



September 5, 2014

Ms. Robin Green
Division of Waste Management
200 Fair Oaks Lane
2nd Floor
Frankfort, KY 40601

RE: Advanced Disposal Services Blue Ridge Landfill, Inc.
3rd Quarter 2014 Groundwater Statistical Analysis Report
Permit # 033-00004
AI # 998

Dear Ms. Green:

Please find attached the 3rd Quarter 2014 groundwater statistical analysis 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 (513) 284-3615.

Sincerely,
BLUE RIDGE LANDFILL, INC.

Dan Fleshour
East Region Compliance Manager





Building Lifetime Relationships with Clients and Employees

3rd Quarter 2014 Groundwater Statistical Analysis Report

Project # 140174
September 2014

Prepared for:
Advanced Disposal Services

Blue Ridge Landfill
2700 Winchester Road
Irvine, KY 40336

3rd Quarter 2014

Groundwater Statistical Analysis Report

Blue Ridge Landfill

September 2014

Prepared for:
Advanced Disposal Services
2700 Winchester Road
Irvine, KY 40336



REPORT CERTIFICATION

3rd Quarter Groundwater Statistical Report
Advanced Disposal Services Blue Ridge Landfill
Irvine, Kentucky

The material and data in this report were prepared under the supervision and direction of the undersigned.

Cornerstone Environmental Group, LLC



Kari A. Wallover, PG
Project Manager



James R. Wade, PE
Client Manager

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1 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 July 8, 2014. Cornerstone has performed a statistical analysis on the data from this third quarter 2014 sampling event. A discussion regarding sample collection procedures, laboratory analytical results, and statistical analysis results is presented herein.

2 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.

3 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.

4 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 third quarter 2014 sampling event, the parameters analyzed were those from 401 KAR Chapter 48:300 Section 11(3)(f).

5 SAMPLING EVENT

This 3rd Quarter 2014 sampling event was conducted by Cornerstone field personnel at the Blue Ridge landfill on July 8, 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.

6 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 third quarter 2014 event were consistent with historical values measured at the monitoring wells.

7 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)(f). 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).

7.1 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.

7.2 Intra-well Prediction Intervals

Intra-well prediction intervals will be calculated on the data if it is determine that the Shewart-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.

7.3 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 , 3Q13	
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, sodium, TDS, and conductivity data in samples collected from MW-15R from February 2000 through August 2005 were lower than from December 2005 through April 2014. The December 2005 through July 2012 concentrations for these parameters 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, sodium, TDS, and conductivity at well MW-15R consist of data from December 2005 through July 2012 only.

7.4 Statistical Results Summary

During the third quarter 2014 monitoring event, of the parameters that were examined using Control Charts, there were three statistical differences. These statistical differences occurred at MW-7 and MW-15R for conductivity, and MW-15R for TDS as the CUSUM values exceeded the statistical limits; however, the concentrations for these parameters did not exceed the statistical limit. Parameters that did not fit the assumptions necessary to perform control chart analyses were analyzed using intra-well prediction intervals. During the third quarter 2014 event, two statistical differences occurred in the wells in detection monitoring utilizing prediction limits. Two statistical differences occurred in monitoring well MW-7 as the parameter results for chloride and TDS exceeded their respective intra-well prediction limits. Statistical charts and graphs are located in Appendix IV.

The analysis using Control Charts revealed that the statistical limit for conductivity at MW-7 was exceeded as the CUSUM of 6,401 mg/L exceeded the limit of 6,080 mg/L. The statistical limit for conductivity at MW-15R was exceeded as the CUSUM of 4,398 mg/L exceeded the limit of 4,173 mg/L. In addition, the statistical limit for TDS at MW-15R was exceeded as the CUSUM of 4,030 mg/L exceeded the limit of 3,808 mg/L.

The analysis using prediction intervals revealed that the statistical limit for chloride at MW-7 was exceeded as the concentration of 1,030 mg/L exceeded the limit of 912 mg/L. In addition, the statistical limit for TDS at MW-7 was exceeded as the concentration of 2,770 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 chloride, conductivity, and TDS in MW-7 are lower than or equal to the concentrations in the upgradient well (MW-17R) that exists at the site. In addition, the average concentrations of these parameters in monitoring well MW-15R are significantly lower than the concentrations in upgradient well MW-17R:

Average Concentrations (mg/L)

	Chloride	Conductivity	TDS
MW-7	578	3,268	2,004
MW-10	369	2,628	1,813
MW-13	5,323	13,907	9,169
MW-15R	46	2,190	1,761
MW-17R*	562	5,024	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 up to 900 feet in the mountainous southern end of the county. The elevated concentrations of chloride, TDS, and conductivity in monitoring wells MW-7 and MW-15R are therefore anticipated to be associated with naturally occurring saline conditions.

8 CONCLUSIONS

During the July 2014 monitoring event, for the parameters that were examined using Control Charts, there were three statistical differences. These statistical differences occurred at MW-7 and MW-15R for conductivity, and at MW-15R for TDS as the CUSUM values exceeded the statistical limits; however, the concentrations for these parameters did not exceed the statistical limits. Parameters that did not fit the assumptions necessary to perform control chart analyses were analyzed using intra-well prediction intervals. For the July 2014 event, concentrations of chloride and TDS in the samples collected from monitoring well MW-7 exceeded their respective prediction limits. All statistical differences are believed to be the result of naturally occurring saline water and not the result of landfill impacts.

LIMITATIONS

The work product included in the attached was undertaken in full conformity with generally accepted professional consulting principles and practices and to the fullest extent as allowed by law we expressly disclaim all warranties, express or implied, including warranties of merchantability or fitness for a particular purpose. The work product was completed in full conformity with the contract with our client and this document is solely for the use and reliance of our client (unless previously agreed upon that a third party could rely on the work product) and any reliance on this work product by an unapproved outside party is at such party's risk.

The work product herein (including opinions, conclusions, suggestions, etc.) was prepared based on the situations and circumstances as found at the time, location, scope and goal of our performance and thus should be relied upon and used by our client recognizing these considerations and limitations. Cornerstone shall not be liable for the consequences of any change in environmental standards, practices, or regulations following the completion of our work and there is no warrant to the veracity of information provided by third parties, or the partial utilization of this work product.

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	✓		7/8/14	✓		7/8/14	No problems encountered during sampling
MW-10	✓		7/8/14	✓		7/8/14	No problems encountered during sampling
MW-13	✓		7/8/14	✓		7/8/14	No problems encountered during sampling
MW-15R	✓		7/8/14	✓		7/8/14	No problems encountered during sampling
MW-17R	✓		7/8/14	✓		7/8/14	No problems encountered during sampling

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

TABLE 2 - STATIC GROUNDWATER LEVELS

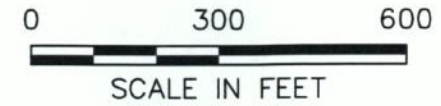
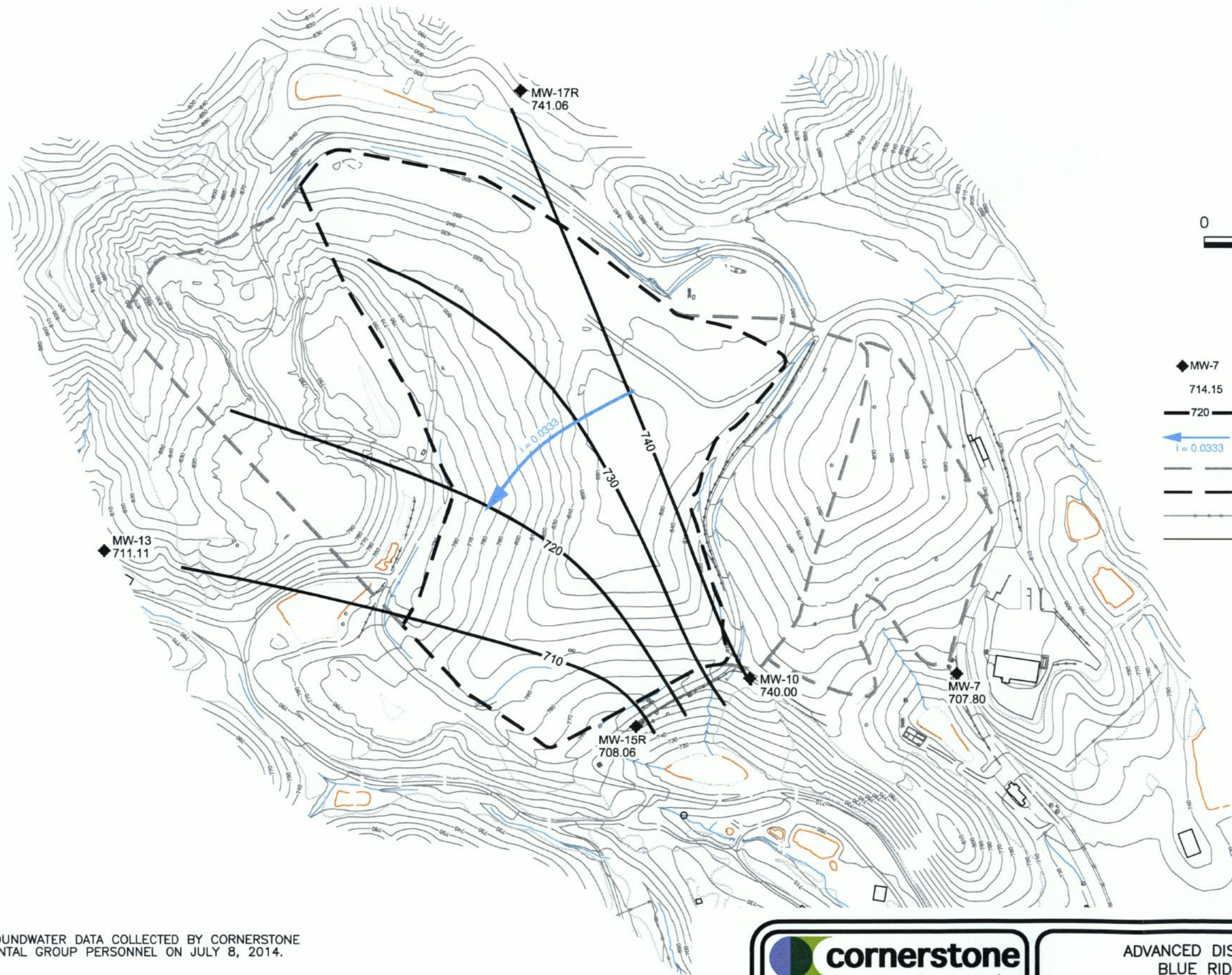
Monitoring Well	AKGWA #	Top PVC Casing Elevation (ft MSL ¹)	Total Well Depth from Top PVC Casing ² (ft)	Depth to Static Groundwater (ft) ³	Static Groundwater Elevation (ft MSL)
MW-7	8001-0205	784.37	110.00	76.57	707.80
MW-10	8001-0201	801.16	70.00	61.16	740.00
MW-13	8001-0233	766.14	64.50	55.03	711.11
MW-15R	8003-3579	763.99	76.00	55.93	708.06
MW-17R	8003-8393	821.82	93.49	80.76	741.06

¹Feet above Mean Sea Level

²Depths taken from well construction logs

³Values measured by Cornerstone Environmental Group, LLC on July 8, 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

Kari A. Wallover
 KARI A. WALLOVER
 Registered Professional Geologist
 Kentucky Board of Registration for Professional Geologists
 PG-2347
 9-3-14

NOTE:
 STATIC GROUNDWATER DATA COLLECTED BY CORNERSTONE ENVIRONMENTAL GROUP PERSONNEL ON JULY 8, 2014.

cornerstone
 environmental

PREPARED BY:
 CORNERSTONE ENVIRONMENTAL GROUP, LLC

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
3rd QTR 2014 GROUNDWATER CONTOURS

FIGURE NO.
1

PROJECT NO.
 140174.001

APPENDIX A
FLOW RATE AND FLOW DIRECTION CALCULATIONS

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

FLOW VELOCITY OF NEW ALBANY SHALE

Parameters:

Saturated Thickness (b) = average saturated thickness is approximately 12.73 ft.

Well	Well Depth (ft)	Depth to Water (ft)	Saturated Thickness (ft)
MW-10	70.00	61.16	8.84
MW-13	64.50	55.03	9.47
MW-15R	76.00	55.93	20.07
MW-17R	93.49	80.76	12.73
Average Saturated Thickness =			12.78

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 / 12.78 ft = 14.7 ft²/d / 12.78 ft = 1.15 ft/d
 Maximum k = 1,130 gpd/ft / 12.78 ft = 151 ft²/d / 12.78 ft = 11.82 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 Third Quarter 2014 potentiometric map.

- Gradient (i) = Change in groundwater elevation along flow path i:
From 740 contour to 720 contour = 20ft / 575ft = 0.0348

Calculations:

Minimum Velocity

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

$$V = [(1.15 \text{ ft/d})(0.0348)] / 0.15$$

$$V = 0.27 \text{ ft/d}$$

Maximum Velocity

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

$$V = [(11.82 \text{ ft/d})(0.0348)] / 0.15$$

$$V = 2.74 \text{ ft/d}$$

APPENDIX B
CERTIFICATION

FACILITY INFORMATION SHEET

Sampling Date: 7/8/14 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 C

DWM GROUNDWATER SAMPLE ANALYSIS

Solid Waste Branch

Permit Number: 033-00004

200 Fair Oaks Lane

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____/1

Frankfort, KY 40601 (502)564-6716

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)						7/8/2014 13:50	7/8/2014 14:15	7/8/2014 14:45	7/8/2014 15:15				
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)						4099524001	4099524002	4099524003	4099524004				
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 of Measure	Method	Detected Value or PQL ⁶	F L A G S	Detected Value or PQL ⁶	F L A G S	Detected Value or PQL ⁶	F L A G S	Detected Value or PQL ⁶	F L A G S
	0	Static Water Level Elevation	T	Ft. MSL	FIELD	707.80		740.00		711.11		708.06	
S0907- -	2	Temperature	T	°C	FIELD	18.27		20.13		16.03		25.11	
16887-00-6	2	Chloride (s)	T	mg/L	9251	1030		141		5090		77.8	
S0130	0	Chemical Oxygen Demand	T	mg/L	410.4	73.6		112		317		<50.0	
S0266	0	Total Dissolved Solids	T	mg/L	160.1	2770		1310		8720		2910	
S0268	1	Total Organic Carbon	T	mg/L	9060	<0.50		32.2		<0.50		6.3	

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

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

Solid Waste Branch

Permit Number: 033-00004

200 Fair Oaks Lane

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____ /1

Frankfort, KY 40601 (502)564-6716

LAB ID: _____

For Official Use Only

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)		7/8/2014 15:46											
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)		4099524005											
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 of Measure	Method	Detected Value or PQL ⁶	F L A G S	Detected Value or PQL ⁶	F L A G S	Detected Value or PQL ⁶	F L A G S	Detected Value or PQL ⁶	F L A G S
	0	Static Water Level Elevation	T	Ft. MSL	FIELD	741.06							
S0907- -	2	Temperature	T	°C	FIELD	16.51							
16887-00-6	2	Chloride (s)	T	mg/L	9251	331							
S0130	0	Chemical Oxygen Demand	T	mg/L	410.4	85.0							
S0266	0	Total Dissolved Solids	T	mg/L	160.1	3040							
S0268	1	Total Organic Carbon	T	mg/L	9060	20.8							

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

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.

⁵T = Total; "D" = Dissolved

⁶<" indicates a non-detect; do not use "ND" or "BDL". Value then shown is Practical Quantification Limit

APPENDIX D
STATISTICAL EVALUATIONS

Shewhart-Cusum Control Chart

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge Printed 8/28/2014, 10:24 AM

Constituent	Well	Sig.	h	SCL	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 Intra PL (normality)
Chemical Oxygen Demand (mg/L)	MW-10	No	1068	947.6	79	13.78	3.779	0	None	No	sqrt(x)	Param Intra
Chemical Oxygen Demand (mg/L)	MW-13	No	4024	3347	77	6.433	1.895	2.597	None	No	x^(1/3)	Param Intra
Chemical Oxygen Demand (mg/L)	MW-15R	No	PL=240	n/a	53	n/a	n/a	24.53	None	No	No	NP Intra PL (normality)
Chemical Oxygen Demand (mg/L)	MW-17R (bg)	No	7475	6435	12	24.03	12.48	0	None	No	sqrt(x)	Param Intra
Chloride (mg/L)	MW-7	Yes	PL=912	n/a	82	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Chloride (mg/L)	MW-10	No	2314	2039	80	18.6	5.901	0	None	No	sqrt(x)	Param Intra
Chloride (mg/L)	MW-13	No	PL=16000	n/a	77	n/a	n/a	1.299	None	No	No	NP Intra PL (normality)
Chloride (mg/L)	MW-15R	No	105.8	100.7	33	54.79	10.21	0	None	No	No	Param Intra
Chloride (mg/L)	MW-17R (bg)	No	1806765	909568	12	7.544	1.373	0	None	No	ln(x)	Param Intra
Iron (mg/L)	MW-7	No	PL=172	n/a	82	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Iron (mg/L)	MW-10	No	PL=56.63	n/a	79	n/a	n/a	0	None	No	No	NP Intra PL (normality) Deseas
Iron (mg/L)	MW-13	No	PL=8.59	n/a	77	n/a	n/a	33.77	None	No	No	NP Intra PL (normality)
Iron (mg/L)	MW-15R	No	196.1	160.2	54	2.02	0.7579	0	None	No	x^(1/3)	Param Intra
Iron (mg/L)	MW-17R (bg)	No	102.9	87.21	12	2.107	1.607	0	None	No	sqrt(x)	Param Intra
pH (SU)	MW-7	No	PL=8.5&6.62	n/a	83	n/a	n/a	0	None	No	No	NP Intra PL (normality)
pH (SU)	MW-10	No	PL=8.07&6.12	n/a	80	n/a	n/a	0	None	No	No	NP Intra PL (normality)
pH (SU)	MW-13	No	PL=8.18&5.66	n/a	78	n/a	n/a	0	None	No	No	NP Intra PL (normality)
pH (SU)	MW-15R	No	PL=8.54&4.5	n/a	55	n/a	n/a	0	None	No	No	NP Intra PL (normality)
pH (SU)	MW-17R (bg)	No	9.133&5.143	8.9...	10	7.138	0.399	0	None	No	No	Param Intra
Sodium (mg/L)	MW-7	No	PL=1290	n/a	82	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Sodium (mg/L)	MW-10	No	PL=1160	n/a	79	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Sodium (mg/L)	MW-13	No	PL=4720	n/a	77	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Sodium (mg/L)	MW-15R	No	426.3	407.5	33	238.4	37.58	0	None	No	No	Param Intra
Sodium (mg/L)	MW-17R (bg)	No	PL=9850	n/a	12	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Specific Conductance (umhos/cm)	MW-7	Yes	6401	6080	84	3193	641.6	0	None	No	No	Param Intra
Specific Conductance (umhos/cm)	MW-10	No	9542	8645	81	50.63	9.41	0	None	No	sqrt(x)	Param Intra
Specific Conductance (umhos/cm)	MW-13	No	PL=18600	n/a	80	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Specific Conductance (umhos/cm)	MW-15R	Yes	4398	4173	30	2147	450.2	0	None	No	No	Param Intra
Specific Conductance (umhos/cm)	MW-17R (bg)	No	PL=20000	n/a	11	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Temperature (degree-C)	MW-7	No	24.29	23.39	74	15.29	1.802	0	None	Yes	No	Param Intra
Temperature (degree-C)	MW-10	No	PL=25.97	n/a	71	n/a	n/a	0	None	No	No	NP Intra PL (normality) Deseas
Temperature (degree-C)	MW-13	No	PL=18.37	n/a	70	n/a	n/a	0	None	No	No	NP Intra PL (normality) Deseas
Temperature (degree-C)	MW-15R	No	32.15	31.4	44	10335	4582	0	None	No	x^3	Param Intra
Temperature (degree-C)	MW-17R (bg)	No	23.64	22.9	11	215.1	68.73	0	None	No	x^2	Param Intra
Total Dissolved Solids (mg/L)	MW-7	Yes	PL=2580	n/a	80	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Total Dissolved Solids (mg/L)	MW-10	No	5791	5289	79	42.35	6.75	0	None	No	sqrt(x)	Param Intra
Total Dissolved Solids (mg/L)	MW-13	No	PL=10600	n/a	77	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Total Dissolved Solids (mg/L)	MW-15R	Yes	4030	3808	27	1810	443.8	0	None	No	No	Param Intra
Total Dissolved Solids (mg/L)	MW-17R (bg)	No	PL=32100	n/a	12	n/a	n/a	0	None	No	No	NP Intra PL (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 Intra PL (normality)
Total Organic Carbon (mg/L)	MW-10	No	395.3	348.6	82	7.754	2.426	0	None	No	sqrt(x)	Param Intra
Total Organic Carbon (mg/L)	MW-13	No	PL=5.3	n/a	77	n/a	n/a	51.95	None	No	No	NP Intra PL (NDs)
Total Organic Carbon (mg/L)	MW-15R	No	23.51	21.88	53	7.21	3.261	1.887	None	No	No	Param Intra
Total Organic Carbon (mg/L)	MW-17R (bg)	No	189.5	174.9	12	43.14	29.28	0	None	No	No	Param Intra
TOX [Total Organic Halides] (mg/L)	MW-7	No	PL=0.4	n/a	80	n/a	n/a	35	None	No	No	NP Intra PL (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 Intra PL (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)	Param Intra
TOX [Total Organic Halides] (mg/L)	MW-15R	No	PL=1	n/a	51	n/a	n/a	33.33	None	No	No	NP Intra PL (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)	Param Intra

Prediction Limit

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge Printed 8/28/2014, 10:33 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chemical Oxygen Demand (mg/L)	MW-7	129	7/8/2014	73.6	No	81	n/a	n/a	n/a	24.69	n/a	n/a	0.0122	NP Intra (normality)
Chemical Oxygen Demand (mg/L)	MW-15R	240	7/8/2014	52.6ND	No	53	n/a	n/a	n/a	24.53	n/a	n/a	0.01852	NP Intra (normality)
Chloride (mg/L)	MW-7	912	7/8/2014	1030	Yes	82	n/a	n/a	n/a	0	n/a	n/a	0.01205	NP Intra (normality)
Chloride (mg/L)	MW-13	16000	7/8/2014	5090	No	77	n/a	n/a	n/a	1.299	n/a	n/a	0.01282	NP Intra (normality)
Iron (mg/L)	MW-7	172	7/8/2014	2.77	No	82	n/a	n/a	n/a	0	n/a	n/a	0.01205	NP Intra (normality)
Iron (mg/L)	MW-10	56.63	7/8/2014	2.794	No	79	n/a	n/a	n/a	0	n/a	n/a	0.0125	NP Intra (normality) Deseas
Iron (mg/L)	MW-13	8.59	7/8/2014	0.423	No	77	n/a	n/a	n/a	33.77	n/a	n/a	0.01282	NP Intra (normality)
pH (SU)	MW-7	8.5	7/8/2014	7.07	No	83	n/a	n/a	n/a	0	n/a	n/a	0.02381	NP Intra (normality)
pH (SU)	MW-10	8.07	7/8/2014	7.19	No	80	n/a	n/a	n/a	0	n/a	n/a	0.02469	NP Intra (normality)
pH (SU)	MW-13	8.18	7/8/2014	6.71	No	78	n/a	n/a	n/a	0	n/a	n/a	0.02532	NP Intra (normality)
pH (SU)	MW-15R	8.54	7/8/2014	6.61	No	55	n/a	n/a	n/a	0	n/a	n/a	0.03571	NP Intra (normality)
Sodium (mg/L)	MW-7	1290	7/8/2014	1100	No	82	n/a	n/a	n/a	0	n/a	n/a	0.01205	NP Intra (normality)
Sodium (mg/L)	MW-10	1160	7/8/2014	487	No	79	n/a	n/a	n/a	0	n/a	n/a	0.0125	NP Intra (normality)
Sodium (mg/L)	MW-13	4720	7/8/2014	3170	No	77	n/a	n/a	n/a	0	n/a	n/a	0.01282	NP Intra (normality)
Sodium (mg/L)	MW-17R	9850	7/8/2014	1140	No	12	n/a	n/a	n/a	0	n/a	n/a	0.07692	NP Intra (normality)
Specific Conductance (umhos/cm)	MW-13	18600	4/10/2014	14430	No	80	n/a	n/a	n/a	0	n/a	n/a	0.01235	NP Intra (normality)
Specific Conductance (umhos/cm)	MW-17R	20000	7/8/2014	4440	No	11	n/a	n/a	n/a	0	n/a	n/a	0.08333	NP Intra (normality)
Temperature (degree-C)	MW-7	19.6	7/8/2014	16.98	No	74	n/a	15.29	1.802	0	None	No	0.01	Param Intra Deseas
Temperature (degree-C)	MW-10	25.97	7/8/2014	18.68	No	71	n/a	n/a	n/a	0	n/a	n/a	0.01389	NP Intra (normality) Deseas
Temperature (degree-C)	MW-13	18.37	7/8/2014	15.16	No	70	n/a	n/a	n/a	0	n/a	n/a	0.01408	NP Intra (normality) Deseas
Total Dissolved Solids (mg/L)	MW-7	2580	7/8/2014	2770	Yes	80	n/a	n/a	n/a	0	n/a	n/a	0.01235	NP Intra (normality)
Total Dissolved Solids (mg/L)	MW-13	10600	7/8/2014	8720	No	77	n/a	n/a	n/a	0	n/a	n/a	0.01282	NP Intra (normality)
Total Dissolved Solids (mg/L)	MW-17R	32100	7/8/2014	3040	No	12	n/a	n/a	n/a	0	n/a	n/a	0.07692	NP Intra (normality)
Total Organic Carbon (mg/L)	MW-7	19.4	7/8/2014	1ND	No	84	n/a	n/a	n/a	4.762	n/a	n/a	0.01176	NP Intra (normality)
Total Organic Carbon (mg/L)	MW-13	5.3	7/8/2014	5ND	No	77	n/a	n/a	n/a	51.95	n/a	n/a	0.01282	NP Intra (NDs)
TOX [Total Organic Halides] (mg/L)	MW-7	0.4	7/8/2014	0.069	No	80	n/a	n/a	n/a	35	n/a	n/a	0.01235	NP Intra (normality)
TOX [Total Organic Halides] (mg/L)	MW-10	1	7/8/2014	0.24	No	77	n/a	n/a	n/a	3.896	n/a	n/a	0.01282	NP Intra (normality)
TOX [Total Organic Halides] (mg/L)	MW-15R	1	7/8/2014	0.024	No	51	n/a	n/a	n/a	33.33	n/a	n/a	0.01923	NP Intra (normality)

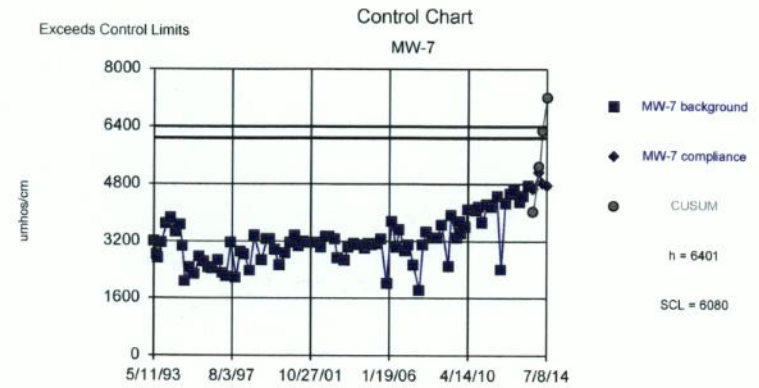
Exceeds Limit



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 8/28/2014 10:19 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Exceeds Control Limits



Background Data Summary: Mean=3193, Std. Dev.=641.6, n=84. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.05, calculated = 0.9812, critical = 0.971. Report alpha = 0.000072. Dates ending 7/11/2013 used for control stats. Unstandardized h=5, SCL=4.5.

Constituent: Specific Conductance Analysis Run 8/28/2014 10:20 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Exceeds Control Limits



Background Data Summary: Mean=2147, Std. Dev.=450.2, n=30. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9753, critical = 0.927. Report alpha = 0.001122. Dates ending 10/4/2012 used for control stats. Unstandardized h=5, SCL=4.5.

Constituent: Specific Conductance Analysis Run 8/28/2014 10:20 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Exceeds Limit



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.

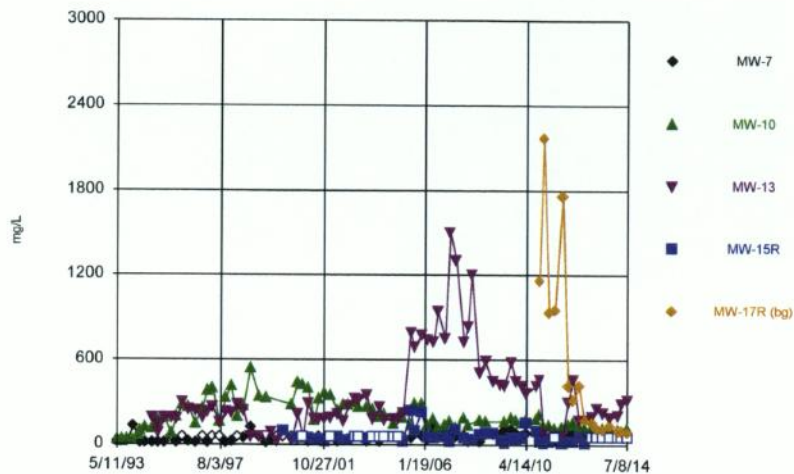
Constituent: Total Dissolved Solids Analysis Run 8/28/2014 10:21 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge



Background Data Summary: Mean=1810, Std. Dev.=443.8, n=27. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9692, critical = 0.923. Report alpha = 0.001646. Dates ending 7/17/2012 used for control stats. Unstandardized h=5, SCL=4.5.

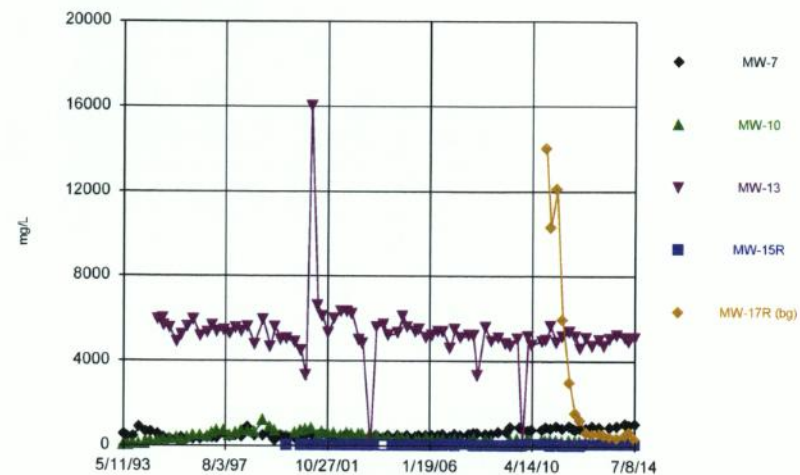
Constituent: Total Dissolved Solids Analysis Run 8/28/2014 10:21 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series



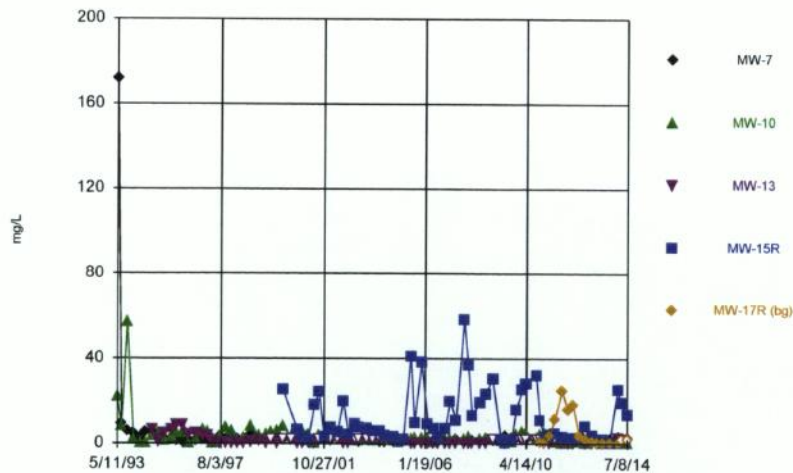
Constituent: Chemical Oxygen Demand Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series



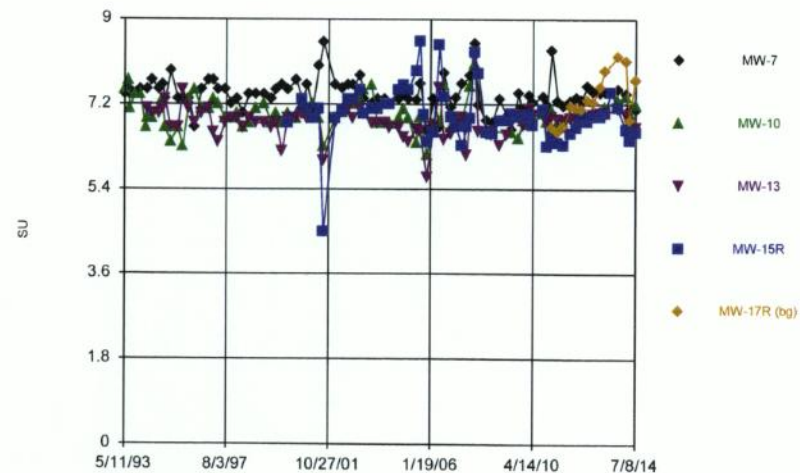
Constituent: Chloride Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series



Constituent: Iron Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series



Constituent: pH Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series

Constituent: Chemical Oxygen Demand (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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

Constituent: Chemical Oxygen Demand (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list
 Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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		
6/6/2006	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

Constituent: Chemical Oxygen Demand (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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
4/10/2014	53.2	89.6	285	<52.6	98.7
7/8/2014	73.6	112	317	<52.6	85

Time Series

Constituent: Chloride (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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	27.4	
6/27/2000	377	564	4850		
9/26/2000	460	710	4500	27	
12/12/2000	480	770	3300	24	
2/27/2001	530	800	16000	34	
6/6/2001	470	500	6600	29	
8/15/2001	570	650	6100	22	
11/7/2001	450	610	5300	21	
2/6/2002	410	600	6000	22	
5/22/2002	430	460	6300	23	
8/21/2002	520	570	6300	27	
11/7/2002	470	520	6200	25	
2/21/2003	370	530	5000	25	
4/16/2003	390	530	4800	25	
8/14/2003			<50	28	
8/15/2003	390	510			
11/12/2003	450	480	5600	21	
3/3/2004	380	370	5700	<50	
5/4/2004	450	410	5200	26	
9/21/2004	470	430	5300	25	
12/15/2004	380	370	6100	26	

Time Series

Constituent: Chloride (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
2/22/2005	470	360	5600	25	
6/16/2005	430	310	5400		
6/17/2005				30	
8/17/2005	450	330	5500	35	
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

Time Series

Constituent: Chloride (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
10/4/2012	910	140	4700	58.5	517
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
4/10/2014	967	141	4950	74	651
7/8/2014	1030	141	5090	77.8	331

Time Series

Constituent: Iron (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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

Constituent: Iron (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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		
6/6/2006	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: Iron (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Comerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
4/10/2014	2.33	<2	<2	19.1	<2
7/8/2014	2.77	0.251	0.423	13.9	<2

Time Series

Constituent: pH (SU) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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

Constituent: pH (SU) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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	6.63	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	
5/20/2009	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

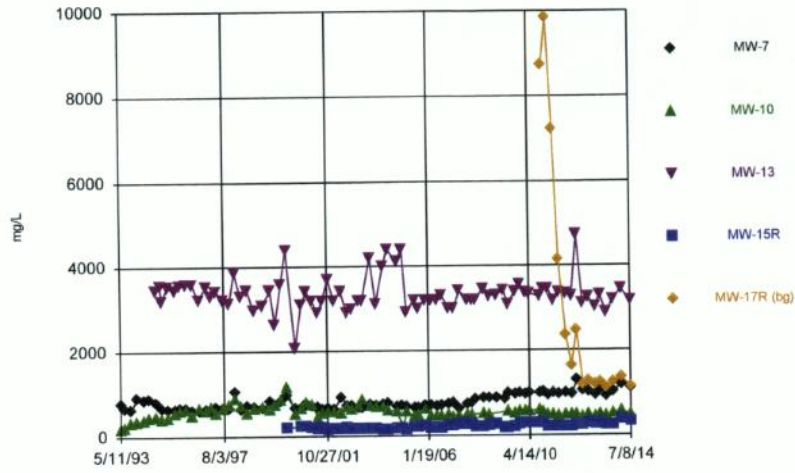
Time Series

Constituent: pH (SU) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

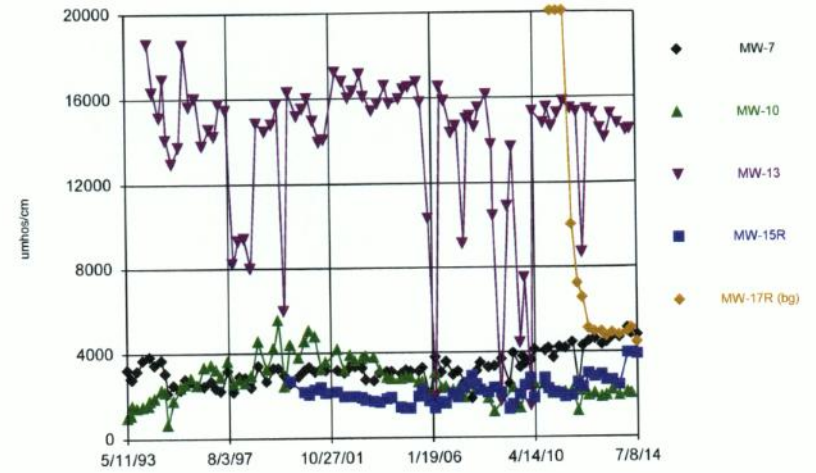
	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
1/24/2013	7.44	7.03	7.01	6.92	7.56
4/4/2013	7.45	7.14	7.02	7	7.9
7/11/2013				7.46	
10/14/2013	7.52	7.29	7.1	7.13	8.2
2/17/2014	7.41	7.37	6.99	6.66	8.11
4/10/2014	7.08	7	6.69	6.42	6.85
7/8/2014	7.07	7.19	6.71	6.61	7.71

Time Series



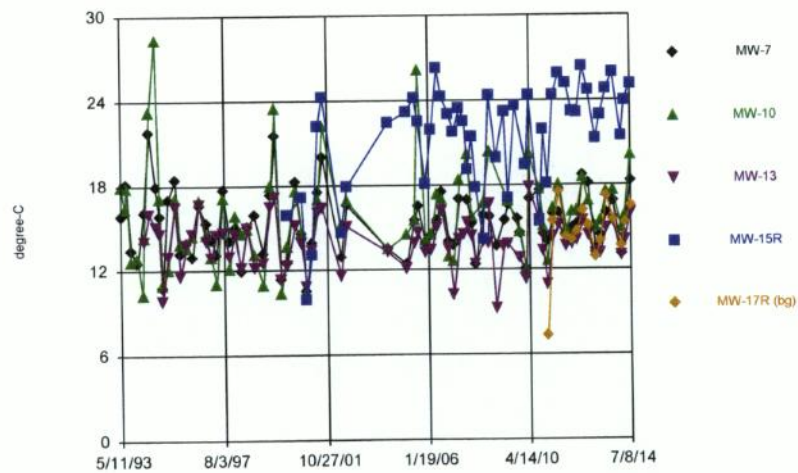
Constituent: Sodium Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Comerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series



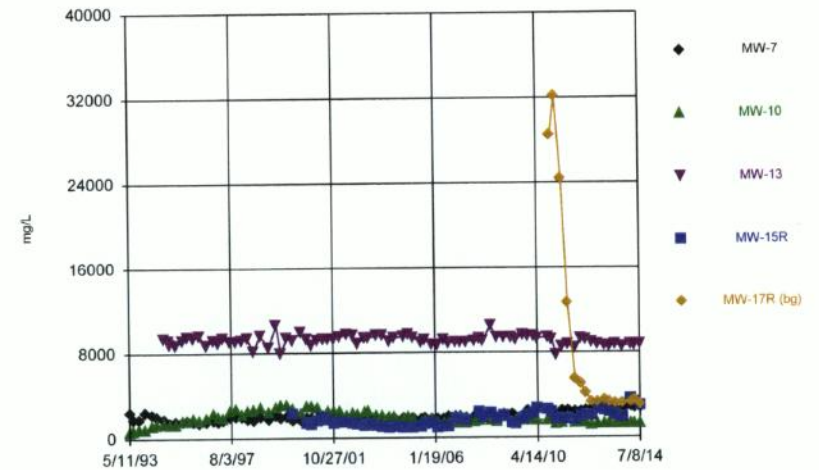
Constituent: Specific Conductance Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Comerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series



Constituent: Temperature Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Comerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series



Constituent: Total Dissolved Solids Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Comerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series

Constituent: Sodium (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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	202	
6/27/2000	664	521	2080		
9/26/2000	650	650	3100	230	
12/12/2000	760	790	3400	230	
2/27/2001	700	750	3200	200	
6/6/2001	670	430	2900	190	
8/15/2001	640	540	3200	200	
11/7/2001	660	580	3700	160	
2/6/2002	630	580	3200	170	
5/22/2002	910	550	3400	190	
8/21/2002	710	670	2900	200	
11/7/2002	700	620	3000	170	
2/21/2003	650	720	3200	170	
4/16/2003	660	840	3200	180	
8/14/2003			4200	170	
8/15/2003	750	710			
11/12/2003	700	680	3100	180	
3/3/2004	730	670	4000	160	
5/4/2004	770	610	4400	160	
9/21/2004	680	580	4100	170	
12/15/2004	710	210	4400	180	
2/22/2005	690	560	2900	160	
6/16/2005	660	460	3200		
6/17/2005				200	

Time Series

Constituent: Sodium (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
8/17/2005	660	490	3000	210	
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	488	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

Time Series

Constituent: Sodium (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
2/17/2014	1170	567	3430	385	1340
7/8/2014	1100	487	3170	320	1140

Time Series

Constituent: Specific Conductance (umhos/cm) Analysis Run 8/28/2014 10:34 AM View: Short list
 Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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

Constituent: Specific Conductance (umhos/cm) Analysis Run 8/28/2014 10:34 AM View: Short list
 Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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

Constituent: Specific Conductance (umhos/cm) Analysis Run 8/28/2014 10:34 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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
4/10/2014	4826	2023	14430	3908	5071
7/8/2014	4750			3871	4440

Time Series

Constituent: Temperature (degree-C) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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

Constituent: Temperature (degree-C) Analysis Run 8/28/2014 10:34 AM View: Short list
 Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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
4/10/2014	15.3	15.8	14.08	23.95	15.35
7/8/2014	18.27	20.13	16.03	25.11	16.51

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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	1600	
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

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list
 Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

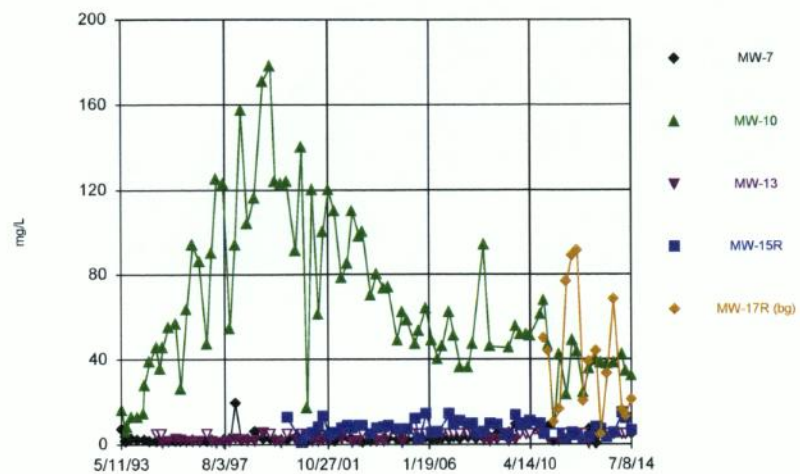
	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
8/17/2005	1800	1600	9200	1300	
11/30/2005	1700		8800		
12/1/2005		1700		1400	
3/7/2006				1000	
3/8/2006		1400	8800		
3/9/2006	1700				
6/5/2006			9200		
6/6/2006	1700	1400		1100	
8/10/2006	1900	1400	8900	1100	
11/30/2006				1800	
12/1/2006	1900	1500	9000		
2/12/2007	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	
4/6/2010	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 Dissolved Solids (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

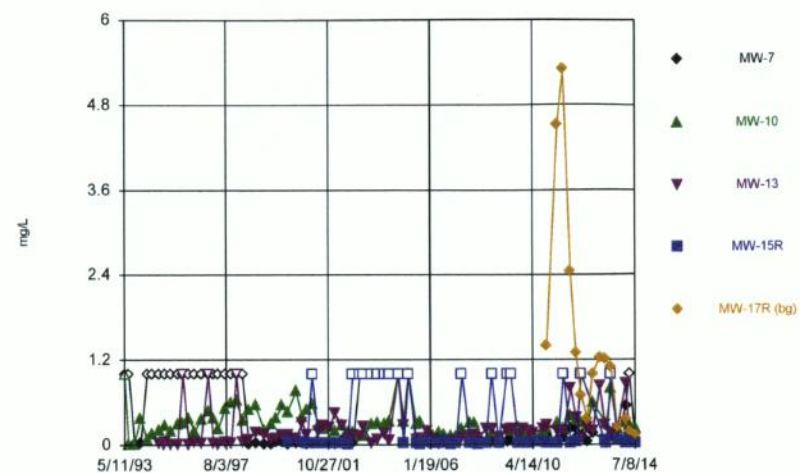
	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
4/10/2014	2750	1290	8650	3270	3520
7/8/2014	2770	1310	8720	2910	3040

Time Series



Constituent: Total Organic Carbon Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series



Constituent: TOX [Total Organic Halides] Analysis Run 8/28/2014 10:33 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series

Constituent: Total Organic Carbon (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list
 Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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

Constituent: Total Organic Carbon (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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

Constituent: Total Organic Carbon (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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
4/10/2014	<5	34.4	<5	11.7	12.9
7/8/2014	<5	32.2	<5	6.3	20.8

Time Series

Constituent: TOX [Total Organic Halides] (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list
 Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
5/11/1993	<1	<1			
7/16/1993	<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	
6/6/2001	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

Constituent: TOX [Total Organic Halides] (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list
 Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC 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	0.059			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

Constituent: TOX [Total Organic Halides] (mg/L) Analysis Run 8/28/2014 10:34 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)
3/11/2014		0.32			
4/10/2014	<1	0.27	0.16	0.092	0.2
7/8/2014	0.069	0.24	0.094	0.024	0.14

APPENDIX E
LABORATORY ANALYTICAL REPORT



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

July 30, 2014

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

RE: Project: BLUE RIDGE GW 07/14
Pace Project No.: 4099524

Dear Dan Fleshour:

Enclosed are the analytical results for sample(s) received by the laboratory on July 10, 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 07/14
Pace Project No.: 4099524

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
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

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SAMPLE SUMMARY

Project: BLUE RIDGE GW 07/14
Pace Project No.: 4099524

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4099524001	MW-7	Water	07/08/14 13:50	07/10/14 10:37
4099524002	MW-10	Water	07/08/14 14:15	07/10/14 10:37
4099524003	MW-13	Water	07/08/14 14:45	07/10/14 10:37
4099524004	MW-15R	Water	07/08/14 15:15	07/10/14 10:37
4099524005	MW-17R	Water	07/08/14 15:46	07/10/14 10:37
4099524006	DUP	Water	07/08/14 14:50	07/10/14 10:37

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SAMPLE ANALYTE COUNT

Project: BLUE RIDGE GW 07/14

Pace Project No.: 4099524

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4099524001	MW-7	EPA 6010	DLB	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
4099524002	MW-10	EPA 6010	DLB	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
4099524003	MW-13	EPA 6010	DLB	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
4099524004	MW-15R	EPA 6010	DLB	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
4099524005	MW-17R	EPA 6010	DLB	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
4099524006	DUP	EPA 6010	DLB	2	PASI-G
		SM 2540C	MLH	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: BLUE RIDGE GW 07/14
Pace Project No.: 4099524

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 410.4	TJJ	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW 07/14
 Pace Project No.: 4099524

Sample: MW-7		Lab ID: 4099524001	Collected: 07/08/14 13:50	Received: 07/10/14 10:37	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	2770	ug/L	100	1	07/14/14 08:55	07/15/14 10:05	7439-89-6	
Sodium	1100000	ug/L	10000	10	07/14/14 08:55	07/15/14 10:13	7440-23-5	
Field Data		Analytical Method:						
Field pH	7.07	Std. Units		1		07/08/14 13:50		
Field Specific Conductance	4750	umhos/cm		1		07/08/14 13:50		
Temperature, Water (C)	18.27	deg C		1		07/08/14 13:50		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	2770	mg/L	20.0	1		07/14/14 16:14		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	73.6	mg/L	50.0	1	07/22/14 10:25	07/22/14 13:42		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	<0.50	mg/L	0.50	1		07/17/14 14:49	7440-44-0	
Total Organic Halides		Analytical Method: EPA 9020B						
Total Organic Halides	0.069	mg/L	0.020	1		07/29/14 10:39		
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	1030	mg/L	200	50		07/15/14 20:44	16887-00-6	

Sample: MW-10		Lab ID: 4099524002	Collected: 07/08/14 14:15	Received: 07/10/14 10:37	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	251	ug/L	100	1	07/14/14 08:55	07/15/14 15:47	7439-89-6	
Sodium	487000	ug/L	10000	10	07/14/14 08:55	07/15/14 17:44	7440-23-5	
Field Data		Analytical Method:						
Field pH	7.19	Std. Units		1		07/08/14 14:15		
Oxygen, Dissolved	2048	mg/L		1		07/08/14 14:15	7782-44-7	
Temperature, Water (C)	20.13	deg C		1		07/08/14 14:15		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	1310	mg/L	20.0	1		07/14/14 16:15		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	112	mg/L	50.0	1	07/22/14 10:25	07/22/14 13:42		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	32.2	mg/L	5.0	10		07/17/14 15:08	7440-44-0	

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW 07/14
 Pace Project No.: 4099524

Sample: MW-10		Lab ID: 4099524002	Collected: 07/08/14 14:15	Received: 07/10/14 10:37	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Halides		Analytical Method: EPA 9020B						
Total Organic Halides	0.24	mg/L	0.020	1		07/25/14 13:46		
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	141	mg/L	20.0	5		07/15/14 20:52	16887-00-6	

Sample: MW-13		Lab ID: 4099524003	Collected: 07/08/14 14:45	Received: 07/10/14 10:37	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	423	ug/L	100	1	07/14/14 08:55	07/15/14 15:49	7439-89-6	
Sodium	3170000	ug/L	100000	100	07/14/14 08:55	07/15/14 17:50	7440-23-5	
Field Data		Analytical Method:						
Field pH	6.71	Std. Units		1		07/08/14 14:45		
Oxygen, Dissolved	14420	mg/L		1		07/08/14 14:45	7782-44-7	
Temperature, Water (C)	16.03	deg C		1		07/08/14 14:45		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	8720	mg/L	20.0	1		07/14/14 16:15		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	317	mg/L	50.0	1	07/22/14 10:25	07/22/14 13:42		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	<0.50	mg/L	0.50	1		07/17/14 15:27	7440-44-0	
Total Organic Halides		Analytical Method: EPA 9020B						
Total Organic Halides	0.094	mg/L	0.020	1		07/25/14 14:24		
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	5090	mg/L	400	100		07/15/14 21:00	16887-00-6	

Sample: MW-15R		Lab ID: 4099524004	Collected: 07/08/14 15:15	Received: 07/10/14 10:37	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	13900	ug/L	100	1	07/14/14 08:55	07/15/14 15:56	7439-89-6	
Sodium	320000	ug/L	10000	10	07/14/14 08:55	07/15/14 17:53	7440-23-5	
Field Data		Analytical Method:						
Field pH	6.61	Std. Units		1		07/08/14 15:15		

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW 07/14
 Pace Project No.: 4099524

Sample: MW-15R		Lab ID: 4099524004	Collected: 07/08/14 15:15	Received: 07/10/14 10:37	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Data		Analytical Method:						
Field Specific Conductance	3871	umhos/cm		1		07/08/14 15:15		
Temperature, Water (C)	25.11	deg C		1		07/08/14 15:15		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	2910	mg/L	20.0	1		07/14/14 16:15		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	<50.0	mg/L	50.0	1	07/22/14 10:25	07/22/14 13:43		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	6.3	mg/L	3.0	6		07/18/14 13:59	7440-44-0	
Total Organic Halides		Analytical Method: EPA 9020B						
Total Organic Halides	0.024	mg/L	0.020	1		07/25/14 15:08		
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	77.8	mg/L	20.0	5		07/16/14 11:15	16887-00-6	

Sample: MW-17R		Lab ID: 4099524005	Collected: 07/08/14 15:46	Received: 07/10/14 10:37	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	<100	ug/L	100	1	07/14/14 08:55	07/15/14 15:59	7439-89-6	
Sodium	1140000	ug/L	10000	10	07/14/14 08:55	07/15/14 17:55	7440-23-5	
Field Data		Analytical Method:						
Field pH	7.71	Std. Units		1		07/08/14 15:46		
Field Specific Conductance	4440	umhos/cm		1		07/08/14 15:46		
Temperature, Water (C)	16.51	deg C		1		07/08/14 15:46		
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	3040	mg/L	20.0	1		07/14/14 16:16		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	85.0	mg/L	50.0	1	07/22/14 10:25	07/22/14 13:43		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	20.8	mg/L	10.0	20		07/17/14 16:05	7440-44-0	
Total Organic Halides		Analytical Method: EPA 9020B						
Total Organic Halides	0.14	mg/L	0.020	1		07/25/14 16:01		

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW 07/14
 Pace Project No.: 4099524

Sample: MW-17R		Lab ID: 4099524005	Collected: 07/08/14 15:46	Received: 07/10/14 10:37	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	331	mg/L	80.0	20		07/15/14 21:16	16887-00-6	
Sample: DUP		Lab ID: 4099524006	Collected: 07/08/14 14:50	Received: 07/10/14 10:37	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	1310	ug/L	100	1	07/14/14 08:55	07/15/14 16:01	7439-89-6	
Sodium	3080000	ug/L	100000	100	07/14/14 08:55	07/16/14 12:30	7440-23-5	
2540C Total Dissolved Solids		Analytical Method: SM 2540C						
Total Dissolved Solids	8780	mg/L	20.0	1		07/14/14 16:16		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	297	mg/L	50.0	1	07/22/14 10:25	07/22/14 13:43		
5310C TOC		Analytical Method: SM 5310C						
Total Organic Carbon	<0.50	mg/L	0.50	1		07/18/14 14:18	7440-44-0	
Total Organic Halides		Analytical Method: EPA 9020B						
Total Organic Halides	0.096	mg/L	0.020	1		07/25/14 16:34		
9056 IC Anions		Analytical Method: EPA 9056						
Chloride	4780	mg/L	800	200		07/16/14 13:42	16887-00-6	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW 07/14
 Pace Project No.: 4099524

QC Batch: MPRP/10519 Analysis Method: EPA 6010
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET
 Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

METHOD BLANK: 1006672 Matrix: Water
 Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron	ug/L	<100	100	07/15/14 09:40	
Sodium	ug/L	<1000	1000	07/15/14 09:40	

LABORATORY CONTROL SAMPLE: 1006673

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	5000	4890	98	80-120	
Sodium	ug/L	5000	5010	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1006674 1006675

Parameter	Units	4099014001		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Iron	ug/L	7270	5000	5000	12200	12000	98	95	75-125	1	20	
Sodium	ug/L	88200	5000	5000	92200	91800	78	72	75-125	0	20 P6	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW 07/14
Pace Project No.: 4099524

QC Batch: WET/19302 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

METHOD BLANK: 1006913 Matrix: Water
Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<20.0	20.0	07/14/14 16:07	

LABORATORY CONTROL SAMPLE: 1006914

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	647	584	90	80-120	

SAMPLE DUPLICATE: 1006915

Parameter	Units	4099468001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	586	586	0	10	

SAMPLE DUPLICATE: 1006916

Parameter	Units	4099485003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	88.0	84.0	5	10	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW 07/14
 Pace Project No.: 4099524

QC Batch: WETA/24233 Analysis Method: EPA 410.4
 QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
 Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

METHOD BLANK: 1010822 Matrix: Water
 Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<50.0	50.0	07/22/14 13:41	

LABORATORY CONTROL SAMPLE: 1010823

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	510	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1010824 1010825

Parameter	Units	4099485003		1010824		1010825		% Rec Limits	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				MSD % Rec
Chemical Oxygen Demand	mg/L	77.5	526	526	619	619	103	103	90-110	0	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1010826 1010827

Parameter	Units	4099555001		1010826		1010827		% Rec Limits	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				MSD % Rec
Chemical Oxygen Demand	mg/L	91.9	526	526	623	621	101	101	90-110	0	10

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW 07/14
Pace Project No.: 4099524

QC Batch: WETA/24168 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

METHOD BLANK: 1008595 Matrix: Water
Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.50	0.50	07/17/14 14:01	

LABORATORY CONTROL SAMPLE: 1008596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.5	2.2	87	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1008597 1008598

Parameter	Units	10273217001 Result	MS		MSD		MS		MSD		% Rec Limits	Max		Qual
			Spike Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD				
Total Organic Carbon	mg/L	<0.17	2.5	2.5	2.7	2.5	107	102	80-120	5	20			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1008599 1008600

Parameter	Units	4099774004 Result	MS		MSD		MS		MSD		% Rec Limits	Max		Qual
			Spike Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD				
Total Organic Carbon	mg/L	0.81	2.5	2.5	3.5	3.6	109	112	80-120	2	20			

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW 07/14
Pace Project No.: 4099524

QC Batch: WETA/2522 Analysis Method: EPA 9020B
QC Batch Method: EPA 9020B Analysis Description: 9020B W TOX
Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

METHOD BLANK: 37618 Matrix: Water
Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Halides	mg/L	<0.020	0.020	07/25/14 09:29	

LABORATORY CONTROL SAMPLE: 37619

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Halides	mg/L	.1	0.092	92	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 37655 37656

Parameter	Units	4099524001 Result	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Total Organic Halides	mg/L	0.069	.1	.1	0.18	0.18	107	111	78-116	3	20		

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW 07/14
 Pace Project No.: 4099524

QC Batch: WETA/24099 Analysis Method: EPA 9056
 QC Batch Method: EPA 9056 Analysis Description: 9056 IC Anions
 Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

METHOD BLANK: 1006692 Matrix: Water
 Associated Lab Samples: 4099524001, 4099524002, 4099524003, 4099524004, 4099524005, 4099524006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<4.0	4.0	07/15/14 18:16	

LABORATORY CONTROL SAMPLE: 1006693

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1006694 1006695

Parameter	Units	1006694		1006695		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		4099097001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Chloride	mg/L	15.0	20	20	35.7	36.0	104	105	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1006696 1006697

Parameter	Units	1006696		1006697		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		4099524006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Chloride	mg/L	4780	4000	4000	9090	9130	108	109	90-110	0	20	

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QUALIFIERS

Project: BLUE RIDGE GW 07/14
Pace Project No.: 4099524

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.

PQL - Practical Quantitation 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

ANALYTE QUALIFIERS

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 07/14

Pace Project No.: 4099524

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4099524001	MW-7	EPA 3010	MPRP/10519	EPA 6010	ICP/9298
4099524002	MW-10	EPA 3010	MPRP/10519	EPA 6010	ICP/9298
4099524003	MW-13	EPA 3010	MPRP/10519	EPA 6010	ICP/9298
4099524004	MW-15R	EPA 3010	MPRP/10519	EPA 6010	ICP/9298
4099524005	MW-17R	EPA 3010	MPRP/10519	EPA 6010	ICP/9298
4099524006	DUP	EPA 3010	MPRP/10519	EPA 6010	ICP/9298
4099524001	MW-7		PM/		
4099524002	MW-10		PM/		
4099524003	MW-13		PM/		
4099524004	MW-15R		PM/		
4099524005	MW-17R		PM/		
4099524001	MW-7	SM 2540C	WET/19302		
4099524002	MW-10	SM 2540C	WET/19302		
4099524003	MW-13	SM 2540C	WET/19302		
4099524004	MW-15R	SM 2540C	WET/19302		
4099524005	MW-17R	SM 2540C	WET/19302		
4099524006	DUP	SM 2540C	WET/19302		
4099524001	MW-7	EPA 410.4	WETA/24233	EPA 410.4	WETA/24247
4099524002	MW-10	EPA 410.4	WETA/24233	EPA 410.4	WETA/24247
4099524003	MW-13	EPA 410.4	WETA/24233	EPA 410.4	WETA/24247
4099524004	MW-15R	EPA 410.4	WETA/24233	EPA 410.4	WETA/24247
4099524005	MW-17R	EPA 410.4	WETA/24233	EPA 410.4	WETA/24247
4099524006	DUP	EPA 410.4	WETA/24233	EPA 410.4	WETA/24247
4099524001	MW-7	SM 5310C	WETA/24168		
4099524002	MW-10	SM 5310C	WETA/24168		
4099524003	MW-13	SM 5310C	WETA/24168		
4099524004	MW-15R	SM 5310C	WETA/24168		
4099524005	MW-17R	SM 5310C	WETA/24168		
4099524006	DUP	SM 5310C	WETA/24168		
4099524001	MW-7	EPA 9020B	WETA/2522		
4099524002	MW-10	EPA 9020B	WETA/2522		
4099524003	MW-13	EPA 9020B	WETA/2522		
4099524004	MW-15R	EPA 9020B	WETA/2522		
4099524005	MW-17R	EPA 9020B	WETA/2522		
4099524006	DUP	EPA 9020B	WETA/2522		
4099524001	MW-7	EPA 9056	WETA/24099		
4099524002	MW-10	EPA 9056	WETA/24099		
4099524003	MW-13	EPA 9056	WETA/24099		
4099524004	MW-15R	EPA 9056	WETA/24099		
4099524005	MW-17R	EPA 9056	WETA/24099		
4099524006	DUP	EPA 9056	WETA/24099		

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Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical

Client Name: ADS Blue Ridge

Project #:

WO#: 4099524



Courier: Fed Ex UPS Client Pace Other:

Tracking #: 1290E6F323000 2947

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 SK-32 Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 5 / Corr: 5 Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

Person examining contents:
Date: 7/10/14
Initials: SB

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Comments:

Table with 15 rows of checklist items and checkboxes. Items include Chain of Custody Present, Short Hold Time Analysis, Rush Turn Around Time Requested, etc.

Client Notification/ Resolution:

If checked, see attached form for additional comments

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature]

Date: 7/10/14