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T 877.633.5520 W www.cornerstoneeg.com

Transmittal Letter

April 16, 2014

Mr. Ron Gruzesky
Kentucky Division of Waste Management
200 Fair Oaks Lane
Frankfort, KY 40601

RE: 1st Quarter 2014 Reports, Advanced Disposal Services Blue Ridge Landfill
Project/Proposal No. 140174-001

Quantity	Description
1	1 st Quarter 2014 Groundwater Report - Permit #033-00004
1	1 st Quarter 2014 Surface Water Report - Permit #033-00004

For Your:	Sent Via:
☐ Use	☐ Regular Mail
☒ Approval	☐ UPS
☐ Review/Comment	☒ Federal Express
☐ Information	☐ Courier
☐ Other	☐ Other

Comments:

Transmitted By:

Kari Wallover

cc:





April 14, 2014

Mr. Ron Gruzesky, Director
Division of Waste Management
200 Fair Oaks Lane
2nd Floor
Frankfort, KY 40601

RE: Advanced Disposal Services Blue Ridge Landfill, Inc.
1st Quarter 2014 Surface Water Report
Permit # 033-00004
AI # 998

Dear Mr. Gruzesky:

Please find attached the 1st Quarter 2014 surface water report for the Advanced Disposal Services Blue Ridge landfill site in Irvine, Estill County, Kentucky.

If you have any questions or require additional information, please contact me at (606) 723-5559.

Sincerely,
BLUE RIDGE LANDFILL, INC.

Dan Fleshour
East Region Compliance Manager

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
SOLID WASTE BRANCH
200 FAIR OAKS LANE
FRANKFORT, KY 40601

DIVISION OF WASTE MANAGEMENT
SOLID WASTE BRANCH

NAME AND TITLE - PLEASE PRINT

FACILITY INFORMATION SHEET

Sampling Date: 2/17/14 County: Estill Permit No.: 033-00004

Facility Name Advanced Disposal Services Blue Ridge Landfill, Inc.

Site Address: 2700 Winchester Road Irvine KY 40336
Street City State Zip

Phone No.: (606) 723-5559 Latitude 34° 44' 45" Longitude 83° 56' 10"

OWNER INFORMATION

Facility Owner: Advanced Disposal Services Blue Ridge Landfill, Inc. Phone No.: (606) 723-5559

Contact Person: Billy Bowles Phone No.: (606) 723-5559

Contact Person Title: Landfill Operations Manager

Mailing Address 2700 Winchester Road Irvine KY 40336
Street City State Zip

SAMPLING PERSONNEL

(IF OTHER THAN LANDFILL OR LABORATORY)

Company: Cornerstone Environmental Group, LLC

Contact Person: Kari Wallover Phone No.: (630) 410-7229

Mailing Address: 2456 Fortune Drive, Ste. 170 Lexington KY 40509
Street City State Zip

LABORATORY RECORD #1

Laboratory: Pace Analytical Services, Inc. Lab ID No.: _____

Contact Person: Cindy Varga Phone No.: (920) 321-9460

Mailing Address: 1241 Bellevue St. Green Bay WI 54302
Street City State Zip

LABORATORY RECORD #2

Laboratory: _____ Lab ID No. _____

Contact Person: _____ Phone No.: _____

Mailing Address: _____
Street City State Zip

Division of Waste Management

Page 1 of 2

Solid Waste Branch

Permit Number: 033-00004

200 Fair Oaks Lane

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: KY0000470336 /1

Frankfort, KY 40601 (502)564-6716

LAB ID: _____

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SURFACE WATER SAMPLE ANALYSIS (w)

Monitoring Point (KPDES Discharge Number, or "Upstream", or "Downstream")						SWM-1		SWM-2		SWM-3		SWM-4	
Sample Sequence #						N/A		N/A		N/A		N/A	
If sample is a Blank specify type: (F)ield, (T)rip, (M)ethod, or (E)quipment						N/A		N/A		N/A		N/A	
Sample Date and Time (Month/Day/Year hour:minutes)						2/17/2014		2/17/2014		2/17/2014		2/17/2014	
Duplicate ("Y" or "N") ¹						N/A		N/A		N/A		N/A	
Split ("Y" or "N") ²						N/A		N/A		N/A		N/A	
Facility Sample ID Number (if applicable)						N/A		N/A		N/A		N/A	
Laboratory Sample ID Number (if applicable)						N/A		N/A		N/A		N/A	
Date of Analysis (Month/Day/Year)						N/A		N/A		N/A		N/A	
CAS RN ³		Constituent	T D ⁴	Unit of Measure	Method	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S
A200-00-0	0	Flow	T	FT/SEC.	FIELD	No Flow		No Flow		No Flow		No Flow	
16887-00-6	2	Chloride(s)	T	mg/L	9251								
14808-79-8	0	Sulfate	T	mg/L	9038								
7439-89-6	0	Iron	T	mg/L	6010								
7440-23-5	0	Sodium	T	mg/L	6010								
S0268- -	0	Organic Carbon ⁶	T	mg/L	9060								
S0097- -	0	BOD ⁶	-	MG/L	N/A								
S0130- -	0	Chemical Oxygen Demand	T	mg/L	410.4								

STANDARD FLAGS:

J = Estimated Value

B = Analyte found in blank

A = Average value

N = Presumptive ID

D = Concentration from analysis of a secondary
dilution factor¹Respond "Y" if the sample was a duplicate of another sample in this report.²Respond "Y" if the sample was split and analyzed by separate laboratories.³Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.⁴T = Total; D = Dissolved⁵< indicates a non-detect; do not use "ND" or "BDL". Value then shown is Practical Quantification Limit.⁶Facility has either/or option on Organic Carbon and (BOD) Biochemical Oxygen Demand - both are not required.



Groundwater Statistical Analysis Report

Project 140174.001
First Quarter 2014

Prepared for:
Advanced Disposal Services

Blue Ridge Landfill
2700 Winchester Road
Irvine, Kentucky 40336

RECEIVED

APR 23 2014

DIVISION OF WASTE MANAGEMENT
SOLID WASTE BRANCH



2456 Fortune Drive, Suite 170, Lexington, KY 40509

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FIRST QUARTER 2014 GROUNDWATER STATISTICAL ANALYSIS REPORT

I. Introduction

The Advanced Disposal Services Blue Ridge Landfill is located at the following address:

Advanced Disposal Services Blue Ridge Landfill, Inc.
2700 Winchester Road
Estill County
Irvine, Kentucky 40336

On behalf of Advanced Disposal Services Blue Ridge Landfill, Inc., Cornerstone Environmental Group, LLC (Cornerstone) conducted groundwater sampling at the Blue Ridge landfill on February 17, 2014. Cornerstone has performed a statistical analysis on the data from this first quarter 2014 sampling event. A discussion regarding sample collection procedures, laboratory analytical results, and statistical analysis results is presented herein.

II. Groundwater Monitoring/Reporting Requirements

Kentucky Administrative Regulations (KAR), specifically 401 KAR 48:300, require regular groundwater monitoring and reporting for solid waste disposal facilities such as the Blue Ridge Landfill. The purpose of this monitoring is to help evaluate if landfill operations are impacting water quality in the vicinity of the landfill.

III. Area and Site Geology/Hydrogeology

Estill County is located within parts of both the Outer Bluegrass and the Eastern Kentucky Coal Field physiographic regions. The oldest rocks found on the surface in the County are sedimentary rocks that were deposited in shallow seas during the Ordovician Period approximately 490 million years ago. The Devonian-aged New Albany Shale lies above the Ordovician rocks and was formed when the deep sea floor became covered with an organic black muck. The muck is now a hard black oil shale and is one of the most distinctive of all geologic formations in Kentucky. Mississippian-aged sandstones, siltstone, and limestones lie above the New Albany Shale.

The geologic unit that is currently being monitored at the site is the New Albany Shale. The site is located on the U. S. Geological Survey Geologic Map of the Irvine Quadrangle (1976), and according to this map the New Albany Shale is defined as the following:

Shale and dolomite: Shale is grayish-black, locally olive-gray; the grayish-black shale weathers to shades of gray, locally to dark brown, and to dark yellowish brown where stained by limonite; carbonaceous; abundant disseminated grains of iron sulfides and a few nodular concretions as much as 4 inches in diameter and 2 inches thick; phosphatic nodules, 2 to 4 inches in diameter, common in upper

15 feet; commonly fissile; contains a few silty layers; locally contains sparse well-rounded grains of quartz, particularly in lower 15 feet; locally crossbedded and interbedded with dolomite in lower 15 feet; sparse phosphatic nodules in upper 10 feet. Olive-gray shale occurs in a few layers, 1/2 to 4 inches thick in upper 40 feet, and in layers as much as 1 foot thick in upper 10 feet. The dolomite consists of two varieties: (1) medium-dark-gray to grayish-brown, very fine to fine-grained, carbonaceous; containing sparse grains of iron sulfides and well-rounded medium grains of quartz; in layers from less than 1 inch to more than 2 feet thick; locally present in lower 15 feet; (2) dark-gray, mottled with variegated shades of brown, very fine to fine-grained; at places containing fragments of dolomite, chert, and fossils which impart a breccia-like appearance; carbonaceous; contains sparse well-rounded medium grains of quartz and chert, and very fine grains of iron sulfides; locally present at base. The Unit is commonly well exposed except on hilltops and gentle slopes. It forms broad, flat valleys, steep dissected hillsides and bluffs along streams, and flat hilltops. The contact with underlying Boyle Dolomite is conformable; the contact with the underlying Bisher Limestone and Crab Orchard Formation is unconformable. The Unit thins slightly southwestward.

According to the Kentucky Geological Survey (KGS) County Report #33, Series XII, issued in 2005, and titled "Groundwater Resources of Estill County, Kentucky," the New Albany Shale yields 100 to 500 gallons per day to wells in valley bottoms and on uplands, usually at depths of less than 50 feet. Water from great depths in this formation is highly mineralized. Salt, hydrogen sulfide, and iron are common objectionable constituents found in groundwater from the New Albany Shale.

IV. Monitoring Points and Requirements

There is one groundwater-bearing zone being monitored at the Blue Ridge landfill site. This zone is the New Albany Shale, and downgradient wells completed in this formation are MW-7, MW-10, MW-13, and MW-15R. Monitoring well MW-17R is the upgradient monitoring point installed in the New Albany Shale for the landfill. The existing groundwater monitoring points are shown on Figure 1.

As stated in the KDEP approved "Groundwater Monitoring Plan-Update" for the facility prepared by Herst & Associates, Inc. and dated August 2009, the sampling program consists of annual sampling for parameters in 401 KAR Chapter 48:300 Section 11(3)(a) and (b) during the second quarter of each year, and quarterly sampling for parameters in 401 KAR Chapter 48:300 Section 11(3)(f) during the first, third, and fourth quarters of each year. During the first quarter 2014 sampling event, the parameters analyzed were those from 401 KAR Chapter 48:300 Section 11(3)(f).

V. Sampling Event

This 1st Quarter 2014 sampling event was conducted by Cornerstone field personnel at the Blue Ridge landfill on February 17, 2014. A sampling checklist summary is located in Table 1, and Table 2 contains a summary of monitoring well specifications (groundwater

monitoring well number, reference casing elevation, depth of well, static groundwater level, static groundwater elevation, zone monitored). All five monitoring wells were purged and sampled on the same day that they were purged. No problems were encountered during the sampling event.

Water levels were first collected from all of the wells and then the purging and sampling were conducted utilizing dedicated bladder pumps. Low-flow purging methods were utilized to purge the wells. Field parameters including pH, temperature, and specific conductivity were monitored and recorded during the low-flow purging activities and purging took place until equilibrium of these parameters was attained or the well went dry. Equilibrium was attained when the field parameters stabilized for at least three consecutive readings within the following limits: pH within plus or minus 0.1 standard units, specific conductance between plus or minus 3%, and temperature within plus or minus 1 degree Celsius. Purge rates were utilized that allowed for water level stabilization.

VI. Groundwater Flow Rate and Direction

The groundwater flow rate and flow direction were estimated for the New Albany Shale zone that is being monitored at the Blue Ridge Landfill. Calculations for the hydraulic gradients and flow rates for this flow zone are displayed in Appendix I.

As shown on Figure 1, the groundwater flow direction in the New Albany Shale appears to be towards the northwest. This flow direction is consistent with historic evaluations of groundwater flow at the facility. Water levels collected during the first quarter 2014 event were consistent with historical values measured at the monitoring wells.

VII. Statistical Analysis Procedures

The statistical analysis software package entitled *Sanitas* was utilized to analyze the data. This program follows a documented decision logic that incorporates the following applicable guidance documents: EPA's "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance," dated April 1989; the "Addendum" to the EPA document dated July 1992; and ASTM D6312-98 titled "Standard Guide for Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs," dated December 1998.

As presented in the "Groundwater Monitoring Plan-Update" dated August 2009, the method of statistical analyses utilized is dictated by the characteristics (i.e., size, number of non-detects, distribution, etc.) of the background data sets in accordance with EPA protocol. In general, control charts were selected as the methods of analysis and have been used in previous evaluations of the groundwater monitoring data. However, other methods (prediction limits, rank sum) have been utilized as dictated by the data characteristics.

Samples were collected this quarter for the parameters specified in 401 KAR Chapter 48:300 Section 11(3)(a) and (b). This list includes the following parameters:

temperature, chloride, chemical oxygen demand (COD), total dissolved solids (TDS), total organic carbon (TOC), specific conductance (conductivity), pH, iron, sodium, and total organic halides (TOX).

Shewhart-CUSUM Control Charts

The Shewhart-CUSUM control chart method combines two traditional control charts: the Shewhart control chart and the cumulative sum (CUSUM) control chart. This analysis rapidly detects both immediate and gradual releases from the landfills. The Shewhart-CUSUM control chart assumes that the data are independent and normally distributed, with a fixed mean and constant variance. This control chart also assumes that no previous releases from the landfill have affected the groundwater wells. Graphs for each well and inorganic constituent (per 401 KAR 48:300 Section 11) are created.

Initial sample data is collected in order to establish baseline parameters for the chart; specifically, estimates of the sampling point mean and variance. As future samples are collected, the baseline parameters are used to standardize the data. At each sampling period, a standardized mean is computed from the baseline mean concentration and the baseline standard deviation. Once the data have been standardized and plotted, the chart is reviewed to determine if it is "out of control". A control chart is declared out of control if the sample concentrations become large when compared to the baseline parameters. An out of control situation is indicated on the control chart when either the standardized means or CUSUM values cross one of two pre-determined threshold values. These thresholds are based on the rationale that if the sampling point concentrations do not vary significantly from the background, then new sample values standardized by the original baseline parameters should not deviate substantially from the baseline level.

Intra-well Prediction Intervals

Intra-well prediction intervals will be calculated on the data if it is determined that the Shewhart-CUSUM control charts are not the appropriate statistical test for a data set. This will be determined utilizing three criteria: 1. The data set could not be normalized during the transformation process that takes place during control chart analysis; 2. Non-detect values make up more than 50% of the data set; 3. The data is transformed successfully but the Cohen's Adjustment cannot be performed on the data due to the presence of greater than 15% non-detect values.

During parametric prediction interval analysis, the mean and the standard deviation are calculated for the raw or transformed background data. The number of comparison observations is defined to be included in the interval. If less than 15% of the background observations are nondetects, the nondetects are replaced with one half of the reporting limit prior to performing the analysis. If more than 15% but less than 50% of the background data are below the reporting limit, the sample mean and standard deviation of the data are adjusted according to the Cohen's Adjustment. However, when the background data are not transformed-normal or contain greater than 50% observations below the reporting limit, the program automatically constructs a nonparametric prediction interval. During nonparametric analysis, the highest value from the background data is used to set the upper limit of the prediction interval.

Site Background

The background period for statistical analysis is in general defined as samples previously taken from each well from May 1993 through the July 2013 event. However, due to either confirmed statistical exceedances or confirmed anomalous results, the parameters and dates listed below were not utilized in the background data set for statistical analyses:

Background Data Not Utilized for Statistical Analyses				
Parameter	MW-7	MW-10	MW-13	MW-15R
TOX	3Q00, 1Q11 ^a , 1Q13	1Q11 ^a , 1Q13	1Q11 ^a	1Q11 ^a , 3Q12, 4Q12, 1Q13
pH			3Q07 ^a	
TDS	2Q09, 3Q09, 4Q09			3Q07 ^a
COD	1Q08 ^a			3Q06 ^a
TOC				3Q06 ^a
Chloride	3Q09, 2Q13			
Temperature	Each well during the 3Q09 event ^a			

a: Denotes anomalous result

In addition, chloride and sodium data in samples collected from MW-15R from February 2000 through August 2005 were lower than from December 2005 through February 2014. The December 2005 through February 2014 chloride and sodium concentrations in samples collected from MW-15R have been detected at consistent levels with no upward/downward trends. Therefore, for this analysis the statistical background for chloride and sodium at well MW-15R consist of data from December 2005 through the last background update (July 2013) only.

VIII. Statistical Results Summary

During the first quarter 2014 monitoring event, of the parameters that were examined using Control Charts, no results exceeded their respective limits. Parameters that did not fit the assumptions necessary to perform control chart analyses were analyzed using intra-well prediction intervals. During the first quarter 2014 event, three significant differences occurred in monitoring well MW-7 as the following parameter results exceeded their respective intra-well prediction limits: chloride, TDS, and TOX. Statistical charts and graphs are located in Appendix IV.

The analysis using prediction intervals revealed that the statistical limit for chloride at MW-7 was exceeded as the concentration of 926 mg/L exceeded the limit of 1,050 mg/L. In addition, the statistical limit for TDS at MW-7 was exceeded as the concentration of 2,830 mg/L exceeded the limit of 2,580 mg/L. Monitoring well MW-7 has historically contained high levels of salt water; however, as shown in the table below the average concentrations of sodium, chloride, and TDS in MW-7 are lower than the upgradient well (MW-17R) that exists at the site:

Average Concentrations (mg/L)

	Chloride	Sodium	TDS
MW-7	568	790	1,986
MW-10	375	555	1,825
MW-13	5,330	3,346	9,169
MW-15R	45	220	1,713
MW-17R*	580	1,378	3,391

*average of last two years of data – when concentrations had stabilized

As stated previously, according to the publication by the KGS titled “Groundwater Resources of Estill County, Kentucky,” water from great depths in the New Albany Shale formation is highly mineralized and salt is a common objectionable constituent. Salt water is found below fresh groundwater at variable depths throughout the entire state of Kentucky. According to the KGS, in Estill County the fresh-saline interface ranges from elevations of less than 500 feet mean sea level in the northwestern part of the county, where the landfill facility is located, up to 900 feet in the mountainous southern end of the county. The static water level at MW-7 during the February 2014 event was 709.42 feet mean sea level. The elevated concentration of chloride in monitoring well MW-7 is therefore anticipated to be associated with naturally occurring conditions.

The analysis using prediction intervals also revealed that the statistical limit for TOX at MW-7 was exceeded as the concentration of 0.539 mg/L at MW-7 exceeded the limit of 0.4 mg/L. However, the Field Duplicate which was collected at MW-7 yielded a result of 0.0789 mg/L. The Field Duplicate concentration was significantly different from the MW-7 concentration and was well below the prediction limit. Research indicates that chloride concentrations can interfere with TOX analyses, and naturally elevated chloride concentrations are present in monitoring well MW-7. It is anticipated that the TOX exceedance is the result of chloride interference; therefore, it is not anticipated that this exceedance is due to landfill impacts.

IX. Conclusions

During the February 2014 monitoring event, no parameters that were examined using control charts exceeded their respective limits. Parameters that did not fit the assumptions necessary to perform control chart analyses were analyzed using intra-well prediction intervals. For the February 2014 event, concentrations of chloride, TDS, and TOX in the samples collected from monitoring well MW-7 exceeded their respective

prediction limits. These exceedances are believed to be the result of naturally occurring saline water and not the result of landfill impacts.

CORNERSTONE ENVIRONMENTAL GROUP, LLC

A handwritten signature in black ink, appearing to read "Kari A. Wallover". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Kari A. Wallover, PG
Project Manager

TABLES

TABLE 1. Sampling Checklist

Sampling Point ID	Well Purged			Sample Collected			Comments
	Yes	No	Purge Date	Full List ¹	None	Sample Date	
MW-7	✓		2/17/14	✓		2/17/14	No problems encountered during sampling.
MW-10	✓		2/17/14	✓		2/17/14	No problems encountered during sampling.
MW-13	✓		2/17/14	✓		2/17/14	No problems encountered during sampling.
MW-15R	✓		2/17/14	✓		2/17/14	No problems encountered during sampling.
MW-17R	✓		2/17/14	✓		2/17/14	No problems encountered during sampling.

¹Parameters in 401 KAR 48:300, Section 11.

TABLE 2. Static Groundwater Levels

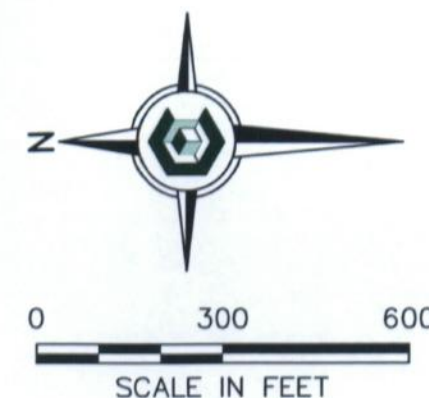
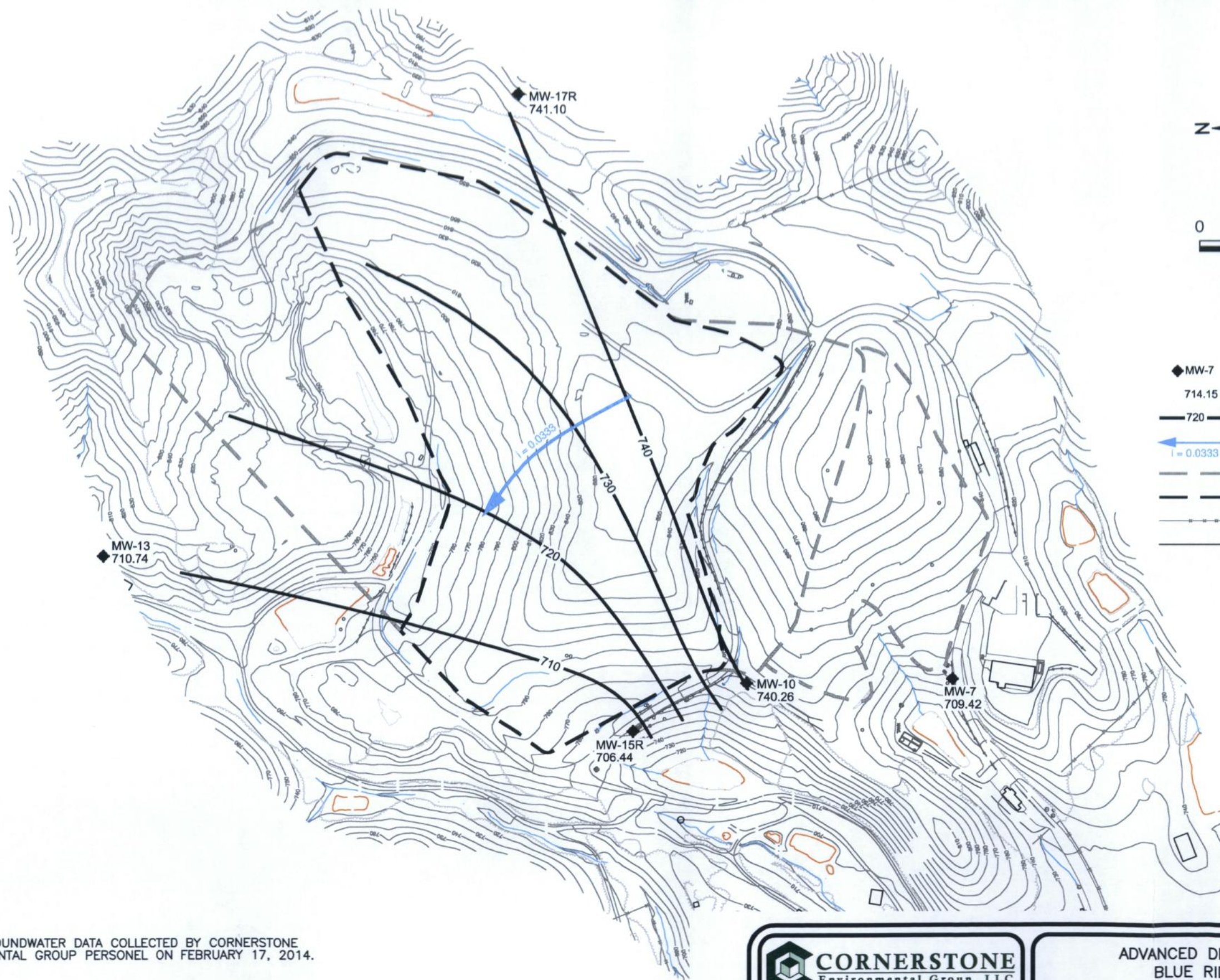
Monitoring Well	AKGWA #	Top PVC Casing Elevation (ft MSL)¹	Total Well Depth from Top PVC Casing² (ft)	Depth to Static Groundwater (feet)³	Static Groundwater Elevation (ft MSL)
MW-7	8001-0205	784.37	110.00	74.95	709.42
MW-10	8001-0201	801.16	70.00	60.90	740.26
MW-13	8001-0233	766.14	64.50	55.40	710.74
MW-15R	8003-3579	763.99	76.00	57.55	706.44
MW-17R	8003-8393	821.82	93.49	80.72	741.10

¹Feet above Mean Sea Level

²Depths taken from well construction logs

³Values measured by Cornerstone Environmental Group, LLC on February 17, 2014

FIGURES



LEGEND

- ◆ MW-7 GROUNDWATER MONITORING WELL
- 714.15 GROUNDWATER ELEVATION (FMSL)
- 720 — INFERRED POTENTIOMETRIC SURFACE CONTOUR (FMSL)
- ← $i = 0.0333$ → HYDRAULIC GRADIENT & INFERRED GROUNDWATER FLOW DIRECTION
- - - APPROXIMATE DESIGN WASTE LIMIT
- — — APPROXIMATE CONSTRUCTED WASTE LIMIT
- - - - - PROPERTY BOUNDARY
- — — EXISTING ACCESS ROAD

K. A. Wallover
 KARI A. WALLOVER
 Registered Professional Geologist
 PG-2347
 4-15-14

NOTE:

STATIC GROUNDWATER DATA COLLECTED BY CORNERSTONE ENVIRONMENTAL GROUP PERSONEL ON FEBRUARY 17, 2014.



This drawing represents intellectual property of Cornerstone Environmental Group, LLC. Any modification to the original by other than Cornerstone Environmental Group, LLC personnel violates its original purpose and as such is rendered void. Cornerstone Environmental Group, LLC will not be held liable for any changes made to this document without express written consent of the originator.

ADVANCED DISPOSAL SERVICES
 BLUE RIDGE LANDFILL
 ESTILL COUNTY, KENTUCKY
ENVIRONMENTAL REPORTING & MONITORING
1st QTR 2014 GROUNDWATER CONTOURS

FIGURE NO.

1

PROJECT NO.
 140174.001

APPENDIX I

Groundwater Flow Velocity Calculations Blue Ridge Landfill, Kentucky First Quarter 2014 Event

FLOW VELOCITY OF NEW ALBANY SHALE

Parameters:

Saturated Thickness (b) = average saturated thickness is approximately 10.35 ft.

Well	Well Depth (ft)	Depth to Water (ft)	Saturated Thickness (ft)
MW-10	70.00	60.90	9.10
MW-13	64.50	55.40	9.10
MW-15R	76.00	57.55	18.45
MW-17R	93.49	80.72	12.77
Average Saturated Thickness =			12.36

Transmissivity (T) = Transmissivity values for the New Albany Shale are listed as ranging from 110 to 1,130 gpd/ft as noted in Table 4 of "Ground-Water Resources in the White and West Fork White River Basin, Indiana," State of Indiana Department of Natural Resources-Division of Water, Water Resource Assessment 2002-6.

Hydraulic Conductivity (k) = transmissivity (T) x saturated thickness (b)

Minimum k = 110 gpd/ft / 12.36 ft = 14.7 ft²/d / 12.36 ft = 1.19 ft/d

Maximum k = 1,130 gpd/ft / 12.36 ft = 151 ft²/d / 12.36 ft = 12.22 ft/d

Conversion factor = ft²/day = gpd/ft / 7.481

Effective Porosity (n_e) = assumed to be approximately 0.15 for shale bedrock according to the USEPA "Interim Final RCRA Facility Investigation Guidance Document", May 1989, EPA 530/SW-89-031, p 10-51.

Gradient (i) = calculated from the gradient at the site using the First Quarter 2014 potentiometric map.

- Gradient (i) = Change in groundwater elevation along flow path i:
From 740 contour to 720 contour = 20ft / 600ft = 0.0333

Calculations:

Minimum Velocity

$$V = [(k)(i)] / n_e$$

$$V = [(1.19 \text{ ft/d})(0.0333)] / 0.15$$

$$V = 0.26 \text{ ft/d}$$

Maximum Velocity

$$V = [(k)(i)] / n_e$$

$$V = [(12.22 \text{ ft/d})(0.0333)] / 0.15$$

$$V = 2.71 \text{ ft/d}$$

APPENDIX II

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
SOLID WASTE BRANCH
200 FAIR OAKS LANE
FRANKFORT, KY 40601

DIVISION OF WASTE MANAGEMENT
SOLID WASTE BRANCH

NAME AND TITLE - PLEASE PRINT

FACILITY INFORMATION SHEET

Sampling Date: 2/17/14 County: Estill Permit No.: 033-00004

Facility Name Advanced Disposal Services Blue Ridge Landfill, Inc.

Site Address: 2700 Winchester Road Irvine KY 40336
Street City State Zip

Phone No.: (606) 723-5559 Latitude 34° 44' 45" Longitude 83° 56' 10"

OWNER INFORMATION

Facility Owner: Advanced Disposal Services Phone No.: (606) 723-5559

Contact Person: Billy Bowles Phone No.: (606) 723-5559

Contact Person Title: Landfill Operations Manager

Mailing Address 2700 Winchester Road Irvine KY 40336
Street City State Zip

SAMPLING PERSONNEL

(IF OTHER THAN LANDFILL OR LABORATORY)

Company: Cornerstone Environmental Group, LLC

Contact Person: Kari Wallover Phone No.: (630) 410-7229

Mailing Address: 2456 Fortune Drive, Ste. 170 Lexington KY 40509
Street City State Zip

LABORATORY RECORD #1

Laboratory: Pace Analytical Services, Inc. Lab ID No.: _____

Contact Person: Cindy Varga Phone No.: (920) 321-9460

Mailing Address: 1241 Bellevue Street Green Bay WI 54302
Street City State Zip

LABORATORY RECORD #2

Laboratory: _____ Lab ID No. _____

Contact Person: _____ Phone No.: _____

Mailing Address: _____
Street City State Zip

APPENDIX III

Division of Waste Management
Solid Waste Branch
200 Fair Oaks Lane
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED - QUARTERLY
Permit Number: 033-00004
Facility: BLUE RIDGE LANDFILL

Page 1 of 10
FINDS/UNIT: /1
LAB ID:
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS (S)

AKGWA NUMBER ¹ Facility Well/Spring Number						8001-0205	8001-0201	8001-0223	8003-3579				
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, MW-3, etc.)						MW-7	MW-10	MW-13	MW-15R				
Sample Sequence #						1	1	1	1				
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA	NA	NA	NA				
Sample Date and Time (Month/Day/Year hour:minutes)						2/17/2014 11:10	2/17/2014 12:00	2/17/2014 13:00	2/17/2014 12:25				
Duplicate ("Y" or "N") ²						N	N	N	N				
Split ("Y" or "N") ³						N	N	N	N				
Facility Sample ID Number (if applicable)						NA	NA	NA	NA				
Laboratory Sample ID Number (if applicable)						4092257001	4092257002	4092257003	4092257004				
Date of Analysis (Month/Day/Year)						VARIES	VARIES	VARIES	VARIES				
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						DOWN	DOWN	DOWN	DOWN				
CAS RN ⁴		Constituent	T D ⁵	Unit Measure	Method	Detected Value or PQL ⁶	F L A G S	Detected Value or PQL ⁶	L A G S	Detected Value or PQL ⁶	L A G S	Detected Value or PQL ⁶	L A G S
	0	Static Water Level Elevation	T	Ft. MSL	FIELD	709.42		740.26		710.74		706.44	
S0907- -	2	Temperature	T	°C	FIELD	13.08		14.90		12.98		21.47	
16887-00-6	2	Chloride (s)	T	mg/L	9251	1050		156		5090		80.0	
S0130	0	Chemical Oxygen Demand	T	mg/L	410.4	75.1		108		206		<50.0	
S0266	0	Total Dissolved Solids	T	mg/L	160.1	2830		1330		8730		3620	
S0268	1	Total Organic Carbon	T	mg/L	9060	<0.50		41.9		<0.50		14.5	

¹AKGWA # is 0000-0000 for any type of blank.
²Respond "Y" if the sample was a duplicate of another sample in this report.
³Respond "Y" if the sample was split and analyzed by separate laboratories.
⁴Chemical Abstracts Service registry Number or unique identifier number assigned by agency.
⁵"T" = Total; "D" = Dissolved
⁶"<" indicates a non-detect; do not use "ND" or "BDL". Value then shown is Practical Quantification Limit

STANDARD FLAGS:
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution factor

RESIDENTIAL/CONTAINED - QUARTERLY

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Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____/1

LAB ID: _____

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER ¹ , Facility Well/Spring Number						8001-0205		8001-0201		8001-0223		8003-3579	
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-7		MW-10		MW-13		MW-15R	
CAS RN ⁴		Constituent	T D ⁵	Unit Measure	Method	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S
S0145	1	Specific Conductance	-	UMHOS/CM	FIELD	5097		2094		14400		3912	
S0595	0	Nitrate	T	mg/L	9200								
S0586	0	Total Organic Halides	T	mg/L	9020	0.539		0.32		0.856		0.0286	
S0296	0	pH	-	No Units	FIELD	7.41		7.37		6.99		6.66	
7440-36-0	0	Antimony	T	mg/L	6010								
7440-38-2	0	Arsenic	T	mg/L	7060								
7440-39-3	0	Barium	T	mg/L	6010								
7440-41-7	0	Beryllium	T	mg/L	6010								
7440-43-9	0	Cadmium	T	mg/L	6010								
7440-47-3	0	Chromium	T	mg/L	6010								
7440-48-4	0	Cobalt	T	mg/L	6010								
7440-50-8	0	Copper	T	mg/L	6010								
7439-89-6	0	Iron	T	mg/L	6010	2.89		0.319		2.24		25.2	
7439-92-1	0	Lead	T	mg/L	6010								
7439-97-6	0	Mercury	T	mg/L	7470								
7440-02-0	0	Nickel	T	mg/L	6010								
7782-49-2	0	Selenium	T	mg/L	7740								
740-22-4	0	Silver	T	mg/L	6010								
7440-23-5	0	Sodium	T	mg/L	6010	1170		567		3430		385	
7440-28-0	0	Thallium	T	mg/L	6010								

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Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____/1

LAB ID: _____

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER ¹ , Facility Well/Spring Number						8001-0205		8001-0201		8001-0223		8003-3579	
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-7		MW-10		MW-13		MW-15R	
CAS RN ⁴		Constituent	T D ⁵	Unit Measure	Method	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S
7440-62-2	0	Vanadium	T	mg/L	6010								
74440-66-6	0	Zinc	T	mg/L	6010								
108-05-4	2	Acetic acid ethenyl ester	T	mg/L	8260								
67-64-1	0	Acetone	T	mg/L	8260								
107-02-8	3	Acrolein	T	mg/L	8260								
107-13-1	0	Acrylonitrile	T	mg/L	8260								
71-43-2	0	Benzene	T	mg/L	8260								
108-90-7	1	Benzene, chloro	T	mg/L	8260								
1330-20-7	3	Benzene, Dimethyl	T	mg/L	8260								
100-42-5	1	Benzene, ethenyl	T	mg/L	8260								
108-88-3	1	Benzene, methyl	T	mg/L	8260								
74-97-5	0	Bromochloromethane	T	mg/L	8260								
75-25-4	3	Bromodichloromethane	T	mg/L	8260								
75-25-2	0	Bromoform	T	mg/L	8260								
74-83-9	0	Bromomethane	T	mg/L	8260								
78-93-3	0	2-Butanone	T	mg/L	8260								
110-57-6	0	2-Butene, 1,4-dichloro-, (E)	T	mg/L	8260								
75-15-0	0	Carbon disulfide	T	mg/L	8260								
75-00-3	0	Chloroethane	T	mg/L	8260								
67-66-3	0	Chloroform	T	mg/L	8260								

RESIDENTIAL/CONTAINED - QUARTERLY

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Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____/1

LAB ID: _____

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER ¹ , Facility Well/Spring Number						8001-0205		8001-0201		8001-0223		8003-3579	
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-7		MW-10		MW-13		MW-15R	
CAS RN ⁴		Constituent	T D ⁵	Unit Measure	Method	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S
74-87-3	0	Chloromethane	T	mg/L	8260								
156-59-2	0	cis-1,2-Dichloroethene	T	mg/L	8260								
74-95-3	0	Dibromomethane	T	mg/L	8260								
75-71-8	0	Dichlorodifluoromethane	-	MG/L	8260								
75-34-3	0	1,1-Dichloroethane	T	mg/L	8260								
107-06-2	0	1,2-Dichloroethane	T	mg/L	8260								
75-35-4	0	1,1-Dichloroethene	T	mg/L	8260								
540-36-3	0	1,4-Difluorobenzene	-	MG/L	8260								
106-93-4	6	Ethane, 1,2-dibromo	T	mg/L	8260								
79-34-5	4	Ethane, 1,1,2,2-Tetrachloro-	T	mg/L	8260								
71-55-6	5	Ethane, 1,1,1-Trichloro-	T	mg/L	8260								
79-00-5	3	Ethane, 1,1,2-Trichloro-	T	mg/L	8260								
630-20-6	3	Ethane, 1,1,1,2-Tetrachloro-	T	mg/L	8260								
64-17-5	0	Ethanol	-	MG/L	8260								
75-01-4	2	Ethene, Chloro-	T	mg/L	8260								
110-75-8	1	Ethene, (2Chloroethoxy)-	-	MG/L	8260								
127-18-4	7	Ethene, Tetrachloro-	T	mg/L	8260								
79-01-6	5	Ethene, Trichloro-	T	mg/L	8260								
100-41-4	0	Ethylbenzene	T	mg/L	8260								
97-63-2	0	Ethyl methacrylate	-	MG/L	8260								

FINDS/UNIT: 1

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Division of Waste Management
Solid Waste Branch
200 Fair Oaks Lane
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED - QUARTERLY
Permit Number: 033-00004
Facility: BLUE RIDGE LANDFILL

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FINDS/UNIT: 1
LAB ID:
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GROUNDWATER SAMPLE ANALYSIS (s)

AKGWA NUMBER ¹ Facility Well/Spring Number					8003-8393								
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, MW-3, etc.)					MW-17R								
Sample Sequence #					1								
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment					NA								
Sample Date and Time (Month/Day/Year hour:minutes)					2/17/2014 10:40								
Duplicate ("Y" or "N") ²					N								
Split ("Y" or "N") ³					N								
Facility Sample ID Number (if applicable)					NA								
Laboratory Sample ID Number (if applicable)					4092257005								
Date of Analysis (Month/Day/Year)					VARIES								
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)					DOWN								
CAS RN ⁴		Constituent	T D ⁵	Unit Measure	Method	Detected Value or PQL ⁶	F L A G S	Detected Value or PQL ⁶	L A G S	Detected Value or PQL ⁶	L A G S	Detected Value or PQL ⁶	L A G S
	0	Static Water Level Elevation	T	Ft. MSL	FIELD	741.10							
S0907- -	2	Temperature	T	°C	FIELD	13.66							
16887-00-6	2	Chloride (s)	T	mg/L	9251	456							
S0130	0	Chemical Oxygen Demand	T	mg/L	410.4	98.7							
S0266	0	Total Dissolved Solids	T	mg/L	160.1	3330							
S0268	1	Total Organic Carbon	T	mg/L	9060	16.1							

¹AKGWA # is 0000-0000 for any type of blank.
²Respond "Y" if the sample was a duplicate of another sample in this report.
³Respond "Y" if the sample was split and analyzed by separate laboratories.
⁴Chemical Abstracts Service registry Number or unique identifier number assigned by agency.
⁵"T" = Total; "D" = Dissolved
⁶"<" indicates a non-detect; do not use "ND" or "BDL". Value then shown is Practical Quantification Limit

STANDARD FLAGS:
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution factor

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Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____/1

LAB ID: _____

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER ¹ , Facility Well/Spring Number						8003-8393							
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-17R							
CAS RN ⁴		Constituent	T D ⁵	Unit of Measure	Method	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S
S0145	1	Specific Conductance	-	UMHOS/CM	FIELD	4930							
S0595	0	Nitrate	T	mg/L	9200								
S0586	0	Total Organic Halides	T	mg/L	9020	0.351							
S0296	0	pH	-	No Units	FIELD	8.11							
7440-36-0	0	Antimony	T	mg/L	6010								
7440-38-2	0	Arsenic	T	mg/L	7060								
7440-39-3	0	Barium	T	mg/L	6010								
7440-41-7	0	Beryllium	T	mg/L	6010								
7440-43-9	0	Cadmium	T	mg/L	6010								
7440-47-3	0	Chromium	T	mg/L	6010								
7440-48-4	0	Cobalt	T	mg/L	6010								
7440-50-8	0	Copper	T	mg/L	6010								
7439-89-6	0	Iron	T	mg/L	6010	0.284							
7439-92-1	0	Lead	T	mg/L	6010								
7439-97-6	0	Mercury	T	mg/L	7470								
7440-02-0	0	Nickel	T	mg/L	6010								
7782-49-2	0	Selenium	T	mg/L	7740								
740-22-4	0	Silver	T	mg/L	6010								
7440-23-5	0	Sodium	T	mg/L	6010	1340							
7440-28-0	0	Thallium	T	mg/L	6010								

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LAB ID: _____

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER ¹ , Facility Well/Spring Number						8003-8393							
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-17R							
CAS RN ⁴		Constituent	T D ⁵	Unit Measure	Method	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S
7440-62-2	0	Vanadium	T	mg/L	6010								
74440-66-6	0	Zinc	T	mg/L	6010								
108-05-4	2	Acetic acid ethenyl ester	T	mg/L	8260								
67-64-1	0	Acetone	T	mg/L	8260								
107-02-8	3	Acrolein	T	mg/L	8260								
107-13-1	0	Acrylonitrile	T	mg/L	8260								
71-43-2	0	Benzene	T	mg/L	8260								
108-90-7	1	Benzene, chloro	T	mg/L	8260								
1330-20-7	3	Benzene, Dimethyl	T	mg/L	8260								
100-42-5	1	Benzene, ethenyl	T	mg/L	8260								
108-88-3	1	Benzene, methyl	T	mg/L	8260								
74-97-5	0	Bromochloromethane	T	mg/L	8260								
75-25-4	3	Bromodichloromethane	T	mg/L	8260								
75-25-2	0	Bromoform	T	mg/L	8260								
74-83-9	0	Bromomethane	T	mg/L	8260								
78-93-3	0	2-Butanone	T	mg/L	8260								
110-57-6	0	2-Butene, 1,4-dichloro-, (E)	T	mg/L	8260								
75-15-0	0	Carbon disulfide	T	mg/L	8260								
75-00-3	0	Chloroethane	T	mg/L	8260								
67-66-3	0	Chloroform	T	mg/L	8260								

RESIDENTIAL/CONTAINED - QUARTERLY

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Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____/1

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER ¹ , Facility Well/Spring Number						8003-8393							
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-17R							
CAS RN ⁴		Constituent	T D ⁵	Unit Measure	Method	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S	Detected Value or PQL ⁵	L A G S
74-87-3	0	Chloromethane	T	mg/L	8260								
156-59-2	0	cis-1,2-Dichloroethene	T	mg/L	8260								
74-95-3	0	Dibromomethane	T	mg/L	8260								
75-71-8	0	Dichlorodifluoromethane	-	MG/L	8260								
75-34-3	0	1,1-Dichloroethane	T	mg/L	8260								
107-06-2	0	1,2-Dichloroethane	T	mg/L	8260								
75-35-4	0	1,1-Dichloroethene	T	mg/L	8260								
540-36-3	0	1,4-Difluorobenzene	-	MG/L	8260								
106-93-4	6	Ethane, 1,2-dibromo	T	mg/L	8260								
79-34-5	4	Ethane, 1,1,2,2-Tetrachloro-	T	mg/L	8260								
71-55-6	5	Ethane, 1,1,1-Trichloro-	T	mg/L	8260								
79-00-5	3	Ethane, 1,1,2-Trichloro-	T	mg/L	8260								
630-20-6	3	Ethane, 1,1,1,2-Tetrachloro-	T	mg/L	8260								
64-17-5	0	Ethanol	-	MG/L	8260								
75-01-4	2	Ethene, Chloro-	T	mg/L	8260								
110-75-8	1	Ethene, (2Chloroethoxy)-	-	MG/L	8260								
127-18-4	7	Ethene, Tetrachloro-	T	mg/L	8260								
79-01-6	5	Ethene, Trichloro-	T	mg/L	8260								
100-41-4	0	Ethylbenzene	T	mg/L	8260								
97-63-2	0	Ethyl methacrylate	-	MG/L	8260								

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: /1

LAB ID:

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APPENDIX IV

Shewhart-Cusum Control Chart / Rank Sum

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge Printed 4/14/2014, 4:11 PM

Constituent	Well	Sig.	h	SCI	N	Mean	Std. Dev.	%NDs	ND Adj.	Deseas.	Transform	Method
Chemical Oxygen Demand (mg/L)	MW-7	No	PL=129	n/a	81	n/a	n/a	24.69	None	No	No	NP Prd Lmt (normality)
Chemical Oxygen Demand (mg/L)	MW-10	No	1068	947.6	79	13.78	3.779	0	None	No	sqrt(x)	Parametric
Chemical Oxygen Demand (mg/L)	MW-13	No	4024	3347	77	6.433	1.895	2.597	None	No	x^(1/3)	Parametric
Chemical Oxygen Demand (mg/L)	MW-15R	No	PL=240	n/a	53	n/a	n/a	24.53	None	No	No	NP Prd Lmt (normality)
Chemical Oxygen Demand (mg/L)	MW-17R (bg)	No	7475	6435	12	24.03	12.48	0	None	No	sqrt(x)	Parametric
Chloride (mg/L)	MW-7	Yes	PL=912	n/a	82	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Chloride (mg/L)	MW-10	No	2314	2039	80	18.6	5.901	0	None	No	sqrt(x)	Parametric
Chloride (mg/L)	MW-13	No	PL=16000	n/a	77	n/a	n/a	1.299	None	No	No	NP Prd Lmt (normality)
Chloride (mg/L)	MW-15R	No	105.8	100.7	33	54.79	10.21	0	None	No	No	Parametric
Chloride (mg/L)	MW-17R (bg)	No	1806765	909568	12	7.544	1.373	0	None	No	ln(x)	Parametric
Iron (mg/L)	MW-7	No	PL=172	n/a	82	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Iron (mg/L)	MW-10	No	PL=56.63	n/a	79	n/a	n/a	0	None	No	No	NP Prd Lmt (normality) Deseas
Iron (mg/L)	MW-13	No	PL=8.59	n/a	77	n/a	n/a	33.77	None	No	No	NP Prd Lmt (normality)
Iron (mg/L)	MW-15R	No	196.1	160.2	54	2.02	0.7579	0	None	No	x^(1/3)	Parametric
Iron (mg/L)	MW-17R (bg)	No	102.9	87.21	12	2.107	1.607	0	None	No	sqrt(x)	Parametric
pH (SU)	MW-7	No	PL=8.5&6.62	n/a	83	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
pH (SU)	MW-10	No	PL=8.07&6.12	n/a	80	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
pH (SU)	MW-13	No	PL=8.18&5.66	n/a	78	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
pH (SU)	MW-15R	No	PL=8.54&4.5	n/a	55	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
pH (SU)	MW-17R (bg)	No	9.133&5.143	8.9...	10	7.138	0.399	0	None	No	No	Parametric
Sodium (mg/L)	MW-7	No	PL=1290	n/a	82	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Sodium (mg/L)	MW-10	No	PL=1160	n/a	79	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Sodium (mg/L)	MW-13	No	PL=4720	n/a	77	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Sodium (mg/L)	MW-15R	No	426.3	407.5	33	238.4	37.58	0	None	No	No	Parametric
Sodium (mg/L)	MW-17R (bg)	No	PL=9850	n/a	12	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Specific Conductance (umhos/cm)	MW-7	No	6401	6080	84	3193	641.6	0	None	No	No	Parametric
Specific Conductance (umhos/cm)	MW-10	No	9542	8645	81	50.63	9.41	0	None	No	sqrt(x)	Parametric
Specific Conductance (umhos/cm)	MW-13	No	PL=18600	n/a	80	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Specific Conductance (umhos/cm)	MW-15R	No	4251	4035	54	2090	432.2	0	None	No	No	Parametric
Specific Conductance (umhos/cm)	MW-17R (bg)	No	PL=20000	n/a	11	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Temperature (degree-C)	MW-7	No	24.29	23.39	74	15.28	1.801	0	None	Yes	No	Parametric
Temperature (degree-C)	MW-10	No	PL=25.91	n/a	71	n/a	n/a	0	None	No	No	NP Prd Lmt (normality) Deseas
Temperature (degree-C)	MW-13	No	PL=18.38	n/a	70	n/a	n/a	0	None	No	No	NP Prd Lmt (normality) Deseas
Temperature (degree-C)	MW-15R	No	32.15	31.4	44	10335	4582	0	None	No	x^3	Parametric
Temperature (degree-C)	MW-17R (bg)	No	23.64	22.9	11	215.1	68.73	0	None	No	x^2	Parametric
Total Dissolved Solids (mg/L)	MW-7	Yes	PL=2580	n/a	80	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Total Dissolved Solids (mg/L)	MW-10	No	5791	5289	79	42.35	6.75	0	None	No	sqrt(x)	Parametric
Total Dissolved Solids (mg/L)	MW-13	No	PL=10600	n/a	77	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Total Dissolved Solids (mg/L)	MW-15R	No	4118	3872	53	1658	492.1	0	None	No	No	Parametric
Total Dissolved Solids (mg/L)	MW-17R (bg)	No	PL=32100	n/a	12	n/a	n/a	0	None	No	No	NP Prd Lmt (normality)
Total Organic Carbon (mg/L)	MW-7	No	PL=19.4	n/a	84	n/a	n/a	4.762	None	No	No	NP Prd Lmt (normality)
Total Organic Carbon (mg/L)	MW-10	No	395.3	348.6	82	7.754	2.426	0	None	No	sqrt(x)	Parametric
Total Organic Carbon (mg/L)	MW-13	No	PL=5.3	n/a	77	n/a	n/a	51.95	None	No	No	NP Prd Lmt (NDs)
Total Organic Carbon (mg/L)	MW-15R	No	23.51	21.88	53	7.21	3.261	1.887	None	No	No	Parametric
Total Organic Carbon (mg/L)	MW-17R (bg)	No	189.5	174.9	12	43.14	29.28	0	None	No	No	Parametric
TOX [Total Organic Halides] (mg/L)	MW-7	Yes	PL=0.4	n/a	80	n/a	n/a	35	None	No	No	NP Prd Lmt (normality)
TOX [Total Organic Halides] (mg/L)	MW-10	No	PL=1	n/a	77	n/a	n/a	3.896	None	No	No	NP Prd Lmt (normality)
TOX [Total Organic Halides] (mg/L)	MW-13	No	29.66	17.09	76	-2.125	1.103	6.579	None	No	ln(x)	Parametric
TOX [Total Organic Halides] (mg/L)	MW-15R	No	PL=1	n/a	51	n/a	n/a	33.33	None	No	No	NP Prd Lmt (normality)
TOX [Total Organic Halides] (mg/L)	MW-17R (bg)	No	15.08	13.12	11	1.273	0.5221	0	None	No	sqrt(x)	Parametric

Prediction Limit

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge Printed 4/14/2014, 4:25 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Obsrv.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chemical Oxygen Demand (mg/L)	MW-7	129	n/a	2/17/2014	75.1	No	81	n/a	n/a	24.69	n/a	n/a	0.0122	NP Intra (normality)
Chemical Oxygen Demand (mg/L)	MW-10	520.3	n/a	2/17/2014	108	No	79	13.78	3.779	0	None	sqrt(x)	0.01	Param Intra
Chemical Oxygen Demand (mg/L)	MW-13	1318	n/a	2/17/2014	206	No	77	6.433	1.895	2.597	None	x^(1/3)	0.01	Param Intra
Chemical Oxygen Demand (mg/L)	MW-15R	240	n/a	2/17/2014	52.6ND	No	53	n/a	n/a	24.53	n/a	n/a	0.01852	NP Intra (normality)
Chemical Oxygen Demand (mg/L)	MW-17R	3523	n/a	2/17/2014	98.7	No	12	24.03	12.48	0	None	sqrt(x)	0.01	Param Intra
Chloride (mg/L)	MW-7	912	n/a	2/17/2014	1060	Yes	82	n/a	n/a	0	n/a	n/a	0.01205	NP Intra (normality)
Chloride (mg/L)	MW-10	1069	n/a	2/17/2014	156	No	80	18.6	5.901	0	None	sqrt(x)	0.01	Param Intra
Chloride (mg/L)	MW-13	16000	n/a	2/17/2014	5090	No	77	n/a	n/a	1.299	n/a	n/a	0.01282	NP Intra (normality)
Chloride (mg/L)	MW-15R	80.17	n/a	2/17/2014	80	No	33	54.79	10.21	0	None	No	0.01	Param Intra
Chloride (mg/L)	MW-17R	91777	n/a	2/17/2014	456	No	12	7.544	1.373	0	None	ln(x)	0.01	Param Intra
Iron (mg/L)	MW-7	172	n/a	2/17/2014	2.89	No	82	n/a	n/a	0	n/a	n/a	0.01205	NP Intra (normality)
Iron (mg/L)	MW-10	56.63	n/a	2/17/2014	3.58	No	79	n/a	n/a	0	n/a	n/a	0.0125	NP Intra (normality) ...
Iron (mg/L)	MW-13	8.59	n/a	2/17/2014	2.24	No	77	n/a	n/a	33.77	n/a	n/a	0.01282	NP Intra (normality)
Iron (mg/L)	MW-15R	57.29	n/a	2/17/2014	25.2	No	54	2.02	0.7579	0	None	x^(1/3)	0.01	Param Intra
Iron (mg/L)	MW-17R	44.27	n/a	2/17/2014	0.284	No	12	2.107	1.607	0	None	sqrt(x)	0.01	Param Intra
pH (SU)	MW-7	8.5	6.62	2/17/2014	7.41	No	83	n/a	n/a	0	n/a	n/a	0.005952	NP Intra (normality)
pH (SU)	MW-10	8.07	6.12	2/17/2014	7.37	No	80	n/a	n/a	0	n/a	n/a	0.006173	NP Intra (normality)
pH (SU)	MW-13	8.18	5.66	2/17/2014	6.99	No	78	n/a	n/a	0	n/a	n/a	0.006329	NP Intra (normality)
pH (SU)	MW-15R	8.54	4.5	2/17/2014	6.66	No	55	n/a	n/a	0	n/a	n/a	0.008929	NP Intra (normality)
pH (SU)	MW-17R	8.498	5.778	2/17/2014	8.11	No	10	7.138	0.399	0	None	No	0.005	Param Intra
Sodium (mg/L)	MW-7	1290	n/a	2/17/2014	1170	No	82	n/a	n/a	0	n/a	n/a	0.01205	NP Intra (normality)
Sodium (mg/L)	MW-10	1160	n/a	2/17/2014	567	No	79	n/a	n/a	0	n/a	n/a	0.0125	NP Intra (normality)
Sodium (mg/L)	MW-13	4720	n/a	2/17/2014	3430	No	77	n/a	n/a	0	n/a	n/a	0.01282	NP Intra (normality)
Sodium (mg/L)	MW-15R	331.8	n/a	2/17/2014	385	Yes	33	238.4	37.58	0	None	No	0.01	Param Intra
Sodium (mg/L)	MW-17R	9850	n/a	2/17/2014	1340	No	12	n/a	n/a	0	n/a	n/a	0.07692	NP Intra (normality)
Specific Conductance (umhos/cm)	MW-7	4724	n/a	2/17/2014	5097	Yes	84	3193	641.6	0	None	No	0.01	Param Intra
Specific Conductance (umhos/cm)	MW-10	5345	n/a	2/17/2014	2094	No	81	50.63	9.41	0	None	sqrt(x)	0.01	Param Intra
Specific Conductance (umhos/cm)	MW-13	18600	n/a	2/17/2014	14400	No	80	n/a	n/a	0	n/a	n/a	0.01235	NP Intra (normality)
Specific Conductance (umhos/cm)	MW-15R	3137	n/a	2/17/2014	3912	Yes	54	2090	432.2	0	None	No	0.01	Param Intra
Specific Conductance (umhos/cm)	MW-17R	20000	n/a	2/17/2014	4930	No	11	n/a	n/a	0	n/a	n/a	0.08333	NP Intra (normality)
Temperature (degree-C)	MW-7	19.6	n/a	2/17/2014	14.23	No	74	15.28	1.801	0	None	No	0.01	Param Intra Deseas
Temperature (degree-C)	MW-10	25.91	n/a	2/17/2014	16.76	No	71	n/a	n/a	0	n/a	n/a	0.01389	NP Intra (normality) ...
Temperature (degree-C)	MW-13	18.38	n/a	2/17/2014	13.56	No	70	n/a	n/a	0	n/a	n/a	0.01408	NP Intra (normality) ...
Temperature (degree-C)	MW-15R	27.82	n/a	2/17/2014	21.47	No	44	10335	4582	0	None	x^3	0.01	Param Intra
Temperature (degree-C)	MW-17R	20.34	n/a	2/17/2014	13.66	No	11	215.1	68.73	0	None	x^2	0.01	Param Intra
Total Dissolved Solids (mg/L)	MW-7	2580	n/a	2/17/2014	2830	Yes	80	n/a	n/a	0	n/a	n/a	0.01235	NP Intra (normality)
Total Dissolved Solids (mg/L)	MW-10	3420	n/a	2/17/2014	1330	No	79	42.35	6.75	0	None	sqrt(x)	0.01	Param Intra
Total Dissolved Solids (mg/L)	MW-13	10600	n/a	2/17/2014	8730	No	77	n/a	n/a	0	n/a	n/a	0.01282	NP Intra (normality)
Total Dissolved Solids (mg/L)	MW-15R	2850	n/a	2/17/2014	3620	Yes	53	1658	492.1	0	None	No	0.01	Param Intra
Total Dissolved Solids (mg/L)	MW-17R	32100	n/a	2/17/2014	3330	No	12	n/a	n/a	0	n/a	n/a	0.07692	NP Intra (normality)
Total Organic Carbon (mg/L)	MW-7	19.4	n/a	2/17/2014	1ND	No	84	n/a	n/a	4.762	n/a	n/a	0.01176	NP Intra (normality)
Total Organic Carbon (mg/L)	MW-10	183.5	n/a	2/17/2014	41.9	No	82	7.754	2.426	0	None	sqrt(x)	0.01	Param Intra
Total Organic Carbon (mg/L)	MW-13	5.3	n/a	2/17/2014	5ND	No	77	n/a	n/a	51.95	n/a	n/a	0.01282	NP Intra (NDs)
Total Organic Carbon (mg/L)	MW-15R	15.11	n/a	2/17/2014	14.5	No	53	7.21	3.261	1.887	None	No	0.01	Param Intra
Total Organic Carbon (mg/L)	MW-17R	126	n/a	2/17/2014	16.1	No	12	43.14	29.28	0	None	No	0.01	Param Intra
TOX [Total Organic Halides] (mg/L)	MW-7	0.4	n/a	2/17/2014	0.539	Yes	80	n/a	n/a	35	n/a	n/a	0.01235	NP Intra (normality)
TOX [Total Organic Halides] (mg/L)	MW-10	1	n/a	3/11/2014	0.32	No	77	n/a	n/a	3.896	n/a	n/a	0.01282	NP Intra (normality)
TOX [Total Organic Halides] (mg/L)	MW-13	1.672	n/a	2/17/2014	0.856	No	76	-2.125	1.103	6.579	None	ln(x)	0.01	Param Intra
TOX [Total Organic Halides] (mg/L)	MW-15R	1	n/a	2/17/2014	0.0286	No	51	n/a	n/a	33.33	n/a	n/a	0.01923	NP Intra (normality)
TOX [Total Organic Halides] (mg/L)	MW-17R	7.731	n/a	2/17/2014	0.351	No	11	1.273	0.5221	0	None	sqrt(x)	0.01	Param Intra

Exceeds Limit

Prediction Limit
Intrawell Non-parametric



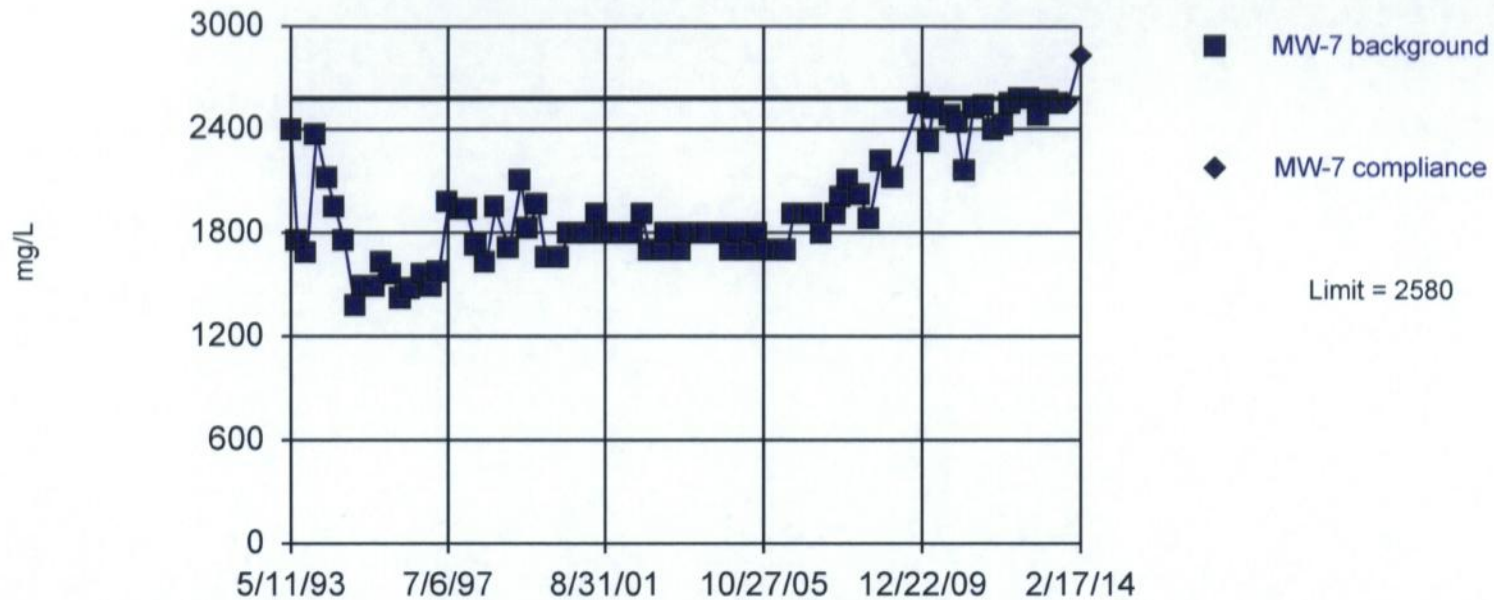
Non-parametric test used in lieu of control chart because the Shapiro Francia normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 82 background values. Report alpha = 0.01205. Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 4/14/2014 4:27 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Exceeds Limit

Prediction Limit
Intrawell Non-parametric



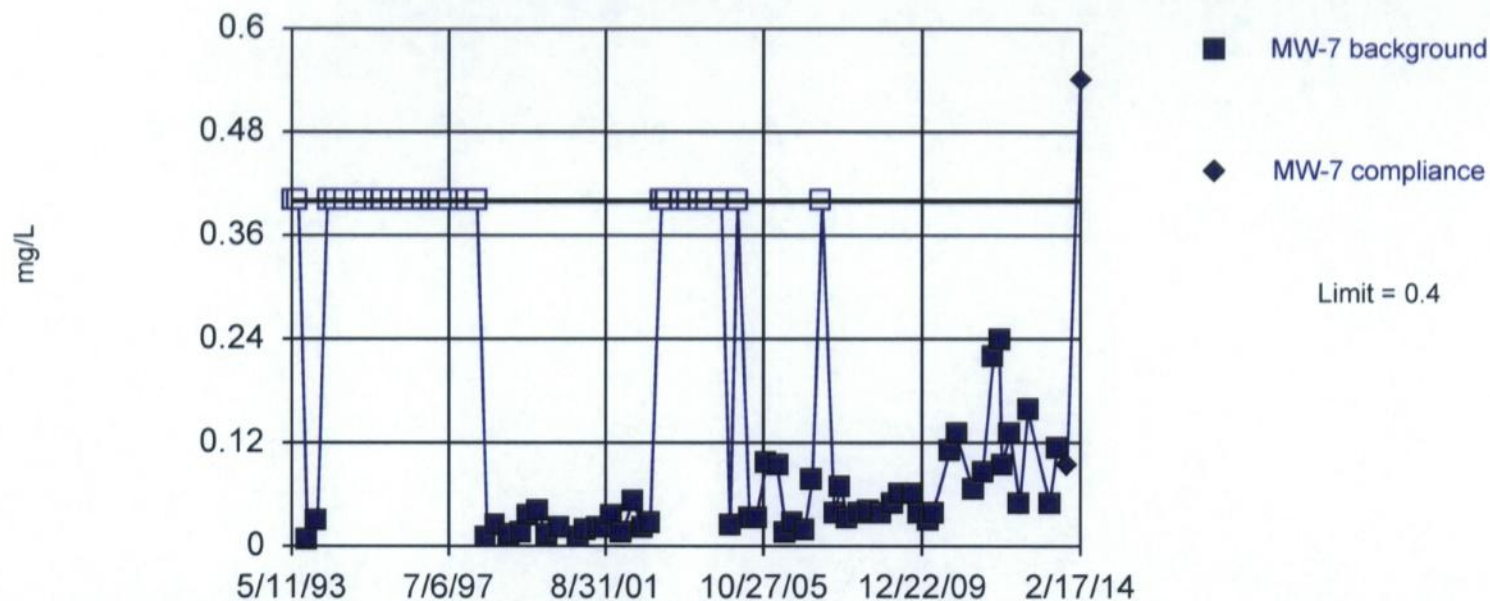
Non-parametric test used in lieu of control chart because the Shapiro Francia normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 80 background values. Report alpha = 0.01235. Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Total Dissolved Solids Analysis Run 4/14/2014 4:29 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Exceeds Limit

Prediction Limit
Intrawell Non-parametric

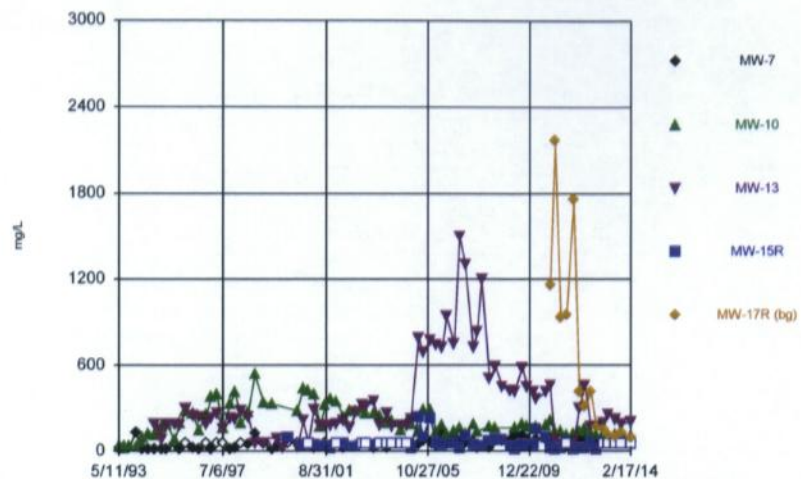


Non-parametric test used in lieu of control chart because the Shapiro Francia normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 80 background values. 35% NDs. Report alpha = 0.01235. Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: TOX [Total Organic Halides] Analysis Run 4/14/2014 4:29 PM

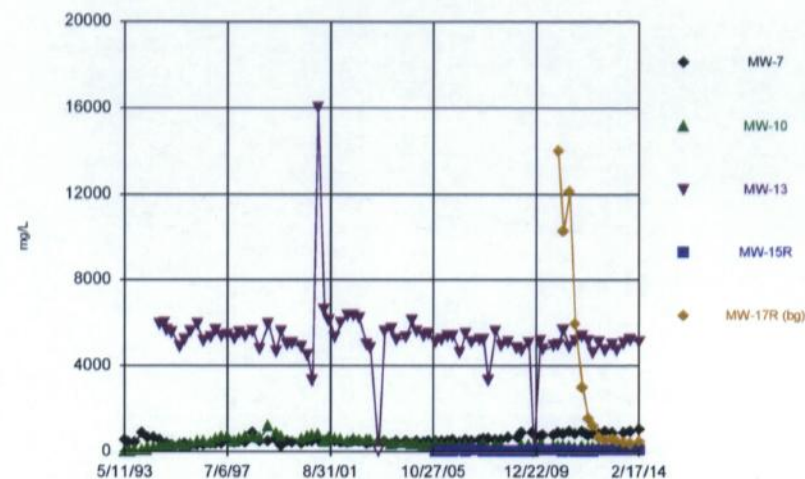
Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Time Series



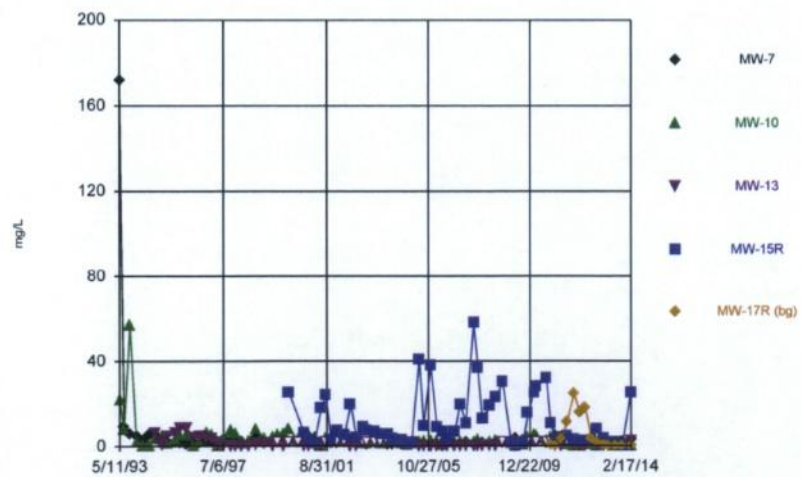
Constituent: Chemical Oxygen Demand Analysis Run 4/14/2014 4:40 PM
Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Time Series



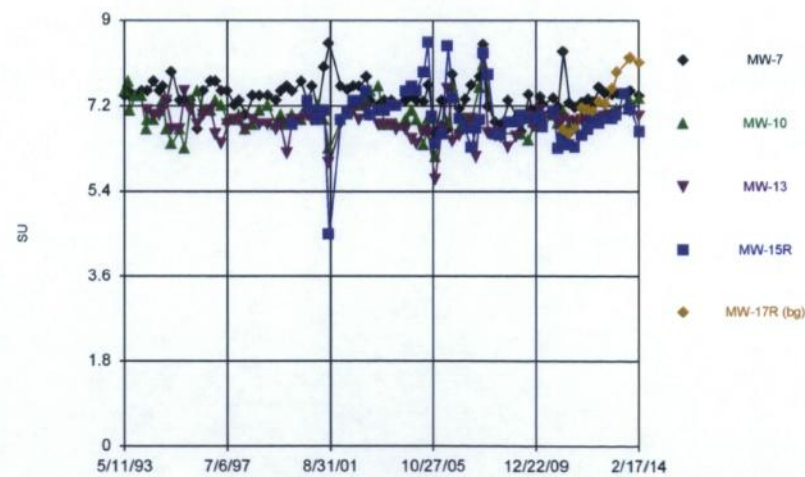
Constituent: Chloride Analysis Run 4/14/2014 4:40 PM
Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Time Series



Constituent: Iron Analysis Run 4/14/2014 4:40 PM
Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Time Series



Constituent: pH Analysis Run 4/14/2014 4:40 PM
Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Time Series

Constituent: Chemical Oxygen Demand (mg/L) Analysis Run 4/14/2014 4:40 PM
 Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	21	35			
7/16/1993	17	24			
8/4/1993		36			
10/11/1993	22	38			
1/13/1994	129	32			
3/29/1994		61			
4/20/1994	16	98			
7/13/1994	13	125			
10/12/1994	10	112	184		
12/6/1994		148			
12/23/1994			149		
1/23/1995	10	173	80		
4/13/1995	14	192	187		
8/2/1995	<52.6	76	184		
10/18/1995	11	195	176		
1/18/1996	<52.6	282	300		
4/17/1996	18	264	243		
7/17/1996	15	148	234		
11/7/1996	<52.6	256	188		
1/22/1997	10	382	229		
4/8/1997	<52.6	398	263		
7/14/1997	<52.6	162	156		
10/22/1997	12	329	228		
1/7/1998	22	414	218		
4/6/1998	<52.6	197	276		
7/14/1998	46	274	235		
10/20/1998	124	535	52		
3/3/1999	<52.6	338	57		
6/22/1999	12.4	332	<52.6		
8/31/1999	27.1		88		
11/30/1999	<52.6		21		
2/15/2000	<52.6		92	100	
6/27/2000	<52.6	283	27		
9/26/2000	39	440	210	45	
12/12/2000	<52.6	420	<52.6	<52.6	
2/27/2001	21	400	290	50	
6/6/2001	29	170	180	29	
8/15/2001	<52.6	320	180	36	
11/7/2001	41	360	180	24	
2/6/2002	<52.6	350	190	<52.6	
5/22/2002	25	240	210	57	
8/21/2002	31	280	160	29	
11/7/2002	37	280	270	28	
2/21/2003	<52.6	300	320	<52.6	
4/16/2003	<52.6	260	310	<52.6	
8/14/2003			350	44	
8/15/2003	20	260			
11/12/2003	<52.6	250	180	<52.6	
3/3/2004	24	200	260	<52.6	
5/4/2004	<52.6	210	170	<52.6	
9/21/2004	<52.6	150	180	<52.6	
12/15/2004	<52.6	200	180	<52.6	

Time Series

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Constituent: Chemical Oxygen Demand (mg/L) Analysis Run 4/14/2014 4:40 PM
 Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
2/22/2005	<52.6	190	220	22	
6/16/2005	46	140	790		
6/17/2005				240	
8/17/2005	67	290	690	100	
11/30/2005	65		770		
12/1/2005		290		230	
3/7/2006				58	
3/8/2006		140	740		
3/9/2006	40				
6/5/2006			720		
6/8/2006	110	180		48	
8/10/2006	49	120	940		
11/30/2006				53	
12/1/2006	100	140	750		
2/12/2007	61			25	
2/13/2007		160	1500		
5/14/2007	52	120	1300	105	
9/10/2007	66	190	720	49	
11/11/2007		140	830		
11/12/2007				39	
11/13/2007	24				
1/15/2008			1200	33	
5/6/2008			502		
5/7/2008	21.9	175		72.8	
8/5/2008		163	587	81.3	
8/6/2008	67.2				
11/19/2008			443	77.4	
11/20/2008	69				
3/23/2009			426		
3/24/2009	76.8			31.6	
5/20/2009	102	164	412	14.6	
9/9/2009		189	584		
9/10/2009	106			47	
11/23/2009	83.2	175	444	41.4	
2/23/2010	60.6	157	417	49.3	
4/6/2010	77.7	174	360	152	
9/13/2010	82.7	177	414	93.8	
11/17/2010			455	24.2	
11/18/2010	88.3	211			1160
1/27/2011		140	68	11.8	
1/28/2011	17.3				2170
4/29/2011	28	135	45.7	19.9	933
7/26/2011		116	64.6	<52.6	946
7/27/2011	26.3				
11/10/2011	21.2	125	50.6	11.7	1760
1/31/2012	85.8	140	300		414
2/1/2012				17	
4/17/2012	77.2	157	458	19.8	312
7/17/2012	77.5	131	169	51.3	410
10/4/2012	60.8	116	168	11.3	175
1/24/2013	57.6	117	196	<52.6	151
4/4/2013	50.8	105	257	<52.6	112

Time Series

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Constituent: Chemical Oxygen Demand (mg/L) Analysis Run 4/14/2014 4:40 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
7/11/2013	53	112	220	<52.6	103
10/14/2013	65.4	114	189	<52.6	128
2/17/2014	75.1	108	206	<52.6	98.7

Time Series

Constituent: Chloride (mg/L) Analysis Run 4/14/2014 4:40 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	554	19			
7/16/1993	438	30			
8/4/1993		35			
10/11/1993	435	79			
1/13/1994	842	92			
3/29/1994		95			
4/20/1994	622	179			
7/13/1994	639	214			
10/12/1994	519	236	5910		
12/6/1994		211			
12/23/1994			5990		
1/23/1995	347	274	5630		
4/13/1995	331	297	5520		
8/2/1995	287	352	4890		
10/18/1995	386	238	5200		
1/18/1996	329	372	5610		
4/17/1996	314	490	5910		
7/17/1996	307	474	5170		
11/7/1996	336	438	5330		
1/22/1997	358	598	5650		
4/8/1997	364	722	5360		
7/14/1997	600	718	5430		
10/22/1997	397	479	5250		
1/7/1998	457	572	5570		
4/6/1998	435	713	5400		
7/14/1998	889	674	5600		
10/20/1998	452	614	4790		
3/3/1999	484	1180	5940		
6/22/1999	522	850	4660		
8/31/1999	262	718	5590		
11/30/1999	479		5010		
2/15/2000	409		5040		
6/27/2000	377	564	4850		
9/26/2000	460	710	4500		
12/12/2000	480	770	3300		
2/27/2001	530	800	16000		
6/6/2001	470	500	6600		
8/15/2001	570	650	6100		
11/7/2001	450	610	5300		
2/6/2002	410	600	6000		
5/22/2002	430	460	6300		
8/21/2002	520	570	6300		
11/7/2002	470	520	6200		
2/21/2003	370	530	5000		
4/16/2003	390	530	4800		
8/14/2003			<10		
8/15/2003	390	510			
11/12/2003	450	480	5600		
3/3/2004	380	370	5700		
5/4/2004	450	410	5200		
9/21/2004	470	430	5300		
12/15/2004	380	370	6100		

Time Series

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Constituent: Chloride (mg/L) Analysis Run 4/14/2014 4:40 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
2/22/2005	470	360	5600		
6/16/2005	430	310	5400		
8/17/2005	450	330	5500		
11/30/2005	470		5100		
12/1/2005		390		46	
3/7/2006				36	
3/8/2006		330	5200		
3/9/2006	490				
6/5/2006			5400		
6/6/2006	470	310		45	
8/10/2006	510	290	5400	39	
11/30/2006				63	
12/1/2006	420	230	4600		
2/12/2007	530			48	
2/13/2007		290	5500		
5/14/2007	470	260	5100	64	
7/23/2007				79	
9/10/2007	520	230	5200	56	
11/11/2007		340	5200		
11/12/2007				55	
11/13/2007	560				
1/15/2008	560		3300	44	
5/6/2008			5620		
5/7/2008	524	288		48.2	
8/5/2008		267	4940	48	
8/6/2008	525				
11/19/2008			5080	54	
11/20/2008	640				
3/23/2009			4820		
3/24/2009	627			42.3	
5/20/2009	873	294	4720	41.5	
9/9/2009		299	5020		
9/10/2009				49.8	
10/21/2009	883				
11/23/2009	783	28.1	49.5	57.1	
2/23/2010	699	286	5150	69.6	
4/6/2010	732	269	4750	72	
9/13/2010	775	272	4950	69.3	
11/17/2010			4990	62.8	
11/18/2010	843	270			14000
1/27/2011		267	5640	54	
1/28/2011	830				10300
4/29/2011	895	234	4870	64.5	12100
7/26/2011		211	5150	46.4	5950
7/27/2011	792				
11/10/2011	912	242	5370	48.6	3000
1/5/2012	797				
1/31/2012	767	217	5150		1540
2/1/2012				52.4	
4/17/2012	806	212	4580	50.8	1210
7/17/2012	830	131	5110	56.3	622
10/4/2012	910	140	4700	58.5	517

Time Series

Page 3

Constituent: Chloride (mg/L) Analysis Run 4/14/2014 4:40 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
1/24/2013	869	157	5000	62.8	576
4/4/2013		161	4700	60.8	490
7/11/2013	859	157	5040	63.4	392
10/14/2013	933	153	5220	62.2	382
2/17/2014	1050	156	5090	80	456

Time Series

Constituent: iron (mg/L) Analysis Run 4/14/2014 4:40 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	172	21.8			
7/16/1993	9.2	8.3			
10/11/1993	5.7	56.9			
1/13/1994	4.6	2.06			
4/20/1994	2.6	0.295			
7/13/1994	5.3	0.234			
10/12/1994	5.3	3.51	6.43		
12/23/1994			1.7		
1/23/1995	1.7	4.95	0.561		
4/13/1995	2	1.67	4.89		
8/2/1995	1.7	2.87	6.17		
10/18/1995	1.4	4.8	8.41		
1/18/1996	1.1	4.77	8.59		
4/17/1996	1.6	0.477	4.19		
7/17/1996	1.5	2.09	4.47		
11/7/1996	2.1	6.54	3.75		
1/22/1997	2	5.15	3.77		
4/8/1997	1.9	0.33	0.667		
7/14/1997	3.1	2.92	0.178		
10/22/1997	2	7.29	0.388		
1/7/1998	3.5	5.76	0.339		
4/6/1998	1.8	1.37	0.356		
7/14/1998	1.3	2.61	0.292		
10/20/1998	4.3	7.9	0.56		
3/3/1999	1.4	3.7	1.2		
6/22/1999	3.3	4	0.21		
8/31/1999	1.8	5.5	<2		
11/30/1999	2.5	6.1	0.12		
2/15/2000	2.1	7.9	<2	25.6	
6/27/2000	1.9	3.1	<2		
9/26/2000	1.7	4.8	0.1	6.2	
12/12/2000	1.5	5.4	0.092	3.2	
2/27/2001	2	4.1	0.59	1.5	
6/6/2001	1.7	0.42	0.083	18	
8/15/2001	1.6	3.4	<2	24	
11/7/2001	1.3	4.1	<2	2.8	
2/6/2002	1.3	4	<2	7.3	
5/22/2002	2.9	3	<2	5.3	
8/21/2002	1.3	2.7	0.03	20	
11/7/2002	1	3.1	0.02	4.2	
2/21/2003	1.3	1.3	<2	9	
4/16/2003	0.61	1.6	<2	7.6	
8/14/2003			<2	6.8	
8/15/2003	1.7	2			
11/12/2003	1.3	1.5	<2	6	
3/3/2004	0.94	2	<2	6	
5/4/2004	0.88	1.7	<2	3.4	
9/21/2004	0.85	1.5	<2	3.2	
12/15/2004	1.5	1.6	<2	0.7	
2/22/2005	1.2	1.6	<2	1.5	
6/16/2005	0.79	2.2	0.021		
6/17/2005				41	

Time Series

Page 2

Constituent: Iron (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
8/17/2005	0.89	2.3	0.039	10	
11/30/2005	0.62		0.08		
12/1/2005		2.4		38	
3/7/2006				9.2	
3/8/2006		2.3	0.28		
3/9/2006	0.98				
6/5/2006			0.12		
6/8/2006	1.2	1		6.9	
8/10/2006	0.79	2.5	0.23	3	
11/30/2006				7.2	
12/1/2006	0.93	2	0.098		
2/12/2007	1.5			20	
2/13/2007		2.1	0.058		
5/14/2007	1.8	2.1	0.046	11	
9/10/2007	0.62	2.2	0.077	58	
11/11/2007		2.8	0.083		
11/12/2007				37	
11/13/2007	1				
1/15/2008	1.3		0.095	13	
5/6/2008			0.042		
5/7/2008	1.49	1.96		19	
8/5/2008		2.53	0.1	23	
8/6/2008	1.58				
11/19/2008			<2	30.4	
11/20/2008	1.5				
3/23/2009			<2		
3/24/2009	1.39			1.3	
5/20/2009	3.51	1.09	0.071	0.193	
9/9/2009		1.02	<2		
9/10/2009	2.66			1.24	
11/23/2009	2.32	4.25	<2	15.8	
2/23/2010	2.16	5.16	<2	25.2	
4/6/2010	2.1	4.67	<2	28.2	
9/13/2010	1.64	2.66	<2	32.1	
11/17/2010			<2	10.8	
11/18/2010	1.7	4.43			0.585
1/27/2011		5.4	0.13	3.1	
1/28/2011	1.1				0.53
4/29/2011	2.2	1.7	0.079	4	3.4
7/26/2011		0.84	<2	4.5	11.5
7/27/2011	1.5				
11/10/2011	2.2	0.43	0.16	3.2	24.9
1/31/2012	1.19	0.477	0.051		15.7
2/1/2012				2	
4/17/2012	2.05	0.583	0.091	2.33	17.9
7/17/2012	1.78	0.716	<2	2.6	3.58
10/4/2012	1.8	0.276	0.0377	7.93	2.06
1/24/2013	2.02	2.23	0.193	3.44	0.928
4/4/2013	2.14	1.57	0.253	1.86	0.336
7/11/2013	1.36	0.455	0.142	1.89	0.248
10/14/2013	1.97	0.315	0.17	0.133	0.156
2/17/2014	2.89	0.319	2.24	25.2	0.284

Time Series

Constituent: pH (SU) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	7.4	7.5			
7/16/1993	7.5	7.7			
8/4/1993	7.4	7.1			
10/11/1993	7.4	7.4			
1/13/1994	7.5	7.4			
3/29/1994		6.7			
4/20/1994	7.5	6.9	7.1		
7/13/1994	7.7	6.9	7		
10/12/1994	7.5	7.1	7		
12/6/1994	7.6	7.3	7.1		
1/23/1995	7.3	6.7	7.3		
4/13/1995	7.9	6.4	6.7		
8/2/1995	7.3	6.7	6.7		
10/18/1995	7.3	6.3	7.5		
1/18/1996	7.3	7.3	7.1		
4/17/1996	6.7	7.5	6.8		
7/17/1996	7.5	7.1	7		
11/7/1996	7.7	7.1	7.1		
1/22/1997	7.7	7.3	6.6		
4/8/1997	7.5	7.2	6.4		
7/14/1997	7.5	6.9	6.8		
10/22/1997	7.2	6.9	6.9		
1/7/1998	7.3	7	6.9		
4/6/1998	7	6.7	6.7		
7/14/1998	7.4	6.8	6.9		
10/20/1998	7.4	7.1	6.8		
3/3/1999	7.4	7.2	6.8		
6/22/1999	7.3	6.8	6.7		
8/31/1999	7.5	7	6.8		
11/30/1999	7.6	6.8	6.2		
2/15/2000	7.5	7	6.9	6.8	
6/27/2000	7.7	6.9	6.9		
9/26/2000	7.3	7.1	7	7.3	
12/12/2000	7.6	7	6.9	7.1	
2/27/2001	7.1	7.2	6.9	6.9	
6/6/2001	8	6.9	7	7.1	
8/15/2001	8.5	6.3	6	4.5	
2/6/2002	7.6	6.9	6.8	6.9	
5/22/2002	7.54	7.04	7.07	7.06	
8/21/2002	7.6	7.2	7.1	7.3	
11/7/2002	7.6	7.2	6.9	7.3	
2/21/2003	7.8	7.3	7.1	7.5	
4/16/2003	7.3	7.5	7	7	
8/14/2003			6.8	7.1	
8/15/2003	7.2	7.6			
11/12/2003	7.3	6.8	6.8	7.1	
3/3/2004	7.3	6.8	6.8	7.2	
5/4/2004	7.2	6.8	6.7	7.2	
9/21/2004	7.3	6.9	6.7	7.5	
12/15/2004	7.4	7.1	6.5	7.6	
2/22/2005	7.3	6.9	6.4	7.5	
6/16/2005	7.28	6.37	6.69		

Time Series

Page 2

Constituent: pH (SU) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
6/17/2005				7.92	
8/17/2005	7.64	6.94	6.53	8.54	
10/12/2005				6.98	
11/30/2005	6.62		5.66		
12/1/2005		6.12		6.41	
3/7/2006				6.6	
3/8/2006		6.78	6.72		
3/9/2006	7.3				
6/5/2006			7.55		
6/6/2006	6.7	6.84		8.46	
8/10/2006	7.85	7.6	6.46	7.37	
11/30/2006				6.92	
12/1/2006	7.12	6.71	6.57		
2/12/2007	7.33			6.72	
2/13/2007		6.94	6.77		
5/14/2007	7.63	6.89	6.92	6.33	
7/23/2007			6.13	6.72	
9/10/2007	7.8	7.59		6.9	
11/11/2007		8.07	8.18		
11/12/2007				8.31	
11/13/2007	8.49				
1/15/2008	7.19		6.62	7.86	
5/6/2008			6.58		
5/7/2008	6.85	6.65		6.6	
7/24/2008			6.56		
8/5/2008		6.64	6.63	6.58	
8/6/2008	6.8				
11/19/2008			6.32	6.85	
11/20/2008	7.3				
3/23/2009			6.55		
3/24/2009	6.96			6.86	
5/29/2009	6.65	6.6	6.8	7.01	
9/9/2009		6.48	6.97		
9/10/2009	7.44			6.94	
10/21/2009	7.1				
11/23/2009	6.99	6.85	6.75	6.92	
2/23/2010	7.39	6.79	7.1	6.98	
4/6/2010	7.23	6.93	6.97	6.76	
9/13/2010	7.37	7.01	7.02	7.07	
11/17/2010			6.84	6.31	
11/18/2010	7.18	6.83			
1/27/2011		7.07	6.94	6.52	
1/28/2011	8.34				6.71
4/29/2011	7.26	6.78	6.89	6.37	6.6
7/26/2011		6.73	6.86	6.34	6.73
7/27/2011	7.16				
11/10/2011	7.26	6.95	6.91	6.59	7.16
1/31/2012	7.33	6.95	6.87		7.11
2/1/2012				6.71	
4/17/2012	7.29	6.98	6.89	6.91	7.09
7/17/2012	7.58	6.84	6.94	6.84	7.29
10/4/2012	7.47	7	6.98	6.92	7.23

Time Series

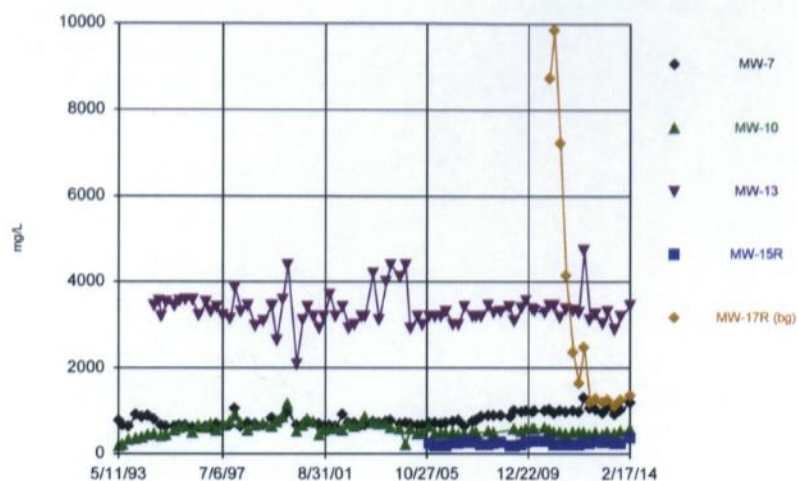
Page 3

Constituent: pH (SU) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
1/24/2013	7.44	7.03	7.01	6.92	7.56
4/4/2013	7.45	7.14	7.02	7	7.9
7/11/2013				7.46	
10/14/2013	7.52	7.29	7.1	7.13	8.2
2/17/2014	7.41	7.37	6.99	6.66	8.11

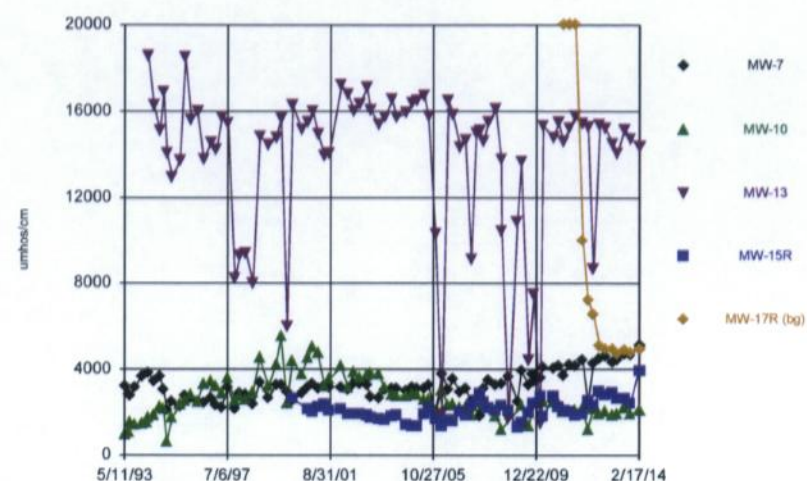
Time Series



Constituent: Sodium Analysis Run 4/14/2014 4:40 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

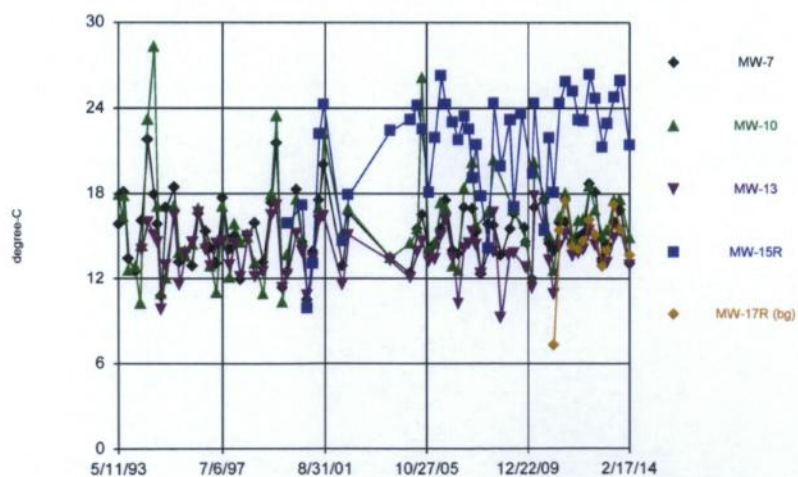
Time Series



Constituent: Specific Conductance Analysis Run 4/14/2014 4:40 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

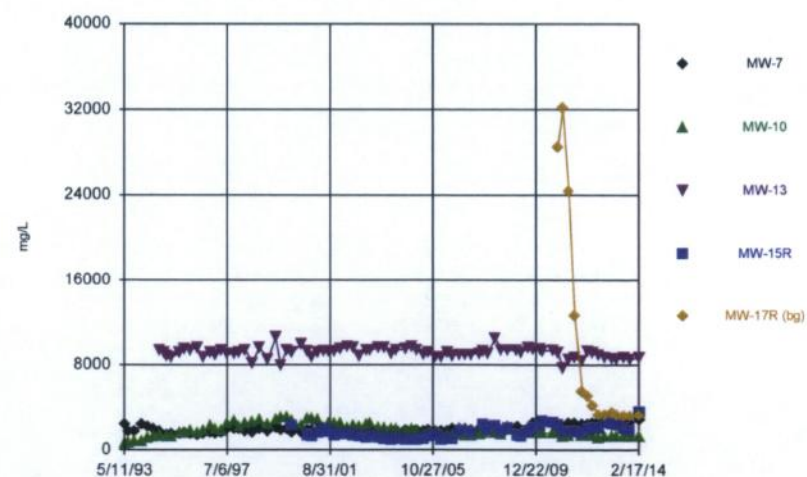
Time Series



Constituent: Temperature Analysis Run 4/14/2014 4:40 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Time Series



Constituent: Total Dissolved Solids Analysis Run 4/14/2014 4:40 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Time Series

Constituent: Sodium (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	773	194			
7/16/1993	659	216			
10/11/1993	622	327			
1/13/1994	895	342			
4/20/1994	844	363			
7/13/1994	872	420			
10/12/1994	783	458	3450		
12/23/1994			3550		
1/23/1995	651	407	3200		
4/13/1995	624	444	3510		
8/2/1995	619	545	3440		
10/18/1995	652	585	3560		
1/18/1996	668	623	3580		
4/17/1996	594	477	3580		
7/17/1996	596	643	3230		
11/7/1996	637	606	3510		
1/22/1997	596	686	3310		
4/8/1997	672	557	3420		
7/14/1997	660	658	3230		
10/22/1997	653	743	3120		
1/7/1998	1050	882	3860		
4/6/1998	620	702	3310		
7/14/1998	701	550	3440		
10/20/1998	683	666	2980		
3/3/1999	649	670	3090		
6/22/1999	820	639	3430		
8/31/1999	726	732	2630		
11/30/1999	808	839	3580		
2/15/2000	956	1160	4400		
6/27/2000	664	521	2080		
9/26/2000	650	650	3100		
12/12/2000	760	790	3400		
2/27/2001	700	750	3200		
6/6/2001	670	430	2900		
8/15/2001	640	540	3200		
11/7/2001	660	580	3700		
2/6/2002	630	580	3200		
5/22/2002	910	550	3400		
8/21/2002	710	670	2900		
11/7/2002	700	620	3000		
2/21/2003	650	720	3200		
4/16/2003	660	840	3200		
8/14/2003			4200		
8/15/2003	750	710			
11/12/2003	700	680	3100		
3/3/2004	730	670	4000		
5/4/2004	770	610	4400		
9/21/2004	680	580	4100		
12/15/2004	710	210	4400		
2/22/2005	690	560	2900		
6/16/2005	660	460	3200		
8/17/2005	660	490	3000		

Time Series

Page 2

Constituent: Sodium (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
11/30/2005	700		3200		
12/1/2005		640		240	
3/7/2006				190	
3/8/2006		450	3200		
3/9/2006	710				
6/5/2006			3200		
6/6/2006	690	450		180	
8/10/2006	700	460	3300	190	
11/30/2006				240	
12/1/2006	750	480	3000		
2/12/2007	760			230	
2/13/2007		440	3000		
5/14/2007	640	450	3400	260	
7/23/2007				280	
9/10/2007	730	480	3200	270	
11/11/2007		500	3200		
11/12/2007				270	
11/13/2007	760				
1/15/2008	840		3200	210	
5/6/2008			3440		
5/7/2008	875	513		202	
8/5/2008		498	3280	245	
8/6/2008	868				
11/19/2008			3310	251	
11/20/2008	879				
3/23/2009			3400		
3/24/2009	850			179	
5/20/2009	978	566	3070	193	
9/9/2009		525	3390		
9/10/2009	966			196	
11/23/2009	994	566	3550	264	
2/23/2010	960	567	3360	293	
4/6/2010	976	568	3340	297	
9/13/2010	1000	595	3270	304	
11/17/2010			3440	295	
11/18/2010	1010	537			8740
1/27/2011		500	3440	210	
1/28/2011	930				9850
4/29/2011	1000	491	3160	219	7240
7/26/2011		467	3350	202	4140
7/27/2011	952				
11/10/2011	985	487	3320	206	2340
1/31/2012	964	494	3270		1640
2/1/2012				218	
4/17/2012	1290	486	4720	235	2470
7/17/2012	1050	429	3100	238	1180
10/4/2012	1030	476	3240	280	1260
1/24/2013	936	442	3030	270	1170
4/4/2013	1060	495	3310	280	1250
7/11/2013	915	454	2870	229	1110
10/14/2013	1020	506	3180	234	1250
2/17/2014	1170	567	3430	385	1340

Time Series

Constituent: Specific Conductance (umhos/cm) Analysis Run 4/14/2014 4:41 PM
 Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	3190	966			
7/16/1993	2830	1080			
8/4/1993	2740	1510			
10/11/1993	3160	1400			
1/13/1994	3670	1450			
3/29/1994		1532			
4/20/1994	3840	1730	18600		
7/13/1994	3440	1870	16300		
10/12/1994	3640	2280	15100		
12/6/1994	3050	2130	16900		
1/23/1995	2080	665	14060		
4/13/1995	2470	1745	12980		
8/2/1995	2260	2340	13730		
10/18/1995	2750	2560	18530		
1/18/1996	2630	2820	15620		
4/17/1996	2470	2480	16030		
7/17/1996	2420	3340	13780		
11/7/1996	2670	3400	14580		
1/22/1997	2310	3210	14250		
4/8/1997	2200	2870	15720		
7/14/1997	3170	3580	15450		
10/22/1997	2170	2530	8200		
1/7/1998	2890	2750	9290		
4/6/1998	2840	2610	9410		
7/14/1998	2370	2920	8020		
10/20/1998	3350	4530	14860		
3/3/1999	2650	3220	14460		
6/22/1999	3260	4220	14780		
8/31/1999	3250	5520	15690		
11/30/1999	2950	2430	5980		
2/15/2000	2520	4400	16290	2650	
6/27/2000	2860	3770	15170		
9/26/2000	3150	4530	15530	2140	
12/12/2000	3340	5060	16040	2060	
2/27/2001	3070	4750	14970	2230	
6/6/2001	3180	3210	13930	2350	
8/15/2001	3160	3540	14090	2070	
2/6/2002	3170	4125	17240	2160	
5/22/2002	3020	3140	16770	1907	
8/21/2002	3330	3890	16010	1941	
11/7/2002	3330	3590	16340	1940	
2/21/2003	3240	3690	17110	1869	
4/16/2003	2720	3810	16100	1742	
8/14/2003			15380	1710	
8/15/2003	2670	3740			
11/12/2003	3040	3150	15760	1652	
3/3/2004	3110	2820	16550	1783	
5/4/2004	3100	2750	15730	1840	
9/21/2004	2990	2770	15940	1412	
12/15/2004	3120	2850	16380	1384	
2/22/2005	3080	2820	16500	1370	
6/16/2005	3114	2584	16760		

Time Series

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Constituent: Specific Conductance (umhos/cm) Analysis Run 4/14/2014 4:41 PM
 Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
6/17/2005				1907	
8/17/2005	3261	2601	15770	2184	
11/30/2005	2014		10325		
12/1/2005		2025		1672	
3/7/2006				1390	
3/8/2006		3010	1940		
3/9/2006	3750				
6/5/2006			16545		
6/6/2006	3034	2330		1616	
8/10/2006	3523	2393	15837	1575	
11/30/2006				2011	
12/1/2006	2936	2197	14336		
2/12/2007	3103			1843	
2/13/2007		2216	14681		
5/14/2007	2524	1872	9087	2320	
7/23/2007			15010	2531	
9/10/2007	1794	2519	15129	2890	
11/11/2007		2311	14601		
11/12/2007				2496	
11/13/2007	3084				
1/15/2008	3465		15516	2213	
5/6/2008			16110		
5/7/2008	3273	1808		2101	
7/24/2008			13792		
8/5/2008		1209	10432	2298	
8/6/2008	3301				
11/19/2008			1699	2070	
11/20/2008	3660				
3/23/2009			10899		
3/24/2009	2488			1310	
5/20/2009	3919	2299	13669	1536	
9/9/2009		1347	4449		
9/10/2009	3274			1954	
10/21/2009	3768				
11/23/2009	3413	2396	7502	2429	
2/23/2010	3580	2480	1455	2760	
4/6/2010	4090	2500	15340	1820	
9/13/2010	4040	2480	14780	2730	
11/17/2010			15490	2250	
11/18/2010	4160	2430			
1/27/2011		2020	14620	2100	
1/28/2011	3730				20000
4/29/2011	4230	2090	15250	2060	20000
7/26/2011		2090	15790	1870	20000
7/27/2011	4140				
11/10/2011	4430	2150	15460	1930	9980
1/31/2012	2390	1220	15290		7210
2/1/2012				2510	
4/17/2012	4240	2140	8640	2310	6550
7/17/2012	4510	1930	15410	2970	5070
10/4/2012	4600	2010	15210	2840	4940
1/24/2013	4290	1840	14530	2920	4910

Time Series

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Constituent: Specific Conductance (umhos/cm) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
4/4/2013	4430	1930	14040	2620	4710
7/11/2013	4729	2210	15180	2625	4870
10/14/2013	4661	1925	14760	2446	4753
2/17/2014	5097	2094	14400	3912	4930

Time Series

Constituent: Temperature (degree-C) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	15.8	17.9			
7/16/1993	16.1	16.3			
8/4/1993	18.1	17.8			
10/11/1993	13.4	12.6			
1/13/1994	12.5	12.8			
3/29/1994		10.2			
4/20/1994	16.1	14.3	14.1		
7/13/1994	21.8	23.2	16		
10/12/1994	17.9	28.3	15.1		
12/6/1994	15.8	17.1	14.6		
1/23/1995	10.7	10.9	9.8		
4/13/1995	17	12	13		
8/2/1995	18.4	17.1	16.5		
10/18/1995	13.2	13.8	11.6		
1/18/1996	13.9	13.6	13.8		
4/17/1996	12.9	14.4	14.6		
7/17/1996	16.6	16.9	16.7		
11/7/1996	15.3	14.5	14.1		
1/22/1997	14.2	12.9	12.9		
4/8/1997	13.1	11	14.5		
7/14/1997	17.7	17.1	14.7		
10/22/1997	14.1	12.1	13		
1/7/1998	15	15.8	14.5		
4/6/1998	11.9	14.6	12.2		
7/14/1998	15.1	14.9	15		
10/20/1998	15.9	13.1	12.2		
3/3/1999	13.2	10.9	12.5		
6/22/1999	17.3	17.9	16.5		
8/31/1999	21.5	23.4	17.2		
11/30/1999	11.3	10.3	11.3		
2/15/2000	12.5	13.7	12.3	15.9	
6/27/2000	18.3	17.6	15.2		
9/26/2000	14.6	14.7	13.9	17.2	
12/12/2000	10.5	10.4	10.8	9.9	
2/27/2001	13.9	13.5	13.4	13.1	
6/6/2001	17.5	17	16.1	22.2	
8/15/2001	20	22.2	16.4	24.3	
5/22/2002	12.9	15.2	11.6	14.7	
8/21/2002	16.6	16.9	15.1	17.9	
5/4/2004	13.5	13.5	13.3	22.4	
2/22/2005	12.4	14.5	12.1	23.2	
6/16/2005	15.46	15.47	13.94		
6/17/2005				24.18	
8/17/2005	16.52	26.1	14.7	22.48	
11/30/2005	13.91		13.25		
12/1/2005		14.09		18.11	
3/7/2006				21.9	
3/8/2006		14.5	13.4		
3/9/2006	14.4				
6/5/2006			15.02		
6/6/2006	15.49	17.3		26.28	
8/10/2006	17.5	17	16.21	24.26	

Time Series

Page 2

Constituent: Temperature (degree-C) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
11/30/2006				23.01	
12/1/2006	14.03	12.94	13.5		
2/12/2007	13.76			21.78	
2/13/2007		12.61	10.25		
5/14/2007	17.04	18.37	14.15	23.4	
7/23/2007			14.49	22.54	
9/10/2007	16.9	20.2	15.3	19.1	
11/11/2007		15.73	14.39		
11/12/2007				21.47	
11/13/2007	15.26				
1/15/2008	12.32		12.38	17.87	
5/6/2008			14		
5/7/2008	15.8	16.7		14.2	
7/24/2008			13.93		
8/5/2008		20.31	16.63	24.32	
8/6/2008	15.76				
11/19/2008			9.2	19.9	
11/20/2008	13.7				
3/23/2009			13.64		
3/24/2009	15.5			23.2	
5/20/2009	16.6	16.86	13.79	17.1	
9/10/2009				23.6	
10/21/2009	15.56				
11/23/2009	14.6	14.7	12.8		
2/23/2010	12	12	11.3	19.4	
4/6/2010	17	20.2	17.8	24.4	
9/13/2010	17.6	17.7	15.5	15.4	
11/17/2010			13.3	21.9	
11/18/2010	14.5	15.1			
1/27/2011		12.6	10.9	18.1	
1/28/2011	14				7.3
4/29/2011	15.9	16.3	14.3	24.4	15.4
7/26/2011		18	15.2	25.9	17.5
7/27/2011	16				
11/10/2011	14.4	14.8	13.7	25.2	14.3
1/31/2012	14.9	16.1	13.8		14.1
2/1/2012				23.2	
4/17/2012	15.2	16.2	14.1	23.1	14.7
7/17/2012	18.7	18.5	15.4	26.4	16.2
10/4/2012	18.1	16.8	14.4	24.7	15.1
1/24/2013	13.4	15	12.9	21.3	12.9
4/4/2013	14.4	15.4	13.2	22.9	14
7/11/2013	15.98	17.53	14.9	24.79	17.24
10/14/2013	16.85	17.57	15.38	25.93	15.52
2/17/2014	13.08	14.9	12.98	21.47	13.66

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	2400	661			
7/16/1993	1750	746			
10/11/1993	1680	867			
1/13/1994	2370	890			
4/20/1994	2120	1140			
7/13/1994	1950	1260			
10/12/1994	1750	1440	9400		
12/23/1994			9190		
1/23/1995	1370	1260	8880		
4/13/1995	1480	1280	8740		
8/2/1995	1490	1640	9180		
10/18/1995	1620	1650	9540		
1/18/1996	1550	1860	9420		
4/17/1996	1410	1640	9640		
7/17/1996	1470	1840	8720		
11/7/1996	1560	2250	9230		
1/22/1997	1480	2000	8950		
4/8/1997	1570	1790	9380		
7/14/1997	1980	2540	9060		
10/22/1997	1930	2700	9080		
1/7/1998	1930	2180	9150		
4/6/1998	1720	2550	9390		
7/14/1998	1630	2630	8170		
10/20/1998	1940	2810	9670		
3/3/1999	1710	2390	8550		
6/22/1999	2100	2820	10600		
8/31/1999	1820	3100	7990		
11/30/1999	1960	3090	9450		
2/15/2000	1660	2700	9200	2290	
6/27/2000	1650	2260	9950		
9/26/2000	1800	3000	9300	1400	
12/12/2000	1800	2900	8800	1300	
2/27/2001	1800	2800	9200	1800	
6/6/2001	1900	2100	9300	2000	
8/15/2001	1800	2500	9300	1700	
11/7/2001	1800	2500	9300	1400	
2/6/2002	1800	2500	9500	1500	
5/22/2002	1800	2100	9700	1500	
8/21/2002	1900	2300	9600	1400	
11/7/2002	1700	2200	8900	1300	
2/21/2003	1700	2400	9400	1200	
4/16/2003	1800	2500	9400	1300	
8/14/2003			9600	1200	
8/15/2003	1700	2100			
11/12/2003	1800	2100	9600	1100	
3/3/2004	1800	2000	9100	1000	
5/4/2004	1800	2000	9400	1100	
9/21/2004	1800	1800	9500	960	
12/15/2004	1700	1900	9700	930	
2/22/2005	1800	1800	9400	910	
6/16/2005	1700	1500	9000		
6/17/2005				1100	

Time Series

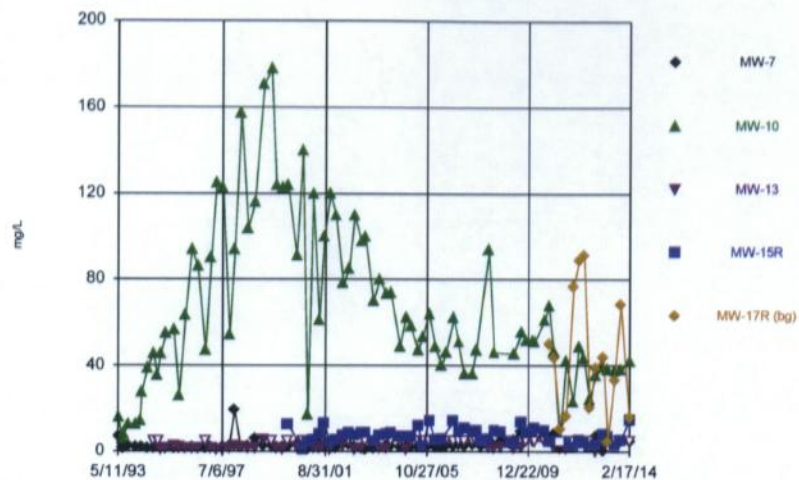
Page 2

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

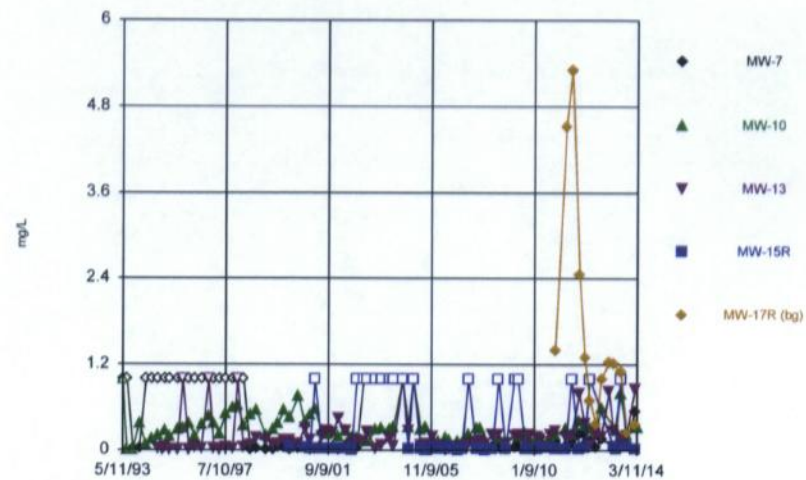
	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
8/17/2005	1800	1600	9200	1300	
11/30/2005	1700		8800		
12/1/2005		1700		1400	
3/7/2006				1000	
3/8/2006		1400	8800		
3/9/2006	1700				
6/5/2006			9200		
6/6/2006	1700	1400		1100	
8/10/2006	1900	1400	8900	1100	
11/30/2006				1800	
12/1/2006	1900	1500	9000		
2/12/2007	1900			1700	
2/13/2007		1400	9000		
5/14/2007	1800	1400	9000	1600	
9/10/2007	1900	1500	9100		
11/11/2007		1600	9300		
11/12/2007				2400	
11/13/2007	2000				
1/15/2008	2100		9100	1800	
5/6/2008			10500		
5/7/2008	2010	1560		2230	
8/5/2008		1490	9440	1710	
8/6/2008	1870				
11/19/2008			9430	2010	
11/20/2008	2210				
3/23/2009			9380		
3/24/2009	2120			1340	
5/20/2009		1640	9220	1320	
9/9/2009		1610	9630		
9/10/2009				1700	
11/23/2009	2540	1580	9530	2020	
2/23/2010	2320	1610	9510	2260	
4/9/2010	2520	1610	9340	2680	
9/13/2010	2480	1580	9410	2630	
11/17/2010			9240	2380	
11/18/2010	2430	1560			28500
1/27/2011		1320	7720	1710	
1/28/2011	2150				32100
4/29/2011	2520	1350	8550	1690	24400
7/26/2011		1880	8700	1690	12600
7/27/2011	2530				
11/10/2011	2400	1360	8420	1620	5480
1/31/2012	2420	1430	9340		5030
2/1/2012				1940	
4/17/2012	2550	1370	9192	2010	4180
7/17/2012	2580	1220	8960	2040	3260
10/4/2012	2570	1250	8790	2610	3300
1/24/2013	2480	1320	8610	2460	3460
4/4/2013	2560	1290	8560	2360	3250
7/11/2013	2540	1330	8730	2050	3150
10/14/2013	2540	1260	8520	1870	3200
2/17/2014	2830	1330	8730	3620	3330

Time Series



Constituent: Total Organic Carbon Analysis Run 4/14/2014 4:40 PM
Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Time Series



Constituent: TOX [Total Organic Halides] Analysis Run 4/14/2014 4:40 PM
Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

Time Series

Constituent: Total Organic Carbon (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	7.1	15.9			
7/16/1993	1.5	6			
8/4/1993	1.4	8.1			
10/11/1993	2.3	12.5			
1/13/1994	1.7	12.8			
3/29/1994		14.1			
4/20/1994	1.9	27.5			
7/13/1994	1.4	38.6			
10/12/1994	1.5	45.6	<5		
12/6/1994	1.9	35.4			
12/23/1994			<5		
1/23/1995	2.1	45.3	1.1		
4/13/1995	1.3	54.6	1.5		
8/2/1995	1.4	56.4	2.5		
10/18/1995	1.6	25.9	1.9		
1/18/1996	1.4	63.4	1.5		
4/17/1996	1.7	94	1.6		
7/17/1996	1.6	86	1.6		
11/7/1996	1.4	46.8	<5		
1/22/1997	2.2	90	1.5		
4/8/1997	1.5	125	1		
7/14/1997	2.1	123	1		
10/22/1997	2.6	54.3	1.3		
1/7/1998	19.4	93.9	2.3		
4/6/1998	1.9	157.5	1.9		
7/14/1998	2.3	104	1.6		
10/20/1998	5.7	116	1.4		
3/3/1999	2.35	171	5.3		
6/22/1999	2.5	178	<5		
8/31/1999	2	124	1.5		
11/30/1999	1.9	123	1.1		
2/15/2000	1.9	124	<5	12.7	
6/27/2000	3.2	90.9	1.9		
9/26/2000	2	140	<5	1	
12/12/2000	1	17	<5	4.1	
2/27/2001	1.9	120	1.4	5.1	
6/6/2001	3.6	61	1.3	8.2	
8/15/2001	2.7	100	2.1	13	
11/7/2001	1.9	120	1	4.4	
2/6/2002	1.5	110	<5	5.2	
5/22/2002	2.8	78	2.3	7.4	
8/21/2002	3.1	85	<5	8.4	
11/7/2002	1.8	110	1	7.4	
2/21/2003	1.5	98	1.4	8.5	
4/16/2003	1.1	100	<5	8.8	
8/14/2003			<5	4.9	
8/15/2003	1.2	70			
11/12/2003	2	80	1.2	7.5	
3/3/2004	2.3	73	1.2	8.1	
5/4/2004	2.3	74	<5	8.9	
9/21/2004	2.1	49	<5	7.1	
12/15/2004	2.2	62	1.1	6.8	

Time Series

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Constituent: Total Organic Carbon (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
2/22/2005	1.8	58	<5	7.1	
6/16/2005	2.2	47	<5		
6/17/2005				12	
8/17/2005	2.1	53	<5	2.3	
11/30/2005	2.8		<5		
12/1/2005		64		14	
3/7/2006				5.4	
3/8/2006		49	<5		
3/9/2006	2.2				
6/5/2006			<5		
6/6/2006	1.8	40		6	
8/10/2006	2.6	46	<5		
11/30/2006				14	
12/1/2006	2.7	62	<5		
2/12/2007	2.8			9.1	
2/13/2007		51	<5		
5/14/2007	2.4	36	<5	11	
9/10/2007	3	36	<5	9.5	
11/11/2007		47	<5		
11/12/2007				10	
11/13/2007	4				
1/15/2008	2.4		<5	4.8	
5/6/2008			1.81		
5/7/2008	2.66	93.6		5.94	
8/5/2008		46	1.55	9.72	
8/6/2008	2.79				
11/19/2008			2.17	9.04	
11/20/2008	4.67				
3/23/2009			<5		
3/24/2009	3.41			3.93	
5/20/2009	5.18	45.3	1.26	4.41	
9/9/2009		55.2	2.01		
9/10/2009	9.03			13.8	
11/23/2009	5.96	51.6	<5	8.75	
2/23/2010	6.52	51.7	<5	9.78	
4/6/2010	5.69	50.9	<5	10.9	
9/13/2010	6.78	61	<5	9.58	
11/17/2010			<5	4.68	
11/18/2010	6.64	67.9			49.8
1/27/2011		46.6	2.6	4.5	
1/28/2011	8.2				44
4/29/2011	1.2	5.9	<5	<5	10.5
7/26/2011		42.1	1.5	4.6	16.3
7/27/2011	<5				
11/10/2011	4.1	23	<5	2	76.4
1/31/2012	4.33	48.5	<5		88.7
2/1/2012				5.16	
4/17/2012	4.87	43	<5	4.24	91.3
7/17/2012	<5	24.4	<5	2	20.3
10/4/2012	6.8	35.2	0.072	3.2	38.9
1/24/2013	0.51	39.4	<5	8	43.5
4/4/2013	<5	38.3	<5	7.1	5

Time Series

Page 3

Constituent: Total Organic Carbon (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
7/11/2013	<5	37.6	<5	3.1	33
10/14/2013	<5	37.9	<5	5.2	68.3
2/17/2014	<5	41.9	<5	14.5	16.1

Time Series

Constituent: TOX [Total Organic Halides] (mg/L) Analysis Run 4/14/2014 4:41 PM
 Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	<1	<1			
7/15/1993	<1	0.01			
10/11/1993	0.008	0.016			
1/13/1994	0.028	0.384			
4/20/1994	<1	0.08			
7/13/1994	<1	0.166			
10/12/1994	<1	0.203	0.033		
12/23/1994			0.014		
1/23/1995	<1	0.271	0.048		
4/13/1995	<1	0.195	0.016		
8/2/1995	<1	0.287	0.013		
10/18/1995	<1	0.305	<1		
1/18/1996	<1	0.369	0.011		
4/17/1996	<1	0.193	0.047		
7/17/1996	<1	0.352	0.022		
11/7/1996	<1	0.469	<1		
1/22/1997	<1	0.379	0.02		
4/8/1997	<1	0.231	0.015		
7/14/1997	<1	0.505	0.041		
10/22/1997	<1	0.588	0.0225		
1/7/1998	<1	0.621	<1		
4/6/1998	<1	0.345	0.036		
7/14/1998	0.011	0.487	0.077		
10/20/1998	0.023	0.552	0.183		
3/3/1999	0.012	0.203	0.14		
6/22/1999	0.016	0.295	0.081		
8/31/1999	0.034	0.38	0.098		
11/30/1999	0.04	0.56	0.15		
2/15/2000	0.0114	0.457	0.136	0.04	
6/27/2000	0.0222	0.757	0.1		
9/26/2000		0.39	0.31	0.04	
12/12/2000	0.011	0.5	0.14	0.03	
2/27/2001	0.018	0.57	0.028	<1	
5/6/2001	0.02	0.268	0.184	0.03	
8/15/2001	0.021	0.224	0.271	0.02	
11/7/2001	0.036	0.26	0.24	0.032	
2/6/2002	0.015	0.19	0.44	0.022	
5/22/2002	0.053	0.28	0.27	0.024	
8/21/2002	0.021	0.17	0.1	0.012	
11/7/2002	0.026	0.17	0.14	<1	
2/21/2003	<1	0.12	0.12	<1	
4/16/2003	<1	0.12	0.253	<1	
8/14/2003			0.019	<1	
8/15/2003	<1	0.29			
11/12/2003	<1	0.31	0.068	<1	
3/3/2004	<1	0.29	0.16	<1	
5/4/2004	<1	0.33	0.058	<1	
9/21/2004	<1	<1	<1	<1	
12/15/2004	0.025	0.33	0.27	0.018	
2/22/2005	<1	<1	<1	<1	
6/16/2005	0.032	0.298	0.069		
6/17/2005				0.023	

Time Series

Page 2

Constituent: TOX [Total Organic Halides] (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
8/17/2005	0.031	0.327	0.085	0.015	
11/30/2005	0.096		0.184		
12/1/2005		0.151		0.038	
3/7/2006				0.017	
3/8/2006		0.119	0.072		
3/9/2006	0.094				
6/5/2006			0.06		
6/6/2006	0.014	0.174		0.026	
8/10/2006	0.027	0.145	0.063	0.052	
11/30/2006				0.015	
12/1/2006	0.019	0.13	0.047		
2/12/2007	0.077			0.022	
2/13/2007		0.114	0.059		
5/14/2007	<1	0.223	0.098	<1	
9/10/2007	0.038	0.303	0.122	0.018	
11/11/2007		0.315	0.136		
11/12/2007				0.018	
11/13/2007	0.069				
1/15/2008	0.032		0.096	0.013	
5/6/2008			0.22		
5/7/2008	0.038	0.022		0.029	
8/5/2008		0.18	0.22	<1	
8/6/2008	0.041				
11/19/2008			0.096	0.026	
11/20/2008	0.039				
3/23/2009			0.21		
3/24/2009	0.048			<1	
5/20/2009	0.061	0.19	0.22	<1	
9/9/2009		0.24	0.12		
9/10/2009	0.056			0.02	
11/23/2009	0.038	0.15	0.23	0.021	
2/23/2010	0.028	0.2	0.19	0.026	
4/6/2010	0.038	0.19	0.16	0.042	
9/13/2010	0.11	0.2	0.22	0.036	
11/17/2010			0.28	0.023	
11/18/2010	0.13	0.22			1.4
4/29/2011	0.0655	0.313	0.184	0.0215	4.52
7/26/2011		0.221	0.193	<1	5.3
7/27/2011	0.0841				
11/10/2011	0.219	0.417	0.793	0.0329	2.45
1/5/2012	0.24				
1/31/2012	0.094	0.34	0.37		1.3
2/1/2012				0.035	
4/17/2012	0.13	0.31	0.075	<1	0.7
7/17/2012	0.0495	0.258	0.247		0.359
10/4/2012	0.157	0.591	0.187		1
1/24/2013			0.822		1.23
4/4/2013			0.282	0.058	1.21
5/1/2013	0.05	0.298		0.0274	
7/11/2013	0.114	0.787	0.159	<1	1.09
10/14/2013	0.0943	0.226	0.214	0.0614	0.247
2/17/2014	0.539		0.856	0.0286	0.351

Time Series

Page 3

Constituent: TOX [Total Organic Halides] (mg/L) Analysis Run 4/14/2014 4:41 PM

Facility: Blue Ridge Client: Advanced Disposal Services Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
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3/11/2014		0.32			
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APPENDIX V

March 04, 2014

Dan Fleshour
Advanced Disposal Blue Ridge Landfill, LLC
2700 Winchester Rd
Irvine, KY 40336

RE: Project: BLUE RIDGE GW FEB 2014 Q1
Pace Project No.: 4092257

Dear Dan Fleshour:

Enclosed are the analytical results for sample(s) received by the laboratory on February 18, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Cindy Varga
cindy.varga@pacelabs.com
Project Manager

Enclosures

cc: Kari Wallover, Cornerstone Environmental Group, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BLUE RIDGE GW FEB 2014 Q1

Pace Project No.: 4092257

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 11888

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

US Dept of Agriculture #: S-76505

Wisconsin Certification #: 405132750

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SAMPLE SUMMARY

Project: BLUE RIDGE GW FEB 2014 Q1

Pace Project No.: 4092257

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4092257001	MW-7	Water	02/17/14 11:10	02/18/14 10:10
4092257002	MW-10	Water	02/17/14 12:00	02/18/14 10:10
4092257003	MW-13	Water	02/17/14 13:00	02/18/14 10:10
4092257004	MW-15R	Water	02/17/14 12:25	02/18/14 10:10
4092257005	MW-17R	Water	02/17/14 10:40	02/18/14 10:10
4092257006	DUPLICATE	Water	02/17/14 11:15	02/18/14 10:10

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SAMPLE ANALYTE COUNT

Project: BLUE RIDGE GW FEB 2014 Q1

Pace Project No.: 4092257

Lab ID	Sample ID	Method	Analysts	Analytes Reported
4092257001	MW-7	EPA 6010	DLB	2
			CDH	3
		SM 2540C	MLH	1
		EPA 410.4	TJJ	1
		SM 5310C	TJJ	1
4092257002	MW-10	EPA 9056	JCJ	1
		EPA 6010	DLB	2
			CDH	3
		SM 2540C	MLH	1
		EPA 410.4	TJJ	1
4092257003	MW-13	SM 5310C	TJJ	1
		EPA 9056	JCJ	1
		EPA 6010	DLB	2
			CDH	3
		SM 2540C	MLH	1
4092257004	MW-15R	EPA 410.4	TJJ	1
		SM 5310C	TJJ	1
		EPA 9056	JCJ	1
		EPA 6010	DLB	2
			CDH	3
4092257005	MW-17R	SM 2540C	MLH	1
		EPA 410.4	TJJ	1
		SM 5310C	TJJ	1
		EPA 9056	JCJ	1
		EPA 6010	DLB	2
4092257006	DUPLICATE		CDH	3
		SM 2540C	MLH	1
		EPA 410.4	TJJ	1
		SM 5310C	TJJ	1
		EPA 9056	JCJ	1

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW FEB 2014 Q1

Pace Project No.: 4092257

Sample: MW-7		Lab ID: 4092257001	Collected: 02/17/14 11:10		Received: 02/18/14 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Iron	2890	ug/L	100	1	02/24/14 09:24	02/25/14 14:22	7439-89-6	
Sodium	1170000	ug/L	10000	10	02/24/14 09:24	02/25/14 15:16	7440-23-5	
Field Data		Analytical Method:						
Field pH	7.41	Std. Units		1		02/17/14 11:10		
Field Specific Conductance	5097	umhos/cm		1		02/17/14 11:10		
Temperature, Water (C)	13.08	deg C		1		02/17/14 11:10		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	2830	mg/L	20.0	1		02/19/14 16:20		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	75.1	mg/L	52.6	1	02/21/14 09:11	02/21/14 12:24		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	<0.50	mg/L	0.50	1		02/19/14 12:17	7440-44-0	M0
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	1050	mg/L	200	50		02/19/14 12:48	16887-00-6	

Sample: MW-10		Lab ID: 4092257002	Collected: 02/17/14 12:00		Received: 02/18/14 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Iron	319	ug/L	100	1	02/24/14 09:24	02/25/14 14:27	7439-89-6	
Sodium	567000	ug/L	10000	10	02/24/14 09:24	02/25/14 15:21	7440-23-5	
Field Data		Analytical Method:						
Field pH	7.37	Std. Units		1		02/17/14 12:00		
Field Specific Conductance	2094	umhos/cm		1		02/17/14 12:00		
Temperature, Water (C)	14.90	deg C		1		02/17/14 12:00		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	1330	mg/L	20.0	1		02/19/14 16:21		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	108	mg/L	50.0	1	02/21/14 09:11	02/21/14 12:25		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	41.9	mg/L	15.0	30		02/19/14 13:32	7440-44-0	
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	156	mg/L	20.0	5		02/19/14 13:13	16887-00-6	

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW FEB 2014 Q1

Pace Project No.: 4092257

Sample: MW-13		Lab ID: 4092257003	Collected: 02/17/14 13:00		Received: 02/18/14 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Iron	2240	ug/L	100	1	02/24/14 09:24	02/25/14 14:29	7439-89-6	
Sodium	3430000	ug/L	100000	100	02/24/14 09:24	02/25/14 15:23	7440-23-5	
Field Data		Analytical Method:						
Field pH	6.99	Std. Units		1		02/17/14 13:00		
Field Specific Conductance	14400	umhos/cm		1		02/17/14 13:00		
Temperature, Water (C)	12.98	deg C		1		02/17/14 13:00		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	8730	mg/L	20.0	1		02/19/14 16:22		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	206	mg/L	50.0	1	02/21/14 09:11	02/21/14 12:25		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	<0.50	mg/L	0.50	1		02/19/14 13:50	7440-44-0	
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	5090	mg/L	400	100		02/19/14 13:21	16887-00-6	

Sample: MW-15R		Lab ID: 4092257004	Collected: 02/17/14 12:25		Received: 02/18/14 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Iron	25200	ug/L	100	1	02/24/14 09:24	02/25/14 14:34	7439-89-6	
Sodium	385000	ug/L	10000	10	02/24/14 09:24	02/25/14 15:25	7440-23-5	
Field Data		Analytical Method:						
Field pH	6.66	Std. Units		1		02/17/14 12:25		
Field Specific Conductance	3912	umhos/cm		1		02/17/14 12:25		
Temperature, Water (C)	21.47	deg C		1		02/17/14 12:25		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	3620	mg/L	20.0	1		02/19/14 16:23		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	<50.0	mg/L	50.0	1	02/21/14 09:11	02/21/14 12:25		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	14.5	mg/L	5.0	10		02/19/14 15:09	7440-44-0	
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	80.0	mg/L	20.0	5		02/19/14 13:29	16887-00-6	

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW FEB 2014 Q1
Pace Project No.: 4092257

Sample: MW-17R		Lab ID: 4092257005	Collected: 02/17/14 10:40		Received: 02/18/14 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Iron	284	ug/L	100	1	02/24/14 09:24	02/25/14 14:44	7439-89-6	
Sodium	1340000	ug/L	100000	100	02/24/14 09:24	02/25/14 15:28	7440-23-5	
Field Data		Analytical Method:						
Field pH	8.11	Std. Units		1		02/17/14 10:40		
Field Specific Conductance	4930	umhos/cm		1		02/17/14 10:40		
Temperature, Water (C)	13.66	deg C		1		02/17/14 10:40		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	3330	mg/L	20.0	1		02/19/14 16:24		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	98.7	mg/L	50.0	1	02/21/14 09:11	02/21/14 12:25		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	16.1	mg/L	3.0	6		02/19/14 15:28	7440-44-0	
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	456	mg/L	40.0	10		02/19/14 13:37	16887-00-6	

Sample: DUPLICATE		Lab ID: 4092257006	Collected: 02/17/14 11:15		Received: 02/18/14 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Iron	2160	ug/L	100	1	02/24/14 09:24	02/25/14 15:11	7439-89-6	
Sodium	1100000	ug/L	10000	10	02/24/14 09:24	02/25/14 15:30	7440-23-5	
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	2720	mg/L	20.0	1		02/19/14 16:25		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	60.0	mg/L	50.0	1	02/21/14 09:11	02/21/14 12:26		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	<0.50	mg/L	0.50	1		02/19/14 15:47	7440-44-0	
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	974	mg/L	200	50		02/19/14 14:37	16887-00-6	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW FEB 2014 Q1

Pace Project No.: 4092257

QC Batch: MPRP/9865 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

METHOD BLANK: 934352

Matrix: Water

Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron	ug/L	<100	100	02/25/14 12:12	
Sodium	ug/L	<1000	1000	02/25/14 12:12	

LABORATORY CONTROL SAMPLE: 934353

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	5000	5050	101	80-120	
Sodium	ug/L	5000	5560	111	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 934354

934355

Parameter	Units	4092441001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	26.8J	5000	5000	5000	5020	100	100	75-125	0	20	
Sodium	ug/L	2400000	5000	5000	2400000	2470000	0	1400	75-125	3	20 P6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW FEB 2014 Q1

Pace Project No.: 4092257

QC Batch: WET/17819 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

METHOD BLANK: 933018 Matrix: Water
Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<20.0	20.0	02/19/14 16:17	

LABORATORY CONTROL SAMPLE: 933019

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	572	574	100	80-120	

SAMPLE DUPLICATE: 933020

Parameter	Units	4092246001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	348	348	0	10	

SAMPLE DUPLICATE: 933021

Parameter	Units	4092304001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	352	354	1	10	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW FEB 2014 Q1

Pace Project No.: 4092257

QC Batch: WETA/21945 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

METHOD BLANK: 933588 Matrix: Water
Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<50.0	50.0	02/21/14 12:22	

LABORATORY CONTROL SAMPLE: 933589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	497	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 933590 933591

Parameter	Units	4092210005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Chemical Oxygen Demand	mg/L	269	526	526	772	760	96	93	90-110	2 10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 933592 933593

Parameter	Units	4092257001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Chemical Oxygen Demand	mg/L	75.1	526	526	585	571	97	94	90-110	2 10	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW FEB 2014 Q1
Pace Project No.: 4092257

QC Batch: WETA/21916 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

METHOD BLANK: 932624 Matrix: Water
Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.50	0.50	02/19/14 20:28	

LABORATORY CONTROL SAMPLE: 932625

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.5	2.1	85	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 932626 932627

Parameter	Units	4092257001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Total Organic Carbon	mg/L	<0.50	2.5	2.5	0.87	0.86	15	14	80-120	1 20	MO

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 932628 932629

Parameter	Units	4092269001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Total Organic Carbon	mg/L	2.1	5	5	7.3	7.4	105	106	80-120	1 20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW FEB 2014 Q1
Pace Project No.: 4092257

QC Batch: WETA/21903 Analysis Method: EPA 9056
QC Batch Method: EPA 9056 Analysis Description: 9056 IC Anions
Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

METHOD BLANK: 932423 Matrix: Water
Associated Lab Samples: 4092257001, 4092257002, 4092257003, 4092257004, 4092257005, 4092257006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<4.0	4.0	02/19/14 10:46	

LABORATORY CONTROL SAMPLE: 932424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.0	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 932425 932426

Parameter	Units	4092210001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Chloride	mg/L	7740	10000	10000	18000	18000	102	103	90-110	0	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 932427 932428

Parameter	Units	4092257001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Chloride	mg/L	1050	1000	1000	2060	2060	101	101	90-110	0	20

REPORT OF LABORATORY ANALYSIS

QUALIFIERS

Project: BLUE RIDGE GW FEB 2014 Q1

Pace Project No.: 4092257

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BLUE RIDGE GW FEB 2014 Q1
Pace Project No.: 4092257

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4092257001	MW-7	EPA 3010	MPRP/9865	EPA 6010	ICP/8679
4092257002	MW-10	EPA 3010	MPRP/9865	EPA 6010	ICP/8679
4092257003	MW-13	EPA 3010	MPRP/9865	EPA 6010	ICP/8679
4092257004	MW-15R	EPA 3010	MPRP/9865	EPA 6010	ICP/8679
4092257005	MW-17R	EPA 3010	MPRP/9865	EPA 6010	ICP/8679
4092257006	DUPLICATE	EPA 3010	MPRP/9865	EPA 6010	ICP/8679
4092257001	MW-7		PM/		
4092257002	MW-10		PM/		
4092257003	MW-13		PM/		
4092257004	MW-15R		PM/		
4092257005	MW-17R		PM/		
4092257001	MW-7	SM 2540C	WET/17819		
4092257002	MW-10	SM 2540C	WET/17819		
4092257003	MW-13	SM 2540C	WET/17819		
4092257004	MW-15R	SM 2540C	WET/17819		
4092257005	MW-17R	SM 2540C	WET/17819		
4092257006	DUPLICATE	SM 2540C	WET/17819		
4092257001	MW-7	EPA 410.4	WETA/21945	EPA 410.4	WETA/21949
4092257002	MW-10	EPA 410.4	WETA/21945	EPA 410.4	WETA/21949
4092257003	MW-13	EPA 410.4	WETA/21945	EPA 410.4	WETA/21949
4092257004	MW-15R	EPA 410.4	WETA/21945	EPA 410.4	WETA/21949
4092257005	MW-17R	EPA 410.4	WETA/21945	EPA 410.4	WETA/21949
4092257006	DUPLICATE	EPA 410.4	WETA/21945	EPA 410.4	WETA/21949
4092257001	MW-7	SM 5310C	WETA/21916		
4092257002	MW-10	SM 5310C	WETA/21916		
4092257003	MW-13	SM 5310C	WETA/21916		
4092257004	MW-15R	SM 5310C	WETA/21916		
4092257005	MW-17R	SM 5310C	WETA/21916		
4092257006	DUPLICATE	SM 5310C	WETA/21916		
4092257001	MW-7	EPA 9056	WETA/21903		
4092257002	MW-10	EPA 9056	WETA/21903		
4092257003	MW-13	EPA 9056	WETA/21903		
4092257004	MW-15R	EPA 9056	WETA/21903		
4092257005	MW-17R	EPA 9056	WETA/21903		
4092257006	DUPLICATE	EPA 9056	WETA/21903		

REPORT OF LABORATORY ANALYSIS

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Cornerstone Environmental Group, LLC

Chain of Custody Record

105 Canewood Blvd. Georgetown, KY 40324

www.cornerstoneeg.com (630) 633-5821 Fax: (513) 870-0610

34

4092257

Page 15 of 16

Customer Name: Cornerstone Environmental Group, LLC		Submittal #		Field Measurements								Send Report To: <u>Kari Waller</u>									
Client Name: <u>Blue Ridge Landfill</u>				Number of Containers		Field Turbidity (ntu)		Field pH (SU)		Field Conductance (µS)		Field Temperature (°C)		Field Dissolved Oxygen (mg/L)		eH/ORP (mV)		Address: <u>Cornerstone</u>			
Project Number: <u>140174-001</u>																		Email:			
Sampled By: <u>Keith Johnson</u>																		Sample Turn Around Time			
																Standard: <u>X</u> Rush Date <u>1/1/14</u> (Accelerated TAT subject to Additional Charge) (Date must be Accepted and Approved by Lab.)					
Date Sampled		Time sampled		Comp		Grab		Sample ID and/or Location										Z Quote Number		Lab use only Sample No.	
2/17/14		1110 AM		X		MW-7		5		7.41		5097		13.08		3-250		A.C.D. 2/18/14 MW			
1200		AM		X		MW-10		1		7.37		2094		14.90		1-125		C 2/18/14 MW			
1300		PM		X		MW-13		1		6.99		1400		12.98		1-125		C 2/18/14 MW			
1225		AM		X		MW-15R		1		6.66		3912		21.47		1-125		C 2/18/14 MW			
1040		AM		X		MW-17R		1		8.11		4930		13.66		1-125		C 2/18/14 MW			
1115		AM		X		Duplicate		1								1-125		C 2/18/14 MW			
		AM																			
		AM																			
		PM																			
		AM																			
		PM																			
		AM																			
		PM																			
		AM																			
		PM																			
		AM																			
		PM																			
Relinquished by: (Signature) <u>[Signature]</u> Date/Time <u>2/17/14 1630</u>				Received by: (Signature) <u>[Signature]</u>				Laboratory use only				Yes		No		Comments:					
Relinquished by: (Signature) <u>Fred EX</u> Date/Time <u>2/18/14 1010</u>				Received by: (Signature) <u>M.V. 2/18/14 1010</u>				Custody seals present/intact?						<u>X</u>							
								Broken containers?						<u>X</u>							
								COC agree with sample labels?				<u>X</u>									
								Correct containers for testing?				<u>X</u>									
Relinquished by: (Signature) <u>[Signature]</u> Date/Time <u>1</u>				Received by: (Signature) <u>[Signature]</u>				Headspace issues acceptable?				<u>X</u>									
Received for Lab by: (Signature) <u>[Signature]</u>				Date <u>2/18/14</u> Temp. <u>0.0.5 °C</u>				Holding time(s) acceptable?				<u>X</u>									
				Time <u>1010</u> ROI: <u>(Yes/No)</u>				Preservative pH's acceptable?				<u>X</u>									
								Was pH left unadjusted?				<u>X</u>									

Distribution: White: Third Party Laboratory; Yellow: Cornerstone; Pink: Sampler

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 1
Green Bay, WI 54301



Project #:

WO#: 4092257



Client Name: ADS

Courier: ☒ Fed Ex ☐ UPS ☐ Client ☐ Pace Other:

Tracking #: 801788425570

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

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used

SR-25

Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None

☒ Samples on ice, cooling process has begun

Cooler Temperature

Uncorr: 0.5 ICorr: 0.5

Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present:

☐ yes ☒ no

Person examining contents:

Date: 2/18/14

Initials: MV

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments:

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2. No analyses on COC. 2/18/14 MV
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.
- VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
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	
-Pace IR 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:	W	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐ Yes ☐ No ☐ N/A	13. ☒ HNO3 ☒ H2SO4 ☐ NaOH ☐ NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation.	☒ Yes ☐ No ☐ N/A	
(HNO3, H2SO4 ≤2; NaOH + ZnAct ≥9, NaOH ≥12)		
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☒ Yes ☐ No	Initial when completed: MV Lab Std #/ID of preservative: Date/Time:
Headspace in VOA Vials (>6mm):	☐ Yes ☐ No ☒ N/A	14.
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	15.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted:

Date/Time:

Comments/ Resolution:

Per client need TOC, TOX, Col, TDS, Cl, Fe, Na 2/18/14 dv

Project Manager Review:

CKV

Date:

2/18/14



Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

March 27, 2014

Dan Fleshour
Advanced Disposal Blue Ridge Landfill, LLC
2700 Winchester Rd
Irvine, KY 40336

RE: Project: BLUE RIDGE MW-10 GW Q1 2014
Pace Project No.: 4093154

Dear Dan Fleshour:

Enclosed are the analytical results for sample(s) received by the laboratory on March 12, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Cindy Varga
cindy.varga@pacelabs.com
Project Manager

Enclosures

cc: Kari Wallover, Cornerstone Environmental Group, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BLUE RIDGE MW-10 GW Q1 2014

Pace Project No.: 4093154

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch:
11277CA

Florida Department of Health (NELAC): E87595

Illinois Environmental Protection Agency: 0025721

Kansas Department of Health and Environment (NELAC):
E-10266

Louisiana Dept. of Environmental Quality (NELAC/LELAP):
02006

Oklahoma Department of Environmental Quality: 2010-
139

Oregon Environmental Laboratory Accreditation:
LA200001

Pennsylvania Dept. of Env Protection (NELAC): 68-04202

Texas Commission on Env. Quality (NELAC):

T104704405-09-TX

U.S. Dept. of Agriculture Foreign Soil Import: P330-10-
00119

Washington Department of Ecology: C2078

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 11888

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

US Dept of Agriculture #: S-76505

Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BLUE RIDGE MW-10 GW Q1 2014

Pace Project No.: 4093154

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4093154001	MW-10	Water	03/11/14 15:55	03/12/14 10:00

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: BLUE RIDGE MW-10 GW Q1 2014
Pace Project No.: 4093154

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4093154001	MW-10		CDH	3	PASI-G
		EPA 9020B	JRP	1	PASI-N

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BLUE RIDGE MW-10 GW Q1 2014

Pace Project No.: 4093154

Sample: MW-10		Lab ID: 4093154001	Collected: 03/11/14 15:55	Received: 03/12/14 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:							
Field pH	6.95	Std. Units		1		03/11/14 15:55		
Field Specific Conductance	2107	umhos/cm		1		03/11/14 15:55		
Temperature, Water (C)	16.34	deg C		1		03/11/14 15:55		
Total Organic Halides	Analytical Method: EPA 9020B							
Total Organic Halides	0.32	mg/L	0.20	10		03/26/14 12:38		

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: BLUE RIDGE MW-10 GW Q1 2014
Pace Project No.: 4093154

QC Batch: WETA/1156 Analysis Method: EPA 9020B
QC Batch Method: EPA 9020B Analysis Description: 9020B W TOX
Associated Lab Samples: 4093154001

METHOD BLANK: 3942 Matrix: Water
Associated Lab Samples: 4093154001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Halides	mg/L	<0.020	0.020	03/26/14 11:41	

LABORATORY CONTROL SAMPLE: 3943

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Halides	mg/L	.1	0.098	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4071 4072

Parameter	Units	60164994001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Total Organic Halides	mg/L	0.058	.1	.1	0.16	0.16	104	98	78-116	4 20	

REPORT OF LABORATORY ANALYSIS

QUALIFIERS

Project: BLUE RIDGE MW-10 GW Q1 2014
Pace Project No.: 4093154

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay
PASI-N Pace Analytical Services - New Orleans

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BLUE RIDGE MW-10 GW Q1 2014

Pace Project No.: 4093154

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4093154001	MW-10		PM/		
4093154001	MW-10	EPA 9020B	WETA/1156		

REPORT OF LABORATORY ANALYSIS

Date: 03/27/2014 11:08 AM

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Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite
Green Bay, WI 5430

Project WO#: 4093154

Client Name: APS

Courier: ☒ Fed Ex ☐ UPS ☐ Client ☐ Pace Other:

Tracking #: 8017 8843 1716



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

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used SR-25

Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None

☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 3, 2, 0.5 Corr: 3, 2, 0.5 Biological Tissue is Frozen: ☐ yes

Temp Blank Present: ☒ yes ☐ no

☐ no

Person examining contents:

Date: 3-12-14

Initials: MV

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments:

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes ☐ No ☐ N/A	5.
- VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
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	
-Pace IR 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. time on sample says 1551, 3/12/14 MV
-Includes date/time/ID/Analysis Matrix:	☒ W	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐ Yes ☐ No ☒ N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐ Yes ☐ No ☒ N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☒ Yes ☐ No	Initial when completed
		Lab Std #ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	☐ Yes ☐ No ☒ N/A	14.
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	15.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution:

Per Louis Waller - changes are correct 3/12/14 ch

Project Manager Review:

One

Date: 3/12/14