

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

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

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

Notes:
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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 28, 2015

Will Martin
Santek Waste Services
650 25th St NW Suite 100
Cleveland, TN 37311

RE: Project: W.O.L.F 4/28
Pace Project No.: 92247382

Dear Will Martin:
Enclosed are the analytical results for sample(s) received by the laboratory on April 28, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Revised Report: Report revised to add field data not listed

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

Sincerely,

Chris Derouen
christopher.derouen@pacelabs.com
Project Manager

Enclosures

cc: Andy Alexander, BLE
Zondra Kuykendall, Haywood Co. Solid Waste
Randy Siske, Haywood Co. Solid Waste

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

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

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

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Asheville, NC 28804
(828)254-7176

SAMPLE ANALYTE COUNT

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92247382001	**MW-1A**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382002	**MW-2**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382003	**MW-2D**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382004	**MW-3R**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382005	**MW-3RD**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382006	**MW-4A**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382007	**MW-8**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382008	**MW-11s**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382009	**MW-11D**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382010	**MW-14**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382011	**MW-15**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382012	**MW-16**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382013	**MW-17**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382014	**SW-1**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382015	**SW-2**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382016	**SW-3**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382017	**SW-5**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382018	**SW-6**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C
92247382019	**SW-7**	EPA 6010	JMW	15	PASI-A

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SAMPLE ANALYTE COUNT

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	SNP	51	PASI-C
92247382020	**Leachate**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	63	PASI-C
		SM 5210B	MLS	1	PASI-A
		EPA 300.0	AES2	1	PASI-A
		EPA 353.2	DMN	3	PASI-A
		EPA 365.1	JDA	1	PASI-A
		SM 5220D	MAB	1	PASI-A
92247382021	**TVL BLK**	EPA 8260	SNP	51	PASI-C
92247382022	**EQUIP BLANK**	EPA 6010	JMW	15	PASI-A
		EPA 8260	SNP	51	PASI-C

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-1A **Lab ID: 92247382001** Collected: 04/28/15 11:45 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/04/15 12:31		
Collected Date	**4/28/15**			1		05/04/15 12:31		
Collected Time	**11:45**			1		05/04/15 12:31		
Field pH	**6.4**	Std. Units	0.10	1		05/04/15 12:31		
Field Temperature	**13.9**	deg C	0.50	1		05/04/15 12:31		
Static Water Level	**18.55**	feet		1		05/04/15 12:31		
Field Specific Conductance	**112.7**	umhos/cm	1.0	1		05/04/15 12:31		
Turbidity	**4.46**	NTU	1.0	1		05/04/15 12:31		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:11	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:11	7440-38-2	
Barium	**199**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:11	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:11	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:11	7440-43-9	
Chromium	**7.9**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:11	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:11	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:11	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:11	7439-92-1	
Nickel	**6.8**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:11	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:11	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:11	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:11	7440-28-0	
Vanadium	**8.0**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:11	7440-62-2	
Zinc	**19.0**	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:11	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 18:36	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 18:36	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 18:36	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 18:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 18:36	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 18:36	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 18:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 18:36	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 18:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 18:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 18:36	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 18:36	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 18:36	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 18:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 18:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 18:36	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 18:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 18:36	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 18:36	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-1A **Lab ID: 92247382001** Collected: 04/28/15 11:45 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 18:36	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 18:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 18:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 18:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 18:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 18:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 18:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 18:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 18:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 18:36	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 18:36	591-78-6	
Iodomethane	**10.2**	ug/L	5.0	1		05/08/15 18:36	74-88-4	B
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 18:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 18:36	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 18:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 18:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 18:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 18:36	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 18:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 18:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 18:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 18:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 18:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 18:36	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 18:36	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 18:36	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 18:36	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 18:36	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 18:36	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		05/08/15 18:36	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		05/08/15 18:36	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		05/08/15 18:36	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-2 **Lab ID: 92247382002** Collected: 04/28/15 11:55 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/04/15 12:32		
Collected Date	**4/28/15**			1		05/04/15 12:32		
Collected Time	**11:55**			1		05/04/15 12:32		
Field pH	**6.0**	Std. Units	0.10	1		05/04/15 12:32		
Field Temperature	**16.9**	deg C	0.50	1		05/04/15 12:32		
Static Water Level	**29.02**	feet		1		05/04/15 12:32		
Field Specific Conductance	**1601**	umhos/cm	1.0	1		05/04/15 12:32		
Turbidity	**7.43**	NTU	1.0	1		05/04/15 12:32		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:24	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:24	7440-38-2	
Barium	**1330**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:24	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:24	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:24	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:24	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:24	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:24	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:24	7439-92-1	
Nickel	**11.7**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:24	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:24	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:24	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:24	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:24	7440-62-2	
Zinc	**13.6**	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:24	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 18:52	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 18:52	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 18:52	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 18:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 18:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 18:52	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 18:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 18:52	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 18:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 18:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 18:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 18:52	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 18:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 18:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 18:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 18:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 18:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 18:52	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 18:52	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-2 **Lab ID: 92247382002** Collected: 04/28/15 11:55 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 18:52	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 18:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 18:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 18:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 18:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 18:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 18:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 18:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 18:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 18:52	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 18:52	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 18:52	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 18:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 18:52	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 18:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 18:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 18:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 18:52	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 18:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 18:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 18:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 18:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 18:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 18:52	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 18:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 18:52	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 18:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 18:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 18:52	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		05/08/15 18:52	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		05/08/15 18:52	17060-07-0	
Toluene-d8 (S)	94	%	70-130	1		05/08/15 18:52	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-2D **Lab ID: 92247382003** Collected: 04/28/15 12:05 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/04/15 12:34		
Collected Date	**4/28/15**			1		05/04/15 12:34		
Collected Time	**12:05**			1		05/04/15 12:34		
Field pH	**6.1**	Std. Units	0.10	1		05/04/15 12:34		
Field Temperature	**15.5**	deg C	0.50	1		05/04/15 12:34		
Static Water Level	**29.00**	feet		1		05/04/15 12:34		
Field Specific Conductance	**1621**	umhos/cm	1.0	1		05/04/15 12:34		
Turbidity	**3.78**	NTU	1.0	1		05/04/15 12:34		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:27	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:27	7440-38-2	
Barium	**1380**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:27	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:27	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:27	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:27	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:27	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:27	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:27	7439-92-1	
Nickel	**11.2**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:27	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:27	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:27	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:27	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:27	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:27	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 19:08	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 19:08	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 19:08	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 19:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 19:08	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 19:08	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 19:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 19:08	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 19:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 19:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 19:08	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 19:08	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 19:08	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 19:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 19:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 19:08	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 19:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 19:08	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 19:08	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-2D **Lab ID: 92247382003** Collected: 04/28/15 12:05 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 19:08	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 19:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 19:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 19:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 19:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 19:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 19:08	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 19:08	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 19:08	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 19:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 19:08	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 19:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 19:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 19:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 19:08	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 19:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 19:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 19:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 19:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 19:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 19:08	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 19:08	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 19:08	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 19:08	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 19:08	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 19:08	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		05/08/15 19:08	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		05/08/15 19:08	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		05/08/15 19:08	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-3R **Lab ID: 92247382004** Collected: 04/28/15 13:10 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/04/15 12:37		
Collected Date	**4/28/15**			1		05/04/15 12:37		
Collected Time	**13:10**			1		05/04/15 12:37		
Field pH	**6.5**	Std. Units	0.10	1		05/04/15 12:37		
Field Temperature	**14.1**	deg C	0.50	1		05/04/15 12:37		
Static Water Level	**31.01**	feet		1		05/04/15 12:37		
Field Specific Conductance	**464**	umhos/cm	1.0	1		05/04/15 12:37		
Turbidity	**4.84**	NTU	1.0	1		05/04/15 12:37		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:30	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:30	7440-38-2	
Barium	**345**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:30	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:30	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:30	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:30	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:30	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:30	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:30	7439-92-1	
Nickel	**25.1**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:30	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:30	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:30	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:30	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:30	7440-62-2	
Zinc	**14.8**	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:30	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 19:24	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 19:24	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 19:24	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 19:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 19:24	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 19:24	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 19:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 19:24	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 19:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 19:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 19:24	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 19:24	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 19:24	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 19:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 19:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 19:24	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 19:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 19:24	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 19:24	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-3R **Lab ID: 92247382004** Collected: 04/28/15 13:10 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 19:24	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 19:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 19:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 19:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 19:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 19:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 19:24	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 19:24	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 19:24	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 19:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 19:24	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 19:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 19:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 19:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 19:24	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 19:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 19:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 19:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 19:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 19:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 19:24	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 19:24	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 19:24	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 19:24	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 19:24	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 19:24	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		05/08/15 19:24	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130	1		05/08/15 19:24	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		05/08/15 19:24	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-3RD **Lab ID: 92247382005** Collected: 04/28/15 13:20 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/04/15 12:40		
Collected Date	**4/28/15**			1		05/04/15 12:40		
Collected Time	**13:20**			1		05/04/15 12:40		
Field pH	**6.2**	Std. Units	0.10	1		05/04/15 12:40		
Field Temperature	**14.2**	deg C	0.50	1		05/04/15 12:40		
Static Water Level	**36.06**	feet		1		05/04/15 12:40		
Field Specific Conductance	**387**	umhos/cm	1.0	1		05/04/15 12:40		
Turbidity	**4.94**	NTU	1.0	1		05/04/15 12:40		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:33	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:33	7440-38-2	
Barium	**260**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:33	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:33	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:33	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:33	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:33	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:33	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:33	7439-92-1	
Nickel	**35.4**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:33	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:33	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:33	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:33	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:33	7440-62-2	
Zinc	**12.9**	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:33	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 19:40	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 19:40	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 19:40	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 19:40	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 19:40	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 19:40	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 19:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 19:40	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 19:40	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 19:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 19:40	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 19:40	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 19:40	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 19:40	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 19:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 19:40	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 19:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 19:40	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 19:40	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-3RD **Lab ID: 92247382005** Collected: 04/28/15 13:20 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 19:40	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 19:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 19:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 19:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 19:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 19:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 19:40	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 19:40	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 19:40	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 19:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 19:40	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 19:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 19:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 19:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 19:40	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 19:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 19:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 19:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 19:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 19:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 19:40	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 19:40	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 19:40	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 19:40	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 19:40	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 19:40	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		05/08/15 19:40	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130	1		05/08/15 19:40	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		05/08/15 19:40	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-4A **Lab ID: 92247382006** Collected: 04/28/15 14:30 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 22:53		
Collected Date	**4/28/15**			1		05/12/15 22:53		
Collected Time	**14:30**			1		05/12/15 22:53		
Field pH	**6.3**	Std. Units	0.10	1		05/12/15 22:53		
Field Temperature	**16.5**	deg C	0.50	1		05/12/15 22:53		
Static Water Level	**43.95**	feet		1		05/12/15 22:53		
Field Specific Conductance	**236**	umhos/cm	1.0	1		05/12/15 22:53		
Turbidity	**3.80**	NTU	1.0	1		05/12/15 22:53		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:36	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:36	7440-38-2	
Barium	**9.0**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:36	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:36	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:36	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:36	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:36	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:36	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:36	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:36	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:36	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:36	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:36	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:36	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:36	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 19:56	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 19:56	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 19:56	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 19:56	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 19:56	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 19:56	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 19:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 19:56	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 19:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 19:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 19:56	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 19:56	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 19:56	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 19:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 19:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 19:56	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 19:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 19:56	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 19:56	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-4A **Lab ID: 92247382006** Collected: 04/28/15 14:30 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 19:56	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 19:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 19:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 19:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 19:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 19:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 19:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 19:56	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 19:56	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 19:56	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 19:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 19:56	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 19:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 19:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 19:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 19:56	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 19:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 19:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 19:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 19:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 19:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 19:56	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 19:56	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 19:56	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 19:56	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 19:56	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 19:56	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		05/08/15 19:56	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130	1		05/08/15 19:56	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		05/08/15 19:56	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-8 **Lab ID: 92247382007** Collected: 04/28/15 14:10 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 22:55		
Collected Date	**4/28/15**			1		05/12/15 22:55		
Collected Time	**14:10**			1		05/12/15 22:55		
Field pH	**6.1**	Std. Units	0.10	1		05/12/15 22:55		
Field Temperature	**15.8**	deg C	0.50	1		05/12/15 22:55		
Static Water Level	**29.90**	feet		1		05/12/15 22:55		
Field Specific Conductance	**843**	umhos/cm	1.0	1		05/12/15 22:55		
Turbidity	**4.37**	NTU	1.0	1		05/12/15 22:55		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:39	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:39	7440-38-2	
Barium	**218**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:39	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:39	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:39	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:39	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:39	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:39	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:39	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:39	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:39	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:39	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:39	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:39	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:39	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 20:12	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 20:12	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 20:12	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 20:12	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 20:12	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 20:12	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 20:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 20:12	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 20:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 20:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 20:12	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 20:12	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 20:12	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 20:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 20:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 20:12	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 20:12	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 20:12	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 20:12	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-8 **Lab ID: 92247382007** Collected: 04/28/15 14:10 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 20:12	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 20:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 20:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 20:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 20:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 20:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 20:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 20:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 20:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 20:12	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 20:12	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 20:12	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 20:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 20:12	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 20:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 20:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 20:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 20:12	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 20:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 20:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 20:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 20:12	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 20:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 20:12	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 20:12	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 20:12	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 20:12	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 20:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 20:12	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		05/08/15 20:12	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70-130	1		05/08/15 20:12	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		05/08/15 20:12	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-11s **Lab ID: 92247382008** Collected: 04/28/15 11:15 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 22:56		
Collected Date	**4/28/15**			1		05/12/15 22:56		
Collected Time	**11:15**			1		05/12/15 22:56		
Field pH	**6.6**	Std. Units	0.10	1		05/12/15 22:56		
Field Temperature	**13.5**	deg C	0.50	1		05/12/15 22:56		
Static Water Level	**79.59**	feet		1		05/12/15 22:56		
Field Specific Conductance	**26**	umhos/cm	1.0	1		05/12/15 22:56		
Turbidity	**39.5**	NTU	1.0	1		05/12/15 22:56		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:42	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:42	7440-38-2	
Barium	**119**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:42	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:42	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:42	7440-43-9	
Chromium	**10.3**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:42	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:42	7440-48-4	
Copper	**7.4**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:42	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:42	7439-92-1	
Nickel	**6.3**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:42	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:42	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:42	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:42	7440-28-0	
Vanadium	**15.5**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:42	7440-62-2	
Zinc	**51.7**	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:42	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 20:28	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 20:28	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 20:28	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 20:28	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 20:28	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 20:28	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 20:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 20:28	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 20:28	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 20:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 20:28	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 20:28	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 20:28	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 20:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 20:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 20:28	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 20:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 20:28	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 20:28	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-11s **Lab ID: 92247382008** Collected: 04/28/15 11:15 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 20:28	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 20:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 20:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 20:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 20:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 20:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 20:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 20:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 20:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 20:28	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 20:28	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 20:28	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 20:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 20:28	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 20:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 20:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 20:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 20:28	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 20:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 20:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 20:28	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 20:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 20:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 20:28	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 20:28	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 20:28	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 20:28	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 20:28	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 20:28	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		05/08/15 20:28	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130	1		05/08/15 20:28	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		05/08/15 20:28	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-11D **Lab ID: 92247382009** Collected: 04/28/15 11:30 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 22:57		
Collected Date	**4/28/15**			1		05/12/15 22:57		
Collected Time	**11:30**			1		05/12/15 22:57		
Field pH	**6.5**	Std. Units	0.10	1		05/12/15 22:57		
Field Temperature	**13.2**	deg C	0.50	1		05/12/15 22:57		
Static Water Level	**80.59**	feet		1		05/12/15 22:57		
Field Specific Conductance	**44**	umhos/cm	1.0	1		05/12/15 22:57		
Turbidity	**4.82**	NTU	1.0	1		05/12/15 22:57		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:45	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:45	7440-38-2	
Barium	**16.0**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:45	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:45	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:45	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:45	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:45	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:45	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:45	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:45	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:45	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:45	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:45	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:45	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:45	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 20:44	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 20:44	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 20:44	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 20:44	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 20:44	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 20:44	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 20:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 20:44	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 20:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 20:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 20:44	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 20:44	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 20:44	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 20:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 20:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 20:44	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 20:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 20:44	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 20:44	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-11D **Lab ID: 92247382009** Collected: 04/28/15 11:30 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 20:44	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 20:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 20:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 20:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 20:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 20:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 20:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 20:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 20:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 20:44	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 20:44	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 20:44	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 20:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 20:44	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 20:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 20:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 20:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 20:44	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 20:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 20:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 20:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 20:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 20:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 20:44	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 20:44	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 20:44	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 20:44	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 20:44	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 20:44	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		05/08/15 20:44	460-00-4	
1,2-Dichloroethane-d4 (S)	118	%	70-130	1		05/08/15 20:44	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		05/08/15 20:44	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-14 **Lab ID: 92247382010** Collected: 04/28/15 10:10 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 22:59		
Collected Date	**4/28/15**			1		05/12/15 22:59		
Collected Time	**10:10**			1		05/12/15 22:59		
Field pH	**7.5**	Std. Units	0.10	1		05/12/15 22:59		
Field Temperature	**12.5**	deg C	0.50	1		05/12/15 22:59		
Static Water Level	**99.22**	feet		1		05/12/15 22:59		
Field Specific Conductance	**53**	umhos/cm	1.0	1		05/12/15 22:59		
Turbidity	**9.58**	NTU	1.0	1		05/12/15 22:59		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:49	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:49	7440-38-2	
Barium	**109**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:49	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:49	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:49	7440-43-9	
Chromium	**8.2**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:49	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:49	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:49	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:49	7439-92-1	
Nickel	**5.6**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:49	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:49	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:49	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:49	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:49	7440-62-2	
Zinc	**14.2**	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:49	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 21:00	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 21:00	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 21:00	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 21:00	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 21:00	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 21:00	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 21:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 21:00	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 21:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 21:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 21:00	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 21:00	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 21:00	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 21:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 21:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 21:00	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 21:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 21:00	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 21:00	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-14 **Lab ID: 92247382010** Collected: 04/28/15 10:10 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 21:00	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 21:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 21:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 21:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 21:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 21:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 21:00	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 21:00	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 21:00	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 21:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 21:00	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 21:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 21:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 21:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 21:00	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 21:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 21:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 21:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 21:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 21:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 21:00	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 21:00	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 21:00	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 21:00	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 21:00	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 21:00	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	104	%	70-130	1		05/08/15 21:00	460-00-4	
1,2-Dichloroethane-d4 (S)	119	%	70-130	1		05/08/15 21:00	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		05/08/15 21:00	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-15 **Lab ID: 92247382011** Collected: 04/28/15 14:50 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:01		
Collected Date	**4/28/15**			1		05/12/15 23:01		
Collected Time	**11:00**			1		05/12/15 23:01		
Field pH	**6.3**	Std. Units	0.10	1		05/12/15 23:01		
Field Temperature	**13.5**	deg C	0.50	1		05/12/15 23:01		
Static Water Level	**9.04**	feet		1		05/12/15 23:01		
Field Specific Conductance	**66**	umhos/cm	1.0	1		05/12/15 23:01		
Turbidity	**18.4**	NTU	1.0	1		05/12/15 23:01		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:52	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:52	7440-38-2	
Barium	**30.2**	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:52	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:52	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 19:52	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:52	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:52	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:52	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:52	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:52	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:52	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:52	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 19:52	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 19:52	7440-62-2	
Zinc	**11.3**	ug/L	10.0	1	04/30/15 09:40	04/30/15 19:52	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 21:16	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 21:16	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 21:16	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 21:16	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 21:16	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 21:16	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 21:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 21:16	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 21:16	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 21:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 21:16	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 21:16	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 21:16	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 21:16	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 21:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 21:16	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 21:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 21:16	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 21:16	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-15 **Lab ID: 92247382011** Collected: 04/28/15 14:50 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 21:16	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 21:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 21:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 21:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 21:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 21:16	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 21:16	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 21:16	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 21:16	74-88-4	
Methylene Chloride	**2.2**	ug/L	2.0	1		05/08/15 21:16	75-09-2	B,C9
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 21:16	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 21:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 21:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 21:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 21:16	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 21:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 21:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 21:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 21:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 21:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 21:16	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 21:16	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 21:16	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 21:16	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 21:16	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 21:16	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	107	%	70-130	1		05/08/15 21:16	460-00-4	
1,2-Dichloroethane-d4 (S)	128	%	70-130	1		05/08/15 21:16	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		05/08/15 21:16	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-16 **Lab ID: 92247382012** Collected: 04/28/15 15:05 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:02		
Collected Date	**4/28/15**			1		05/12/15 23:02		
Collected Time	**14:50**			1		05/12/15 23:02		
Field pH	**6.1**	Std. Units	0.10	1		05/12/15 23:02		
Field Temperature	**16.6**	deg C	0.50	1		05/12/15 23:02		
Static Water Level	**35.11**	feet		1		05/12/15 23:02		
Field Specific Conductance	**253**	umhos/cm	1.0	1		05/12/15 23:02		
Turbidity	**4.49**	NTU	1.0	1		05/12/15 23:02		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:04	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 20:04	7440-38-2	
Barium	**156**	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:04	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 20:04	7440-41-7	
Cadmium	**2.3**	ug/L	1.0	1	04/30/15 09:40	04/30/15 20:04	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:04	7440-47-3	
Cobalt	**29.3**	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:04	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:04	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:04	7439-92-1	
Nickel	**8.3**	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:04	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 20:04	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:04	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 20:04	7440-28-0	
Vanadium	**7.0**	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:04	7440-62-2	
Zinc	**13.3**	ug/L	10.0	1	04/30/15 09:40	04/30/15 20:04	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 21:32	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 21:32	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 21:32	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 21:32	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 21:32	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 21:32	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 21:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 21:32	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 21:32	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 21:32	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 21:32	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 21:32	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 21:32	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 21:32	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 21:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 21:32	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 21:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 21:32	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 21:32	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-16 **Lab ID: 92247382012** Collected: 04/28/15 15:05 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 21:32	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 21:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 21:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 21:32	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 21:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 21:32	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 21:32	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 21:32	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 21:32	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 21:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 21:32	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 21:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 21:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 21:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 21:32	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 21:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 21:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 21:32	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 21:32	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 21:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 21:32	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 21:32	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 21:32	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 21:32	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 21:32	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 21:32	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	105	%	70-130	1		05/08/15 21:32	460-00-4	
1,2-Dichloroethane-d4 (S)	122	%	70-130	1		05/08/15 21:32	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		05/08/15 21:32	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-17 **Lab ID: 92247382013** Collected: 04/28/15 15:05 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:03		
Collected Date	**4/28/15**			1		05/12/15 23:03		
Collected Time	**15:05**			1		05/12/15 23:03		
Field pH	**6.1**	Std. Units	0.10	1		05/12/15 23:03		
Field Temperature	**14.8**	deg C	0.50	1		05/12/15 23:03		
Static Water Level	**56.85**	feet		1		05/12/15 23:03		
Field Specific Conductance	**169**	umhos/cm	1.0	1		05/12/15 23:03		
Turbidity	**3.49**	NTU	1.0	1		05/12/15 23:03		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:07	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 20:07	7440-38-2	
Barium	**190**	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:07	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 20:07	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 20:07	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:07	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:07	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:07	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:07	7439-92-1	
Nickel	**5.1**	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:07	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 20:07	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:07	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 20:07	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 20:07	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 20:07	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 21:48	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 21:48	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 21:48	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 21:48	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 21:48	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 21:48	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 21:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 21:48	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 21:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 21:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 21:48	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 21:48	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 21:48	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 21:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 21:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 21:48	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 21:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 21:48	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 21:48	106-46-7	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: MW-17 **Lab ID: 92247382013** Collected: 04/28/15 15:05 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 21:48	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 21:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 21:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 21:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 21:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 21:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 21:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 21:48	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 21:48	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 21:48	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 21:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 21:48	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 21:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 21:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 21:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 21:48	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 21:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 21:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 21:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 21:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 21:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 21:48	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 21:48	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 21:48	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 21:48	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 21:48	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 21:48	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		05/08/15 21:48	460-00-4	
1,2-Dichloroethane-d4 (S)	126	%	70-130	1		05/08/15 21:48	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		05/08/15 21:48	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-1 **Lab ID: 92247382014** Collected: 04/28/15 12:30 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:05		
Collected Date	**4/28/15**			1		05/12/15 23:05		
Collected Time	**12:30**			1		05/12/15 23:05		
Field pH	**7.3**	Std. Units	0.10	1		05/12/15 23:05		
Field Temperature	**13.8**	deg C	0.50	1		05/12/15 23:05		
Field Specific Conductance	**201**	umhos/cm	1.0	1		05/12/15 23:05		
Turbidity	**4.62**	NTU	1.0	1		05/12/15 23:05		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:30	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:30	7440-38-2	
Barium	**175**	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:30	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:30	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:30	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:30	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:30	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:30	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:30	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:30	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:30	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:30	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 23:30	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:30	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:30	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 22:04	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 22:04	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 22:04	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 22:04	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 22:04	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 22:04	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 22:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 22:04	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 22:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 22:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 22:04	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 22:04	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 22:04	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 22:04	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 22:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 22:04	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 22:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 22:04	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 22:04	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 22:04	110-57-6	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-1 **Lab ID: 92247382014** Collected: 04/28/15 12:30 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 22:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 22:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 22:04	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 22:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 22:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 22:04	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 22:04	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 22:04	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 22:04	75-09-2	B
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 22:04	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 22:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 22:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 22:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 22:04	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 22:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 22:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 22:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 22:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 22:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 22:04	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 22:04	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 22:04	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 22:04	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 22:04	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 22:04	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	112	%	70-130	1		05/08/15 22:04	460-00-4	
1,2-Dichloroethane-d4 (S)	128	%	70-130	1		05/08/15 22:04	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		05/08/15 22:04	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-2 **Lab ID: 92247382015** Collected: 04/28/15 12:50 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:06		
Collected Date	**4/28/15**			1		05/12/15 23:06		
Collected Time	**12:50**			1		05/12/15 23:06		
Field pH	**7.6**	Std. Units	0.10	1		05/12/15 23:06		
Field Temperature	**11.5**	deg C	0.50	1		05/12/15 23:06		
Field Specific Conductance	**217**	umhos/cm	1.0	1		05/12/15 23:06		
Turbidity	**6.77**	NTU	1.0	1		05/12/15 23:06		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:38	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:38	7440-38-2	
Barium	**152**	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:38	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:38	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:38	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:38	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:38	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:38	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:38	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:38	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:38	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:38	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 23:38	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:38	7440-62-2	
Zinc	**43.4**	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:38	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 22:20	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 22:20	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 22:20	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 22:20	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 22:20	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 22:20	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 22:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 22:20	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 22:20	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 22:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 22:20	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 22:20	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 22:20	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 22:20	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 22:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 22:20	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 22:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 22:20	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 22:20	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 22:20	110-57-6	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-2 **Lab ID: 92247382015** Collected: 04/28/15 12:50 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 22:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 22:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 22:20	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 22:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 22:20	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 22:20	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 22:20	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 22:20	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 22:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 22:20	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 22:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 22:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 22:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 22:20	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 22:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 22:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 22:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 22:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 22:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 22:20	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 22:20	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 22:20	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 22:20	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 22:20	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 22:20	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	105	%	70-130	1		05/08/15 22:20	460-00-4	
1,2-Dichloroethane-d4 (S)	127	%	70-130	1		05/08/15 22:20	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		05/08/15 22:20	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-3 **Lab ID: 92247382016** Collected: 04/28/15 12:45 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:07		
Collected Date	**4/28/15**			1		05/12/15 23:07		
Collected Time	**12:45**			1		05/12/15 23:07		
Field pH	**8.3**	Std. Units	0.10	1		05/12/15 23:07		
Field Temperature	**16.8**	deg C	0.50	1		05/12/15 23:07		
Field Specific Conductance	**330**	umhos/cm	1.0	1		05/12/15 23:07		
Turbidity	**3.60**	NTU	1.0	1		05/12/15 23:07		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:42	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:42	7440-38-2	
Barium	**145**	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:42	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:42	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:42	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:42	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:42	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:42	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:42	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:42	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:42	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:42	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 23:42	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:42	7440-62-2	
Zinc	**20.4**	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:42	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 22:36	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 22:36	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 22:36	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 22:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 22:36	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 22:36	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 22:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 22:36	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 22:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 22:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 22:36	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 22:36	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 22:36	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 22:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 22:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 22:36	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 22:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 22:36	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 22:36	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 22:36	110-57-6	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-3 **Lab ID: 92247382016** Collected: 04/28/15 12:45 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 22:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 22:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 22:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 22:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 22:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 22:36	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 22:36	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 22:36	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 22:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 22:36	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 22:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 22:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 22:36	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 22:36	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 22:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 22:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 22:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 22:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 22:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 22:36	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 22:36	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 22:36	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 22:36	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 22:36	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 22:36	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	108	%	70-130	1		05/08/15 22:36	460-00-4	
1,2-Dichloroethane-d4 (S)	126	%	70-130	1		05/08/15 22:36	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		05/08/15 22:36	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-5 **Lab ID: 92247382017** Collected: 04/28/15 13:30 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:08		
Collected Date	**4/28/15**			1		05/12/15 23:08		
Collected Time	**13:30**			1		05/12/15 23:08		
Field pH	**6.1**	Std. Units	0.10	1		05/12/15 23:08		
Field Temperature	**18.2**	deg C	0.50	1		05/12/15 23:08		
Field Specific Conductance	**181**	umhos/cm	1.0	1		05/12/15 23:08		
Turbidity	**6.70**	NTU	1.0	1		05/12/15 23:08		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:45	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:45	7440-38-2	
Barium	**133**	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:45	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:45	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:45	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:45	7440-47-3	
Cobalt	**7.4**	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:45	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:45	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:45	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:45	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:45	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:45	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 23:45	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:45	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:45	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 22:52	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 22:52	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 22:52	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 22:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 22:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 22:52	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 22:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 22:52	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 22:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 22:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 22:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 22:52	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 22:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 22:52	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 22:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 22:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 22:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 22:52	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 22:52	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 22:52	110-57-6	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-5 **Lab ID: 92247382017** Collected: 04/28/15 13:30 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 22:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 22:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 22:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 22:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 22:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 22:52	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 22:52	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 22:52	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 22:52	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 22:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 22:52	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 22:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 22:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 22:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 22:52	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 22:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 22:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 22:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 22:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 22:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 22:52	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 22:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 22:52	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 22:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 22:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 22:52	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	105	%	70-130	1		05/08/15 22:52	460-00-4	
1,2-Dichloroethane-d4 (S)	129	%	70-130	1		05/08/15 22:52	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		05/08/15 22:52	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-6 **Lab ID: 92247382018** Collected: 04/28/15 10:35 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:09		
Collected Date	**4/28/15**			1		05/12/15 23:09		
Collected Time	**10:35**			1		05/12/15 23:09		
Field pH	**7.3**	Std. Units	0.10	1		05/12/15 23:09		
Field Temperature	**12.3**	deg C	0.50	1		05/12/15 23:09		
Field Specific Conductance	**41**	umhos/cm	1.0	1		05/12/15 23:09		
Turbidity	**5.76**	NTU	1.0	1		05/12/15 23:09		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:48	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:48	7440-38-2	
Barium	**34.5**	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:48	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:48	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:48	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:48	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:48	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:48	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:48	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:48	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:48	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:48	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 23:48	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:48	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:48	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 23:08	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 23:08	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 23:08	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 23:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 23:08	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 23:08	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 23:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 23:08	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 23:08	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 23:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 23:08	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 23:08	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 23:08	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 23:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 23:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 23:08	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 23:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:08	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:08	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 23:08	110-57-6	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-6 **Lab ID: 92247382018** Collected: 04/28/15 10:35 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 23:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 23:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 23:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 23:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 23:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 23:08	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 23:08	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 23:08	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 23:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 23:08	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 23:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 23:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 23:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 23:08	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 23:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 23:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 23:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 23:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 23:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 23:08	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 23:08	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 23:08	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 23:08	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 23:08	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 23:08	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		05/08/15 23:08	460-00-4	
1,2-Dichloroethane-d4 (S)	127	%	70-130	1		05/08/15 23:08	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		05/08/15 23:08	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-7 **Lab ID: 92247382019** Collected: 04/28/15 10:45 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:10		
Collected Date	**4/28/15**			1		05/12/15 23:10		
Collected Time	**10:45**			1		05/12/15 23:10		
Field pH	**7.1**	Std. Units	0.10	1		05/12/15 23:10		
Field Temperature	**10.7**	deg C	0.50	1		05/12/15 23:10		
Field Specific Conductance	**81**	umhos/cm	1.0	1		05/12/15 23:10		
Turbidity	**4.76**	NTU	1.0	1		05/12/15 23:10		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:51	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:51	7440-38-2	
Barium	**33.3**	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:51	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:51	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	04/30/15 23:51	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:51	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:51	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:51	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:51	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:51	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:51	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:51	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	04/30/15 23:51	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	04/30/15 23:51	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	04/30/15 23:51	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 23:24	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 23:24	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 23:24	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 23:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 23:24	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 23:24	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 23:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 23:24	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 23:24	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 23:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 23:24	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 23:24	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 23:24	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 23:24	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 23:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 23:24	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 23:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:24	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:24	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 23:24	110-57-6	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: SW-7 **Lab ID: 92247382019** Collected: 04/28/15 10:45 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 23:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 23:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 23:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 23:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 23:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 23:24	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 23:24	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 23:24	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 23:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 23:24	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 23:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 23:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 23:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 23:24	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 23:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 23:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 23:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 23:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 23:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 23:24	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 23:24	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 23:24	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 23:24	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 23:24	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 23:24	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		05/08/15 23:24	460-00-4	
1,2-Dichloroethane-d4 (S)	128	%	70-130	1		05/08/15 23:24	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		05/08/15 23:24	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: Leachate **Lab ID: 92247382020** Collected: 04/28/15 13:45 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:							
Collected By	**Mark Swann**			1		05/12/15 23:12		
Collected Date	**4/28/15**			1		05/12/15 23:12		
Collected Time	**13:45**			1		05/12/15 23:12		
Field pH	**8.1**	Std. Units	0.10	1		05/12/15 23:12		
Field Temperature	**22.1**	deg C	0.50	1		05/12/15 23:12		
Field Specific Conductance	**6309**	umhos/cm	1.0	1		05/12/15 23:12		
Turbidity	**5.43**	NTU	1.0	1		05/12/15 23:12		
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	**23.4**	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:03	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	05/01/15 00:03	7440-38-2	
Barium	**119**	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:03	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	05/01/15 00:03	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	05/01/15 00:03	7440-43-9	
Chromium	**9.5**	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:03	7440-47-3	
Cobalt	**7.3**	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:03	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:03	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:03	7439-92-1	
Nickel	**64.5**	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:03	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	05/01/15 00:03	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:03	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	05/01/15 00:03	7440-28-0	
Vanadium	**19.3**	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:03	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	05/01/15 00:03	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	**32.3**	ug/L	25.0	1		05/08/15 23:40	67-64-1	
Benzene	ND	ug/L	1.0	1		05/08/15 23:40	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/08/15 23:40	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 23:40	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 23:40	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 23:40	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 23:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 23:40	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 23:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 23:40	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 23:40	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 23:40	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 23:40	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/08/15 23:40	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/08/15 23:40	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		05/08/15 23:40	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 23:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 23:40	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 23:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:40	95-50-1	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: Leachate **Lab ID: 92247382020** Collected: 04/28/15 13:45 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:40	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/08/15 23:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 23:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 23:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 23:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/08/15 23:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 23:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/08/15 23:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 23:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 23:40	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/08/15 23:40	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 23:40	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/08/15 23:40	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 23:40	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/08/15 23:40	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 23:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 23:40	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/08/15 23:40	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/08/15 23:40	91-20-3	
Styrene	ND	ug/L	1.0	1		05/08/15 23:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 23:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 23:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 23:40	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 23:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 23:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 23:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 23:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 23:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 23:40	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 23:40	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 23:40	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 23:40	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 23:40	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/08/15 23:40	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		05/08/15 23:40	460-00-4	
1,2-Dichloroethane-d4 (S)	130	%	70-130	1		05/08/15 23:40	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		05/08/15 23:40	2037-26-5	
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**24.6**	mg/L	2.0	1	04/28/15 20:20	05/03/15 15:50		B2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: Leachate **Lab ID: 92247382020** Collected: 04/28/15 13:45 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**712**	mg/L	80.0	40		05/01/15 09:34	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		04/29/15 16:51		
Nitrogen, Nitrite	**0.031**	mg/L	0.020	1		04/29/15 16:51		
Nitrogen, NO2 plus NO3	ND	mg/L	0.020	1		04/29/15 16:51		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1							
Phosphorus	**0.34**	mg/L	0.050	1		05/05/15 13:14	7723-14-0	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**503**	mg/L	25.0	1		05/04/15 09:35		

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: TVL BLK **Lab ID: 92247382021** Collected: 04/27/15 08:00 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/08/15 23:56	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/08/15 23:56	107-13-1	
Benzene	ND	ug/L	1.0	1		05/08/15 23:56	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/08/15 23:56	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/08/15 23:56	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/08/15 23:56	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/08/15 23:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/08/15 23:56	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/08/15 23:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/08/15 23:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/08/15 23:56	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/08/15 23:56	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/08/15 23:56	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/08/15 23:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/08/15 23:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/08/15 23:56	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/08/15 23:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:56	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/08/15 23:56	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/08/15 23:56	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/08/15 23:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/08/15 23:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/08/15 23:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/08/15 23:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 23:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/08/15 23:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/08/15 23:56	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/08/15 23:56	591-78-6	
Iodomethane	ND	ug/L	5.0	1		05/08/15 23:56	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/08/15 23:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/08/15 23:56	108-10-1	
Styrene	ND	ug/L	1.0	1		05/08/15 23:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 23:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/08/15 23:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/08/15 23:56	127-18-4	
Toluene	ND	ug/L	1.0	1		05/08/15 23:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/08/15 23:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/08/15 23:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/08/15 23:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/08/15 23:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/08/15 23:56	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/08/15 23:56	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/08/15 23:56	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/08/15 23:56	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/08/15 23:56	179601-23-1	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: TVL BLK **Lab ID: 92247382021** Collected: 04/27/15 08:00 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
o-Xylene	ND	ug/L	1.0	1		05/08/15 23:56	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		05/08/15 23:56	460-00-4	
1,2-Dichloroethane-d4 (S)	134	%	70-130	1		05/08/15 23:56	17060-07-0	S3
Toluene-d8 (S)	98	%	70-130	1		05/08/15 23:56	2037-26-5	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: EQUIP BLANK **Lab ID: 92247382022** Collected: 04/27/15 08:00 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:06	7440-36-0	
Arsenic	ND	ug/L	10.0	1	04/30/15 09:40	05/01/15 00:06	7440-38-2	
Barium	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:06	7440-39-3	
Beryllium	ND	ug/L	1.0	1	04/30/15 09:40	05/01/15 00:06	7440-41-7	
Cadmium	ND	ug/L	1.0	1	04/30/15 09:40	05/01/15 00:06	7440-43-9	
Chromium	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:06	7440-47-3	
Cobalt	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:06	7440-48-4	
Copper	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:06	7440-50-8	
Lead	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:06	7439-92-1	
Nickel	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:06	7440-02-0	
Selenium	ND	ug/L	10.0	1	04/30/15 09:40	05/01/15 00:06	7782-49-2	
Silver	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:06	7440-22-4	
Thallium	ND	ug/L	5.4	1	04/30/15 09:40	05/01/15 00:06	7440-28-0	
Vanadium	ND	ug/L	5.0	1	04/30/15 09:40	05/01/15 00:06	7440-62-2	
Zinc	ND	ug/L	10.0	1	04/30/15 09:40	05/01/15 00:06	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		05/09/15 00:12	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		05/09/15 00:12	107-13-1	
Benzene	ND	ug/L	1.0	1		05/09/15 00:12	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		05/09/15 00:12	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/09/15 00:12	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/09/15 00:12	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/09/15 00:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/09/15 00:12	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		05/09/15 00:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		05/09/15 00:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/09/15 00:12	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/09/15 00:12	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/09/15 00:12	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/09/15 00:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		05/09/15 00:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/09/15 00:12	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/09/15 00:12	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/09/15 00:12	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/09/15 00:12	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		05/09/15 00:12	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/09/15 00:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/09/15 00:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/09/15 00:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/09/15 00:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/09/15 00:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/09/15 00:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/09/15 00:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/09/15 00:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		05/09/15 00:12	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		05/09/15 00:12	591-78-6	

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ANALYTICAL RESULTS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Sample: EQUIP BLANK **Lab ID: 92247382022** Collected: 04/27/15 08:00 Received: 04/28/15 15:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Iodomethane	ND	ug/L	5.0	1		05/09/15 00:12	74-88-4	
Methylene Chloride	ND	ug/L	2.0	1		05/09/15 00:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/09/15 00:12	108-10-1	
Styrene	ND	ug/L	1.0	1		05/09/15 00:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/09/15 00:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/09/15 00:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/09/15 00:12	127-18-4	
Toluene	ND	ug/L	1.0	1		05/09/15 00:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/09/15 00:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/09/15 00:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/09/15 00:12	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/09/15 00:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/09/15 00:12	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/09/15 00:12	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/09/15 00:12	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		05/09/15 00:12	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/09/15 00:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/09/15 00:12	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		05/09/15 00:12	460-00-4	
1,2-Dichloroethane-d4 (S)	127	%	70-130	1		05/09/15 00:12	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		05/09/15 00:12	2037-26-5	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

QC Batch: MPRP/18376 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92247382001, 92247382002, 92247382003, 92247382004, 92247382005, 92247382006, 92247382007, 92247382008, 92247382009, 92247382010, 92247382011, 92247382012, 92247382013

METHOD BLANK: 1446593 | Matrix: Water
Associated Lab Samples: 92247382001, 92247382002, 92247382003, 92247382004, 92247382005, 92247382006, 92247382007, 92247382008, 92247382009, 92247382010, 92247382011, 92247382012, 92247382013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	04/30/15 18:28	
Arsenic	ug/L	ND	10.0	04/30/15 18:28	
Barium	ug/L	ND	5.0	04/30/15 18:28	
Beryllium	ug/L	ND	1.0	04/30/15 18:28	
Cadmium	ug/L	ND	1.0	04/30/15 18:28	
Chromium	ug/L	ND	5.0	04/30/15 18:28	
Cobalt	ug/L	ND	5.0	04/30/15 18:28	
Copper	ug/L	ND	5.0	04/30/15 18:28	
Lead	ug/L	ND	5.0	04/30/15 18:28	
Nickel	ug/L	ND	5.0	04/30/15 18:28	
Selenium	ug/L	ND	10.0	04/30/15 18:28	
Silver	ug/L	ND	5.0	04/30/15 18:28	
Thallium	ug/L	ND	5.4	04/30/15 18:28	
Vanadium	ug/L	ND	5.0	04/30/15 18:28	
Zinc	ug/L	ND	10.0	04/30/15 18:28	

LABORATORY CONTROL SAMPLE: 1446594

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	505	101	80-120	
Arsenic	ug/L	500	480	96	80-120	
Barium	ug/L	500	488	98	80-120	
Beryllium	ug/L	500	488	98	80-120	
Cadmium	ug/L	500	493	99	80-120	
Chromium	ug/L	500	482	96	80-120	
Cobalt	ug/L	500	490	98	80-120	
Copper	ug/L	500	495	99	80-120	
Lead	ug/L	500	488	98	80-120	
Nickel	ug/L	500	482	96	80-120	
Selenium	ug/L	500	488	98	80-120	
Silver	ug/L	250	244	98	80-120	
Thallium	ug/L	500	484	97	80-120	
Vanadium	ug/L	500	490	98	80-120	
Zinc	ug/L	500	481	96	80-120	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446595 1446596

Parameter	Units	92246947003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Antimony	ug/L	4.0J	500	500	494	490	98	97	75-125	1	
Arsenic	ug/L	ND	500	500	475	470	95	94	75-125	1	
Barium	ug/L	152	500	500	630	624	96	94	75-125	1	
Beryllium	ug/L	0.55J	500	500	484	478	97	96	75-125	1	
Cadmium	ug/L	ND	500	500	482	478	96	96	75-125	1	
Chromium	ug/L	ND	500	500	472	469	94	94	75-125	1	
Cobalt	ug/L	5.0	500	500	484	480	96	95	75-125	1	
Copper	ug/L	ND	500	500	490	486	98	97	75-125	1	
Lead	ug/L	ND	500	500	475	471	95	94	75-125	1	
Nickel	ug/L	7.1	500	500	477	473	94	93	75-125	1	
Selenium	ug/L	ND	500	500	475	472	95	94	75-125	1	
Silver	ug/L	ND	250	250	239	237	95	95	75-125	1	
Thallium	ug/L	ND	500	500	475	470	95	94	75-125	1	
Vanadium	ug/L	ND	500	500	484	480	97	96	75-125	1	
Zinc	ug/L	22.6	500	500	492	488	94	93	75-125	1	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

QC Batch: MPRP/18377 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92247382014, 92247382015, 92247382016, 92247382017, 92247382018, 92247382019, 92247382020, 92247382022

METHOD BLANK: 1446614 | Matrix: Water
Associated Lab Samples: 92247382014, 92247382015, 92247382016, 92247382017, 92247382018, 92247382019, 92247382020, 92247382022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	04/30/15 23:24	
Arsenic	ug/L	ND	10.0	04/30/15 23:24	
Barium	ug/L	ND	5.0	04/30/15 23:24	
Beryllium	ug/L	ND	1.0	04/30/15 23:24	
Cadmium	ug/L	ND	1.0	04/30/15 23:24	
Chromium	ug/L	ND	5.0	04/30/15 23:24	
Cobalt	ug/L	ND	5.0	04/30/15 23:24	
Copper	ug/L	ND	5.0	04/30/15 23:24	
Lead	ug/L	ND	5.0	04/30/15 23:24	
Nickel	ug/L	ND	5.0	04/30/15 23:24	
Selenium	ug/L	ND	10.0	04/30/15 23:24	
Silver	ug/L	ND	5.0	04/30/15 23:24	
Thallium	ug/L	ND	5.4	04/30/15 23:24	
Vanadium	ug/L	ND	5.0	04/30/15 23:24	
Zinc	ug/L	ND	10.0	04/30/15 23:24	

LABORATORY CONTROL SAMPLE: 1446615

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	484	97	80-120	
Arsenic	ug/L	500	464	93	80-120	
Barium	ug/L	500	478	96	80-120	
Beryllium	ug/L	500	478	96	80-120	
Cadmium	ug/L	500	480	96	80-120	
Chromium	ug/L	500	477	95	80-120	
Cobalt	ug/L	500	469	94	80-120	
Copper	ug/L	500	478	96	80-120	
Lead	ug/L	500	466	93	80-120	
Nickel	ug/L	500	468	94	80-120	
Selenium	ug/L	500	469	94	80-120	
Silver	ug/L	250	238	95	80-120	
Thallium	ug/L	500	467	93	80-120	
Vanadium	ug/L	500	476	95	80-120	
Zinc	ug/L	500	467	93	80-120	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446616 1446617

Parameter	Units	92247382014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Antimony	ug/L	ND	500	500	488	478	97	96	75-125	2	
Arsenic	ug/L	ND	500	500	472	462	94	92	75-125	2	
Barium	ug/L	175	500	500	659	641	97	93	75-125	3	
Beryllium	ug/L	ND	500	500	488	476	98	95	75-125	2	
Cadmium	ug/L	ND	500	500	483	474	97	95	75-125	2	
Chromium	ug/L	ND	500	500	483	473	96	94	75-125	2	
Cobalt	ug/L	ND	500	500	468	460	94	92	75-125	2	
Copper	ug/L	ND	500	500	488	477	97	95	75-125	2	
Lead	ug/L	ND	500	500	466	459	93	92	75-125	1	
Nickel	ug/L	ND	500	500	469	460	94	92	75-125	2	
Selenium	ug/L	ND	500	500	470	461	94	92	75-125	2	
Silver	ug/L	ND	250	250	241	235	96	94	75-125	2	
Thallium	ug/L	ND	500	500	470	464	93	92	75-125	1	
Vanadium	ug/L	ND	500	500	486	474	97	94	75-125	3	
Zinc	ug/L	ND	500	500	470	463	92	91	75-125	2	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

QC Batch: MSV/31543 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92247382001, 92247382002, 92247382003, 92247382004, 92247382005, 92247382006, 92247382007, 92247382008, 92247382009, 92247382010, 92247382011, 92247382012, 92247382013, 92247382014, 92247382015, 92247382016, 92247382017, 92247382018, 92247382019, 92247382020

METHOD BLANK: 1454553 Matrix: Water
Associated Lab Samples: 92247382001, 92247382002, 92247382003, 92247382004, 92247382005, 92247382006, 92247382007, 92247382008, 92247382009, 92247382010, 92247382011, 92247382012, 92247382013, 92247382014, 92247382015, 92247382016, 92247382017, 92247382018, 92247382019, 92247382020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	05/08/15 18:04	
1,1,1-Trichloroethane	ug/L	ND	1.0	05/08/15 18:04	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/08/15 18:04	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/08/15 18:04	
1,1-Dichloroethane	ug/L	ND	1.0	05/08/15 18:04	
1,1-Dichloroethene	ug/L	ND	1.0	05/08/15 18:04	
1,1-Dichloropropene	ug/L	ND	1.0	05/08/15 18:04	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	05/08/15 18:04	
1,2,3-Trichloropropane	ug/L	ND	1.0	05/08/15 18:04	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	05/08/15 18:04	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	05/08/15 18:04	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	05/08/15 18:04	
1,2-Dichlorobenzene	ug/L	ND	1.0	05/08/15 18:04	
1,2-Dichloroethane	ug/L	ND	1.0	05/08/15 18:04	
1,2-Dichloropropane	ug/L	ND	1.0	05/08/15 18:04	
1,3-Dichlorobenzene	ug/L	ND	1.0	05/08/15 18:04	
1,3-Dichloropropane	ug/L	ND	1.0	05/08/15 18:04	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/08/15 18:04	
2,2-Dichloropropane	ug/L	ND	1.0	05/08/15 18:04	
2-Butanone (MEK)	ug/L	ND	5.0	05/08/15 18:04	
2-Chlorotoluene	ug/L	ND	1.0	05/08/15 18:04	
2-Hexanone	ug/L	ND	5.0	05/08/15 18:04	
4-Chlorotoluene	ug/L	ND	1.0	05/08/15 18:04	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	05/08/15 18:04	
Acetone	ug/L	ND	25.0	05/08/15 18:04	
Acrylonitrile	ug/L	ND	10.0	05/08/15 18:04	
Benzene	ug/L	ND	1.0	05/08/15 18:04	
Bromobenzene	ug/L	ND	1.0	05/08/15 18:04	
Bromochloromethane	ug/L	ND	1.0	05/08/15 18:04	
Bromodichloromethane	ug/L	ND	1.0	05/08/15 18:04	
Bromoform	ug/L	ND	1.0	05/08/15 18:04	
Bromomethane	ug/L	ND	2.0	05/08/15 18:04	
Carbon disulfide	ug/L	ND	2.0	05/08/15 18:04	
Carbon tetrachloride	ug/L	ND	1.0	05/08/15 18:04	
Chlorobenzene	ug/L	ND	1.0	05/08/15 18:04	
Chloroethane	ug/L	ND	1.0	05/08/15 18:04	
Chloroform	ug/L	ND	1.0	05/08/15 18:04	
Chloromethane	ug/L	ND	1.0	05/08/15 18:04	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

METHOD BLANK: 1454553 Matrix: Water

Associated Lab Samples: 92247382001, 92247382002, 92247382003, 92247382004, 92247382005, 92247382006, 92247382007, 92247382008, 92247382009, 92247382010, 92247382011, 92247382012, 92247382013, 92247382014, 92247382015, 92247382016, 92247382017, 92247382018, 92247382019, 92247382020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/08/15 18:04	
cis-1,3-Dichloropropene	ug/L	ND	1.0	05/08/15 18:04	
Dibromochloromethane	ug/L	ND	1.0	05/08/15 18:04	
Dibromomethane	ug/L	ND	1.0	05/08/15 18:04	
Dichlorodifluoromethane	ug/L	ND	1.0	05/08/15 18:04	
Diisopropyl ether	ug/L	ND	1.0	05/08/15 18:04	
Ethylbenzene	ug/L	ND	1.0	05/08/15 18:04	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	05/08/15 18:04	
Iodomethane	ug/L	10.8	5.0	05/08/15 18:04	
m&p-Xylene	ug/L	ND	2.0	05/08/15 18:04	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/08/15 18:04	
Methylene Chloride	ug/L	2.2	2.0	05/08/15 18:04	C9
Naphthalene	ug/L	ND	1.0	05/08/15 18:04	
o-Xylene	ug/L	ND	1.0	05/08/15 18:04	
p-Isopropyltoluene	ug/L	ND	1.0	05/08/15 18:04	
Styrene	ug/L	ND	1.0	05/08/15 18:04	
Tetrachloroethene	ug/L	ND	1.0	05/08/15 18:04	
Toluene	ug/L	ND	1.0	05/08/15 18:04	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/08/15 18:04	
trans-1,3-Dichloropropene	ug/L	ND	1.0	05/08/15 18:04	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	05/08/15 18:04	
Trichloroethene	ug/L	ND	1.0	05/08/15 18:04	
Trichlorofluoromethane	ug/L	ND	1.0	05/08/15 18:04	
Vinyl acetate	ug/L	ND	2.0	05/08/15 18:04	
Vinyl chloride	ug/L	ND	1.0	05/08/15 18:04	
Xylene (Total)	ug/L	ND	2.0	05/08/15 18:04	
1,2-Dichloroethane-d4 (S)	%	100	70-130	05/08/15 18:04	
4-Bromofluorobenzene (S)	%	102	70-130	05/08/15 18:04	
Toluene-d8 (S)	%	97	70-130	05/08/15 18:04	

LABORATORY CONTROL SAMPLE: 1454554

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	44.3	89	70-130	
1,1,1-Trichloroethane	ug/L	50	46.2	92	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.1	92	70-130	
1,1,2-Trichloroethane	ug/L	50	46.7	93	70-130	
1,1-Dichloroethane	ug/L	50	47.5	95	70-130	
1,1-Dichloroethene	ug/L	50	42.7	85	70-132	
1,1-Dichloropropene	ug/L	50	52.8	106	70-130	
1,2,3-Trichlorobenzene	ug/L	50	50.8	102	70-135	
1,2,3-Trichloropropane	ug/L	50	46.4	93	70-130	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

LABORATORY CONTROL SAMPLE: 1454554

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	50.9	102	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	48.9	98	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	46.4	93	70-130	
1,2-Dichlorobenzene	ug/L	50	47.4	95	70-130	
1,2-Dichloroethane	ug/L	50	44.2	88	70-130	
1,2-Dichloropropane	ug/L	50	47.1	94	70-130	
1,3-Dichlorobenzene	ug/L	50	47.6	95	70-130	
1,3-Dichloropropane	ug/L	50	45.7	91	70-130	
1,4-Dichlorobenzene	ug/L	50	46.6	93	70-130	
2,2-Dichloropropane	ug/L	50	47.6	95	58-145	
2-Butanone (MEK)	ug/L	100	93.0	93	70-145	
2-Chlorotoluene	ug/L	50	47.3	95	70-130	
2-Hexanone	ug/L	100	92.6	93	70-144	
4-Chlorotoluene	ug/L	50	47.2	94	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	91.5	91	70-140	
Acetone	ug/L	100	94.1	94	50-175	
Acrylonitrile	ug/L	250	249	100	70-143	
Benzene	ug/L	50	45.7	91	70-130	
Bromobenzene	ug/L	50	46.8	94	70-130	
Bromochloromethane	ug/L	50	53.9	108	70-130	
Bromodichloromethane	ug/L	50	42.2	84	70-130	
Bromoform	ug/L	50	43.7	87	70-130	
Bromomethane	ug/L	50	62.3	125	54-130	
Carbon disulfide	ug/L	50	47.2	94	70-131	
Carbon tetrachloride	ug/L	50	44.2	88	70-132	
Chlorobenzene	ug/L	50	45.5	91	70-130	
Chloroethane	ug/L	50	49.5	99	64-134	
Chloroform	ug/L	50	43.4	87	70-130	
Chloromethane	ug/L	50	44.3	89	64-130	
cis-1,2-Dichloroethene	ug/L	50	49.3	99	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.9	98	70-130	
Dibromochloromethane	ug/L	50	43.0	86	70-130	
Dibromomethane	ug/L	50	45.7	91	70-131	
Dichlorodifluoromethane	ug/L	50	41.6	83	56-130	
Diisopropyl ether	ug/L	50	48.1	96	70-130	
Ethylbenzene	ug/L	50	43.8	88	70-130	
Hexachloro-1,3-butadiene	ug/L	50	49.0	98	70-130	
Iodomethane	ug/L	100	97.5	98	49-180	
m&p-Xylene	ug/L	100	88.0	88	70-130	
Methyl-tert-butyl ether	ug/L	50	48.6	97	70-130	
Methylene Chloride	ug/L	50	47.2	94	63-130	
Naphthalene	ug/L	50	50.4	101	70-138	
o-Xylene	ug/L	50	43.5	87	70-130	
p-Isopropyltoluene	ug/L	50	47.8	96	70-130	
Styrene	ug/L	50	46.6	93	70-130	
Tetrachloroethene	ug/L	50	43.6	87	70-130	
Toluene	ug/L	50	46.5	93	70-130	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

LABORATORY CONTROL SAMPLE: 1454554

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/L	50	46.2	92	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.4	95	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	46.1	92	70-141	
Trichloroethene	ug/L	50	42.5	85	70-130	
Trichlorofluoromethane	ug/L	50	43.4	87	62-133	
Vinyl acetate	ug/L	100	99.3	99	66-157	
Vinyl chloride	ug/L	50	51.1	102	50-150	
Xylene (Total)	ug/L	150	131	88	70-130	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1454555

Parameter	Units	92247382014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%				99	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				97	70-130	

SAMPLE DUPLICATE: 1454556

Parameter	Units	92247382015 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		
1,1,1-Trichloroethane	ug/L	ND	ND		
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		
1,1,2-Trichloroethane	ug/L	ND	ND		
1,1-Dichloroethane	ug/L	ND	ND		
1,1-Dichloroethene	ug/L	ND	ND		
1,1-Dichloropropene	ug/L	ND	ND		
1,2,3-Trichlorobenzene	ug/L	ND	ND		
1,2,3-Trichloropropane	ug/L	ND	ND		
1,2,4-Trichlorobenzene	ug/L	ND	ND		
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		
1,2-Dibromoethane (EDB)	ug/L	ND	ND		
1,2-Dichlorobenzene	ug/L	ND	ND		
1,2-Dichloroethane	ug/L	ND	ND		
1,2-Dichloropropane	ug/L	ND	ND		
1,3-Dichlorobenzene	ug/L	ND	ND		
1,3-Dichloropropane	ug/L	ND	ND		
1,4-Dichlorobenzene	ug/L	ND	ND		
2,2-Dichloropropane	ug/L	ND	ND		
2-Butanone (MEK)	ug/L	ND	ND		
2-Chlorotoluene	ug/L	ND	ND		
2-Hexanone	ug/L	ND	ND		

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

SAMPLE DUPLICATE: 1454556

Parameter	Units	92247382015 Result	Dup Result	RPD	Qualifiers
4-Chlorotoluene	ug/L	ND	ND		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		
Acetone	ug/L	ND	ND		
Acrylonitrile	ug/L	ND	ND		
Benzene	ug/L	ND	ND		
Bromobenzene	ug/L	ND	ND		
Bromochloromethane	ug/L	ND	ND		
Bromodichloromethane	ug/L	ND	ND		
Bromoform	ug/L	ND	ND		
Bromomethane	ug/L	ND	ND		
Carbon disulfide	ug/L	ND	ND		
Carbon tetrachloride	ug/L	ND	ND		
Chlorobenzene	ug/L	ND	ND		
Chloroethane	ug/L	ND	ND		
Chloroform	ug/L	ND	ND		
Chloromethane	ug/L	ND	ND		
cis-1,2-Dichloroethene	ug/L	ND	ND		
cis-1,3-Dichloropropene	ug/L	ND	ND		
Dibromochloromethane	ug/L	ND	ND		
Dibromomethane	ug/L	ND	ND		
Dichlorodifluoromethane	ug/L	ND	ND		
Diisopropyl ether	ug/L	ND	ND		
Ethylbenzene	ug/L	ND	ND		
Hexachloro-1,3-butadiene	ug/L	ND	ND		
Iodomethane	ug/L	ND	ND		
m&p-Xylene	ug/L	ND	ND		
Methyl-tert-butyl ether	ug/L	ND	ND		
Methylene Chloride	ug/L	ND	ND		
Naphthalene	ug/L	ND	ND		
o-Xylene	ug/L	ND	ND		
p-Isopropyltoluene	ug/L	ND	ND		
Styrene	ug/L	ND	ND		
Tetrachloroethene	ug/L	ND	ND		
Toluene	ug/L	ND	ND		
trans-1,2-Dichloroethene	ug/L	ND	ND		
trans-1,3-Dichloropropene	ug/L	ND	ND		
trans-1,4-Dichloro-2-butene	ug/L	ND	ND		
Trichloroethene	ug/L	ND	ND		
Trichlorofluoromethane	ug/L	ND	ND		
Vinyl acetate	ug/L	ND	ND		
Vinyl chloride	ug/L	ND	ND		
Xylene (Total)	ug/L	ND	ND		
1,2-Dichloroethane-d4 (S)	%	127	97	27	
4-Bromofluorobenzene (S)	%	105	101	4	
Toluene-d8 (S)	%	98	99	1	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

QC Batch: MSV/31544 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92247382021, 92247382022

METHOD BLANK: 1454569 | Matrix: Water
Associated Lab Samples: 92247382021, 92247382022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	05/08/15 18:20	
1,1,1-Trichloroethane	ug/L	ND	1.0	05/08/15 18:20	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/08/15 18:20	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/08/15 18:20	
1,1-Dichloroethane	ug/L	ND	1.0	05/08/15 18:20	
1,1-Dichloroethene	ug/L	ND	1.0	05/08/15 18:20	
1,2,3-Trichloropropane	ug/L	ND	1.0	05/08/15 18:20	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	05/08/15 18:20	
1,2-Dichlorobenzene	ug/L	ND	1.0	05/08/15 18:20	
1,2-Dichloroethane	ug/L	ND	1.0	05/08/15 18:20	
1,2-Dichloropropane	ug/L	ND	1.0	05/08/15 18:20	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/08/15 18:20	
2-Butanone (MEK)	ug/L	ND	5.0	05/08/15 18:20	
2-Hexanone	ug/L	ND	5.0	05/08/15 18:20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	05/08/15 18:20	
Acetone	ug/L	ND	25.0	05/08/15 18:20	
Acrylonitrile	ug/L	ND	10.0	05/08/15 18:20	
Benzene	ug/L	ND	1.0	05/08/15 18:20	
Bromochloromethane	ug/L	ND	1.0	05/08/15 18:20	
Bromodichloromethane	ug/L	ND	1.0	05/08/15 18:20	
Bromoform	ug/L	ND	1.0	05/08/15 18:20	
Bromomethane	ug/L	ND	2.0	05/08/15 18:20	
Carbon disulfide	ug/L	ND	2.0	05/08/15 18:20	
Carbon tetrachloride	ug/L	ND	1.0	05/08/15 18:20	
Chlorobenzene	ug/L	ND	1.0	05/08/15 18:20	
Chloroethane	ug/L	ND	1.0	05/08/15 18:20	
Chloroform	ug/L	ND	1.0	05/08/15 18:20	
Chloromethane	ug/L	ND	1.0	05/08/15 18:20	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/08/15 18:20	
cis-1,3-Dichloropropene	ug/L	ND	1.0	05/08/15 18:20	
Dibromochloromethane	ug/L	ND	1.0	05/08/15 18:20	
Dibromomethane	ug/L	ND	1.0	05/08/15 18:20	
Ethylbenzene	ug/L	ND	1.0	05/08/15 18:20	
Iodomethane	ug/L	10.5	5.0	05/08/15 18:20	
m&p-Xylene	ug/L	ND	2.0	05/08/15 18:20	
Methylene Chloride	ug/L	ND	2.0	05/08/15 18:20	
o-Xylene	ug/L	ND	1.0	05/08/15 18:20	
Styrene	ug/L	ND	1.0	05/08/15 18:20	
Tetrachloroethene	ug/L	ND	1.0	05/08/15 18:20	
Toluene	ug/L	ND	1.0	05/08/15 18:20	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/08/15 18:20	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

METHOD BLANK: 1454569 Matrix: Water
Associated Lab Samples: 92247382021, 92247382022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	05/08/15 18:20	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	05/08/15 18:20	
Trichloroethene	ug/L	ND	1.0	05/08/15 18:20	
Trichlorofluoromethane	ug/L	ND	1.0	05/08/15 18:20	
Vinyl acetate	ug/L	ND	2.0	05/08/15 18:20	
Vinyl chloride	ug/L	ND	1.0	05/08/15 18:20	
Xylene (Total)	ug/L	ND	2.0	05/08/15 18:20	
1,2-Dichloroethane-d4 (S)	%	103	70-130	05/08/15 18:20	
4-Bromofluorobenzene (S)	%	100	70-130	05/08/15 18:20	
Toluene-d8 (S)	%	96	70-130	05/08/15 18:20	

LABORATORY CONTROL SAMPLE: 1454570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	45.3	91	70-130	
1,1,1-Trichloroethane	ug/L	50	43.0	86	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.5	99	70-130	
1,1,2-Trichloroethane	ug/L	50	47.3	95	70-130	
1,1-Dichloroethane	ug/L	50	45.5	91	70-130	
1,1-Dichloroethene	ug/L	50	41.0	82	70-132	
1,2,3-Trichloropropane	ug/L	50	49.9	100	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	49.1	98	70-130	
1,2-Dichlorobenzene	ug/L	50	47.8	96	70-130	
1,2-Dichloroethane	ug/L	50	44.6	89	70-130	
1,2-Dichloropropane	ug/L	50	47.7	95	70-130	
1,4-Dichlorobenzene	ug/L	50	46.0	92	70-130	
2-Butanone (MEK)	ug/L	100	91.7	92	70-145	
2-Hexanone	ug/L	100	97.5	97	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.2	94	70-140	
Acetone	ug/L	100	91.8	92	50-175	
Acrylonitrile	ug/L	250	248	99	70-143	
Benzene	ug/L	50	46.4	93	70-130	
Bromochloromethane	ug/L	50	52.5	105	70-130	
Bromodichloromethane	ug/L	50	41.9	84	70-130	
Bromoform	ug/L	50	45.1	90	70-130	
Bromomethane	ug/L	50	56.9	114	54-130	
Carbon disulfide	ug/L	50	44.6	89	70-131	
Carbon tetrachloride	ug/L	50	42.4	85	70-132	
Chlorobenzene	ug/L	50	46.8	94	70-130	
Chloroethane	ug/L	50	44.6	89	64-134	
Chloroform	ug/L	50	41.7	83	70-130	
Chloromethane	ug/L	50	40.6	81	64-130	
cis-1,2-Dichloroethene	ug/L	50	47.3	95	70-131	
cis-1,3-Dichloropropene	ug/L	50	48.1	96	70-130	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

LABORATORY CONTROL SAMPLE: 1454570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	45.5	91	70-130	
Dibromomethane	ug/L	50	46.5	93	70-131	
Ethylbenzene	ug/L	50	44.8	90	70-130	
Iodomethane	ug/L	100	101	101	49-180	
m&p-Xylene	ug/L	100	87.6	88	70-130	
Methylene Chloride	ug/L	50	47.7	95	63-130	
o-Xylene	ug/L	50	44.4	89	70-130	
Styrene	ug/L	50	47.6	95	70-130	
Tetrachloroethene	ug/L	50	44.5	89	70-130	
Toluene	ug/L	50	45.7	91	70-130	
trans-1,2-Dichloroethene	ug/L	50	43.4	87	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.7	95	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	48.4	97	70-141	
Trichloroethene	ug/L	50	42.4	85	70-130	
Trichlorofluoromethane	ug/L	50	43.6	87	62-133	
Vinyl acetate	ug/L	100	100	100	66-157	
Vinyl chloride	ug/L	50	47.9	96	50-150	
Xylene (Total)	ug/L	150	132	88	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			100	70-130	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

QC Batch: WET/37113 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92247382020

METHOD BLANK: 1445593 | Matrix: Water
Associated Lab Samples: 92247382020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/03/15 15:50	

LABORATORY CONTROL SAMPLE: 1445594

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	199	101	84.6-115.4	

SAMPLE DUPLICATE: 1445595

Parameter	Units	92247341002 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	11.3	11.5	1	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

QC Batch: WETA/22746 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92247382020

METHOD BLANK: 1446177 | Matrix: Water
Associated Lab Samples: 92247382020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	2.0	04/30/15 23:26	

LABORATORY CONTROL SAMPLE: 1446178

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446179 1446180

Parameter	Units	92246735025 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Sulfate	mg/L	2.8	20	20	21.6	21.6	94	94	90-110	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446181 1446182

Parameter	Units	92247296004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Sulfate	mg/L	1610J ug/L	20	20	19.9	19.8	91	91	90-110	0	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

QC Batch: WETA/22747
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92247382020

METHOD BLANK: 1446308
Matrix: Water
Associated Lab Samples: 92247382020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	04/29/15 16:41	
Nitrogen, Nitrite	mg/L	ND	0.020	04/29/15 16:41	
Nitrogen, NO2 plus NO3	mg/L	ND	0.020	04/29/15 16:41	

LABORATORY CONTROL SAMPLE: 1446309

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.5	102	90-110	
Nitrogen, Nitrite	mg/L	1	0.99	99	90-110	
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1446310 1446311

Parameter	Units	92247473001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Nitrate	mg/L	0.052	2.5	2.5	2.4	2.4	95	95	90-110	0	
Nitrogen, Nitrite	mg/L	ND	1	1	0.96	0.96	94	94	90-110	0	
Nitrogen, NO2 plus NO3	mg/L	0.052	2.5	2.5	2.4	2.4	95	95	90-110	0	

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

QC Batch: WETA/22797 | Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 | Analysis Description: 365.1 Phosphorus, Total
Associated Lab Samples: 92247382020

METHOD BLANK: 1449130 | Matrix: Water
Associated Lab Samples: 92247382020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	05/05/15 13:11	

LABORATORY CONTROL SAMPLE: 1449131

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.5	2.7	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1449132 1449133

Parameter	Units	92247358001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Phosphorus	mg/L	26.1	2.5	2.5	28.8	28.8	110	109	90-110	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1449134 1449135

Parameter	Units	92247581001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Phosphorus	mg/L	4.7	2.5	2.5	7.7	8.0	122	133	90-110	3	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: W.O.L.F 4/28
Pace Project No.: 92247382

QC Batch: WETA/22767 | Analysis Method: SM 5220D
QC Batch Method: SM 5220D | Analysis Description: 5220D COD
Associated Lab Samples: 92247382020

METHOD BLANK: 1448061 | Matrix: Water
Associated Lab Samples: 92247382020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	05/04/15 09:35	

LABORATORY CONTROL SAMPLE: 1448062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	735	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1448063 1448064

Parameter	Units	92247473004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	mg/L	199	750	750	842	842	86	86	90-110	0	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1448065 1448066

Parameter	Units	92247697004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	mg/L	105	750	750	892	892	105	105	90-110	0	

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QUALIFIERS

Project: W.O.L.F 4/28
Pace Project No.: 92247382

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

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TNI - The NELAC Institute.

LABORATORIES

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

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
B2	Oxygen usage is less than 2.0 for all dilutions set. The reported value is an estimated less than value and is calculated for the dilution using the most amount of sample.
C9	Common Laboratory Contaminant.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S3	Surrogate recovery exceeded laboratory control 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: W.O.L.F 4/28
Pace Project No.: 92247382

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92247382001	**MW-1A**		FLD/		
92247382002	**MW-2**		FLD/		
92247382003	**MW-2D**		FLD/		
92247382004	**MW-3R**		FLD/		
92247382005	**MW-3RD**		FLD/		
92247382006	**MW-4A**		FLD/		
92247382007	**MW-8**		FLD/		
92247382008	**MW-11s**		FLD/		
92247382009	**MW-11D**		FLD/		
92247382010	**MW-14**		FLD/		
92247382011	**MW-15**		FLD/		
92247382012	**MW-16**		FLD/		
92247382013	**MW-17**		FLD/		
92247382014	**SW-1**		FLD/		
92247382015	**SW-2**		FLD/		
92247382016	**SW-3**		FLD/		
92247382017	**SW-5**		FLD/		
92247382018	**SW-6**		FLD/		
92247382019	**SW-7**		FLD/		
92247382020	**Leachate**		FLD/		
92247382001	**MW-1A**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382002	**MW-2**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382003	**MW-2D**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382004	**MW-3R**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382005	**MW-3RD**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382006	**MW-4A**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382007	**MW-8**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382008	**MW-11s**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382009	**MW-11D**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382010	**MW-14**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382011	**MW-15**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382012	**MW-16**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382013	**MW-17**	EPA 3010	MPRP/18376	EPA 6010	ICP/16495
92247382014	**SW-1**	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247382015	**SW-2**	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247382016	**SW-3**	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247382017	**SW-5**	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247382018	**SW-6**	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247382019	**SW-7**	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247382020	**Leachate**	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247382022	**EQUIP BLANK**	EPA 3010	MPRP/18377	EPA 6010	ICP/16496
92247382001	**MW-1A**	EPA 8260	MSV/31543		
92247382002	**MW-2**	EPA 8260	MSV/31543		
92247382003	**MW-2D**	EPA 8260	MSV/31543		
92247382004	**MW-3R**	EPA 8260	MSV/31543		
92247382005	**MW-3RD**	EPA 8260	MSV/31543		
92247382006	**MW-4A**	EPA 8260	MSV/31543		

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: W.O.L.F 4/28
Pace Project No.: 92247382

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92247382007	**MW-8**	EPA 8260	MSV/31543		
92247382008	**MW-11s**	EPA 8260	MSV/31543		
92247382009	**MW-11D**	EPA 8260	MSV/31543		
92247382010	**MW-14**	EPA 8260	MSV/31543		
92247382011	**MW-15**	EPA 8260	MSV/31543		
92247382012	**MW-16**	EPA 8260	MSV/31543		
92247382013	**MW-17**	EPA 8260	MSV/31543		
92247382014	**SW-1**	EPA 8260	MSV/31543		
92247382015	**SW-2**	EPA 8260	MSV/31543		
92247382016	**SW-3**	EPA 8260	MSV/31543		
92247382017	**SW-5**	EPA 8260	MSV/31543		
92247382018	**SW-6**	EPA 8260	MSV/31543		
92247382019	**SW-7**	EPA 8260	MSV/31543		
92247382020	**Leachate**	EPA 8260	MSV/31543		
92247382021	**TVL BLK**	EPA 8260	MSV/31544		
92247382022	**EQUIP BLANK**	EPA 8260	MSV/31544		
92247382020	**Leachate**	SM 5210B	WET/37113	SM 5210B	WET/37114
92247382020	**Leachate**	EPA 300.0	WETA/22746		
92247382020	**Leachate**	EPA 353.2	WETA/22747		
92247382020	**Leachate**	EPA 365.1	WETA/22797		
92247382020	**Leachate**	SM 5220D	WETA/22767		

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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 2

1905059

Section A Required Client Information:

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

Section B Required Project Information:

Report To: SANTEK / HAGWOOD
Copy To:
Purchase Order No.:
Project Name: WHITE OAK LANDFILL W.D.L.F.
Project Number:

Section C Invoice Information:

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

REGULATORY AGENCY

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

Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N): FLD, VOC, Metals, Static H_2O

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	FLD	VOC	Metals	Static H_2O	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1A					4.28.15	1145		4			1	3						X	X	X	X		9224 1382-001
2	MW-2					4.28	1155		4			1	3						X	X	X	X		002
3	MW 2D					4.28	1205		4			1	3						X	X	X	X		003
4	MW-3R					4.28	1310		4			1	3						X	X	X	X		004
5	MW-3D					4.28	1320		4			1	3						X	X	X	X		005
6	MW-4A					4.28	1430		4			1	3						X	X	X	X		006
7	MW-8					4.28	1410		4			1	3						X	X	X	X		007
8	MW-11S					4.28	1115		4			1	3						X	X	X	X		008
9	MW-11D					4.28	1130		4			1	3						X	X	X	X		009
10	MW 14					4.28	1010		4			1	3						X	X	X	X		010
11	MW-15					4.28	1450		4			1	3						X	X	X	X		011
12	MW-16					4.28	1505		4			1	3						X	X	X	X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		4.28.15	1505	[signature] Pace	4.28.15	1505				
FLD pH, specif, Temp, Turb	[signature] Pace	4.28.15	1555	[signature]	4/28/15	15:55	GLD	Y	N	1
							SL			

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK P. SWAN

SIGNATURE of SAMPLER: [signature] Pace

DATE Signed (MM/DD/YY): 4.28.15

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

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

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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

1905058

Section A Required Client Information:

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

Section B Required Project Information:

Report To: SANTEK HAYWOOD CO
Copy To:
Purchase Order No.:
Project Name: White Oak LF (WOLF)
Project Number:

Section C Invoice Information:

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

REGULATORY AGENCY

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

Site Location STATE: NC

Section D Required Client Information

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

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

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): Fe	Mn	metals	BOD	TP	COD	SO4	NO3	Static H_2O	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-17					4.22.15	1505		4			1	3					X	X	X						X		92241382-013
2																												~~013~~
3	SW-1					4.22	1230		4			1	3					X	X	X								014
4	SW-2					4.22	1250		4			1	3					X	X	X								015
5	SW-3					4.22	1245		4			1	3					X	X	X								016
6	SW-5					4.22	1330		4			1	3					X	X	X								017
7	SW-6					4.22	1035		4			1	3					X	X	X								018
8	SW-7					4.22	1045		4			1	3					X	X	X								019
9	Leachate					4.22	1345					1	3					X	X	X	X	X	X	X	X			020
10																												
11	TUL BLK					4.22.15	800		2				2						X									021
12	Equip BLK					4.22	800		3			1	2						X	X								022

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		4.22.15	1505	[signature]	4.22.15	1505				
	[signature]	4.22.15	1555	[signature]	4/22/15	15:55	6.0	Y	N	Y
							5.2			

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK L. SWANT

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 4-22-15

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

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

Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: June 10, 2014 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.14	Issuing Authorities: Pace Asheville Quality Office

Client Name: Hayward

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

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

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

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

IR Gun #4 SN:140290365 Other:_____

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 6.0/5.2 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: RDB 4/28/15

		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: [signature] **Date:** 4/29/15

SRF Review: [signature] **Date:** 4/29/15

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

WO# : 92247382

92247382

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

4 · 2015

Pace Analytical Services, Inc

Report Form for Field Monitoring

Location HAYWOOD CO WOLF MW'S

Date	Time	Sampler	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~	Comments
4.28.15	1145	MCJ	MW-1A	18.55 ~~27.47~~	6.4	13.9	112.7	4.46		WL 18.55
	1155		MW-2	29.02	6.0	16.9	1601	7.43		
	1205		MW-2D	29.00	6.1	15.5	1621	3.78		
	1310		MW-3R	31.01	6.5	14.1	464	4.84		
	1320		MW-3RD	36.06	6.2	14.2	387	4.94		
	1430		MW-4A	43.95	6.3	16.5	236	3.80		
	1410		MW-8	29.90	6.1	15.8	843	4.37		
	1115		MW-11S	79.59	6.6	13.5	26	39.5		
	1130		MW-11D	80.59	6.5	13.2	44	4.88		
	1010		MW-14	99.22	7.5	12.5	53	9.58		
	1100		MW-15	9.04	6.3	13.5	66	18.4		
	1450		MW-16	35.11	6.1	16.6	253	4.49		
	1505		MW 17	56.85	6.1	14.8	169	3.49		

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

4 · 2015

Pace Analytical Services, Inc
Report Form for Field Monitoring

Location HAYWOOD Co WOLF SW's + Leachate

Date	Time	Samples	Sample ID	~~Water Level (ft)~~	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	ORP	Comments
4·22·15	1230	GPS	SW·1		7.3	13.8	201	4.62		
4·22	1250		SW·2		7.6	11.5	217	6.77		
4·22	1245		SW·3		8.3	16.8	330	3.60		
4·22	1330		SW·5		6.1	18.2	181	6.70		
4·22	1035		SW·6		7.3	12.3	41	5.76		
4·22	1045		SW·7		7.1	10.7	81	4.76		
4·22	1345		Leachate		8.1	22.1	6309	5.43		

APPENDIX D

STATISTICAL CALCULATIONS

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

COMPOUND	TOTAL	ND	DETECTED	%ND	STATISTICAL TEST
Total Antimony	328	321	7	97.9%	Poisson Prediction Limits
Total Arsenic	328	301	27	91.8%	Poisson Prediction Limits
Total Barium	331	16	315	4.8%	Kruskal-Wallis
Total Beryllium	329	285	44	86.6%	Kruskal-Wallis
Total Cadmium	329	287	42	87.2%	Kruskal-Wallis
Total Chromium	329	188	141	57.1%	Kruskal-Wallis
Total Cobalt	329	214	115	65.0%	Kruskal-Wallis
Total Copper	329	208	121	63.2%	Kruskal-Wallis
Total Lead	330	253	77	76.7%	Kruskal-Wallis
Total Nickel	330	153	177	46.4%	Kruskal-Wallis
Total Selenium	329	325	4	98.8%	Poisson Prediction Limits
Total Silver	329	326	3	99.1%	Poisson Prediction Limits
Total Thallium	329	310	19	94.2%	Poisson Prediction Limits
Total Vanadium	329	193	136	58.7%	Kruskal-Wallis
Total Zinc	329	117	212	35.6%	Kruskal-Wallis
Acetone	278	277	1	99.6%	Poisson Prediction Limits
Carbon Disulfide	278	275	3	98.9%	Poisson Prediction Limits
Chloroethane	278	277	1	99.6%	Poisson Prediction Limits
Iodomethane	278	277	1	99.6%	Poisson Prediction Limits
Dichloromethane	278	275	3	98.9%	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
N 35	19
N 36	41

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) =	1450
Total Detected Concentrations (per event) =	1450
Are all accounted for ?	Yes
Statistical Package Prepared By:	IAI
Statistical Package Checked By:	MSP

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**30**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**30**
04/15/02	**15**	ND	NS	ND	ND	ND	NT	ND	ND	**11**	NS	NP	NP	**10**
09/26/02	ND	ND	ND	**12**	ND	ND	ND	ND	ND	ND	**98**	NP	NP	**10**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	NP	NP	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**30**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	**20**	ND	ND	ND	ND	ND	NP	NP	**6**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.1**	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**

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' = 30.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 83$
$T_{n1} = 294$

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).

$k = 1$
$n = 83$
$T_{n1} = 294$
$t\,[82,.01] = 2.3783$

$c = 0.012$

$T^*_k = 8.1$

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

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Total Arsenic**
MCL (µg/l): 10
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	ND	ND	NS	ND	ND	ND	NT	ND	ND	ND	NS	NP	NP	**10**
09/26/02	ND	**5.7**	ND	ND	ND	ND	ND	ND	**27**	ND	**68**	NP	NP	**5**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24**	NP	NP	**5**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	**5.3**	**81**	NP	NP	**5**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.4**	**30**	NP	NP	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**59**	NP	NP	**5**
04/18/05	ND	ND	ND	**10**	ND	ND	ND	ND	ND	**5.2**	**65**	NP	NP	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**44**	NP	NP	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**42**	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13**	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	**280**	ND	ND	ND	ND	**12**	NP	NP	**5**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21.4**	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10.2**	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.6**	NP	NP	**5**
04/22/09	ND	ND	**5.4**	ND	ND	**5.6**	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	**6**	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	**7.4**	**9.8**	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	**5.4**	**5.9**	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**

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' = 30.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 83$
$T_{n1} = 273.6$

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).

$k = 1$
$n = 83$
$T_{n1} = 273.6$
$t\,[82,.01] = 2.3783$

$c = 0.012$

$T^*_k = 7.7$

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

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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
10/27/14	117	16.1	102	136	1280	1410	363	224	8.6	228	23	156	180	5
04/28/15	119	16	109	199	1330	1380	345	260	9	218	30	156	190	5
N_i	31	30	25	30	30	29	27	27	28	29	25	10	10	
sum of rank values (R_i)	6358.5	1704.5	3427.0	5417.5	7676.0	6406.0	4140.5	4263.5	2201.5	5840.5	4725.5	1393.0	1392.0	
avg rank value (Rbar)	205.1	56.8	137.1	180.6	255.9	220.9	153.4	157.9	78.6	201.4	189.0	139.3	139.2	

	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 8.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	19
rank value of 9s =	0	0	0	0	0	0	0	0	1	0	0	0	0	20
rank value of 9.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	21
rank value of 9.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	22
rank value of 9.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	23
rank value of 12s =	0	0	0	0	0	0	0	0	2	0	0	0	0	24.5
rank value of 13.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	26
rank value of 15.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	27
rank value of 16s =	0	1	0	0	0	0	0	0	0	0	0	0	0	28
rank value of 16.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	29
rank value of 16.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	30
rank value of 16.8s =	0	2	0	0	0	0	0	0	0	0	0	0	0	31.5
rank value of 17.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	33
rank value of 17.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	34
rank value of 18.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	35

rank value of 19s =	0	1	0	0	0	0	0	0	0	0	0	0	0	36
rank value of 19.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	37
rank value of 20s =	0	0	0	0	0	0	0	0	1	0	0	0	0	38
rank value of 20.9s =	0	0	0	0	0	0	0	0	1	0	0	0	0	39
rank value of 22s =	0	1	0	0	0	0	0	0	0	0	0	0	0	40
rank value of 23s =	0	0	0	0	0	0	1	0	0	0	0	0	0	41
rank value of 23.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	42
rank value of 26.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	43
rank value of 27s =	0	0	0	0	0	0	0	0	1	0	0	0	0	44
rank value of 27.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	45
rank value of 30s =	0	1	0	0	0	0	0	0	0	0	0	0	0	46
rank value of 30.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	47
rank value of 30.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	48
rank value of 31.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	49
rank value of 37s =	0	1	0	0	0	0	0	0	0	0	0	0	0	50
rank value of 40s =	0	1	0	0	0	0	0	0	0	0	0	0	0	51
rank value of 41s =	0	1	0	0	0	0	0	0	0	0	0	0	0	52
rank value of 41.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	53
rank value of 43.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	54
rank value of 43.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	55
rank value of 47.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	56
rank value of 55s =	0	1	0	0	0	0	0	0	0	0	0	0	0	57
rank value of 55.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	58
rank value of 56s =	0	1	0	0	0	0	0	0	0	0	0	0	0	59
rank value of 61.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	60
rank value of 62s =	0	0	0	0	0	0	0	0	1	0	0	0	0	61
rank value of 62.4s =	0	0	0	0	0	0	0	0	1	0	0	0	0	62
rank value of 63s =	0	0	0	0	0	0	1	0	0	0	0	0	0	63
rank value of 64.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	64
rank value of 66s =	0	2	0	0	0	0	0	0	0	0	0	0	0	65.5
rank value of 67s =	0	1	0	0	0	0	0	0	0	0	0	0	0	67
rank value of 74.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	68
rank value of 77s =	0	0	0	0	0	0	0	0	1	0	0	0	0	69
rank value of 80s =	0	0	0	0	0	0	1	0	0	0	0	0	0	70
rank value of 84.4s =	0	0	0	0	0	0	0	0	0	0	0	0	1	71
rank value of 92s =	0	0	0	0	1	0	0	1	0	0	0	0	0	72.5
rank value of 93s =	0	0	0	0	0	0	1	0	1	0	0	0	0	74.5
rank value of 95s =	0	0	0	0	0	0	1	0	0	0	0	0	0	76
rank value of 96.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	77
rank value of 100s =	0	1	1	0	0	0	0	0	0	0	0	0	0	78.5
rank value of 102s =	0	0	1	0	0	0	0	0	0	0	0	0	0	80
rank value of 109s =	0	0	1	0	0	0	0	0	0	0	0	0	0	81
rank value of 110s =	0	0	0	0	0	0	1	1	0	0	0	0	0	82.5
rank value of 111s =	0	0	0	0	0	0	0	0	0	0	1	0	0	84
rank value of 116s =	0	0	0	0	0	0	0	0	0	0	0	1	0	85
rank value of 117s =	1	0	0	0	0	0	0	0	0	0	0	0	0	86
rank value of 119s =	1	0	0	0	0	0	0	0	0	0	0	0	0	87
rank value of 120s =	0	0	2	0	1	1	0	0	0	0	0	0	0	89.5
rank value of 123s =	0	0	0	0	0	0	0	0	0	0	1	0	0	92
rank value of 124s =	0	0	1	0	0	0	0	0	0	0	0	0	0	93
rank value of 125s =	0	0	0	0	0	0	0	0	0	0	1	0	0	94
rank value of 126s =	1	0	0	0	0	0	0	0	0	0	0	0	0	95
rank value of 127s =	0	0	1	0	0	0	0	0	0	0	0	0	0	96
rank value of 129s =	0	0	1	0	0	0	0	0	0	0	0	0	0	97
rank value of 130s =	0	0	0	0	0	1	1	1	0	0	0	0	0	99
rank value of 131s =	1	0	0	0	0	0	0	0	0	0	0	0	0	101
rank value of 133s =	0	0	0	0	0	0	0	0	0	0	0	0	1	102
rank value of 136s =	0	0	0	1	0	0	0	0	0	0	0	0	0	103
rank value of 140s =	0	0	0	0	0	2	2	2	0	0	0	0	0	106.5
rank value of 144s =	0	0	1	0	0	0	0	0	0	0	0	0	0	110
rank value of 147s =	1	0	0	0	0	0	0	0	0	0	0	0	0	111
rank value of 148s =	0	0	0	1	0	0	0	0	0	0	0	1	0	112.5
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	0	0	0	114
rank value of 151s =	0	0	0	0	0	0	0	0	0	1	0	0	0	115
rank value of 153s =	0	0	1	1	0	0	0	0	0	0	0	0	0	116.5
rank value of 154s =	0	0	0	0	0	0	0	0	0	0	0	0	1	118
rank value of 156s =	0	0	1	0	0	0	0	0	0	0	0	2	0	120
rank value of 157s =	0	0	0	1	0	0	0	0	0	0	0	0	0	122
rank value of 160s =	0	0	2	0	1	1	2	0	1	0	0	0	0	126
rank value of 161s =	0	0	0	0	0	0	0	0	0	0	0	1	0	130
rank value of 162s =	0	0	1	0	0	0	0	0	0	0	0	0	0	131
rank value of 163s =	0	0	0	0	0	0	0	0	0	1	0	0	0	132

rank value of 164s =	0	0	0	1	0	0	1	0	0	0	0	0	0	133.5
rank value of 166s =	0	0	0	1	0	0	0	0	0	0	0	0	0	135
rank value of 167s =	0	0	0	1	0	0	0	0	0	0	0	0	0	136
rank value of 168s =	0	0	0	1	0	0	0	0	0	0	0	0	0	137
rank value of 169s =	0	0	0	0	0	0	0	0	0	0	0	0	1	138
rank value of 170s =	0	0	0	0	0	1	0	0	0	0	0	0	0	139
rank value of 171s =	0	0	0	0	0	0	0	0	0	0	0	1	0	140
rank value of 173s =	0	0	0	0	0	0	0	1	0	0	0	0	0	141
rank value of 174s =	1	0	0	0	0	0	0	0	0	0	0	0	0	142
rank value of 177s =	0	0	0	0	0	0	0	0	0	0	0	1	0	143
rank value of 178s =	0	0	0	1	0	0	0	0	0	0	1	0	0	144.5
rank value of 180s =	0	0	1	1	0	1	0	1	0	0	0	0	1	148
rank value of 181s =	0	0	0	0	0	0	0	0	0	0	0	0	1	151
rank value of 182s =	0	0	0	1	0	0	0	0	0	1	0	0	0	152.5
rank value of 184s =	0	0	0	0	0	0	1	0	0	0	0	0	0	154
rank value of 185s =	1	0	0	0	0	0	0	0	0	0	0	0	0	155
rank value of 188s =	0	0	1	1	0	0	0	0	0	0	0	0	0	156.5
rank value of 189s =	0	0	0	0	0	0	0	0	0	0	0	0	1	158
rank value of 190s =	0	0	0	0	0	0	0	1	0	1	0	0	2	160.5
rank value of 191s =	1	0	0	0	0	0	0	0	0	0	0	1	0	163.5
rank value of 194s =	1	0	0	0	0	0	0	0	0	0	0	0	0	165
rank value of 196s =	0	0	0	0	0	0	0	0	0	1	0	0	0	166
rank value of 198s =	0	0	0	1	0	0	0	0	0	0	0	0	0	167
rank value of 199s =	0	0	0	1	0	0	0	0	0	0	0	0	0	168
rank value of 200s =	0	0	2	0	0	1	0	0	0	0	0	0	0	170
rank value of 201s =	0	0	0	0	0	0	0	0	0	0	0	1	0	172
rank value of 202s =	0	0	0	0	0	0	0	1	0	0	0	0	0	173
rank value of 205s =	0	0	0	0	0	0	0	1	0	0	0	0	0	174
rank value of 208s =	1	0	0	0	0	0	0	1	0	0	0	0	0	175.5
rank value of 209s =	0	0	0	0	0	0	0	0	0	1	0	0	0	177
rank value of 210s =	0	0	0	1	0	0	0	1	0	0	0	0	0	178.5
rank value of 215s =	0	0	0	0	0	0	0	1	0	0	0	0	0	180
rank value of 216s =	0	0	0	0	0	0	1	2	0	0	0	0	0	182
rank value of 218s =	0	0	0	0	0	0	0	0	0	2	0	0	1	185
rank value of 220s =	0	0	1	0	0	0	0	0	0	0	0	0	0	187
rank value of 223s =	0	0	1	0	0	0	0	0	0	0	0	0	0	188
rank value of 224s =	0	0	0	1	0	0	0	1	0	0	0	0	0	189.5
rank value of 226s =	0	0	0	0	0	0	0	1	0	0	0	0	0	191
rank value of 228s =	0	0	0	0	0	0	0	0	0	1	0	0	0	192
rank value of 229s =	0	0	0	0	0	0	0	1	0	0	0	0	0	193
rank value of 230s =	0	0	0	0	0	1	1	0	0	1	0	0	0	195
rank value of 232s =	0	0	0	0	0	0	0	0	0	1	0	0	0	197
rank value of 234s =	0	0	0	0	0	0	0	1	0	0	0	0	0	198
rank value of 235s =	0	0	0	0	0	0	0	0	0	1	0	0	0	199
rank value of 238s =	0	0	0	0	0	0	0	0	0	2	0	0	0	200.5
rank value of 240s =	0	0	0	2	0	0	0	0	0	0	0	0	0	202.5
rank value of 241s =	1	0	0	0	0	0	0	0	0	0	0	0	0	204
rank value of 245s =	0	0	0	0	0	0	0	0	0	0	1	0	0	205
rank value of 248s =	0	0	0	0	0	0	0	1	0	0	0	0	0	206
rank value of 249s =	0	0	0	0	0	0	0	0	0	0	0	1	0	207
rank value of 250s =	1	0	0	0	0	1	0	0	0	1	0	0	0	209
rank value of 253s =	0	0	1	0	0	0	0	0	0	0	0	0	0	211
rank value of 255s =	1	0	0	0	0	0	0	0	0	0	0	0	0	212
rank value of 256s =	0	0	0	0	0	0	0	1	0	0	0	0	0	213
rank value of 260s =	0	0	0	0	0	0	0	1	0	0	0	0	0	214
rank value of 270s =	0	0	0	0	0	0	0	0	0	1	0	0	0	215
rank value of 290s =	1	0	0	0	0	0	0	1	0	0	0	0	0	216.5
rank value of 300s =	1	0	0	1	0	0	0	1	0	0	0	0	0	219
rank value of 304s =	1	0	0	0	0	0	0	0	0	0	0	0	0	221
rank value of 309s =	0	0	0	1	0	0	0	0	0	0	0	0	0	222
rank value of 310s =	0	0	0	0	2	0	0	0	0	0	0	0	0	223.5
rank value of 313s =	0	0	1	0	0	0	0	0	0	0	0	0	0	225
rank value of 320s =	3	0	0	0	0	0	0	0	0	0	0	0	0	227
rank value of 330s =	2	0	0	1	1	0	0	0	0	0	0	0	0	230.5
rank value of 332s =	0	0	0	1	0	0	0	0	0	0	0	0	0	233
rank value of 344s =	0	0	0	0	0	0	1	0	0	0	0	0	0	234
rank value of 345s =	0	0	0	0	0	0	1	0	0	0	0	0	0	235
rank value of 360s =	0	0	0	0	0	0	0	0	2	0	0	0	0	236.5
rank value of 361s =	0	0	0	0	0	0	0	0	0	0	1	0	0	238
rank value of 363s =	0	0	0	0	0	0	1	0	0	0	0	0	0	239
rank value of 378s =	0	0	0	0	0	0	1	0	0	0	0	0	0	240
rank value of 380s =	0	1	0	0	0	0	0	0	0	0	0	0	0	241

rank value of 389s =	1	0	0	0	0	0	0	0	0	0	0	0	0	242
rank value of 393s =	0	0	0	0	0	0	1	0	0	0	0	0	0	243
rank value of 410s =	1	0	0	1	0	0	0	1	0	0	0	0	0	245
rank value of 420s =	0	0	0	0	1	0	0	0	0	0	0	0	0	247
rank value of 428s =	0	0	0	0	0	0	1	0	0	0	0	0	0	248
rank value of 442s =	0	0	0	0	0	0	1	0	0	0	0	0	0	249
rank value of 460s =	0	0	0	0	1	0	0	0	1	0	0	0	0	250.5
rank value of 470s =	0	0	0	1	0	0	0	0	0	0	0	0	0	252
rank value of 474s =	1	0	0	0	0	0	0	0	0	0	0	0	0	253
rank value of 480s =	1	0	0	0	0	0	0	0	0	0	0	0	0	254
rank value of 500s =	0	1	0	0	0	0	0	0	0	0	0	0	0	255
rank value of 501s =	1	0	0	0	0	0	0	0	0	0	0	0	0	256
rank value of 510s =	0	0	0	0	0	0	1	0	0	0	0	0	0	257
rank value of 516s =	0	0	0	0	0	0	0	0	0	1	0	0	0	258
rank value of 531s =	0	0	0	0	0	0	1	0	0	0	0	0	0	259
rank value of 591s =	0	0	1	0	0	1	0	0	0	0	0	0	0	260.5
rank value of 600s =	1	0	0	0	0	0	0	0	0	0	1	0	0	262.5
rank value of 610s =	0	0	0	0	1	0	0	0	0	0	0	0	0	264
rank value of 650s =	1	0	0	0	0	0	0	0	0	0	1	0	0	265.5
rank value of 661s =	0	0	0	0	0	1	0	0	0	0	0	0	0	267
rank value of 750s =	0	0	1	0	0	0	0	0	0	1	0	0	0	268.5
rank value of 770s =	1	0	0	0	0	0	0	0	0	0	0	0	0	270
rank value of 800s =	0	0	0	0	0	0	0	0	0	1	0	0	0	271
rank value of 810s =	0	0	0	0	0	0	0	0	0	1	0	0	0	272
rank value of 817s =	0	0	0	0	0	1	0	0	0	0	0	0	0	273
rank value of 839s =	0	0	0	0	1	0	0	0	0	0	0	0	0	274
rank value of 842s =	0	0	0	0	1	0	0	0	0	0	0	0	0	275
rank value of 870s =	0	0	0	0	1	0	0	0	0	0	0	0	0	276
rank value of 872s =	0	0	0	0	0	0	0	0	0	0	1	0	0	277
rank value of 889s =	0	0	0	0	1	0	0	0	0	0	0	0	0	278
rank value of 894s =	0	0	0	0	0	1	0	0	0	0	0	0	0	279
rank value of 900s =	0	0	0	0	0	0	0	0	0	1	0	0	0	280
rank value of 910s =	0	0	0	0	0	0	0	0	1	0	0	0	0	281
rank value of 940s =	0	0	0	0	0	0	0	0	0	1	0	0	0	282
rank value of 941s =	0	0	0	0	1	0	0	0	0	0	0	0	0	283
rank value of 945s =	0	0	0	0	0	0	1	0	0	0	0	0	0	284
rank value of 964s =	0	0	0	0	0	1	0	0	0	0	0	0	0	285
rank value of 970s =	0	0	0	0	0	0	0	0	0	1	0	0	0	286
rank value of 987s =	0	0	0	0	0	1	0	0	0	0	0	0	0	287
rank value of 1000s =	0	0	0	0	0	0	0	0	0	1	0	0	0	288
rank value of 1020s =	0	0	0	0	1	0	0	0	0	0	0	0	0	289
rank value of 1030s =	0	0	0	0	0	1	0	0	0	0	0	0	0	290
rank value of 1100s =	0	0	0	0	2	0	0	0	0	0	0	0	0	291.5
rank value of 1140s =	0	0	0	0	0	1	0	0	0	0	0	0	0	293
rank value of 1160s =	0	0	0	0	0	1	0	0	0	0	0	0	0	294
rank value of 1200s =	0	0	0	0	1	0	0	0	1	0	0	0	0	295.5
rank value of 1210s =	0	0	0	0	1	0	0	0	0	0	0	0	0	297
rank value of 1230s =	0	0	0	0	1	0	0	0	0	0	0	0	0	298
rank value of 1280s =	0	0	0	0	1	0	0	0	0	0	0	0	0	299
rank value of 1290s =	0	0	0	0	0	1	0	0	0	0	0	0	0	300
rank value of 1300s =	2	0	0	0	2	1	0	0	0	0	0	0	0	303
rank value of 1330s =	0	0	0	0	1	0	0	0	0	0	0	0	0	306
rank value of 1350s =	0	0	0	0	1	0	0	0	0	0	0	0	0	307
rank value of 1380s =	0	0	0	0	0	2	0	0	0	0	0	0	0	308.5
rank value of 1390s =	0	0	0	0	0	1	0	0	0	0	0	0	0	310
rank value of 1400s =	0	0	0	0	0	0	0	0	0	2	0	0	0	311.5
rank value of 1410s =	0	0	0	0	0	1	0	0	0	0	0	0	0	313
rank value of 1500s =	0	0	0	0	0	1	0	0	0	0	0	0	0	314
rank value of 1550s =	0	0	0	0	0	1	0	0	0	0	0	0	0	315
rank value of 1620s =	0	0	0	0	1	0	0	0	0	0	0	0	0	316
rank value of 1700s =	0	0	0	1	0	0	0	0	0	0	0	0	0	317
rank value of 1720s =	0	0	0	0	1	0	0	0	0	0	0	0	0	318
rank value of 1760s =	0	0	0	0	1	0	0	0	0	0	0	0	0	319
rank value of 1800s =	0	0	0	1	0	0	0	0	0	0	0	0	0	320
rank value of 1920s =	0	0	0	0	1	0	0	0	0	0	0	0	0	321
rank value of 2000s =	0	0	0	0	0	0	0	0	0	0	1	0	0	322
rank value of 2700s =	0	0	0	0	0	0	0	0	0	0	2	0	0	323.5
rank value of 2800s =	0	0	0	0	0	0	0	0	0	0	1	0	0	325
rank value of 3700s =	0	0	0	0	0	0	0	0	0	0	1	0	0	326
rank value of 4200s =	0	0	0	1	0	0	0	0	0	0	0	0	0	327
rank value of 4900s =	0	0	0	0	0	0	0	0	0	0	2	0	0	328.5
rank value of 7200s =	0	0	0	1	0	0	0	0	0	0	0	0	0	330

rank value of 11000s =	0	0	0	0	0	0	0	0	0	0	1	0	0	331
n =	**31**	**30**	**25**	**30**	**30**	**29**	**27**	**27**	**28**	**29**	**25**	**10**	**10**	

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 =	1535117.4	978310	2E+06	1E+06	634953	673238	173093	1E+06	893214	194045	193766

$N_{i\,bg}$ = 86
N = 331
H = 77.54

Adjust H for ties:

T_i = 5484 sum of T1..T51

$H' = H/(1-(T_i/(N^3-N)))$
H' = 77.55
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' =77.55.
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) =	180.6	255.9	220.9	153.4	157.9	78.6	201.4	189.0	139.3	139.2
avg Rbar (background) =	133.6	133.6	133.6	133.6	133.6	133.6	133.6	133.6	133.6	133.6
Dx =	47.0	122.3	87.3	19.7	24.3	-55.0	67.8	55.4	5.7	5.6
Cx =	47.3	47.3	47.9	49.2	49.2	48.5	47.9	50.7	74.5	74.5
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 J15-1957-49

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**
10/27/14	**117**	**16.1**	**102**	**136**	**1280**	**1410**	**363**	**224**	**8.6**	**228**	**23.2**	**156**	**180**	**5**
4/28/15	**119**	**16**	**109**	**199**	**1330**	**1380**	**345**	**260**	**9**	**218**	**30.2**	**156**	**190**	**5**

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

n =	31	30	25	30	30	29	27	27	28	29	25	10	10
bar x_i =	378.26	70.093	209.36	686.72	921.18	738.5	256.28	205.8	155.03	452.98	1535.2	172.6	168.84
bar z_i =	199.45	63.308	90.758	810.21	442.8	490.66	156.76	51.797	186.77	341.8	1793.5	25.52	27.024
n_i * bar z_i^2 =	1E+06	120239	205927	2E+07	6E+06	7E+06	663466	72439	976721	3E+06	8E+07	6512.7	7303

bar z = 360.02
N = 331

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	8E+07	12	6E+06	10.34	1.67
Error	2E+08	318	618409		
Total	3E+08	330			

Since the F-ratio = 10.34 exceeds the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 12 and 318 df, the assumption of equal variances should be rejected.
Re-test the data set using the natural log of the above values.

n =	31	30	25	30	30	29	27	27	28	29	25	10	10
bar x_i =	5.723	3.6707	5.1975	5.5791	6.4346	6.0949	5.1449	5.1545	3.8116	5.6482	5.8849	5.1323	5.1005
bar z_i =	0.4806	0.6966	0.3569	0.7718	0.8792	1.069	0.7792	0.4473	1.2876	0.806	1.6617	0.1459	0.1877
n_i * bar z_i^2 =	7.1612	14.558	3.1846	17.872	23.189	33.143	16.392	5.4026	46.419	18.841	69.032	0.2128	0.3523

bar z = 0.7361
N = 331

	SS	df	MS	F_{Ratio}	$F_{critical}$
Between Wells	76.40	12	6.37	7.71	1.67
Error	262.48	318	0.83		
Total	338.88	330			

Since the F-ratio = 7.71 exceeds the tabulated value of F-critical = 1.67 (see Table 2 of IFG) with 12 and 318 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 J15-1957-49

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
4/24/14	174	17.7	127	148	941	1290	378	248	8.3	238	27.5	148	189	5
10/27/14	117	16.1	102	136	1280	1410	363	224	8.6	228	23.2	156	180	5
4/28/15	119	16	109	199	1330	1380	345	260	9	218	30.2	156	190	5

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

X_{bar} = 484.79
SD = 945.93
N = 331
$1/N\Sigma_i(X_i-X_{bar})^3$ = 5E+09
γ_1= 6.3738

Since the Coefficient of Skewness of 6.37 is greater than 1.0, the data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

X_{bar} = 5.2951
SD = 1.4234
N = 331
$1/N\Sigma_i(X_i-X_{bar})^3$ = -1.462
γ_1= 0.5093

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

Part 1: Check for Normality

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

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

X_{bar} = 1030.4231
SD = 486.18607
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = -26327121
γ_1= 0.2429662

Since the Coefficient of Skewness of 0.24 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the real detected values shown above.

X_{bar} = 6.7599996
SD = 0.7140641
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.4966873
γ_1= 1.4468429

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

Part 2: Shewhart-CUSUM Control Chart

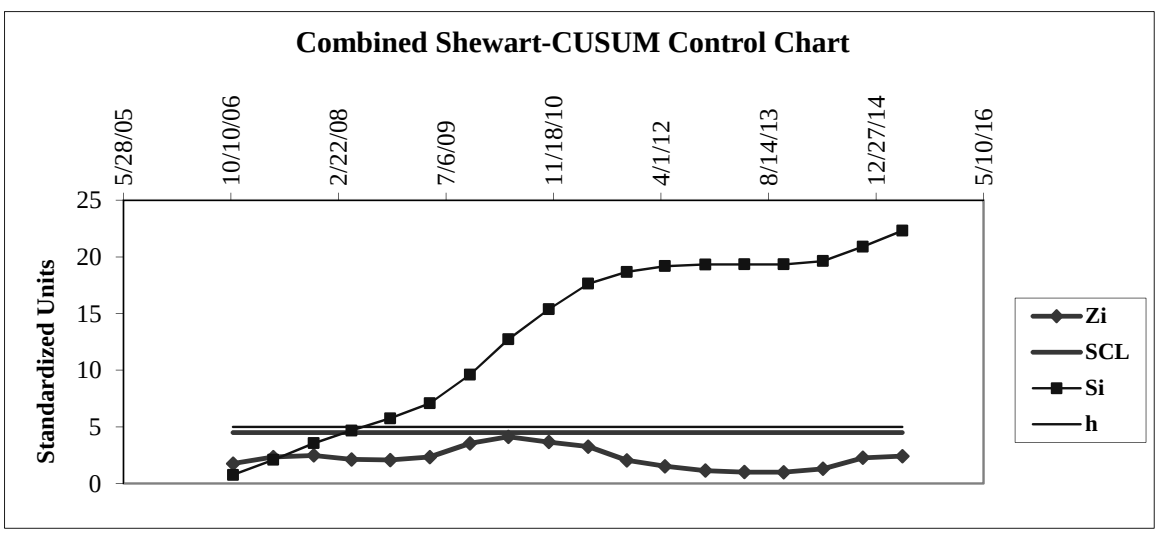
Compute the mean and standard deviation of the historical data:

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

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

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

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
One, or both, of the control limits was exceeded. Therefore, there is statistically significant evidence of contamination in this well at the concentrations indicated above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

Part 1: Check for Normality

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

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

X_{bar} = 805.25
SD = 530.4444
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = -21995230
γ_1= 0.1563

Since the Coefficient of Skewness of 0.16 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} = 6.2150633
SD = 1.3980991
N = 26
$1/N\Sigma_i(X_i-X_{bar})^3$ = -5.676243
γ_1= 2.202912

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

Part 2: Shewhart-CUSUM Control Chart

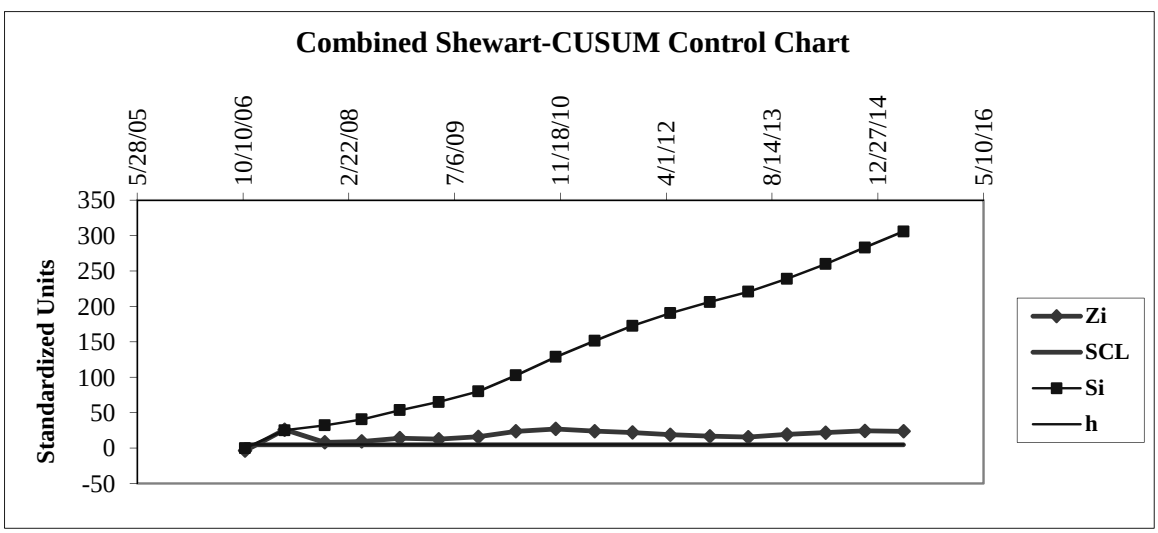
Compute the mean and standard deviation of the historical data:

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

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

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

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
One, or both, of the control limits was exceeded. Therefore, there is statistically significant evidence of contamination in this well at the concentrations indicated above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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**
10/27/14	**228**	**5**
4/28/15	**218**	**5**

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

X_{bar} = 442.09259
SD = 401.52996
N = 27
$1/N\Sigma_i(X_i-X_{bar})^3$ = 71069426
γ_1= 1.1617551

Since the Coefficient of Skewness of 1.16 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} = 5.610476
SD = 1.2455318
N = 27
$1/N\Sigma_i(X_i-X_{bar})^3$ = -3.3638068
γ_1= 1.8422653

Since the Coefficient of Skewness of 1.84 is greater than 1.0, the data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
A non-parametric testing procedure should be used on the data set.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Total Barium**
GA MCL (ug/l): 2000
Method: Kendall-Mann Non-Parametric Trend Test (Concentration vs. Time)
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	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	64.8	249	169	5
10/24/12	389	19	124	167	889	1030	393	229	26.1	235	43.2	177	181	5
04/24/13	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
04/24/14	174	17.7	127	148	941	1290	378	248	8.3	238	27.5	148	189	5
10/27/14	117	16.1	102	136	1280	1410	363	224	8.6	228	23.2	156	180	5
04/28/15	119	16	109	199	1330	1380	345	260	9	218	30.2	156	190	5

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

Trendline Slope =	-	-	-	-	-	-	-0.162	-	-	-
Standard Deviation =	-	-	-	-	-	-	401.43	-	-	-
ımber of observations **n =**	-	-	-	-	-	-	29	-	-	-
S =	-	-	-	-	-	-	-117	-	-	-
uncorrected for ties **τ =**	-	-	-	-	-	-	-0.29	-	-	-
U =	-	-	-	-	-	-	3	-	-	-
corrected for ties τ =	-	-	-	-	-	-	**-0.29**	-	-	-
Concentration Trend	-	-	-	-	-	-	**decrease**	-	-	-

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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**
10/27/14	**23.2**	**5**
4/28/15	**30.2**	**5**

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

X_{bar} = 1535.216
SD = 2516.9592
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3.587E+10
γ_1= 2.3917393

Since the Coefficient of Skewness of 2.39 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} = 5.884852
SD = 1.9055428
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = 1.3995596
γ_1= 0.2150445

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

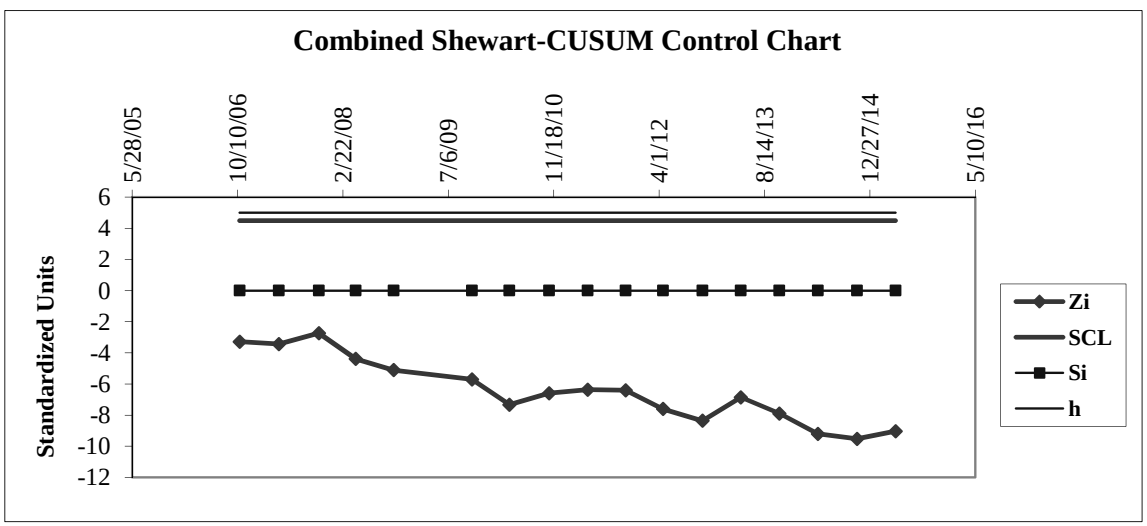
Compute the mean and standard deviation of the historical data:

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
10/27/14	3.1441523	-9.5241639	0	5	4.5
4/28/15	3.4078419	-9.0305519	0	5	4.5

Plot Z_i and S_i versus time:



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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	**4.4**	NS	NS	ND	**2**	ND	**2.2**	ND	ND	ND	NS	NP	NP	**2**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**2**
04/09/01	**2.3**	**7**	NS	ND	ND	ND	ND	ND	**2.4**	**4.8**	NS	NP	NP	**2**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
04/15/02	**2.1**	ND	NS	ND	ND	ND	ND	ND	**2.5**	**5**	NS	NP	NP	**2**
09/26/02	ND	**7**	**2.1**	**5.1**	ND	ND	ND	ND	**8.5**	**4.7**	**95**	NP	NP	**2**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	**2**	**2.2**	**20**	NP	NP	**2**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	**2.4**	ND	**33**	NP	NP	**1**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**21**	NP	NP	**1**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.4**	**28**	NP	NP	**1**
04/18/05	ND	ND	ND	**7.2**	ND	ND	ND	ND	ND	**3.8**	**26**	NP	NP	**1**
10/13/05	ND	ND	ND	**3**	ND	ND	ND	ND	ND	**3.4**	**21**	NP	NP	**1**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	**2.1**	ND	**17**	NP	NP	**2**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	NP	NP	**1**
04/25/07	ND	ND	ND	ND	ND	**14**	ND	ND	ND	ND	**4.9**	NP	NP	**1**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6**	NP	NP	**1**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3**	NP	NP	**1**
10/20/08	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	NP	NP	**1**
04/22/09	ND	ND	**1.5**	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**1**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**1.7**	NP	NP	**1**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**1**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.1**	ND	ND	**1**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	ND	ND	**1**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	ND	ND	**1**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
N_i	31	30	25	29	29	29	27	27	28	29	25	10	10	
sum of rank values (R_i)	4911.0	4783.5	3876.0	4656.5	4298.5	4325.0	4017.5	3861.0	4966.5	5282.5	6447.0	1430.0	1430.0	
avg rank value (Rbar)	158.4	159.5	155.0	160.6	148.2	149.1	148.8	143.0	177.4	182.2	257.9	143.0	143.0	

	Number of each rank value													Rank Value
rank value of NDs =	28	27	23	26	28	28	26	27	22	22	8	10	10	143
rank value of 1.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	286
rank value of 1.2s =	0	1	0	0	0	0	0	0	0	0	1	0	0	287.5
rank value of 1.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	289

rank value of 1.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	290
rank value of 1.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	291
rank value of 1.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	292
rank value of 1.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	293
rank value of 2s =	0	0	0	0	1	0	0	0	1	0	0	0	0	294.5
rank value of 2.1s =	1	0	1	0	0	0	0	0	1	0	0	0	0	297
rank value of 2.2s =	0	0	0	0	0	0	1	0	0	1	0	0	0	299.5
rank value of 2.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	301
rank value of 2.4s =	0	0	0	0	0	0	0	0	2	0	0	0	0	302.5
rank value of 2.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	304
rank value of 3s =	0	0	0	1	0	0	0	0	0	0	1	0	0	305.5
rank value of 3.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	307
rank value of 3.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	308
rank value of 4.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	309
rank value of 4.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	310
rank value of 4.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	311
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	312
rank value of 4.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	313
rank value of 5.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	314
rank value of 5.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	315
rank value of 6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	316
rank value of 7s =	0	2	0	0	0	0	0	0	0	0	0	0	0	317.5
rank value of 7.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	319
rank value of 8.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	320
rank value of 14s =	0	0	0	0	0	1	0	0	0	0	0	0	0	321
rank value of 17s =	0	0	0	0	0	0	0	0	0	0	1	0	0	322
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	1	0	0	323
rank value of 21s =	0	0	0	0	0	0	0	0	0	0	2	0	0	324.5
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	1	0	0	326
rank value of 28s =	0	0	0	0	0	0	0	0	0	0	1	0	0	327
rank value of 33s =	0	0	0	0	0	0	0	0	0	0	1	0	0	328
rank value of 95s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
n =	**31**	**30**	**25**	**29**	**29**	**29**	**27**	**27**	**28**	**29**	**25**	**10**	**10**	

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 =	2141377.6	747689	637141	645022	597789	552123	880933	962235	2E+06	204490	204490

$N_{i\ bg}$ = 86
N = 329
H = 30.82

Adjust H for ties:

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

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

H' = 88.06

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' =88.06.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

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

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

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

N = total sample size

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

N_x = total samples (N_i) of well x

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

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	**MW-15**	MW-16	MW-17
Rbar (well x) =	160.6	148.2	149.1	148.8	143.0	177.4	182.2	257.9	143.0	143.0
avg Rbar (background) =	157.8	157.8	157.8	157.8	157.8	157.8	157.8	157.8	157.8	157.8
Dx =	2.8	-9.6	-8.7	-9.0	-14.8	19.6	24.4	100.1	-14.8	-14.8
Cx =	47.6	47.6	47.6	48.9	48.9	48.2	47.6	50.4	74.0	74.0
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	NE	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

Part 1: Check for Normality

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

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

X_{bar} = 11.684
SD = 20.25598
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = 23191.858
γ_1= 2.9666677

Since the Coefficient of Skewness of 2.97 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} = 1.1661476
SD = 1.7199445
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = 1.6414417
γ_1= 0.3429851

Since the Coefficient of Skewness of 0.34 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

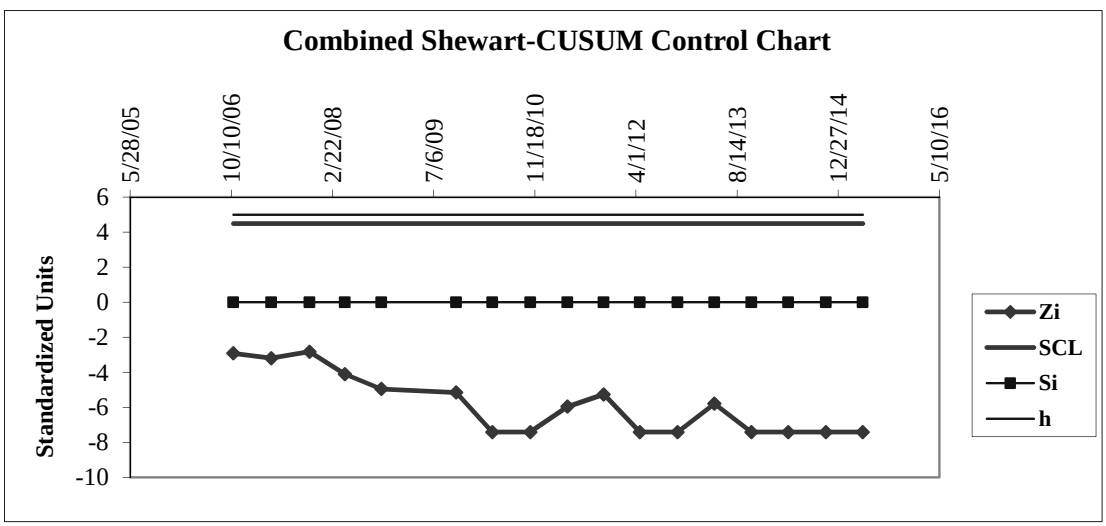
Compute the mean and standard deviation of the historical data:

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

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

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

Plot Z_i and S_i versus time:



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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Total Cadmium**
NC MCL (µg/l): 2
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	**2**	NS	NS	ND	**1.3**	**1.2**	**1.3**	**2.1**	ND	**5.4**	NS	NP	NP	**1**
06/26/00	**1.6**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
07/26/00	**1.1**	**3.2**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**1**
04/09/01	**130**	**2**	NS	ND	ND	ND	**1.7**	**1.8**	**2.7**	**19**	NS	NP	NP	**1**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**1**
04/15/02	**13**	ND	NS	ND	ND	ND	**4**	ND	**5.5**	**19**	NS	NP	NP	**10**
09/26/02	ND	ND	**4.2**	**21**	ND	**10**	ND	**2.3**	**4.2**	**19**	**180**	NP	NP	**1**
04/28/03	**3.6**	ND	ND	**6**	ND	ND	ND	ND	**2.9**	**16**	**20**	NP	NP	**1**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.8**	**8.9**	NP	NP	**1**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
10/20/06	**3.8**	ND	ND	ND	ND	ND	ND	ND	**1.5**	ND	**5.2**	NP	NP	**1**
04/25/07	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND	ND	ND	NP	NP	**1**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	NP	NP	**1**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**1**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**1**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**1**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.8**	ND	**1**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**	ND	**1**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	ND	**1**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.3**	ND	**1**
N_i	31	30	25	29	29	29	27	27	28	29	25	10	10	
sum of rank values (R_i)	5606.0	4638.5	3767.5	4532.0	4324.5	4656.5	4355.5	4358.5	4844.5	5239.0	4463.5	2059.0	1440.0	
avg rank value (Rbar)	180.8	154.6	150.7	156.3	149.1	160.6	161.3	161.4	173.0	180.7	178.5	205.9	144.0	

	Number of each rank value													Rank Value
rank value of NDs =	24	28	24	27	28	26	24	24	23	23	20	6	10	144
rank value of 1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	288
rank value of 1.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	289
rank value of 1.2s =	0	0	0	0	0	1	0	0	0	0	0	1	0	290.5

rank value of 1.3s =	0	0	0	0	1	0	1	0	0	0	0	0	0	292.5
rank value of 1.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	294
rank value of 1.6s =	1	0	0	0	0	0	0	0	0	0	1	0	0	295.5
rank value of 1.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	297
rank value of 1.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	298
rank value of 2s =	1	1	0	0	0	0	0	0	0	0	0	0	0	299.5
rank value of 2.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	301
rank value of 2.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	302
rank value of 2.3s =	0	0	0	0	0	0	0	1	0	0	0	1	0	303.5
rank value of 2.7s =	0	0	0	0	0	0	0	0	1	0	0	0	0	305
rank value of 2.9s =	0	0	0	0	0	0	0	0	1	0	0	0	0	306
rank value of 3.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	307
rank value of 3.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	308
rank value of 3.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	309
rank value of 4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	310
rank value of 4.2s =	0	0	1	0	0	0	0	0	1	0	0	0	0	311.5
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	313
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	314
rank value of 5.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	315
rank value of 5.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	316
rank value of 6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	317
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	318
rank value of 8.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	319
rank value of 10s =	0	0	0	0	0	1	0	0	0	0	0	0	0	320
rank value of 13s =	1	0	0	0	0	0	0	0	0	0	0	0	0	321
rank value of 16s =	0	0	0	0	0	0	0	0	0	1	0	0	0	322
rank value of 19s =	0	0	0	0	0	0	0	0	0	3	0	0	0	324
rank value of 20s =	0	0	0	0	0	0	0	0	0	0	1	0	0	326
rank value of 21s =	0	0	0	1	0	0	0	0	0	0	0	0	0	327
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	328
rank value of 180s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
n =	**31**	**30**	**25**	**29**	**29**	**29**	**27**	**27**	**28**	**29**	**25**	**10**	**10**	

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 =	2282978.4	708242	644872	747689	702607	703575	838185	946452	796913	423948	207360

$N_{i\ bg}$ = 86
N = 329
H = 5.06

Adjust H for ties:

T_i = 2E+07 sum of T1..T8

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

H' = 15.06

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' =15.06. 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 J15-1957-49

Compound: **Total Chromium**
NC MCL (µg/l): 10
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	**15**	NS	NS	**18**	**17**	**11**	ND	**26**	**5.4**	**50**	NS	NP	NP	**5**
06/26/00	**22**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
07/26/00	**29**	**20**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	**130**	ND	NS	**11**	**8.4**	ND	ND	**20**	**27**	**160**	NS	NP	NP	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	**170**	ND	NS	ND	ND	**5.7**	**7**	**10**	**56**	**180**	NS	NP	NP	**5**
09/26/02	**33**	**5.4**	**33**	**510**	ND	**5.2**	ND	**37**	**36**	**230**	**770**	NP	NP	**5**
04/28/03	ND	ND	ND	**89**	ND	ND	ND	ND	ND	**110**	**27**	NP	NP	**5**
10/30/03	**30**	ND	NT	ND	**6.2**	ND	ND	ND	**31**	**4.6**	**140**	NP	NP	**2**
04/20/04	**33**	ND	**2.1**	**45**	**13**	ND	ND	**11**	**3.5**	**190**	**68**	NP	NP	**2**
10/21/04	**21**	ND	**2.8**	**16**	**2**	ND	ND	ND	ND	**120**	**140**	NP	NP	**2**
04/18/05	**49**	**12**	**8.3**	**680**	**2.9**	ND	ND	**3.2**	ND	**210**	**100**	NP	NP	**2**
10/13/05	**52**	ND	**3.7**	**230**	**4.7**	ND	ND	ND	ND	**150**	**88**	NP	NP	**2**
04/25/06	**65**	ND	**16**	ND	ND	ND	ND	ND	**16**	**100**	**93**	NP	NP	**10**
10/20/06	**50**	ND	**11**	**24**	ND	ND	ND	ND	**17**	ND	**27**	NP	NP	**5**
04/25/07	**20**	ND	ND	**16**	ND	**410**	ND	ND	ND	ND	**17**	NP	NP	**10**
10/31/07	**40.9**	ND	**11.9**	**10.9**	**7.8**	ND	ND	ND	**5.1**	**75.5**	**33.7**	NP	NP	**5**
04/23/08	**10.7**	ND	**16.8**	**7.8**	ND	ND	ND	ND	**7.6**	**7.3**	**14.9**	NP	NP	**5**
10/20/08	**38.6**	ND	**29.4**	**12.7**	ND	ND	ND	ND	ND	ND	**6.8**	NP	NP	**5**
04/22/09	**12.3**	ND	**28.9**	**19.7**	**5.1**	ND	ND	ND	**7.3**	ND	NS	NP	NP	**5**
10/26/09	**10**	ND	**8.1**	ND	**18.7**	ND	NS	NS	NS	**10.9**	**8.1**	NP	NP	**5**
04/22/10	**14.3**	**10.9**	**13.1**	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	**10.1**	ND	**6.6**	**7.1**	ND	ND	**12**	**9.2**	ND	ND	**5.2**	ND	ND	**5**
04/29/11	**8**	ND	**8.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	**15**	ND	ND	**21.1**	ND	ND	**8.1**	ND	ND	**9.2**	**5.1**	ND	ND	**5**
04/20/12	**24.5**	ND	ND	**5.1**	ND	ND	**7.9**	ND	ND	ND	ND	**12.3**	ND	**5**
10/24/12	**30.4**	**6**	ND	**6.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	**19**	ND	ND	**8.8**	**6.8**	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	**14.5**	ND	**12.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	**12.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.1**	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	**10.3**	ND	**8.2**	**7.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
N_i	31	30	25	29	29	29	27	27	28	29	25	10	10	
sum of rank values (R_i)	8158.5	3537.5	4838.0	6092.5	4140.0	3342.5	3081.5	3644.5	4342.0	5682.5	5274.0	1206.5	945.0	
avg rank value (Rbar)	263.2	117.9	193.5	210.1	142.8	115.3	114.1	135.0	155.1	195.9	211.0	120.7	94.5	

	Number of each rank value													Rank Value
rank value of NDs =	2	25	8	9	18	25	23	20	17	14	9	8	10	94.5
rank value of 2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	189
rank value of 2.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	190
rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	191

rank value of 2.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	192
rank value of 3.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	193
rank value of 3.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	194
rank value of 3.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	195
rank value of 4.6s =	0	0	0	0	0	0	0	0	0	1	0	0	0	196
rank value of 4.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	197
rank value of 5.1s =	0	0	0	1	1	0	0	0	1	0	1	1	0	200
rank value of 5.2s =	0	0	0	0	0	1	0	0	0	0	1	0	0	203.5
rank value of 5.4s =	0	1	0	0	0	0	0	0	1	0	0	0	0	205.5
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	207
rank value of 6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	208
rank value of 6.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	209
rank value of 6.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	210
rank value of 6.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	211
rank value of 6.8s =	0	0	0	0	1	0	0	0	0	0	1	0	0	212.5
rank value of 7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	214
rank value of 7.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	215
rank value of 7.3s =	0	0	0	0	0	0	0	0	1	1	0	0	0	216.5
rank value of 7.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	218
rank value of 7.8s =	0	0	0	1	1	0	0	0	0	0	0	0	0	219.5
rank value of 7.9s =	0	0	0	1	0	0	1	0	0	0	0	0	0	221.5
rank value of 8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	223
rank value of 8.1s =	0	0	1	0	0	0	1	0	0	0	1	0	0	225
rank value of 8.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	227
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	228
rank value of 8.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	229
rank value of 8.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	230
rank value of 8.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	231
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	1	0	0	0	232.5
rank value of 10s =	1	0	0	0	0	0	0	1	0	0	0	0	0	234.5
rank value of 10.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	236
rank value of 10.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	237
rank value of 10.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	238
rank value of 10.9s =	0	1	0	1	0	0	0	0	0	1	0	0	0	240
rank value of 11s =	0	0	1	1	0	1	0	1	0	0	0	0	0	243.5
rank value of 11.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	246
rank value of 12s =	0	1	0	0	0	0	1	0	0	0	0	0	0	247.5
rank value of 12.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	249
rank value of 12.3s =	1	0	0	0	0	0	0	0	0	0	0	1	0	250.5
rank value of 12.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	252
rank value of 12.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	253
rank value of 13s =	0	0	0	0	1	0	0	0	0	0	0	0	0	254
rank value of 13.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	255
rank value of 14.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	256
rank value of 14.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	257
rank value of 14.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	258
rank value of 15s =	2	0	0	0	0	0	0	0	0	0	0	0	0	259.5
rank value of 16s =	0	0	1	2	0	0	0	0	1	0	0	0	0	262.5
rank value of 16.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	265
rank value of 17s =	0	0	0	0	1	0	0	0	1	0	1	0	0	267
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	0	0	269
rank value of 18.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	270
rank value of 19s =	1	0	0	0	0	0	0	0	0	0	0	0	0	271
rank value of 19.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	272
rank value of 20s =	1	1	0	0	0	0	0	1	0	0	0	0	0	274
rank value of 21s =	1	0	0	0	0	0	0	0	0	0	0	0	0	276
rank value of 21.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	277
rank value of 22s =	1	0	0	0	0	0	0	0	0	0	0	0	0	278

rank value of 24s =	0	0	0	1	0	0	0	0	0	0	0	0	0	279
rank value of 24.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	280
rank value of 26s =	0	0	0	0	0	0	0	1	0	0	0	0	0	281
rank value of 27s =	0	0	0	0	0	0	0	0	1	0	2	0	0	283
rank value of 28.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	285
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	286
rank value of 29.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	287
rank value of 30s =	1	0	0	0	0	0	0	0	0	0	0	0	0	288
rank value of 30.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	289
rank value of 31s =	0	0	0	0	0	0	0	0	1	0	0	0	0	290
rank value of 33s =	2	0	1	0	0	0	0	0	0	0	0	0	0	292
rank value of 33.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	294
rank value of 36s =	0	0	0	0	0	0	0	0	1	0	0	0	0	295
rank value of 37s =	0	0	0	0	0	0	0	1	0	0	0	0	0	296
rank value of 38.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	297
rank value of 40.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	298
rank value of 45s =	0	0	0	1	0	0	0	0	0	0	0	0	0	299
rank value of 49s =	1	0	0	0	0	0	0	0	0	0	0	0	0	300
rank value of 50s =	1	0	0	0	0	0	0	0	0	1	0	0	0	301.5
rank value of 52s =	1	0	0	0	0	0	0	0	0	0	0	0	0	303
rank value of 56s =	0	0	0	0	0	0	0	0	1	0	0	0	0	304
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	305
rank value of 68s =	0	0	0	0	0	0	0	0	0	0	1	0	0	306
rank value of 75.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	307
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	0	0	308
rank value of 89s =	0	0	0	1	0	0	0	0	0	0	0	0	0	309
rank value of 93s =	0	0	0	0	0	0	0	0	0	0	1	0	0	310
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	1	0	0	311.5
rank value of 110s =	0	0	0	0	0	0	0	0	0	1	0	0	0	313
rank value of 120s =	0	0	0	0	0	0	0	0	0	1	0	0	0	314
rank value of 130s =	1	0	0	0	0	0	0	0	0	0	0	0	0	315
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	2	0	0	316.5
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	0	0	0	318
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	0	0	319
rank value of 170s =	1	0	0	0	0	0	0	0	0	0	0	0	0	320
rank value of 180s =	0	0	0	0	0	0	0	0	0	1	0	0	0	321
rank value of 190s =	0	0	0	0	0	0	0	0	0	1	0	0	0	322
rank value of 210s =	0	0	0	0	0	0	0	0	0	1	0	0	0	323
rank value of 230s =	0	0	0	1	0	0	0	0	0	1	0	0	0	324.5
rank value of 410s =	0	0	0	0	0	1	0	0	0	0	0	0	0	326
rank value of 510s =	0	0	0	1	0	0	0	0	0	0	0	0	0	327
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	328
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
n =	**31**	**30**	**25**	**29**	**29**	**29**	**27**	**27**	**28**	**29**	**25**	**10**	**10**	

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 =	3178757.6	1E+06	591021	385252	351690	491940	673320	1E+06	1E+06	145564	89303

$N_{i\ bg}$ = 86
N = 329
H = 50.38

Adjust H for ties:

T_i = 7E+06 sum of T1..T25

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

H' = 61.94

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' =61.94.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

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

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

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

N = total sample size

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

N_x = total samples (N_i) of well x

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

Well =	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
Rbar (well x) =	210.1	142.8	115.3	114.1	135.0	155.1	195.9	211.0	120.7	94.5
avg Rbar (background) =	192.3	192.3	192.3	192.3	192.3	192.3	192.3	192.3	192.3	192.3
Dx =	17.8	-49.5	-77.0	-78.1	-57.3	-37.2	3.7	18.7	-71.6	-97.8
Cx =	47.6	47.6	47.6	48.9	48.9	48.2	47.6	50.4	74.0	74.0
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	ND	NS	NS	ND	**8.2**	**5.4**	ND	**14**	ND	**16**	NS	NP	NP	**5**
06/26/00	**10**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
07/26/00	**9.9**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	**54**	ND	NS	ND	ND	ND	**13**	**12**	**13**	**59**	NS	NP	NP	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	**58**	ND	NS	ND	ND	ND	**18**	**8**	**21**	**82**	NS	NP	NP	**5**
09/26/02	**13**	**5.4**	**16**	**100**	ND	**16**	**7.4**	**21**	**19**	**85**	**560**	NP	NP	**5**
04/28/03	**21**	ND	ND	**37**	ND	ND	**6.9**	ND	**17**	**50**	**81**	NP	NP	**5**
10/30/03	**9**	ND	NT	ND	ND	ND	**5.7**	ND	**52**	**8.8**	**110**	NP	NP	**5**
04/20/04	**9.5**	ND	ND	**7.7**	**5.2**	ND	**13**	**6.4**	ND	**43**	**50**	NP	NP	**5**
10/21/04	**6.2**	ND	ND	ND	ND	ND	ND	ND	ND	**31**	**120**	NP	NP	**5**
04/18/05	**12**	ND	ND	**110**	ND	ND	ND	ND	ND	**36**	**70**	NP	NP	**5**
10/13/05	**21**	ND	ND	**32**	ND	ND	**5.1**	ND	ND	**29**	**56**	NP	NP	**5**
04/25/06	**16**	ND	ND	ND	ND	ND	ND	ND	ND	**25**	**57**	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	**260**	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	**16.8**	ND	ND	ND	**10.6**	ND	ND	ND	ND	ND	**17.6**	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**22.3**	NP	NP	**5**
10/20/08	**27**	**10.4**	**19.5**	**9.4**	**7.7**	ND	**12.6**	**5.3**	**7.1**	ND	**18.4**	NP	NP	**5**
04/22/09	**5**	**6.3**	**17.1**	**8.5**	**5.7**	ND	**7**	ND	**6.4**	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	**6**	ND	NS	NS	NS	ND	**6**	NP	NP	**5**
04/22/10	**5.6**	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	**17.3**	**5.6**	ND	ND	**7.8**	**29.6**	ND	**5**
04/29/11	ND	ND	ND	ND	**6.9**	ND	**8.9**	ND	ND	ND	ND	**26.3**	ND	**5**
10/25/11	**5.3**	ND	ND	**6.4**	**6.3**	ND	**21**	ND	ND	ND	ND	**42.4**	ND	**5**
04/20/12	**6.9**	ND	ND	ND	ND	ND	**6.4**	ND	ND	ND	ND	**134**	ND	**5**
10/24/12	**15.7**	ND	ND	ND	**5.6**	ND	**6.5**	ND	ND	ND	ND	**48.5**	ND	**5**
04/24/13	**16.5**	ND	ND	ND	**10.8**	ND	**5.6**	ND	ND	ND	**8.9**	**115**	ND	**5**
10/24/13	**11.8**	ND	ND	ND	**8**	ND	**7.5**	ND	ND	ND	ND	**84.5**	ND	**5**
04/24/14	ND	ND	ND	ND	**5.7**	ND	ND	ND	ND	ND	ND	**65.1**	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**24.2**	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**29.3**	ND	**5**
N_i	31	30	25	29	29	29	27	27	28	29	25	10	10	
sum of rank values (R_i)	6642.5	3616.5	3208.5	4500.0	4695.0	3619.0	5210.0	3905.5	4171.5	5230.0	5322.5	3089.0	1075.0	
avg rank value (Rbar)	214.3	120.6	128.3	155.2	161.9	124.8	193.0	144.6	149.0	180.3	212.9	308.9	107.5	

	Number of each rank value													Rank Value
rank value of NDs =	10	27	22	21	17	26	11	20	21	18	11	0	10	107.5
rank value of 5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	215
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	216
rank value of 5.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	217

rank value of 5.3s =	1	0	0	0	0	0	0	1	0	0	0	0	0	218.5
rank value of 5.4s =	0	1	0	0	0	1	0	0	0	0	0	0	0	220.5
rank value of 5.6s =	1	0	0	0	1	0	1	1	0	0	0	0	0	223.5
rank value of 5.7s =	0	0	0	0	2	0	1	0	0	0	0	0	0	227
rank value of 6s =	0	0	0	0	1	0	0	0	0	0	1	0	0	229.5
rank value of 6.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	231
rank value of 6.3s =	0	1	0	0	1	0	0	0	0	0	0	0	0	232.5
rank value of 6.4s =	0	0	0	1	0	0	1	1	1	0	0	0	0	235.5
rank value of 6.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	238
rank value of 6.9s =	1	0	0	0	1	0	1	0	0	0	0	0	0	240
rank value of 7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	242
rank value of 7.1s =	0	0	0	0	0	0	0	0	1	0	0	0	0	243
rank value of 7.4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	244
rank value of 7.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	245
rank value of 7.7s =	0	0	0	1	1	0	0	0	0	0	0	0	0	246.5
rank value of 7.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	248
rank value of 8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	249
rank value of 8.2s =	0	0	0	0	1	0	0	1	0	0	0	0	0	250.5
rank value of 8.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	252
rank value of 8.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	253
rank value of 8.9s =	0	0	0	0	0	0	1	0	0	0	1	0	0	254.5
rank value of 9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	256
rank value of 9.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	257
rank value of 9.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	258
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	259
rank value of 10s =	1	0	0	0	0	0	0	0	0	0	0	0	0	260
rank value of 10.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	261
rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	262
rank value of 10.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	263
rank value of 11.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	264
rank value of 12s =	1	0	0	0	0	0	0	1	0	0	0	0	0	265.5
rank value of 12.6s =	0	0	0	0	0	0	1	0	0	0	0	0	0	267
rank value of 13s =	1	0	0	0	0	0	2	0	1	0	0	0	0	269.5
rank value of 14s =	0	0	0	0	0	0	0	1	0	0	0	0	0	272
rank value of 15.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	273
rank value of 16s =	1	0	1	0	0	1	0	0	0	1	0	0	0	275.5
rank value of 16.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	278
rank value of 16.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	279
rank value of 17s =	0	0	0	0	0	0	0	0	1	0	0	0	0	280
rank value of 17.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	281
rank value of 17.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	282
rank value of 17.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	283
rank value of 18s =	0	0	0	0	0	0	1	0	0	0	0	0	0	284
rank value of 18.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	285
rank value of 19s =	0	0	0	0	0	0	0	0	1	0	0	0	0	286
rank value of 19.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	287
rank value of 21s =	2	0	0	0	0	0	1	1	1	0	0	0	0	290
rank value of 22.3s =	0	0	0	0	0	0	0	0	0	0	1	0	0	293
rank value of 24.2s =	0	0	0	0	0	0	0	0	0	0	0	1	0	294
rank value of 25s =	0	0	0	0	0	0	0	0	0	1	0	0	0	295
rank value of 26.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	296
rank value of 27s =	1	0	0	0	0	0	0	0	0	0	0	0	0	297
rank value of 29s =	0	0	0	0	0	0	0	0	0	1	0	0	0	298
rank value of 29.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	299
rank value of 29.6s =	0	0	0	0	0	0	0	0	0	0	0	1	0	300
rank value of 31s =	0	0	0	0	0	0	0	0	0	1	0	0	0	301
rank value of 32s =	0	0	0	1	0	0	0	0	0	0	0	0	0	302
rank value of 36s =	0	0	0	0	0	0	0	0	0	1	0	0	0	303

rank value of 37s =	0	0	0	1	0	0	0	0	0	0	0	0	0	304
rank value of 42.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	305
rank value of 43s =	0	0	0	0	0	0	0	0	0	1	0	0	0	306
rank value of 48.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	307
rank value of 50s =	0	0	0	0	0	0	0	0	0	1	1	0	0	308.5
rank value of 52s =	0	0	0	0	0	0	0	0	1	0	0	0	0	310
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	311
rank value of 56s =	0	0	0	0	0	0	0	0	0	0	1	0	0	312
rank value of 57s =	0	0	0	0	0	0	0	0	0	0	1	0	0	313
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	314
rank value of 59s =	0	0	0	0	0	0	0	0	0	1	0	0	0	315
rank value of 65.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	316
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	1	0	0	317
rank value of 81s =	0	0	0	0	0	0	0	0	0	0	1	0	0	318
rank value of 82s =	0	0	0	0	0	0	0	0	0	1	0	0	0	319
rank value of 84.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	320
rank value of 85s =	0	0	0	0	0	0	0	0	0	1	0	0	0	321
rank value of 100s =	0	0	0	1	0	0	0	0	0	0	0	0	0	322
rank value of 110s =	0	0	0	1	0	0	0	0	0	0	1	0	0	323.5
rank value of 115s =	0	0	0	0	0	0	0	0	0	0	0	1	0	325
rank value of 120s =	0	0	0	0	0	0	0	0	0	0	1	0	0	326
rank value of 134s =	0	0	0	0	0	0	0	0	0	0	0	1	0	327
rank value of 260s =	0	0	0	0	0	1	0	0	0	0	0	0	0	328
rank value of 560s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
n =	**31**	**30**	**25**	**29**	**29**	**29**	**27**	**27**	**28**	**29**	**25**	**10**	**10**	

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 =	2108994.8	698276	760104	451626	1E+06	564923	621479	943203	1E+06	954192	115563

$N_{i\,bg}$ = 86
N = 329
H = 44.19

Adjust H for ties:

T_i = 1E+07 sum of T1..T18

$H' = H/(1-(T_i/(N^3-N)))$
H' = 60.97
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' =60.97.
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) =	155.2	161.9	124.8	193.0	144.6	149.0	180.3	212.9	308.9	107.5
avg Rbar (background) =	156.6	156.6	156.6	156.6	156.6	156.6	156.6	156.6	156.6	156.6
Dx =	-1.4	5.3	-31.8	36.4	-12.0	-7.6	23.7	56.3	152.3	-49.1
Cx =	47.6	47.6	47.6	48.9	48.9	48.2	47.6	50.4	74.0	74.0
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**	**Yes**	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	NE	NE	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

Part 1: Check for Normality

	MW-15	MDL
9/26/02	**560**	**5**
4/28/03	**81**	**5**
10/30/03	**110**	**5**
4/20/04	**50**	**5**
10/21/04	**120**	**5**
4/18/05	**70**	**5**
10/13/05	**56**	**5**
4/25/06	**57**	**10**
10/20/06	ND	**5**
4/25/07	ND	**10**
10/31/07	**17.6**	**5**
4/23/08	**22.3**	**5**
10/20/08	**18.4**	**5**
4/22/09	NS	**5**
10/26/09	**6**	**5**
4/22/10	ND	**5**
10/27/10	**7.8**	**5**
4/29/11	ND	**5**
10/25/11	ND	**5**
4/20/12	ND	**5**
10/24/12	ND	**5**
4/24/13	**8.9**	**5**
10/24/13	ND	**5**
4/24/14	ND	**5**
10/27/14	ND	**5**
4/28/15	ND	**5**

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

X_{bar} = 48.6
SD = 112.32508
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = 5321631.1
γ_1= 3.992158

Since the Coefficient of Skewness of 3.99 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} = 2.4851358
SD = 1.6509382
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = 2.5301569
γ_1= 0.5977893

Since the Coefficient of Skewness of 0.60 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

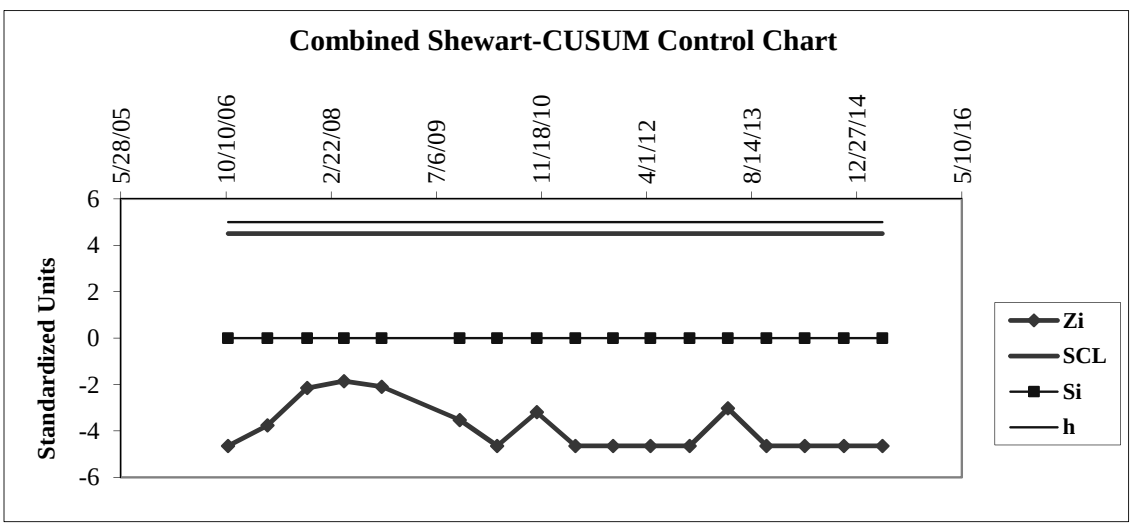
Compute the mean and standard deviation of the historical data:

4.5549099 = x_{mean} (Mean of N1-N8 historical data)
0.7832425 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	0.9162907	-4.6455844	0	5	4.5
4/25/07	1.6094379	-3.7606131	0	5	4.5
10/31/07	2.8678989	-2.1538808	0	5	4.5
4/23/08	3.1045867	-1.8516912	0	5	4.5
10/20/08	2.9123507	-2.0971273	0	5	4.5
10/26/09	1.7917595	-3.5278352	0	5	4.5
4/22/10	0.9162907	-4.6455844	0	5	4.5
10/27/10	2.0541237	-3.1928632	0	5	4.5
4/29/11	0.9162907	-4.6455844	0	5	4.5
10/25/11	0.9162907	-4.6455844	0	5	4.5
4/20/12	0.9162907	-4.6455844	0	5	4.5
10/24/12	0.9162907	-4.6455844	0	5	4.5
4/24/13	2.1860513	-3.0244255	0	5	4.5
10/24/13	0.9162907	-4.6455844	0	5	4.5
4/24/14	0.9162907	-4.6455844	0	5	4.5
10/27/14	0.9162907	-4.6455844	0	5	4.5
4/28/15	0.9162907	-4.6455844	0	5	4.5

Plot Z_i and S_i versus time:



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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

Part 1: Check for Normality

	MW-16	MDL
9/26/02	NP	**5**
4/28/03	NP	**5**
10/30/03	NP	**5**
4/20/04	NP	**5**
10/21/04	NP	**5**
4/18/05	NP	**5**
10/13/05	NP	**5**
4/25/06	NP	**10**
10/20/06	NP	**5**
4/25/07	NP	**10**
10/31/07	NP	**5**
4/23/08	NP	**5**
10/20/08	NP	**5**
4/22/09	NP	**5**
10/26/09	NP	**5**
4/22/10	NP	**5**
10/27/10	**29.6**	**5**
4/29/11	**26.3**	**5**
10/25/11	**42.4**	**5**
4/20/12	**134**	**5**
10/24/12	**48.5**	**5**
4/24/13	**115**	**5**
10/24/13	**84.5**	**5**
4/24/14	**65.1**	**5**
10/27/14	**24.2**	**5**
4/28/15	**29.3**	**5**

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

X_{bar} = 59.89
SD = 39.233105
N = 10
$1/N\Sigma_i(X_i-X_{bar})^3$ = 44285.23
γ_1= 0.8588891

Since the Coefficient of Skewness of 0.86 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} = 3.9105444
SD = 0.6270255
N = 10
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.0765879

$\gamma_1 =$ 0.3638656

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

Part 2: Shewhart-CUSUM Control Chart

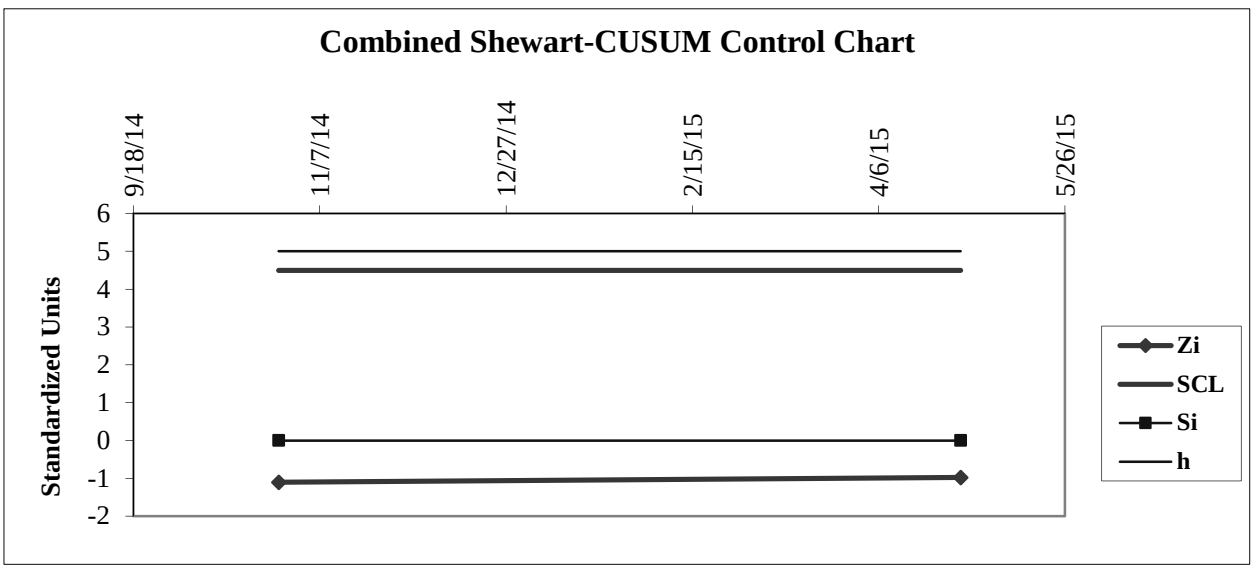
Compute the mean and standard deviation of the historical data:

68.175 = x_{mean} (Mean of N1-N8 historical data)
39.811117 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/27/14	24.2	-1.104591	0	5	4.5
4/28/15	29.3	-0.9764861	0	5	4.5

Plot Z_i and S_i versus time:



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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Total Copper**
NC MCL (µg/l): 1000
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	**12**	NS	NS	ND	ND	**13**	ND	**27**	ND	**22**	NS	NP	NP	**5**
06/26/00	**17**	**6**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
07/26/00	**12**	**6.1**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**200**
04/09/01	**77**	**8.4**	NS	ND	ND	**5.4**	ND	**26**	**38**	**110**	NS	NP	NP	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**200**
04/15/02	**69**	ND	NS	ND	ND	ND	ND	**13**	**68**	**120**	NS	NP	NP	**2**
09/26/02	**20**	**10**	**31**	**220**	ND	ND	**2.6**	**42**	**88**	**150**	**450**	NP	NP	**2**
04/28/03	**24**	ND	**2.6**	**40**	ND	ND	ND	ND	**28**	**94**	**71**	NP	NP	**2**
10/30/03	**18**	ND	NT	ND	**2.3**	**2.6**	ND	**3**	**85**	**4.4**	**150**	NP	NP	**2**
04/20/04	**18**	ND	**2.8**	**12**	**5.3**	**2.3**	**4.3**	**13**	**7.4**	**100**	**89**	NP	NP	**2**
10/21/04	**11**	ND	ND	**2**	ND	ND	ND	ND	ND	**63**	**140**	NP	NP	**2**
04/18/05	**29**	ND	ND	**240**	ND	ND	ND	**3.8**	ND	**120**	**130**	NP	NP	**2**
10/13/05	**31**	**2.6**	**3.5**	**70**	ND	ND	ND	ND	**3**	**82**	**96**	NP	NP	**2**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**200**
10/20/06	**26**	ND	ND	**9.6**	ND	ND	ND	ND	**20**	ND	**25**	NP	NP	**5**
04/25/07	**15**	ND	ND	ND	ND	**330**	ND	ND	ND	ND	**26**	NP	NP	**10**
10/31/07	**29.2**	ND	ND	ND	ND	ND	ND	ND	**6.3**	**40.3**	**47.4**	NP	NP	**5**
04/23/08	**7.2**	ND	ND	ND	ND	ND	ND	ND	**7.2**	ND	**17**	NP	NP	**5**
10/20/08	**26.5**	ND	**8.3**	ND	ND	ND	ND	ND	ND	ND	**9.7**	NP	NP	**5**
04/22/09	**5.1**	ND	**22.6**	**6**	ND	ND	ND	ND	**8.8**	ND	NS	NP	NP	**5**
10/26/09	**5.8**	ND	ND	ND	**6.4**	ND	NS	NS	NS	ND	**7.1**	NP	NP	**5**
04/22/10	**9.9**	ND	ND	ND	ND	**5.9**	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	**6.7**	ND	ND	ND	ND	ND	ND	**12.4**	ND	ND	**53.9**	ND	ND	**5**
04/29/11	**6.4**	ND	ND	ND	**6.7**	**6.1**	ND	ND	ND	ND	**5.2**	ND	ND	**5**
10/25/11	**9.6**	ND	ND	**9.4**	**6.8**	**11.2**	**7.6**	ND	ND	**5.1**	**6.9**	ND	ND	**5**
04/20/12	**15.6**	ND	ND	ND	**5.8**	**5.2**	ND	ND	ND	ND	ND	**6.5**	ND	**5**
10/24/12	**22.7**	ND	ND	ND	**6**	ND	ND	ND	**5.1**	ND	ND	ND	ND	**5**
04/24/13	**13.4**	ND	ND	ND	**9.3**	**6**	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	**12.6**	ND	ND	ND	**7.5**	**5.8**	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	**7.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	**7.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
N_i	31	30	25	29	29	29	27	27	28	29	25	10	10	
sum of rank values (R_i)	8134.0	3822.0	3474.5	4588.0	4239.0	4567.5	3196.5	4130.0	4925.0	5346.0	5634.0	1183.5	1045.0	
avg rank value (Rbar)	262.4	127.4	139.0	158.2	146.2	157.5	118.4	153.0	175.9	184.3	225.4	118.4	104.5	

	Number of each rank value													Rank Value
rank value of NDs =	2	25	19	20	20	18	24	19	16	17	9	9	10	104.5
rank value of 2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	209
rank value of 2.3s =	0	0	0	0	1	1	0	0	0	0	0	0	0	210.5
rank value of 2.6s =	0	1	1	0	0	1	1	0	0	0	0	0	0	213.5

rank value of 2.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	216
rank value of 3s =	0	0	0	0	0	0	0	1	1	0	0	0	0	217.5
rank value of 3.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	219
rank value of 3.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	220
rank value of 4.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	221
rank value of 4.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	222
rank value of 5.1s =	1	0	0	0	0	0	0	0	1	1	0	0	0	224
rank value of 5.2s =	0	0	0	0	0	1	0	0	0	0	1	0	0	226.5
rank value of 5.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	228
rank value of 5.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	229
rank value of 5.8s =	1	0	0	0	1	1	0	0	0	0	0	0	0	231
rank value of 5.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	233
rank value of 6s =	0	1	0	1	1	1	0	0	0	0	0	0	0	235.5
rank value of 6.1s =	0	1	0	0	0	1	0	0	0	0	0	0	0	238.5
rank value of 6.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	240
rank value of 6.4s =	1	0	0	0	1	0	0	0	0	0	0	0	0	241.5
rank value of 6.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	243
rank value of 6.7s =	1	0	0	0	1	0	0	0	0	0	0	0	0	244.5
rank value of 6.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	246
rank value of 6.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	247
rank value of 7.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	248
rank value of 7.2s =	1	0	0	0	0	0	0	0	1	0	0	0	0	249.5
rank value of 7.4s =	1	0	0	0	0	0	0	0	1	0	0	0	0	251.5
rank value of 7.5s =	0	0	0	0	1	0	0	0	0	0	0	0	0	253
rank value of 7.6s =	0	0	0	0	0	0	1	0	0	0	0	0	0	254
rank value of 7.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	255
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	256
rank value of 8.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	257
rank value of 8.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	258
rank value of 9.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	259
rank value of 9.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	260
rank value of 9.6s =	1	0	0	1	0	0	0	0	0	0	0	0	0	261.5
rank value of 9.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	263
rank value of 9.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	264
rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	0	0	265
rank value of 11s =	1	0	0	0	0	0	0	0	0	0	0	0	0	266
rank value of 11.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	267
rank value of 12s =	2	0	0	1	0	0	0	0	0	0	0	0	0	269
rank value of 12.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	271
rank value of 12.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	272
rank value of 13s =	0	0	0	0	0	1	0	2	0	0	0	0	0	274
rank value of 13.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	276
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	277
rank value of 15.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	278
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	1	0	0	279.5
rank value of 18s =	2	0	0	0	0	0	0	0	0	0	0	0	0	281.5
rank value of 20s =	1	0	0	0	0	0	0	0	1	0	0	0	0	283.5
rank value of 22s =	0	0	0	0	0	0	0	0	0	1	0	0	0	285
rank value of 22.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	286
rank value of 22.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	287
rank value of 24s =	1	0	0	0	0	0	0	0	0	0	0	0	0	288
rank value of 25s =	0	0	0	0	0	0	0	0	0	0	1	0	0	289
rank value of 26s =	1	0	0	0	0	0	0	1	0	0	1	0	0	291
rank value of 26.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	293
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	294
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	295
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	296
rank value of 29.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	297

rank value of 31s =	1	0	1	0	0	0	0	0	0	0	0	0	0	298.5
rank value of 38s =	0	0	0	0	0	0	0	0	1	0	0	0	0	300
rank value of 40s =	0	0	0	1	0	0	0	0	0	0	0	0	0	301
rank value of 40.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	302
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	303
rank value of 47.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	304
rank value of 53.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	305
rank value of 63s =	0	0	0	0	0	0	0	0	0	1	0	0	0	306
rank value of 68s =	0	0	0	0	0	0	0	0	1	0	0	0	0	307
rank value of 69s =	1	0	0	0	0	0	0	0	0	0	0	0	0	308
rank value of 70s =	0	0	0	1	0	0	0	0	0	0	0	0	0	309
rank value of 71s =	0	0	0	0	0	0	0	0	0	0	1	0	0	310
rank value of 77s =	1	0	0	0	0	0	0	0	0	0	0	0	0	311
rank value of 82s =	0	0	0	0	0	0	0	0	0	1	0	0	0	312
rank value of 85s =	0	0	0	0	0	0	0	0	1	0	0	0	0	313
rank value of 88s =	0	0	0	0	0	0	0	0	1	0	0	0	0	314
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	1	0	0	315
rank value of 94s =	0	0	0	0	0	0	0	0	0	1	0	0	0	316
rank value of 96s =	0	0	0	0	0	0	0	0	0	0	1	0	0	317
rank value of 100s =	0	0	0	0	0	0	0	0	0	1	0	0	0	318
rank value of 110s =	0	0	0	0	0	0	0	0	0	1	0	0	0	319
rank value of 120s =	0	0	0	0	0	0	0	0	0	2	0	0	0	320.5
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	1	0	0	322
rank value of 140s =	0	0	0	0	0	0	0	0	0	0	1	0	0	323
rank value of 150s =	0	0	0	0	0	0	0	0	0	1	1	0	0	324.5
rank value of 220s =	0	0	0	1	0	0	0	0	0	0	0	0	0	326
rank value of 240s =	0	0	0	1	0	0	0	0	0	0	0	0	0	327
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	328
rank value of 450s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
n =	**31**	**30**	**25**	**29**	**29**	**29**	**27**	**27**	**28**	**29**	**25**	**10**	**10**	

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 =	2768608.5	725853	619625	719381	378430	631737	866272	985507	1E+06	140067	109203

$N_{i\,bg}$ = 86
N = 329
H = 28.44

Adjust H for ties:

T_i = 9E+06 sum of T1..T23

$H' = H/(1-(T_i/(N^3-N)))$
H' = 38.06
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' =38.06.
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) =	158.2	146.2	157.5	118.4	153.0	175.9	184.3	225.4	118.4	104.5
avg Rbar (background) =	179.4	179.4	179.4	179.4	179.4	179.4	179.4	179.4	179.4	179.4
Dx =	-21.2	-33.3	-21.9	-61.0	-26.5	-3.5	4.9	45.9	-61.1	-74.9
Cx =	47.6	47.6	47.6	48.9	48.9	48.2	47.6	50.4	74.0	74.0
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Total Lead**
NC MCL (µg/l): 15
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	**35**	NS	NS	ND	ND	ND	ND	**11**	ND	ND	NS	NP	NP	**10**
06/26/00	ND	**10**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	ND	NS	NS	NP	NP	**10**
04/09/01	ND	**59**	NS	ND	ND	ND	ND	ND	**18**	**2.5**	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	**13**	ND	NS	ND	ND	ND	ND	ND	**13**	**29**	NS	NP	NP	**10**
09/26/02	ND	**76**	**29**	ND	ND	ND	ND	ND	**150**	**20**	**740**	NP	NP	**10**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	**25**	ND	**300**	NP	NP	**10**
10/30/03	**8.7**	**12**	NT	ND	ND	ND	ND	ND	**39**	**7.4**	**640**	NP	NP	**5**
04/20/04	**7.2**	**7**	**5.2**	**6.4**	**5.4**	ND	ND	ND	**12**	**39**	**250**	NP	NP	**5**
10/21/04	**7.2**	**5.6**	**5.7**	ND	ND	ND	ND	ND	ND	**24**	**430**	NP	NP	**5**
04/18/05	**13**	**8**	**5.2**	**73**	ND	ND	ND	ND	ND	**39**	**380**	NP	NP	**5**
10/13/05	**14**	**6.9**	ND	**20**	ND	ND	ND	ND	ND	**29**	**290**	NP	NP	**5**
04/25/06	**15**	ND	ND	ND	ND	ND	ND	ND	**53**	**19**	**300**	NP	NP	**10**
10/20/06	**20**	ND	ND	ND	ND	ND	ND	ND	**32**	ND	**89**	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	**96**	ND	ND	ND	ND	**69**	NP	NP	**10**
10/31/07	**17.5**	**8.1**	ND	ND	ND	ND	ND	ND	ND	**12.3**	**123**	NP	NP	**5**
04/23/08	ND	ND	**8.4**	ND	ND	ND	ND	ND	**5.8**	ND	**50.2**	NP	NP	**5**
10/20/08	ND	**13.5**	**7.6**	ND	ND	ND	ND	ND	ND	ND	**25.9**	NP	NP	**5**
04/22/09	ND	**8.7**	**24.4**	ND	ND	ND	ND	ND	**9.8**	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	**24.7**	NP	NP	**5**
04/22/10	ND	**10.5**	ND	ND	ND	ND	NS	NS	ND	ND	**9.2**	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**16**	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11**	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	**6.3**	ND	ND	ND	**14.6**	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.4**	ND	ND	**5**
10/24/12	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10.4**	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
N_i	31	30	25	29	29	29	27	27	29	29	25	10	10	
sum of rank values (R_i)	5667.5	5656.0	4206.0	4180.5	3813.0	3876.0	3564.0	3583.5	5373.5	5349.0	6806.0	1270.0	1270.0	
avg rank value (Rbar)	182.8	188.5	168.2	144.2	131.5	133.7	132.0	132.7	185.3	184.4	272.2	127.0	127.0	

	Number of each rank value													Rank Value
rank value of NDs =	20	18	18	26	28	28	26	26	19	19	5	10	10	127
rank value of 2.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	254
rank value of 5.2s =	0	0	2	0	0	0	0	0	0	0	0	0	0	255.5
rank value of 5.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	257
rank value of 5.6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	258
rank value of 5.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	259
rank value of 5.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	260

rank value of 5.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	261
rank value of 6.3s =	0	0	0	0	0	0	1	0	0	0	0	0	0	262
rank value of 6.4s =	0	0	0	1	0	0	0	0	0	0	1	0	0	263.5
rank value of 6.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	265
rank value of 7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	266
rank value of 7.2s =	2	0	0	0	0	0	0	0	0	0	0	0	0	267.5
rank value of 7.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	269
rank value of 7.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	270
rank value of 8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	271
rank value of 8.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	272
rank value of 8.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	273
rank value of 8.7s =	1	1	0	0	0	0	0	0	0	0	0	0	0	274.5
rank value of 9.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	276
rank value of 9.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	277
rank value of 10s =	0	1	0	0	0	0	0	0	0	0	0	0	0	278
rank value of 10.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	279
rank value of 10.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	280
rank value of 11s =	0	0	0	0	0	0	0	1	0	0	1	0	0	281.5
rank value of 12s =	0	1	0	0	0	0	0	0	1	0	0	0	0	283.5
rank value of 12.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	285
rank value of 13s =	2	0	0	0	0	0	0	0	1	0	0	0	0	287
rank value of 13.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	289
rank value of 14s =	1	0	0	0	0	0	0	0	0	0	0	0	0	290
rank value of 14.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	291
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	292
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	1	0	0	293
rank value of 17.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	294
rank value of 18s =	0	0	0	0	0	0	0	0	1	0	0	0	0	295
rank value of 19s =	0	0	0	0	0	0	0	0	0	1	0	0	0	296
rank value of 20s =	1	0	0	1	0	0	0	0	0	1	0	0	0	298
rank value of 24s =	0	0	0	0	0	0	0	0	0	1	0	0	0	300
rank value of 24.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	301
rank value of 24.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	302
rank value of 25s =	0	0	0	0	0	0	0	0	1	0	0	0	0	303
rank value of 25.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	304
rank value of 29s =	0	0	1	0	0	0	0	0	0	2	0	0	0	306
rank value of 32s =	0	0	0	0	0	0	0	0	1	0	0	0	0	308
rank value of 35s =	1	0	0	0	0	0	0	0	0	0	0	0	0	309
rank value of 39s =	0	0	0	0	0	0	0	0	1	2	0	0	0	311
rank value of 50.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	313
rank value of 53s =	0	0	0	0	0	0	0	0	1	0	0	0	0	314
rank value of 59s =	0	1	0	0	0	0	0	0	0	0	0	0	0	315
rank value of 69s =	0	0	0	0	0	0	0	0	0	0	1	0	0	316
rank value of 73s =	0	0	0	1	0	0	0	0	0	0	0	0	0	317
rank value of 76s =	0	1	0	0	0	0	0	0	0	0	0	0	0	318
rank value of 89s =	0	0	0	0	0	0	0	0	0	0	1	0	0	319
rank value of 96s =	0	0	0	0	0	1	0	0	0	0	0	0	0	320
rank value of 123s =	0	0	0	0	0	0	0	0	0	0	1	0	0	321
rank value of 150s =	0	0	0	0	0	0	0	0	1	0	0	0	0	322
rank value of 250s =	0	0	0	0	0	0	0	0	0	0	1	0	0	323
rank value of 290s =	0	0	0	0	0	0	0	0	0	0	1	0	0	324
rank value of 300s =	0	0	0	0	0	0	0	0	0	0	2	0	0	325.5
rank value of 380s =	0	0	0	0	0	0	0	0	0	0	1	0	0	327
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	1	0	0	328
rank value of 640s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
rank value of 740s =	0	0	0	0	0	0	0	0	0	0	1	0	0	330

n =	**31**	**30**	**25**	**29**	**29**	**29**	**27**	**27**	**29**	**29**	**25**	**10**	**10**

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 =	2804248.5	602641	501344	518047	470448	475610	995672	986614	2E+06	161290	161290

$N_{i\,bg}$ = 86
N = 330
H = 53.97

Adjust H for ties:

T_i = 2E+07 sum of T1..T12

$H' = H/(1-(T_i/(N^3-N)))$
H' = 98.25
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' =98.25.
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) =	144.2	131.5	133.7	132.0	132.7	185.3	184.4	272.2	127.0	127.0
avg Rbar (background) =	180.6	180.6	180.6	180.6	180.6	180.6	180.6	180.6	180.6	180.6
Dx =	-36.4	-49.1	-46.9	-48.6	-47.9	4.7	3.9	91.7	-53.6	-53.6
Cx =	47.7	47.7	47.7	49.0	49.0	47.7	47.7	50.5	74.3	74.3
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	No	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Total Lead**
NC MCL (μg/l): 15
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-15	MDL
9/26/02	**740**	**10**
4/28/03	**300**	**10**
10/30/03	**640**	**5**
4/20/04	**250**	**5**
10/21/04	**430**	**5**
4/18/05	**380**	**5**
10/13/05	**290**	**5**
4/25/06	**300**	**10**
10/20/06	**89**	**5**
4/25/07	**69**	**10**
10/31/07	**123**	**5**
4/23/08	**50.2**	**5**
10/20/08	**25.9**	**5**
4/22/09	NS	**5**
10/26/09	**24.7**	**5**
4/22/10	**9.2**	**5**
10/27/10	**16**	**5**
4/29/11	**11**	**5**
10/25/11	**14.6**	**5**
4/20/12	**6.4**	**5**
10/24/12	ND	**5**
4/24/13	**10.4**	**5**
10/24/13	ND	**5**
4/24/14	ND	**5**
10/27/14	ND	**5**
4/28/15	ND	**5**

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

X_{bar} = 151.676
SD = 211.18977
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = 12980636
γ_1= 1.4651108

Since the Coefficient of Skewness of 1.47 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} = 3.6173295
SD = 1.9805963
N = 25
$1/N\Sigma_i(X_i-X_{bar})^3$ = 0.0435283
γ_1= 0.0059563

Since the Coefficient of Skewness of 0.01 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

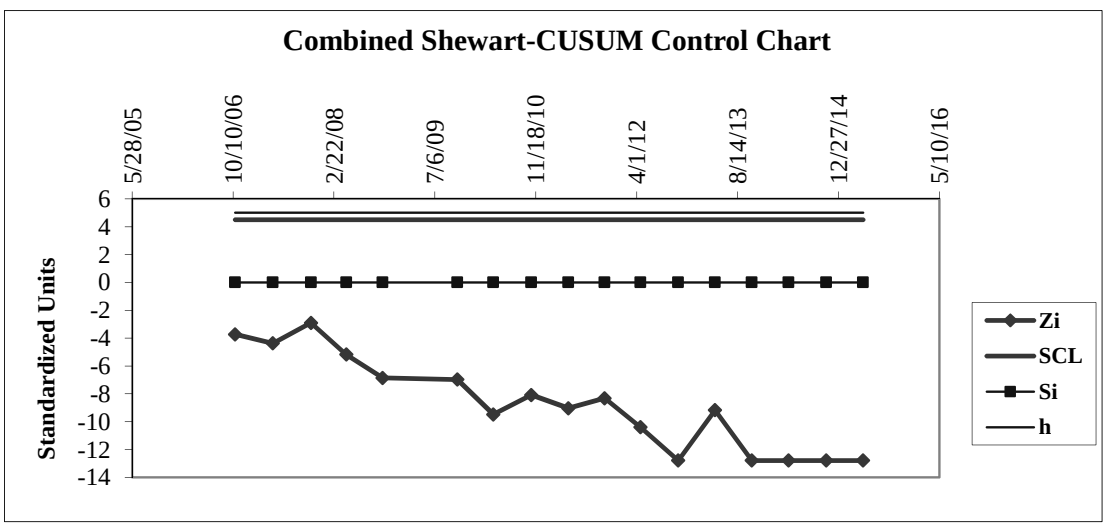
Compute the mean and standard deviation of the historical data:

5.9588727 = x_{mean} (Mean of N1-N8 historical data)
0.394346 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	4.4886364	-3.7282898	0	5	4.5
4/25/07	4.2341065	-4.3737378	0	5	4.5
10/31/07	4.8121844	-2.9078226	0	5	4.5
4/23/08	3.916015	-5.1803681	0	5	4.5
10/20/08	3.254243	-6.8585187	0	5	4.5
10/26/09	3.2068032	-6.9788185	0	5	4.5
4/22/10	2.2192035	-9.4832172	0	5	4.5
10/27/10	2.7725887	-8.0799187	0	5	4.5
4/29/11	2.3978953	-9.0300828	0	5	4.5
10/25/11	2.6810215	-8.3121188	0	5	4.5
4/20/12	1.856298	-10.403489	0	5	4.5
10/24/12	0.9162907	-12.787201	0	5	4.5
4/24/13	2.3418058	-9.1723169	0	5	4.5
10/24/13	0.9162907	-12.787201	0	5	4.5
4/24/14	0.9162907	-12.787201	0	5	4.5
10/27/14	0.9162907	-12.787201	0	5	4.5
4/28/15	0.9162907	-12.787201	0	5	4.5

Plot Z_i and S_i versus time:



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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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**
10/27/14	ND	ND	ND	ND	**10.7**	**10.1**	**29.5**	**31.4**	ND	ND	ND	**9.1**	ND	**5**
04/28/15	**6.3**	ND	**5.6**	**6.8**	**11.7**	**11.2**	**25.1**	**35.4**	ND	ND	ND	**8.3**	**5.1**	**5**
N_i	31	30	25	30	29	29	27	27	28	29	25	10	10	
sum of rank values (R_i)	6667.5	3069.0	3556.5	5417.0	5163.0	4249.5	4484.5	5950.0	3594.5	4443.5	4894.0	2278.5	847.5	
avg rank value (Rbar)	215.1	102.3	142.3	180.6	178.0	146.5	166.1	220.4	128.4	153.2	195.8	227.9	84.8	

	Number of each rank value													Rank Value
rank value of NDs =	5	24	14	12	8	14	13	6	19	18	11	0	9	77
rank value of 5.1s =	0	0	0	0	0	0	1	0	0	0	0	0	1	154.5
rank value of 5.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	156
rank value of 5.3s =	0	0	0	0	1	0	0	0	2	0	0	0	0	158
rank value of 5.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	160

rank value of 5.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	161
rank value of 5.6s =	1	0	1	0	0	0	0	0	0	0	0	0	0	162.5
rank value of 5.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	164
rank value of 5.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	165
rank value of 6s =	0	0	0	1	0	1	0	0	1	1	0	0	0	167.5
rank value of 6.1s =	0	0	0	0	0	0	0	1	0	1	0	0	0	170.5
rank value of 6.2s =	0	0	0	0	1	0	1	0	0	0	0	0	0	172.5
rank value of 6.3s =	1	0	0	1	0	0	0	0	0	0	0	0	0	174.5
rank value of 6.7s =	1	0	0	0	0	0	0	0	1	0	0	0	0	176.5
rank value of 6.8s =	0	1	0	1	1	0	0	0	0	0	0	0	0	179
rank value of 6.9s =	1	0	0	1	1	0	0	0	0	0	0	0	0	182
rank value of 7s =	2	0	0	0	0	1	0	0	0	0	0	0	0	185
rank value of 7.2s =	0	2	0	0	0	0	0	0	0	0	0	0	0	187.5
rank value of 7.3s =	1	0	0	0	1	0	0	0	0	0	0	0	0	189.5
rank value of 7.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	191
rank value of 7.5s =	0	0	0	0	1	3	0	0	0	0	1	0	0	194
rank value of 7.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	197
rank value of 7.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	198
rank value of 8s =	0	0	1	0	0	0	0	0	0	0	0	1	0	199.5
rank value of 8.3s =	0	0	2	0	0	1	0	0	0	0	0	1	0	202.5
rank value of 8.4s =	0	0	0	1	0	0	0	0	0	0	1	0	0	205.5
rank value of 8.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	207
rank value of 8.6s =	1	0	0	0	0	2	0	0	0	0	0	0	0	209
rank value of 8.8s =	0	0	0	1	1	0	0	0	0	0	0	0	0	211.5
rank value of 8.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	213
rank value of 9.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	214
rank value of 9.2s =	0	0	0	0	0	0	0	1	0	0	0	1	0	215.5
rank value of 9.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	217
rank value of 9.4s =	0	0	0	0	1	1	0	0	0	0	0	0	0	218.5
rank value of 9.6s =	0	2	0	1	0	0	0	0	0	0	0	1	0	221.5
rank value of 9.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	224
rank value of 9.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	225
rank value of 10s =	1	0	0	0	0	0	0	0	0	0	0	0	0	226
rank value of 10.1s =	0	0	0	0	1	2	0	0	0	0	0	0	0	228
rank value of 10.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	230
rank value of 10.5s =	0	0	0	0	1	0	0	0	0	0	0	0	0	231
rank value of 10.7s =	0	0	0	0	2	0	0	0	0	0	0	0	0	232.5
rank value of 10.8s =	0	0	0	0	1	0	0	0	0	0	0	1	0	234.5
rank value of 10.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	236
rank value of 11.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	237
rank value of 11.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	238
rank value of 11.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	239
rank value of 11.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	240
rank value of 12s =	1	0	0	0	2	0	0	1	0	0	0	0	0	242.5
rank value of 12.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	245
rank value of 12.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	246
rank value of 12.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	247
rank value of 12.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	248
rank value of 13s =	0	0	0	1	0	0	0	0	1	0	0	0	0	249.5
rank value of 13.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	251
rank value of 14s =	0	0	0	0	0	0	0	2	0	0	0	0	0	252.5
rank value of 14.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	254
rank value of 15s =	2	0	0	0	0	0	0	0	0	0	0	0	0	255.5
rank value of 15.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	257
rank value of 16s =	2	0	0	0	0	0	0	0	0	0	0	0	0	258.5
rank value of 16.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	260
rank value of 17s =	0	0	1	1	0	0	0	0	0	0	0	0	0	261.5
rank value of 18s =	0	0	0	0	1	0	0	1	0	0	0	0	0	263.5

rank value of 18.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	265
rank value of 19s =	1	0	0	0	0	0	0	1	0	0	1	0	0	267
rank value of 19.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	269
rank value of 19.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	270
rank value of 19.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	271
rank value of 19.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	272
rank value of 20s =	1	0	0	0	0	0	1	0	0	0	0	0	0	273.5
rank value of 20.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	275
rank value of 20.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	276
rank value of 21s =	0	0	1	0	0	0	0	0	0	0	0	0	0	277
rank value of 21.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	278
rank value of 21.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	279
rank value of 22s =	1	0	0	0	0	0	0	0	0	1	0	0	0	280.5
rank value of 23s =	1	0	0	0	0	0	0	0	0	0	0	0	0	282
rank value of 23.6s =	0	0	0	0	0	0	1	0	0	0	0	0	0	283
rank value of 23.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	284
rank value of 24s =	1	0	0	0	0	0	0	1	0	0	1	0	0	286
rank value of 24.6s =	0	0	0	0	0	0	0	1	0	0	0	0	0	288
rank value of 25s =	0	0	0	1	0	0	0	0	0	0	0	0	0	289
rank value of 25.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	290
rank value of 25.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	291
rank value of 26s =	0	0	0	0	0	0	0	0	0	1	0	0	0	292
rank value of 27s =	0	0	0	0	0	0	0	1	0	0	0	0	0	293
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	294
rank value of 29s =	2	0	0	0	0	0	0	0	0	0	0	0	0	295.5
rank value of 29.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	297
rank value of 29.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	298
rank value of 30s =	0	0	0	1	0	0	0	0	0	0	0	0	0	299
rank value of 30.2s =	0	0	0	0	0	0	1	0	0	0	0	0	0	300
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	0	0	301
rank value of 31.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	302
rank value of 32.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	303
rank value of 33.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	304
rank value of 35s =	0	0	0	0	0	0	0	0	0	1	0	0	0	305
rank value of 35.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	306
rank value of 36.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	307
rank value of 40s =	0	0	0	0	0	0	0	0	1	0	0	0	0	308
rank value of 44s =	0	0	0	0	0	0	0	0	1	0	0	0	0	309
rank value of 46s =	0	0	0	0	0	0	0	0	0	1	0	0	0	310
rank value of 48s =	0	0	0	0	0	0	0	0	1	0	0	0	0	311
rank value of 49s =	0	0	0	0	0	0	0	0	0	1	0	0	0	312
rank value of 59s =	0	0	0	0	0	0	0	0	0	1	0	0	0	313
rank value of 68s =	0	0	0	0	0	0	0	0	0	1	0	0	0	314
rank value of 70s =	0	0	0	0	0	0	0	0	0	0	1	0	0	315
rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	0	316
rank value of 76s =	1	0	0	0	0	0	0	0	0	0	0	0	0	317
rank value of 78s =	0	0	0	0	0	0	0	0	0	1	0	0	0	318
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	0	0	319
rank value of 90s =	0	0	0	1	0	0	0	0	0	0	0	0	0	320
rank value of 100s =	0	0	0	0	0	0	0	0	0	0	1	0	0	321
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	1	0	0	322
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	1	0	0	323.5
rank value of 170s =	0	0	0	0	0	0	0	0	0	0	1	0	0	325
rank value of 190s =	0	0	0	0	0	0	0	0	0	0	1	0	0	326
rank value of 330s =	0	0	0	0	0	1	0	0	0	0	0	0	0	327
rank value of 400s =	0	0	0	1	0	0	0	0	0	0	0	0	0	328
rank value of 430s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
rank value of 460s =	0	0	0	1	0	0	0	0	0	0	0	0	0	330

n =	**31**	**30**	**25**	**30**	**29**	**29**	**27**	**27**	**28**	**29**	**25**	**10**	**10**

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 =	2054695.9	978130	919192	622698	744842	1E+06	461444	680851	958049	519156	71826

$N_{i\,bg}$ = 86
N = 330
H = 31.12

Adjust H for ties:

T_i = 4E+06 sum of T1..T39

$H' = H/(1-(T_i/(N^3-N)))$
H' = 34.57
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' =34.57.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

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

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

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

Well =	MW-1A	MW-2	MW-2D	MW-3	**MW-3D**	MW-4A	MW-8	MW-15	MW-16	MW-17
Rbar (well x) =	180.6	178.0	146.5	166.1	220.4	128.4	153.2	195.8	227.9	84.8
avg Rbar (background) =	154.6	154.6	154.6	154.6	154.6	154.6	154.6	154.6	154.6	154.6
Dx =	26.0	23.5	-8.0	11.5	65.8	-26.2	-1.3	41.2	73.3	-69.8
Cx =	47.1	47.7	47.7	49.0	49.0	48.4	47.7	50.5	74.3	74.3
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 J15-1957-49

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**
10/27/14	**31**	**5**
4/28/15	**35**	**5**

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

X_{bar} = 17.711111
SD = 10.627914
N = 27
$1/N\Sigma_i(X_i-X_{bar})^3$ = 37.088472
γ_1 = 0.0326949

Since the Coefficient of Skewness of 0.03 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the real detected values shown above.

X_{bar} = 2.5987593
SD = 0.871415
N = 27
$1/N\Sigma_i(X_i-X_{bar})^3$ = -0.565146

$\gamma_1 =$ 0.9037984

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

Part 2: Shewhart-CUSUM Control Chart

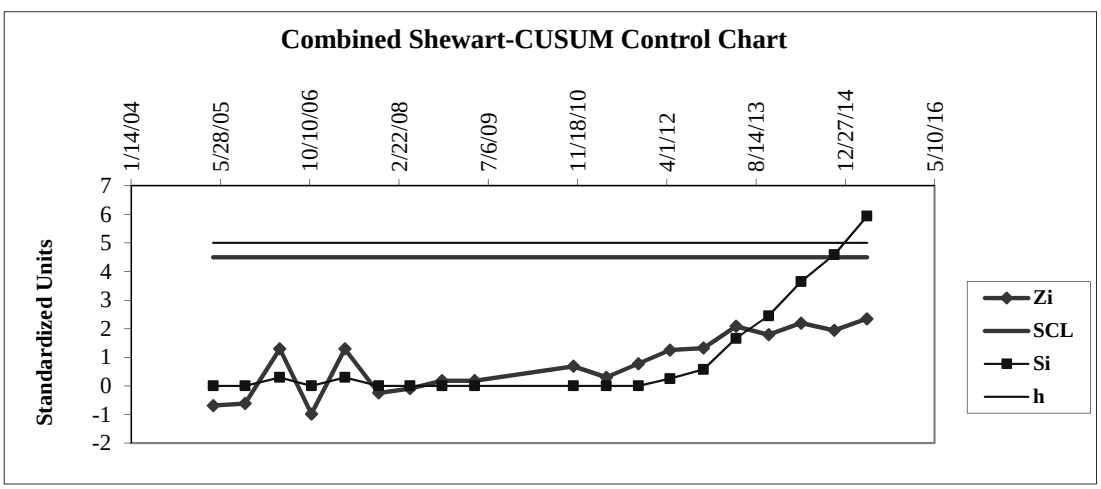
Compute the mean and standard deviation of the historical data:

12.2125 = x_{mean} (Mean of N1-N8 historical data)
9.8794791 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
4/18/05	5.4	-0.6895606	0	5	4.5
10/13/05	6.1	-0.6187067	0	5	4.5
4/25/06	25	1.2943496	0.2943496	5	4.5
10/20/06	2.5	-0.9830984	0	5	4.5
4/25/07	25	1.2943496	0.2943496	5	4.5
10/31/07	9.8	-0.244193	0	5	4.5
4/23/08	11.3	-0.0923632	0	5	4.5
10/20/08	14	0.1809306	0	5	4.5
4/22/09	14	0.1809306	0	5	4.5
10/27/10	19	0.6870301	0	5	4.5
4/29/11	15.2	0.3023945	0	5	4.5
10/25/11	19.9	0.7781281	0	5	4.5
4/20/12	24.6	1.2538617	0.2538617	5	4.5
10/24/12	25.3	1.3247156	0.5785772	5	4.5
4/24/13	32.8	2.0838649	1.6624422	5	4.5
10/24/13	29.9	1.7903272	2.4527694	5	4.5
4/24/14	33.9	2.1952068	3.6479762	5	4.5
10/27/14	31.4	1.9421571	4.5901332	5	4.5
4/28/15	**35.4**	2.3470367	**5.9371699**	5	4.5

Plot Z_i and S_i versus time:



Compare the Z_i and S_i values to their respective control limits of SCL and h.
One, or both, of the control limits was exceeded. Therefore, there is statistically significant evidence of contamination in this well at the concentrations indicated above.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Total Selenium**
MCL (µg/l): 20
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**20**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**20**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**20**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
04/15/02	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**20**
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**20**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**20**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/20/04	ND	ND	ND	ND	ND	**5**	ND	ND	ND	ND	ND	NP	NP	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**20**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	**12**	ND	ND	ND	ND	**460**	ND	ND	ND	ND	**18**	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**10**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**10**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**10**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**

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' = 30.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 83$
$T_{n1} = 477$

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).

$k = 1$
$n = 83$
$T_{n1} = 477$
$t\,[82,.01] = 2.3783$

$c = 0.012$

$T^*_k = 11.5$

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

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Total Silver**
MCL (µg/l): 20
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	**3.7**	NS	NS	ND	ND	ND	**6.9**	ND	ND	ND	NS	NP	NP	**2**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/28/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/13/05	**2.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**

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' = 30.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 83$
$T_{n1} = 183.6$

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).

$k = 1$
$n = 83$
$T_{n1} = 183.6$
$t\,[82,.01] = 2.3783$

$c = 0.012$

$T^*_k = 5.8$

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

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	**2**	NS	NS	ND	**3**	**2**	**4**	ND	**2**	**5**	NS	NP	NP	**2**
06/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
07/26/00	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**20**
04/09/01	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**2**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**20**
04/15/02	**40**	ND	NS	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
09/26/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**65**	NP	NP	**2**
04/28/03	ND	ND	ND	**1.6**	ND	ND	ND	ND	**1.4**	ND	**15**	NP	NP	**1**
10/30/03	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	**22**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	**35**	ND	ND	ND	ND	ND	NP	NP	**5.5**
10/31/07	**11.6**	ND	ND	ND	ND	ND	ND	ND	ND	**9.5**	ND	NP	NP	**5.5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5.5**
10/20/08	**7.2**	ND	ND	ND	ND	ND	ND	**6.1**	ND	ND	ND	NP	NP	**5.4**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5.4**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5.4**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5.4**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.6**	ND	**5.4**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.4**

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' = 30.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 83$
$T_{n1} = 352.9$

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).

$k = 1$
$n = 83$
$T_{n1} = 352.9$
$t\,[82,.01] = 2.3783$

$c = 0.012$

$T^*_k = 9.2$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	**17**	NS	NS	**19**	**32**	**21**	ND	**29**	**8.9**	**78**	NS	NP	NP	**5**
06/26/00	**40**	**6.3**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
07/26/00	**45**	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**40**
04/09/01	**250**	**1.4**	NS	**13**	**19**	**9.3**	ND	**24**	**41**	**230**	NS	NP	NP	**5**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**5**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**40**
04/15/02	**240**	ND	NS	ND	ND	**11**	**21**	**14**	**69**	**260**	NS	NP	NP	**5**
09/26/02	**58**	**16**	**44**	**640**	ND	ND	ND	**42**	**50**	**310**	**1000**	NP	NP	**5**
04/28/03	**89**	ND	**9.6**	**170**	**6.8**	**6.8**	ND	ND	**37**	**230**	**130**	NP	NP	**5**
10/30/03	**54**	ND	NT	**6.6**	**16**	ND	ND	ND	**92**	**14**	**200**	NP	NP	**5**
04/20/04	**55**	ND	ND	**45**	**25**	ND	ND	**13**	**5.1**	**240**	**88**	NP	NP	**5**
10/21/04	**41**	ND	ND	**18**	ND	ND	ND	ND	ND	**160**	**210**	NP	NP	**5**
04/18/05	**85**	ND	ND	**680**	**5.4**	ND	ND	ND	ND	**240**	**110**	NP	NP	**5**
10/13/05	**82**	ND	ND	**210**	**8.9**	ND	ND	ND	ND	**170**	**82**	NP	NP	**5**
04/25/06	**110**	ND	ND	ND	ND	ND	ND	ND	ND	**120**	**85**	NP	NP	**40**
10/20/06	**79**	ND	ND	**28**	ND	ND	ND	ND	**23**	ND	**30**	NP	NP	**5**
04/25/07	**43**	ND	ND	ND	ND	**300**	ND	ND	ND	ND	**26**	NP	NP	**25**
10/31/07	**89**	ND	**8.8**	**14.7**	**20**	ND	ND	ND	**8.6**	**103**	**48.2**	NP	NP	**5**
04/23/08	**26.1**	ND	**11.4**	**9.7**	**10.1**	ND	ND	**5.1**	**9.7**	**10**	**23.1**	NP	NP	**5**
10/20/08	**79**	ND	**15.1**	**15.8**	ND	ND	ND	ND	**5.4**	ND	**14.8**	NP	NP	**5**
04/22/09	**16**	ND	**32.7**	**19.8**	**7.7**	ND	ND	ND	**13.3**	ND	NS	NP	NP	**5**
10/26/09	**17.9**	ND	ND	**5.3**	**33.6**	ND	NS	NS	NS	**12.2**	**11.9**	NP	NP	**5**
04/22/10	**27.9**	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	**17.4**	ND	ND	**6.9**	ND	ND	**14.2**	**7.1**	ND	ND	**5.9**	ND	ND	**5**
04/29/11	**15.8**	ND	**5.1**	ND	ND	ND	ND	ND	ND	ND	**5.5**	**7.3**	ND	**5**
10/25/11	**25.6**	ND	ND	**23**	ND	ND	**15.1**	ND	ND	**9.7**	**6.3**	ND	ND	**5**
04/20/12	**44.3**	ND	ND	ND	ND	ND	**10**	ND	ND	ND	ND	**15**	ND	**5**
10/24/12	**59**	ND	ND	**5.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	**33.5**	ND	ND	**7.7**	**9.6**	ND	ND	ND	ND	ND	**5.4**	ND	ND	**5**
10/24/13	**30.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	**22.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	**15.5**	ND	ND	**8**	ND	ND	ND	ND	ND	ND	ND	**7**	ND	**5**
N_i	31	30	25	29	29	29	27	27	28	29	25	10	10	
sum of rank values (R_i)	8558.0	3267.5	3418.0	5940.5	4524.5	3572.0	3200.5	3640.0	4559.5	5748.5	5541.0	1345.0	970.0	
avg rank value (Rbar)	276.1	108.9	136.7	204.8	156.0	123.2	118.5	134.8	162.8	198.2	221.6	134.5	97.0	

	Number of each rank value													Rank Value
rank value of NDs =	1	27	18	9	17	24	23	20	16	14	7	7	10	97
rank value of 1.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	194
rank value of 5.1s =	0	0	1	0	0	0	0	1	1	0	0	0	0	196
rank value of 5.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	198

rank value of 5.4s =	0	0	0	0	1	0	0	0	1	0	1	0	0	200
rank value of 5.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	202
rank value of 5.9s =	0	0	0	1	0	0	0	0	0	0	1	0	0	203.5
rank value of 6.3s =	0	1	0	0	0	0	0	0	0	0	1	0	0	205.5
rank value of 6.6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	207
rank value of 6.8s =	0	0	0	0	1	1	0	0	0	0	0	0	0	208.5
rank value of 6.9s =	0	0	0	1	0	0	0	0	0	0	0	0	0	210
rank value of 7s =	0	0	0	0	0	0	0	0	0	0	0	1	0	211
rank value of 7.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	212
rank value of 7.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	213
rank value of 7.7s =	0	0	0	1	1	0	0	0	0	0	0	0	0	214.5
rank value of 8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	216
rank value of 8.6s =	0	0	0	0	0	0	0	0	1	0	0	0	0	217
rank value of 8.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	218
rank value of 8.9s =	0	0	0	0	1	0	0	0	1	0	0	0	0	219.5
rank value of 9.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	221
rank value of 9.6s =	0	0	1	0	1	0	0	0	0	0	0	0	0	222.5
rank value of 9.7s =	0	0	0	1	0	0	0	0	1	1	0	0	0	225
rank value of 10s =	0	0	0	0	0	0	1	0	0	1	0	0	0	227.5
rank value of 10.1s =	0	0	0	0	1	0	0	0	0	0	0	0	0	229
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	230
rank value of 11.4s =	0	0	1	0	0	0	0	0	0	0	0	0	0	231
rank value of 11.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	232
rank value of 12.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	233
rank value of 13s =	0	0	0	1	0	0	0	1	0	0	0	0	0	234.5
rank value of 13.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	236
rank value of 14s =	0	0	0	0	0	0	0	1	0	1	0	0	0	237.5
rank value of 14.2s =	0	0	0	0	0	0	1	0	0	0	0	0	0	239
rank value of 14.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	240
rank value of 14.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	241
rank value of 15s =	0	0	0	0	0	0	0	0	0	0	0	1	0	242
rank value of 15.1s =	0	0	1	0	0	0	1	0	0	0	0	0	0	243.5
rank value of 15.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	245
rank value of 15.8s =	1	0	0	1	0	0	0	0	0	0	0	0	0	246.5
rank value of 16s =	1	1	0	0	1	0	0	0	0	0	0	0	0	249
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	0	0	0	251
rank value of 17.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	252
rank value of 17.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	253
rank value of 18s =	0	0	0	1	0	0	0	0	0	0	0	0	0	254
rank value of 19s =	0	0	0	1	1	0	0	0	0	0	0	0	0	255.5
rank value of 19.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	257
rank value of 20s =	0	0	0	0	1	0	0	0	0	0	0	0	0	258
rank value of 21s =	0	0	0	0	0	1	1	0	0	0	0	0	0	259.5
rank value of 22.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	261
rank value of 23s =	0	0	0	1	0	0	0	0	1	0	0	0	0	262.5
rank value of 23.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	264
rank value of 24s =	0	0	0	0	0	0	0	1	0	0	0	0	0	265
rank value of 25s =	0	0	0	0	1	0	0	0	0	0	0	0	0	266
rank value of 25.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	267
rank value of 26s =	0	0	0	0	0	0	0	0	0	0	1	0	0	268
rank value of 26.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	269
rank value of 27.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	270
rank value of 28s =	0	0	0	1	0	0	0	0	0	0	0	0	0	271
rank value of 29s =	0	0	0	0	0	0	0	1	0	0	0	0	0	272
rank value of 30s =	0	0	0	0	0	0	0	0	0	0	1	0	0	273
rank value of 30.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	274
rank value of 32s =	0	0	0	0	1	0	0	0	0	0	0	0	0	275
rank value of 32.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	276

rank value of 33.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	277
rank value of 33.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	278
rank value of 37s =	0	0	0	0	0	0	0	0	1	0	0	0	0	279
rank value of 40s =	1	0	0	0	0	0	0	0	0	0	0	0	0	280
rank value of 41s =	1	0	0	0	0	0	0	0	1	0	0	0	0	281.5
rank value of 42s =	0	0	0	0	0	0	0	1	0	0	0	0	0	283
rank value of 43s =	1	0	0	0	0	0	0	0	0	0	0	0	0	284
rank value of 44s =	0	0	1	0	0	0	0	0	0	0	0	0	0	285
rank value of 44.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	286
rank value of 45s =	1	0	0	1	0	0	0	0	0	0	0	0	0	287.5
rank value of 48.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	289
rank value of 50s =	0	0	0	0	0	0	0	0	1	0	0	0	0	290
rank value of 54s =	1	0	0	0	0	0	0	0	0	0	0	0	0	291
rank value of 55s =	1	0	0	0	0	0	0	0	0	0	0	0	0	292
rank value of 58s =	1	0	0	0	0	0	0	0	0	0	0	0	0	293
rank value of 59s =	1	0	0	0	0	0	0	0	0	0	0	0	0	294
rank value of 69s =	0	0	0	0	0	0	0	0	1	0	0	0	0	295
rank value of 78s =	0	0	0	0	0	0	0	0	0	1	0	0	0	296
rank value of 79s =	2	0	0	0	0	0	0	0	0	0	0	0	0	297.5
rank value of 82s =	1	0	0	0	0	0	0	0	0	0	1	0	0	299.5
rank value of 85s =	1	0	0	0	0	0	0	0	0	0	1	0	0	301.5
rank value of 88s =	0	0	0	0	0	0	0	0	0	0	1	0	0	303
rank value of 89s =	2	0	0	0	0	0	0	0	0	0	0	0	0	304.5
rank value of 92s =	0	0	0	0	0	0	0	0	1	0	0	0	0	306
rank value of 103s =	0	0	0	0	0	0	0	0	0	1	0	0	0	307
rank value of 110s =	1	0	0	0	0	0	0	0	0	0	1	0	0	308.5
rank value of 120s =	0	0	0	0	0	0	0	0	0	1	0	0	0	310
rank value of 130s =	0	0	0	0	0	0	0	0	0	0	1	0	0	311
rank value of 160s =	0	0	0	0	0	0	0	0	0	1	0	0	0	312
rank value of 170s =	0	0	0	1	0	0	0	0	0	1	0	0	0	313.5
rank value of 200s =	0	0	0	0	0	0	0	0	0	0	1	0	0	315
rank value of 210s =	0	0	0	1	0	0	0	0	0	0	1	0	0	316.5
rank value of 230s =	0	0	0	0	0	0	0	0	0	2	0	0	0	318.5
rank value of 240s =	1	0	0	0	0	0	0	0	0	2	0	0	0	321
rank value of 250s =	1	0	0	0	0	0	0	0	0	0	0	0	0	323
rank value of 260s =	0	0	0	0	0	0	0	0	0	1	0	0	0	324
rank value of 300s =	0	0	0	0	0	1	0	0	0	0	0	0	0	325
rank value of 310s =	0	0	0	0	0	0	0	0	0	1	0	0	0	326
rank value of 640s =	0	0	0	1	0	0	0	0	0	0	0	0	0	327
rank value of 680s =	0	0	0	1	0	0	0	0	0	0	0	0	0	328
rank value of 1000s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
n =	**31**	**30**	**25**	**29**	**29**	**29**	**27**	**27**	**28**	**29**	**25**	**10**	**10**	

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 =	2701910.4	1E+06	705900	439972	379378	490726	742466	1E+06	1E+06	180903	94090

$N_{i\ bg}$ = 86
N = 329
H = 40.10

Adjust H for ties:

T_i = 7E+06 sum of T1..T30

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

H' = 50.24

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' =50.24.
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) =	204.8	156.0	123.2	118.5	134.8	162.8	198.2	221.6	134.5	97.0
avg Rbar (background) =	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3
Dx =	27.6	-21.2	-54.1	-58.7	-42.4	-14.4	21.0	44.4	-42.8	-80.3
Cx =	47.6	47.6	47.6	48.9	48.9	48.2	47.6	50.4	74.0	74.0
Statistical Significance ?	No	No	No	No	No	No	No	No	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Total Zinc**
NC MCL (µg/l): 1000
Method: Kruskal-Wallis
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	**150**	NS	NS	**35**	**48**	**36**	**12**	**43**	**28**	**68**	NS	NP	NP	**10**
06/26/00	**37**	**12**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	**65**	**66**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**50**
04/09/01	**230**	**130**	NS	**12**	**24**	**18**	**17**	**33**	**75**	**200**	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**50**
04/15/02	**230**	**16**	NS	ND	ND	**13**	**33**	**38**	**120**	**230**	NS	NP	NP	**10**
09/26/02	**57**	**120**	**110**	**580**	ND	**20**	ND	**56**	**250**	**280**	**4800**	NP	NP	**10**
04/28/03	**86**	**14**	**31**	**160**	**16**	ND	ND	ND	**81**	**190**	**800**	NP	NP	**10**
10/30/03	**55**	**22**	NT	**17**	**26**	**10**	ND	ND	**140**	**26**	**1800**	NP	NP	**10**
04/20/04	**55**	**10**	ND	**44**	**30**	**11**	**14**	**19**	**23**	**220**	**770**	NP	NP	**10**
10/21/04	**29**	ND	ND	**17**	ND	**14**	ND	**12**	**15**	**70**	**1200**	NP	NP	**10**
04/18/05	**83**	ND	ND	**780**	ND	**30**	**13**	**10**	ND	**240**	**1200**	NP	NP	**10**
10/13/05	**92**	**13**	**12**	**230**	**19**	**25**	ND	ND	**14**	**170**	**800**	NP	NP	**10**
04/25/06	**130**	ND	**88**	ND	ND	ND	ND	ND	**110**	**120**	**780**	NP	NP	**50**
10/20/06	**74**	ND	**20**	**37**	ND	ND	ND	ND	**55**	ND	**200**	NP	NP	**10**
04/25/07	**55**	**21**	**30**	**30**	**22**	**830**	**22**	**15**	**10**	**12**	**200**	NP	NP	**10**
10/31/07	**86**	ND	**66.2**	**14**	**37.4**	**33.3**	**12**	ND	**11.6**	**91.1**	**336**	NP	NP	**10**
04/23/08	**27.3**	ND	**50.3**	**12.2**	**24.4**	**36.9**	ND	**10.3**	**17.5**	**38.8**	**138**	NP	NP	**10**
10/20/08	**66.5**	**19.9**	**59.2**	**15.3**	**10.6**	**29.1**	ND	**12.4**	ND	**17.4**	**71.5**	NP	NP	**10**
04/22/09	**23.1**	**43.5**	**99.9**	**25.3**	**17.9**	**17.6**	**10.5**	ND	**35.2**	ND	NS	NP	NP	**10**
10/26/09	**19.6**	ND	**14.8**	ND	**37.8**	ND	NS	NS	NS	ND	**63.8**	NP	NP	**10**
04/22/10	**22.2**	**14.2**	ND	ND	ND	ND	NS	NS	ND	ND	**24.6**	NP	NP	**10**
10/27/10	**19.1**	ND	**12.3**	**15**	ND	ND	**32.4**	**16.3**	ND	ND	**60.7**	ND	ND	**10**
04/29/11	**25.7**	ND	**21.9**	ND	**11.8**	**23.9**	**13.7**	ND	ND	ND	**42.9**	**20.5**	**21.5**	**10**
10/25/11	**34.5**	ND	**11.6**	**23.7**	**12.8**	**10.1**	**32.5**	ND	ND	**17.7**	**49.9**	**15.1**	ND	**10**
04/20/12	**47.6**	ND	**12.5**	ND	**11.6**	**10.1**	**21.1**	ND	ND	**11.1**	**30.7**	**50.8**	ND	**10**
10/24/12	**93.4**	**10.4**	**11.3**	**22.4**	**23.8**	ND	**10.3**	**16.1**	**14.9**	**12.2**	**15.7**	**15.8**	ND	**10**
04/24/13	**56.3**	ND	ND	ND	**18.6**	**14.9**	ND	ND	ND	ND	**33.2**	ND	ND	**10**
10/24/13	**30.6**	ND	ND	ND	ND	ND	**28.1**	ND	ND	**28.8**	**39.6**	**14.9**	ND	**10**
04/24/14	**25.8**	ND	ND	ND	ND	ND	**18.9**	ND	ND	ND	ND	**14.9**	**10.1**	**10**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10**
04/28/15	**51.7**	ND	**14.2**	**19**	**13.6**	ND	**14.8**	**12.9**	ND	ND	**11.3**	**13.3**	ND	**10**
N_i	31	30	25	29	29	29	27	27	28	29	25	10	10	
sum of rank values (R_i)	7878.5	3725.0	4070.0	4829.5	4182.5	4162.0	3549.5	3258.5	4378.0	5407.5	6560.0	1485.0	799.0	
avg rank value (Rbar)	254.1	124.2	162.8	166.5	144.2	143.5	131.5	120.7	156.4	186.5	262.4	148.5	79.9	

	Number of each rank value													Rank Value
rank value of NDs =	1	16	8	10	11	11	11	14	12	10	2	3	8	59
rank value of 10s =	0	1	0	0	0	1	0	1	1	0	0	0	0	119.5
rank value of 10.1s =	0	0	0	0	0	2	0	0	0	0	0	0	1	123
rank value of 10.3s =	0	0	0	0	0	0	1	1	0	0	0	0	0	125.5

rank value of 10.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	127
rank value of 10.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	128
rank value of 10.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	129
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	130
rank value of 11.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	131
rank value of 11.3s =	0	0	1	0	0	0	0	0	0	0	1	0	0	132.5
rank value of 11.6s =	0	0	1	0	1	0	0	0	1	0	0	0	0	135
rank value of 11.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	137
rank value of 12s =	0	1	1	1	0	0	2	1	0	1	0	0	0	141
rank value of 12.2s =	0	0	0	1	0	0	0	0	0	1	0	0	0	145.5
rank value of 12.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	147
rank value of 12.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	148
rank value of 12.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	149
rank value of 12.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	150
rank value of 12.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	151
rank value of 13s =	0	1	0	0	0	1	1	0	0	0	0	0	0	153
rank value of 13.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	155
rank value of 13.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	156
rank value of 13.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	157
rank value of 14s =	0	1	0	1	0	1	1	0	1	0	0	0	0	160
rank value of 14.2s =	0	1	1	0	0	0	0	0	0	0	0	0	0	163.5
rank value of 14.8s =	0	0	1	0	0	0	1	0	0	0	0	0	0	165.5
rank value of 14.9s =	0	0	0	0	0	1	0	0	1	0	0	2	0	168.5
rank value of 15s =	0	0	0	1	0	0	0	1	1	0	0	0	0	172
rank value of 15.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	174
rank value of 15.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	175
rank value of 15.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	176
rank value of 15.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	177
rank value of 16s =	0	1	0	0	1	0	0	0	0	0	0	0	0	178.5
rank value of 16.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	180
rank value of 16.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	181
rank value of 17s =	0	0	0	2	0	0	1	0	0	0	0	0	0	183
rank value of 17.4s =	0	0	0	0	0	0	0	0	0	1	0	0	0	185
rank value of 17.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	186
rank value of 17.6s =	0	0	0	0	0	1	0	0	0	0	0	0	0	187
rank value of 17.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	188
rank value of 17.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	189
rank value of 18s =	0	0	0	0	0	1	0	0	0	0	0	0	0	190
rank value of 18.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	191
rank value of 18.9s =	0	0	0	0	0	0	1	0	0	0	0	0	0	192
rank value of 19s =	0	0	0	1	1	0	0	1	0	0	0	0	0	194
rank value of 19.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	196
rank value of 19.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	197
rank value of 19.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	198
rank value of 20s =	0	0	1	0	0	1	0	0	0	0	0	0	0	199.5
rank value of 20.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	201
rank value of 21s =	0	1	0	0	0	0	0	0	0	0	0	0	0	202
rank value of 21.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	203
rank value of 21.5s =	0	0	0	0	0	0	0	0	0	0	0	0	1	204
rank value of 21.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	205
rank value of 22s =	0	1	0	0	1	0	1	0	0	0	0	0	0	207
rank value of 22.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	209
rank value of 22.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	210
rank value of 23s =	0	0	0	0	0	0	0	0	1	0	0	0	0	211
rank value of 23.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	212
rank value of 23.7s =	0	0	0	1	0	0	0	0	0	0	0	0	0	213
rank value of 23.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	214
rank value of 23.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	215

rank value of 24s =	0	0	0	0	1	0	0	0	0	0	0	0	0	216
rank value of 24.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	217
rank value of 24.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	218
rank value of 25s =	0	0	0	0	0	1	0	0	0	0	0	0	0	219
rank value of 25.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	220
rank value of 25.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	221
rank value of 25.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	222
rank value of 26s =	0	0	0	0	1	0	0	0	0	1	0	0	0	223.5
rank value of 27.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	225
rank value of 28s =	0	0	0	0	0	0	0	0	1	0	0	0	0	226
rank value of 28.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	227
rank value of 28.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	228
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	229
rank value of 29.1s =	0	0	0	0	0	1	0	0	0	0	0	0	0	230
rank value of 30s =	0	0	1	1	1	1	0	0	0	0	0	0	0	232.5
rank value of 30.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	235
rank value of 30.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	236
rank value of 31s =	0	0	1	0	0	0	0	0	0	0	0	0	0	237
rank value of 32.4s =	0	0	0	0	0	0	1	0	0	0	0	0	0	238
rank value of 32.5s =	0	0	0	0	0	0	1	0	0	0	0	0	0	239
rank value of 33s =	0	0	0	0	0	0	1	1	0	0	0	0	0	240.5
rank value of 33.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	242
rank value of 33.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	243
rank value of 34.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	244
rank value of 35s =	0	0	0	1	0	0	0	0	0	0	0	0	0	245
rank value of 35.2s =	0	0	0	0	0	0	0	0	1	0	0	0	0	246
rank value of 36s =	0	0	0	0	0	1	0	0	0	0	0	0	0	247
rank value of 36.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	248
rank value of 37s =	1	0	0	1	0	0	0	0	0	0	0	0	0	249.5
rank value of 37.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	251
rank value of 37.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	252
rank value of 38s =	0	0	0	0	0	0	0	1	0	0	0	0	0	253
rank value of 38.8s =	0	0	0	0	0	0	0	0	0	1	0	0	0	254
rank value of 39.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	255
rank value of 42.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	256
rank value of 43s =	0	0	0	0	0	0	0	1	0	0	0	0	0	257
rank value of 43.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	258
rank value of 44s =	0	0	0	1	0	0	0	0	0	0	0	0	0	259
rank value of 47.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	260
rank value of 48s =	0	0	0	0	1	0	0	0	0	0	0	0	0	261
rank value of 49.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	262
rank value of 50.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	263
rank value of 50.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	264
rank value of 51.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	265
rank value of 55s =	3	0	0	0	0	0	0	0	1	0	0	0	0	267.5
rank value of 56s =	0	0	0	0	0	0	0	1	0	0	0	0	0	270
rank value of 56.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	271
rank value of 57s =	1	0	0	0	0	0	0	0	0	0	0	0	0	272
rank value of 59.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	273
rank value of 60.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	274
rank value of 63.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	275
rank value of 65s =	1	0	0	0	0	0	0	0	0	0	0	0	0	276
rank value of 66s =	0	1	0	0	0	0	0	0	0	0	0	0	0	277
rank value of 66.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	278
rank value of 66.5s =	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	1	0	0	0	280
rank value of 70s =	0	0	0	0	0	0	0	0	0	1	0	0	0	281
rank value of 71.5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	282

rank value of 74s =	1	0	0	0	0	0	0	0	0	0	0	0	0	283
rank value of 75s =	0	0	0	0	0	0	0	0	1	0	0	0	0	284
rank value of 81s =	0	0	0	0	0	0	0	0	1	0	0	0	0	285
rank value of 83s =	1	0	0	0	0	0	0	0	0	0	0	0	0	286
rank value of 86s =	2	0	0	0	0	0	0	0	0	0	0	0	0	287.5
rank value of 88s =	0	0	1	0	0	0	0	0	0	0	0	0	0	289
rank value of 91.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	290
rank value of 92s =	1	0	0	0	0	0	0	0	0	0	0	0	0	291
rank value of 93.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	292
rank value of 99.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	293
rank value of 110s =	0	0	1	0	0	0	0	0	1	0	0	0	0	294.5
rank value of 120s =	0	1	0	0	0	0	0	0	1	1	0	0	0	297
rank value of 130s =	1	1	0	0	0	0	0	0	0	0	0	0	0	299.5
rank value of 138s =	0	0	0	0	0	0	0	0	0	0	1	0	0	301
rank value of 140s =	0	0	0	0	0	0	0	0	1	0	0	0	0	302
rank value of 150s =	1	0	0	0	0	0	0	0	0	0	0	0	0	303
rank value of 160s =	0	0	0	1	0	0	0	0	0	0	0	0	0	304
rank value of 170s =	0	0	0	0	0	0	0	0	0	1	0	0	0	305
rank value of 190s =	0	0	0	0	0	0	0	0	0	1	0	0	0	306
rank value of 200s =	0	0	0	0	0	0	0	0	0	1	2	0	0	308
rank value of 220s =	0	0	0	0	0	0	0	0	0	1	0	0	0	310
rank value of 230s =	2	0	0	1	0	0	0	0	0	1	0	0	0	312.5
rank value of 240s =	0	0	0	0	0	0	0	0	0	1	0	0	0	315
rank value of 250s =	0	0	0	0	0	0	0	0	1	0	0	0	0	316
rank value of 280s =	0	0	0	0	0	0	0	0	0	1	0	0	0	317
rank value of 336s =	0	0	0	0	0	0	0	0	0	0	1	0	0	318
rank value of 580s =	0	0	0	1	0	0	0	0	0	0	0	0	0	319
rank value of 770s =	0	0	0	0	0	0	0	0	0	0	1	0	0	320
rank value of 780s =	0	0	0	1	0	0	0	0	0	0	1	0	0	321.5
rank value of 800s =	0	0	0	0	0	0	0	0	0	0	2	0	0	323.5
rank value of 830s =	0	0	0	0	0	1	0	0	0	0	0	0	0	325
rank value of 1200s =	0	0	0	0	0	0	0	0	0	0	2	0	0	326.5
rank value of 1800s =	0	0	0	0	0	0	0	0	0	0	1	0	0	328
rank value of 4800s =	0	0	0	0	0	0	0	0	0	0	1	0	0	329
n =	**31**	**30**	**25**	**29**	**29**	**29**	**27**	**27**	**28**	**29**	**25**	**10**	**10**	

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 =	2856495.4	804278	603217	597319	466628	393253	684532	1E+06	2E+06	220523	63840

$N_{i\ bg}$ = 86
N = 329
H = 51.14

Adjust H for ties:

T_i = 2E+06 sum of T1..T33

$H' = H/(1-(T_i/(N^3-N)))$
H' = 53.55
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' =53.55.
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) =	166.5	144.2	143.5	131.5	120.7	156.4	186.5	262.4	148.5	79.9
avg Rbar (background) =	182.3	182.3	182.3	182.3	182.3	182.3	182.3	182.3	182.3	182.3
Dx =	-15.7	-38.0	-38.7	-50.8	-61.6	-25.9	4.2	80.2	-33.8	-102.4
Cx =	47.6	47.6	47.6	48.9	48.9	48.2	47.6	50.4	74.0	74.0
Statistical Significance ?	No	No	No	No	No	No	No	**Yes**	No	No
If SSI, is current event above MCL?	-	-	-	-	-	-	-	No	-	-

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

Part 1: Check for Normality

	MW-15	MDL
9/26/02	**4800**	**10**
4/28/03	**800**	**10**
10/30/03	**1800**	**10**
4/20/04	**770**	**10**
10/21/04	**1200**	**10**
4/18/05	**1200**	**10**
10/13/05	**800**	**10**
4/25/06	**780**	**50**
10/20/06	**200**	**10**
4/25/07	**200**	**10**
10/31/07	**336**	**10**
4/23/08	**138**	**10**
10/20/08	**71.5**	**10**
4/22/09	NS	**10**
10/26/09	**63.8**	**10**
4/22/10	**24.6**	**10**
10/27/10	**60.7**	**10**
4/29/11	**42.9**	**10**
10/25/11	**49.9**	**10**
4/20/12	**30.7**	**10**
10/24/12	**15.7**	**10**
4/24/13	**33.2**	**10**
10/24/13	**39.6**	**10**
4/24/14	ND	**10**
10/27/14	ND	**10**
4/28/15	**11.3**	**10**

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

X_{bar} =	539.116
SD =	1012.606544
N =	25
$1/N\Sigma_i(X_i-X_{bar})^3$ =	3126973871
γ_1=	3.201807474

Since the Coefficient of Skewness of 3.20 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

X_{bar} =	4.822959552
SD =	1.908327064
N =	25
$1/N\Sigma_i(X_i-X_{bar})^3$ =	0.596101561
γ_1=	0.091191631

Since the Coefficient of Skewness of 0.09 is less than 1.0, the data appear not to be significantly skewed.
Proceed with further statistical tests using the log-transformed values shown above.

Part 2: Shewhart-CUSUM Control Chart

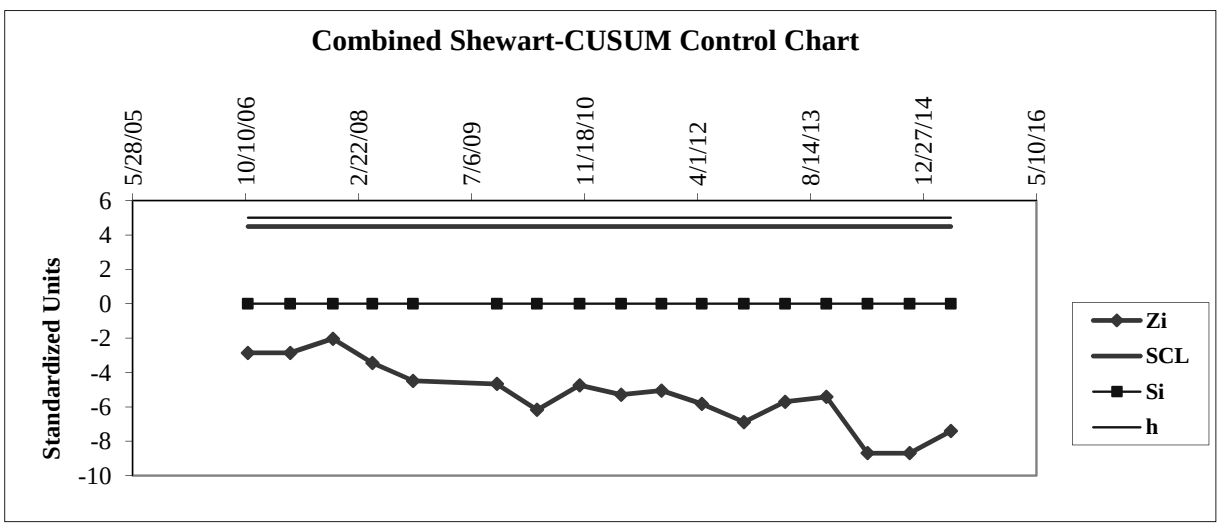
Compute the mean and standard deviation of the historical data:

7.103371838 = x_{mean} (Mean of N1-N8 historical data)
0.63200761 = s (Standard Deviation of N1-N8 historical data)
1 = k (constant, reference value)
5 = h (constant, upper control limit for the CUSUM scheme)
4.5 = SCL (Constant, upper Shewhart Control Limit)

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

Date	x_i	Z_i	S_i	h	SCL
			0		
10/20/06	5.298317367	-2.8560645	0	5	4.5
4/25/07	5.298317367	-2.8560645	0	5	4.5
10/31/07	5.81711116	-2.0351981	0	5	4.5
4/23/08	4.927253685	-3.4431835	0	5	4.5
10/20/08	4.26969745	-4.483608	0	5	4.5
10/26/09	4.15575319	-4.6638974	0	5	4.5
4/22/10	3.202746443	-6.1718013	0	5	4.5
10/27/10	4.105943698	-4.7427089	0	5	4.5
4/29/11	3.758871826	-5.2918667	0	5	4.5
10/25/11	3.910021003	-5.0527095	0	5	4.5
4/20/12	3.424262655	-5.8213052	0	5	4.5
10/24/12	2.753660712	-6.8823714	0	5	4.5
4/24/13	3.502549876	-5.6974345	0	5	4.5
10/24/13	3.678829118	-5.418515	0	5	4.5
4/24/14	1.609437912	-8.6928288	0	5	4.5
10/27/14	1.609437912	-8.6928288	0	5	4.5
4/28/15	2.424802726	-7.4027101	0	5	4.5

Plot Z_i and S_i versus time:



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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Acetone**
MCL (µg/l): 6000
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**100**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**25**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**140**	NP	NP	**25**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**25**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**25**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**25**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**

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' = 23.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 69$
$T_{n1} = 795$

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).

$k = 1$
$n = 69$
$T_{n1} = 795$
$t\,[68,.01] = 2.3857$

$c = 0.0145$

$T^*_k = 19.7$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Carbon Disulfide**
MCL (µg/l): 700
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**100**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	**24**	ND	ND	ND	ND	ND	ND	**15**	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	**4.5**	ND	NS	NP	NP	**2**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**2**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**2**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**

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' = 23.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 69$
$T_{n1} = 184$

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).

$k = 1$
$n = 69$
$T_{n1} = 184$
$t\,[68,.01] = 2.3857$

$c = 0.0145$

$T^*_k = 6.6$

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

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Chloroethane**
MCL (µg/l): 3000
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**1**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**1**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**1**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**1**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/24/12	ND	ND	ND	ND	**4.4**	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**

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' = 23.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 69$
$T_{n1} = 142.5$

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).

$k = 1$
$n = 69$
$T_{n1} = 142.5$
$t\,[68,.01] = 2.3857$

$c = 0.0145$

$T^*_k = 5.6$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

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

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	**10.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**

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' = 23.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 69$
$T_{n1} = 232.5$

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).

$k = 1$
$n = 69$
$T_{n1} = 232.5$
$t\,[68,.01] = 2.3857$

$c = 0.0145$

$T^*_k = 7.8$

	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17
T_{n2} =	10.2	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 exceeded in one, or more of the wells, Wilcoxon Rank Sum Tests must be performed to test the possibility that the detected concentrations are statistically significant.

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Iodomethane**
MCL (mg/l): Not Established
Method: Wilcoxon Rank Sum
Background: GWA-1,-2S, -2D, -3, -4, & -5

	MW-11S	MW-11D	MW-14	MW-1A	MDL
04/24/00	NT	NS	NS	NT	**10**
06/26/00	NT	NT	NS	NS	**10**
07/26/00	NT	NT	NS	NS	**10**
09/18/00	NS	NS	NS	NT	**10**
04/09/01	NT	NT	NS	NT	**10**
09/18/01	NS	NS	NS	NS	**10**
10/29/01	NS	NS	NS	NS	**10**
01/30/02	NS	NS	NS	NS	**10**
02/28/02	NS	NS	NS	NS	**10**
04/15/02	NT	NT	NS	NT	**10**
09/26/02	NT	NT	NT	NT	**10**
04/28/03	NT	NT	NT	NT	**10**
10/30/03	ND	ND	ND	ND	**10**
04/20/04	ND	ND	ND	ND	**10**
10/21/04	ND	ND	ND	ND	**10**
04/18/05	ND	ND	ND	ND	**10**
10/13/05	ND	ND	ND	ND	**10**
04/25/06	ND	ND	ND	ND	**10**
10/20/06	ND	ND	ND	ND	**10**
04/25/07	ND	ND	ND	ND	**10**
10/31/07	ND	ND	ND	ND	**5**
04/23/08	ND	ND	ND	ND	**5**
10/20/08	ND	ND	ND	ND	**5**
04/22/09	ND	ND	ND	ND	**5**
10/26/09	ND	ND	ND	ND	**5**
04/22/10	ND	ND	ND	ND	**5**
10/27/10	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	**5**
10/24/13	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	**10.2**	**5**

1) Rank the N = 96 observations from the smallest to the largest from background wells and compliance well MW-1A.

n =	24
m =	72
N =	96
Ci (MW-1A) =	1200.0

# samples =	24	24	24	24
sum of rank values (Ri) =	1152.0	1152.0	1152.0	1200.0
avg rank value (Rbar) =	48.0	48.0	48.0	50.0

	Number of each rank value				Rank Value
rank value of NDs =	24	24	24	23	48
rank value of 10.2s =	0	0	0	1	96
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

	0	0	0	0	0
# samples =	**24**	**24**	**24**	**24**	
sum of rank values (R_i)	**1152**	**1152**	**1152**	**1200**	

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

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

W = 900

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

E(W) = 1/2mn

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

E(W) = 864

Adjustment for tie values:

SD(W) = 20.785

4) Form the appropriate Z-score.

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

Z = 1.708

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

Z = 1.708

$Z_{0.01}$ = 2.326

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **Dichloromethane (Methylene chloride)**
MCL (µg/l): 5
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**10**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**10**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**10**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**10**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**2**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**2**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**2**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**2**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/24/14	ND	ND	ND	ND	ND	**2**	ND	ND	ND	**2.2**	ND	ND	ND	**2**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.2**	ND	ND	**2**

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' = 23.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 69$
$T_{n1} = 105$

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).

$k = 1$
$n = 69$
$T_{n1} = 105$
$t\,[68,.01] = 2.3857$

$c = 0.0145$

$T^*_k = 4.5$

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

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

White Oak Landfill
Haywood County, North Carolina
BLE Project Number J15-1957-49

Compound: **2-Butanone**
MCL (µg/l): 4000
Method: Poisson Prediction Limits
Background: MW-11S, MW-11D, & MW-14

	MW-11S	MW-11D	MW-14	MW-1A	MW-2	MW-2D	MW-3	MW-3D	MW-4A	MW-8	MW-15	MW-16	MW-17	MDL
04/24/00	NT	NS	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
06/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
07/26/00	NT	NT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
09/18/00	NS	NS	NS	NT	NT	NS	NS	NS	NT	NS	NS	NP	NP	**100**
04/09/01	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/18/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
10/29/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
01/30/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
02/28/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NP	NP	**100**
04/15/02	NT	NT	NS	NT	NT	NT	NT	NT	NT	NT	NS	NP	NP	**100**
09/26/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
04/28/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NP	**100**
10/30/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/21/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/18/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/13/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/20/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
04/25/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**10**
10/31/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
04/23/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	NP	**5**
10/20/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**54.4**	NP	NP	**5**
04/22/09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NP	NP	**5**
10/26/09	ND	ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NP	NP	**5**
04/22/10	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	ND	NP	NP	**5**
10/27/10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/29/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/25/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/20/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/24/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/24/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
10/27/14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
04/28/15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**

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' = 23.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 69$
$T_{n1} = 232.5$

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).

$k = 1$
$n = 69$
$T_{n1} = 232.5$
$t\,[68,.01] = 2.3857$

$c = 0.0145$

$T^*_k = 7.8$

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

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