cornerstone
environmental

2456 Fortune Drive, Suite 170, Lexington, KY 40509
T 877.633.5520 W www.cornerstoneeg.com

998
4Q GW SW CMR
CMN14-02

NO DATE R'CD
STAMP
- 12-12-14
DD

Transmittal Letter

December 12, 2014

Mr. Danny Anderson, P.E.
Kentucky Division of Waste Management
200 Fair Oaks Lane
Frankfort, KY 40601

RE: 4th Quarter 2014 Reports, Advanced Disposal Services Blue Ridge Landfill
Project No. 140174

Quantity	Description
1	4th Quarter 2014 Groundwater Report – Permit #033-00004
1	4th Quarter 2014 Surface Water Report – Permit #033-00004

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

Comments:

Transmitted By:

Kari Wallover

cc:

Advanced Disposal

December 12, 2014

Mr. Danny Anderson, P.E.
Manager, Solid Waste Branch
Division of Waste Management
200 Fair Oaks Lane
2nd Floor
Frankfort, KY 40601

RE: Advanced Disposal Services Blue Ridge Landfill, Inc.
4th Quarter 2014 Surface Water Report
Permit # 033-00004
AI # 998

Dear Mr. Anderson:

Please find attached the 4th Quarter 2014 surface water report for the Advanced Disposal Services Blue Ridge landfill site in Irvine, Estill County, Kentucky.

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

Sincerely,
BLUE RIDGE LANDFILL, INC.

Daniel J Fleshour

Dan Fleshour
East Region Compliance Manager

2700 Winchester Road Irvine, KY 40336 Tel (606) 723-5552 Fax (606) 723-5607
AdvancedDisposal.com

GROUNDWATER
AND
SURFACE WATER MONITORING
SAMPLE DATA REPORTING FORM

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

Facility Name Advanced Disposal Services Blue Ridge Landfill, Inc. Activity OTR SW Detection
(As officially shown on DWM Permit Face)

Permit No. 033-00004 Finds/Unit No. KY0000470336 Quarter & Year 4th Quarter, 2014

Please check only ONE of the following:

____Characterization __X__Quarterly _____Semi-Annual _____Annual _____Assessment

Please check applicable submittal: _____Groundwater __X__Surface Water
_____Leachate

This form is to be utilized by those sites required by regulation (Kentucky Waste Management Regulations - 401 KAR 48:300 and 45:160) or by statute (Kentucky Revised Statutes Chapter 224) to conduct groundwater and surface water monitoring under the jurisdiction of the Division of Waste Management. You must report any indication of contamination within forty-eight (48) hours of making the determination using statistical analyses, direct comparison, or other similar techniques. Submitting the lab report is NOT considered notification. Instructions for completing the form are attached. Do not submit the instruction pages.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for such violations.

Daniel J Fleshour

SIGNATURE

12/12/14
DATE

Dan Fleshour, East Region Compliance Manager
NAME AND TITLE - PLEASE PRINT

FACILITY INFORMATION SHEET

Sampling Date: 10/13/14 County: Estill Permit No.: 033-00004

Facility Name Advanced Disposal Services Blue Ridge Landfill, Inc.

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

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

OWNER INFORMATION

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

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

Contact Person Title: Landfill Operations Manager

Mailing Address 2700 Winchester Road (Street) Irvine (City) KY (State) 40336 (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 (Street) Lexington (City) KY (State) 40509 (Zip)

LABORATORY RECORD #1

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

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

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

LABORATORY RECORD #2

Laboratory: Lab ID No

Contact Person: Phone No.:

Mailing Address: (Street) (City) (State) (Zip)

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

Permit Number: 033-00004
Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: KY0000470336 /1
LAB ID:
For Offical Use Only

SURFACE WATER SAMPLE ANALYSIS (W)

Monitoring Point (KPDES Discharge Number, or "Upstream", or "Downstream")						SWM-1		SWM-2		SWM-3		SWM-4	
Sample Sequence #						N/A		N/A		N/A		N/A	
If sample is a Blank specify type: (F)ield, (T)rip, (M)ethod, or (E)quipment						N/A		N/A		N/A		N/A	
Sample Date and Time (Month/Day/Year hour:minutes)						10/13/2014		10/13/2014		10/13/2014		10/13/2014	
Duplicate ("Y" or "N")[1]						N/A		N/A		N/A		N/A	
Split ("Y" or "N")[2]						N/A		N/A		N/A		N/A	
Facility Sample ID Number (if applicable)						N/A		N/A		N/A		N/A	
Laboratory Sample ID Number (if applicable)						N/A		N/A		N/A		N/A	
Date of Analysis (Month/Day/Year)						N/A		N/A		N/A		N/A	
CAS RN[3]		Constituent	TD[4]	Unit of Measure	Method	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS
A200-00-0	0	Flow	T	FT/SEC.	FIELD	No Flow		No Flow		No Flow		No Flow	
16887-00-6	2	Chloride(s)	T	mg/L	9251								
14808-79-8	0	Sulfate	T	mg/L	9038								
7439-89-6	0	Iron	T	mg/L	6010								
7440-23-5	0	Sodium	T	mg/L	6010								
S0268- -	0	Organic Carbon[6]	T	mg/L	9060								
S0097- -	0	BOD[6]	-	MG/L	N/A								
S0130- -	0	Chemical Oxygen Demand	T	mg/L	410.4								

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

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

Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL FINDS/UNIT: KY0000470336 /1

LAB ID: _____

For official Use Only

SURFACE WATER SAMPLE ANALYSIS - (Cont.)

Monitoring Point (KPDES Discharge Number, or "Upstream" or "Downstream")						SWM-1		SWM-2		SWM-3		SWM-4	
CAS RN[3]		Constituent	TD[4]	Unit of Measure	Method	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS
S0145- -	1	Specific Conductance	-	UMHOS/CM	FIELD								
S0270- -	0	Total Suspended Solids	T	mg/L	160.2								
S0266- -	0	Total Dissolved Solids	T	mg/L	160.1								
S0269- -	0	Total Solids	T	mg/L	160.3								
S0296- -	0	pH	-	NO UNITS	FIELD								

[1]Respond "Y" if the sample was a duplicate of another sample in this report.

[2]Respond "Y" if the sample was split and analyzed by separate laboratories.

[3]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.

[4]"T" = Total; "D" = Dissolved

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

[6]Facility has either/or option on Organic Carbon and (BOD) Biochemical Oxygen Demand - both are not required.

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

Advanced Disposal

December 12, 2014

Mr. Danny Anderson, P.E.
Manager, Solid Waste Branch
Division of Waste Management
200 Fair Oaks Lane
2nd Floor
Frankfort, KY 40601

RE: Advanced Disposal Services Blue Ridge Landfill, Inc.
4th Quarter 2014 Groundwater Statistical Analysis Report
Permit # 033-00004
AI # 998

Dear Mr. Anderson:

Please find attached the 4th 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 (606) 723-5559.

Sincerely,
BLUE RIDGE LANDFILL, INC.

Daniel J Fleshour

Dan Fleshour
East Region Compliance Manager

2700 Winchester Road Irvine, KY 40336 Tel (606) 723-5552 Fax (606) 723-5607
AdvancedDisposal.com

cornerstone
environmental

2456 Fortune Drive, Suite 170, Lexington, KY 40509

4th Quarter 2014 Groundwater Statistical Analysis Report

Project # 140174
December 2014

Prepared for:
Advanced Disposal Services

Blue Ridge Landfill
2700 Winchester Road
Irvine, KY 40336

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environmental

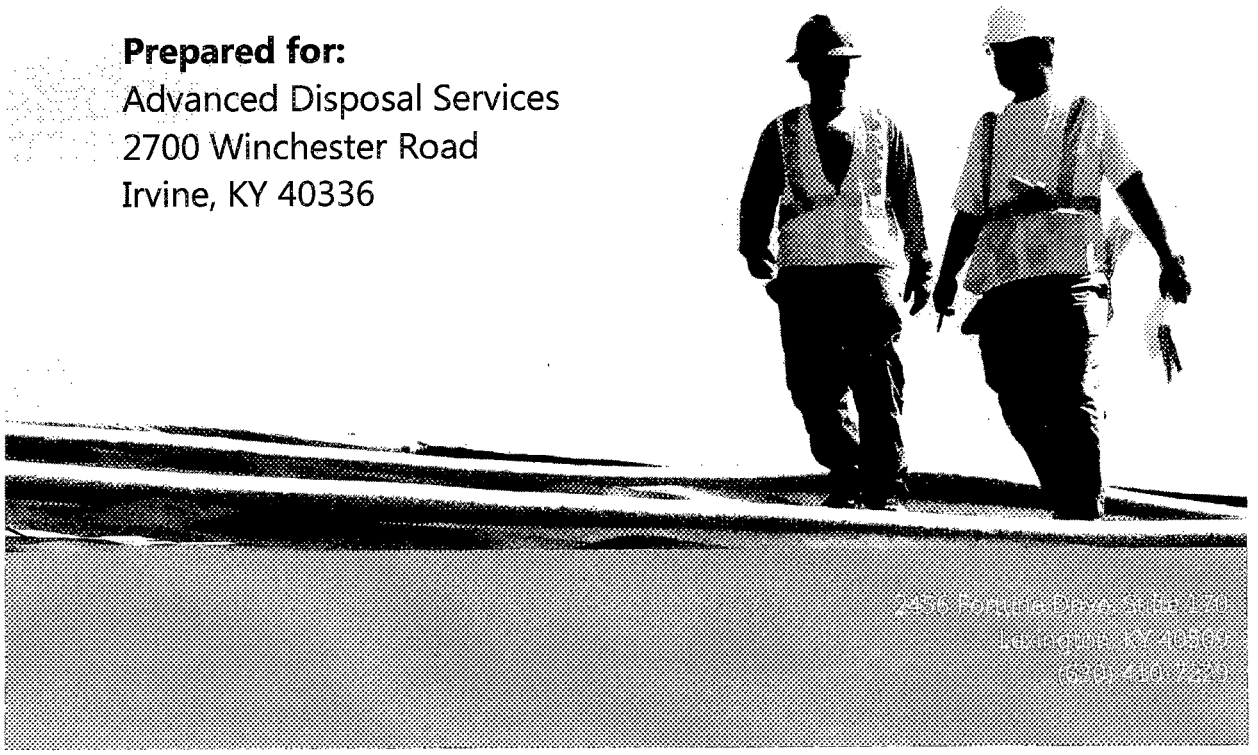
Building lifetime relationships with our clients and employees.

4th Quarter 2014 Groundwater Statistical Analysis Report

Blue Ridge Landfill

December 2014

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



2456 Fortune Drive, Suite 130
Lexington, KY 40509
(859) 219-1562 FAX

REPORT CERTIFICATION

4th 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

TABLE OF CONTENTS

List of Tables, Figures and Drawings

Tables

Figures

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 October 13, 2014. Cornerstone has performed a statistical analysis on the data from this fourth 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 Kentucky Department for Environmental Protection (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 fourth quarter 2014 sampling event, the parameters analyzed were those from 401 KAR Chapter 48:300 Section 11(3)(f).

5 SAMPLING EVENT

This 4th Quarter 2014 sampling event was conducted by Cornerstone field personnel at the Blue Ridge landfill on October 13, 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. KDEP personnel (Mr. Kevin Francis) accompanied Cornerstone personnel during this event to collect split-samples at monitoring wells MW-7 and MW-15R as a result of statistical exceedances reported for these wells during the 3rd quarter 2014 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 fourth 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 Shewhart-CUSUM control charts are not the appropriate statistical test for a data set. This will be determined utilizing three criteria: 1. The data set could not be normalized during the transformation process that takes place during control chart analysis; 2. Non-detect values make up more than 50% of the data set; 3. The data is transformed successfully but the Cohen's Adjustment cannot be performed on the data due to the presence of greater than 15% non-detect values.

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

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 2014 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 July 2012. 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 fourth 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 fourth 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.

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 similar 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 that the concentrations in upgradient well MW-17R:

Average Concentrations (mg/L)

	Chloride	Conductivity	TDS
MW-7	584	3,289	2,015
MW-10	366	2,621	1,806
MW-13	5,321	13,910	9,163
MW-15R	46	2,200	1,772
MW-17R*	557	4,976	3,406

*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.

KDEP personnel indicated in a letter dated November 19, 2014, that the split-sample results for chloride and TDS collected by KDEP at MW-7 during the 4th quarter 2014 event confirmed the statistical exceedances reported for the 3rd quarter 2014 event. The letter indicated that a Groundwater Assessment Plan (GAP) is required to be submitted for monitoring well MW-7 by January 20, 2015.

8 CONCLUSIONS

During the October 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 October 2014 event, concentrations of chloride and TDS in the samples collected from monitoring well MW-7 exceeded their respective prediction limits. The exceedances for chloride and TDS at MW-7 will be investigated through groundwater assessment procedures as required in a letter issued by KDEP on November 19, 2014, requiring that a GAP be submitted for the well.

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

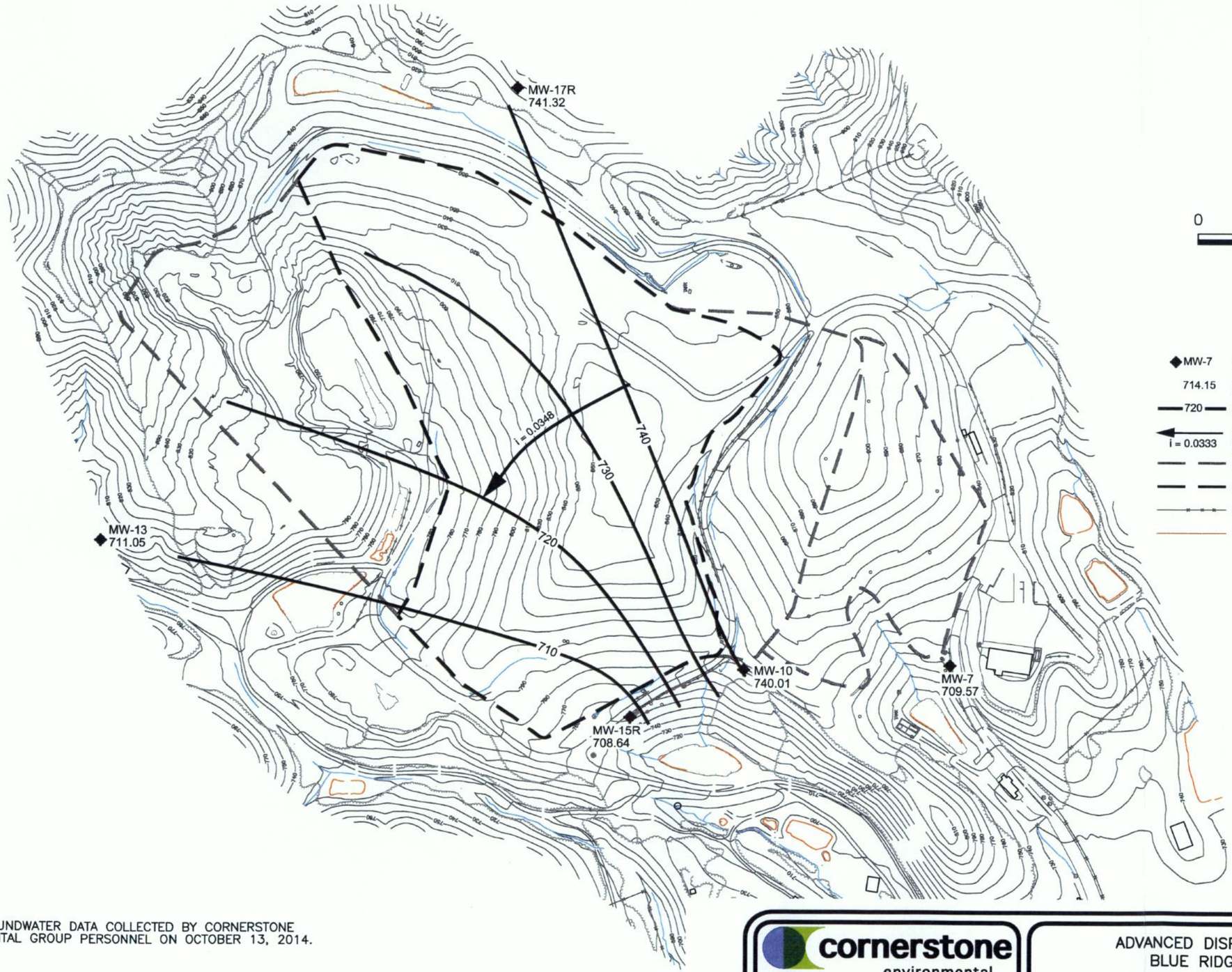
[1]Parameters in 401 KAR 48:300, Section 11.

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	74.80	709.57
MW-10	8001-0201	801.16	70.00	61.15	740.01
MW-13	8001-0233	766.14	64.50	55.09	711.05
MW-15R	8003-3579	763.99	76.00	55.35	708.64
MW-17R	8003-8393	821.82	93.49	80.50	741.32

[1]Feet above Mean Sea Level
[2]Depths taken from well construction logs
[3]Values measured by Cornerstone Environmental Group, LLC on October 13, 2014

FIGURES



N

0 300 600

SCALE IN FEET

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 • Kentucky Board of Registration for Professional Geologists • PG-2347 • Registered Professional Geologist

12-9-14

NOTE:

STATIC GROUNDWATER DATA COLLECTED BY CORNERSTONE ENVIRONMENTAL GROUP PERSONNEL ON OCTOBER 13, 2014.

cornerstone environmental

PREPARED BY:
CORNERSTONE ENVIRONMENTAL GROUP, LLC

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ADVANCED DISPOSAL SERVICES
BLUE RIDGE LANDFILL
ESTILL COUNTY, KENTUCKY

ENVIRONMENTAL REPORTING & MONITORING
4th QTR 2014 GROUNDWATER CONTOURS

FIGURE NO.
1
PROJECT NO.
140174.001

File: \\lil01dfs02\cstn\PROJECTS\BLUE RIDGE\140174 - ENV MONITORING AND REPORTING 2014\dwg\BRLF 4Q 2014 GW.dwg Layout: Layout1 User: tod.skidmore Dec 09, 2014 - 10:45am

APPENDIX A
FLOW RATE AND FLOW DIRECTION CALCULATIONS

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

FLOW VELOCITY OF NEW ALBANY SHALE

Parameters:

Saturated Thickness (b) = average saturated thickness is approximately 12.98 ft.

Well	Well Depth (ft)	Depth to Water (ft)	Saturated Thickness (ft)
MW-10	70.00	61.15	8.85
MW-13	64.50	55.09	9.41
MW-15R	76.00	55.35	20.65
MW-17R	93.49	80.50	12.99
Average Saturated Thickness =			12.98

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 / 12.98 ft = 14.7 ft^2/d / 12.98 ft = 1.13 ft/d
Maximum k = 1,130 gpd/ft / 12.98 ft = 151 ft^2/d / 12.98 ft = 11.63 ft/d

Conversion factor = ft^2/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 Fourth 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 = [(1.13 ft/d)(0.0348)] / 0.15
V = 0.26 ft/d

Maximum Velocity
$V = [(k)(i)] / n_e$
V = [(11.63 ft/d)(0.0348)] / 0.15
V = 2.70 ft/d

APPENDIX B
CERTIFICATION

GROUNDWATER
AND
SURFACE WATER MONITORING
SAMPLE DATA REPORTING FORM

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

RECEIVED
DEC 15 2014
Division of Waste Management
Solid Waste Branch

Facility Name Advanced Disposal Services Blue Ridge Landfill, Inc. Activity Residential/Contained/CDD
(As officially shown on DWM Permit Face)

Permit No. 033-00004 Finds/Unit No. _____ Quarter & Year 4th Quarter, 2014

Please check only ONE of the following:

_____Characterization __X__Quarterly _____Semi-Annual _____Annual _____Assessment

Please check applicable submittal: __X__Groundwater _____Surface Water
_____Leachate

This form is to be utilized by those sites required by regulation (Kentucky Waste Management Regulations - 401 KAR 48:300 and 45:160) or by statute (Kentucky Revised Statutes Chapter 224) to conduct groundwater and surface water monitoring under the jurisdiction of the Division of Waste Management. You must report any indication of contamination within forty-eight (48) hours of making the determination using statistical analyses, direct comparison, or other similar techniques. Submitting the lab report is NOT considered notification. Instructions for completing the form are attached. Do not submit the instruction pages.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for such violations.

Daniel J Fleshour

SIGNATURE

12/12/14
DATE

Dan Fleshour, East Region Compliance Manager
NAME AND TITLE - PLEASE PRINT

FACILITY INFORMATION SHEET

Sampling Date: 10/13/14 County: Estill Permit No.: 033-00004

Facility Name Advanced Disposal Services Blue Ridge Landfill, Inc.

Site Address: 2700 Winchester Road (Street) Irvine (City) KY (State) 40336 (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 (Street) Irvine (City) KY (State) 40336 (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 (Street) Lexington (City) KY (State) 40509 (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 (Street) Green Bay (City) WI (State) 54302 (Zip)

LABORATORY RECORD #2

Laboratory: Lab ID No

Contact Person: Phone No.:

Mailing Address: (Street) (City) (State) (Zip)

APPENDIX C
DWM GROUNDWATER SAMPLE ANALYSIS

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

RESIDENTIAL/CONTAINED - QUARTERLY

Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____ /1

LAB ID: _____

For Offical 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)						10/13/2014 11:40		10/13/2014 14:25		10/13/2014 13:50		10/13/2014 13:18		
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)						40105317001		40105317002		40105317003		40105317004		
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]	FLAGS	Detected Value or PQL[6]	FLAGS	Detected Value or PQL[6]	FLAGS	Detected Value or PQL[6]	FLAGS	
	0	Static Water Level Elevation	T	Ft. MSL	FIELD	709.57		740.01		711.05		708.64		
S0907- -	2	Temperature	T	°C	FIELD	15.59		17.26		14.71		24.42		
16887-00-6	2	Chloride (s)	T	mg/L	9251	1120		136		5120		65.3		
S0130	0	Chemical Oxygen Demand	T	mg/L	410.4	78.2		98.7		224		<50.0		
S0266	0	Total Dissolved Solids	T	mg/L	160.1	2950		1290		8720		2440		
S0268	1	Total Organic Carbon	T	mg/L	9060	<0.50		33.9		<0.50		6.5		

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

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

Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____ /1

LAB ID: _____

For official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8001-0205		8001-0201		8001-0223		8003-3579	
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-7		MW-10		MW-13		MW-15R	
CAS RN[4]		Constituent	TD[5]	Unit of Measure	Method	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS
S0145	1	Specific Conductance	-	UMHOS/CM	FIELD	5155		1996		14110		2800	
S0595	0	Nitrate	T	mg/L	9200								
S0586	0	Total Organic Halides	T	mg/L	9020	0.093		0.26		0.15		0.056	
S0296	0	pH	-	No Units	FIELD	7.31		7.40		7.14		7.05	
7440-36-0	0	Antimony	T	mg/L	6010								
7440-38-2	0	Arsenic	T	mg/L	7060								
7440-39-3	0	Barium	T	mg/L	6010								
7440-41-7	0	Beryllium	T	mg/L	6010								
7440-43-9	0	Cadmium	T	mg/L	6010								
7440-47-3	0	Chromium	T	mg/L	6010								
7440-48-4	0	Cobalt	T	mg/L	6010								
7440-50-8	0	Copper	T	mg/L	6010								
7439-89-6	0	Iron	T	mg/L	6010	3.52		0.284		1.6		6.93	
7439-92-1	0	Lead	T	mg/L	6010								
7439-97-6	0	Mercury	T	mg/L	7470								
7440-02-0	0	Nickel	T	mg/L	6010								
7782-49-2	0	Selenium	T	mg/L	7740								
740-22-4	0	Silver	T	mg/L	6010								
7440-23-5	0	Sodium	T	mg/L	6010	1080		485		3050		253	
7440-28-0	0	Thallium	T	mg/L	6010								

Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____ /1

LAB ID: _____

For official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

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

Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL FINDS/UNIT: _____ /1

LAB ID: _____

For official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

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

Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____ /1

LAB ID: _____

For official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8001-0205		8001-0201		8001-0223		8003-3579	
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-7		MW-10		MW-13		MW-15R	
CAS RN[4]		Constituent	TD[5]	Unit of Measure	Method	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS
591-78-6	3	2-Hexanone	T	mg/L	8260								
74-88-4	4	Iodomethane	T	mg/L	8260								
124-48-1	4	Methane, Dibromochloro-	T	mg/L	8260								
56-23-5	1	Methane, Tetrachloro-	T	mg/L	8260								
75-09-2	0	Methylene chloride	T	mg/L	8260								
108-10-1	4	4-Methyl-2-pentanone	T	mg/L	8260								
96-12-8	2	Propane, 1,2-Dibromo-3-chloro	T	mg/L	8260								
78-87-5	1	Propane, 1,2-Dichloro-	T	mg/L	8260								
10061-02-6	3	1-Propene, 1,3-Dichloro-, (E)	T	mg/L	8260								
10061-01-5	4	1-Propene, 1,3-Dichloro-, (Z)	T	mg/L	8260								
156-60-5	2	trans-1,2-Dichloroethene	T	mg/L	8260								
75-69-4	0	Trichlorofluoromethane	T	mg/L	8260								
96-18-4	0	1,2,3-Trichloropropane	T	mg/L	8260								
95-50-1	7	Benzene, 1,2-Dichloro-	T	mg/L	8260								
106-46-7	6	Benzene, 1,4-Dichloro-	T	mg/L	8260								

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

RESIDENTIAL/CONTAINED - QUARTERLY

Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____ /1

LAB ID: _____

For Offical 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)						10/13/2014 14:50							
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)						40105317005							
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]	FLAGS	Detected Value or PQL[6]	FLAGS	Detected Value or PQL[6]	FLAGS	Detected Value or PQL[6]	FLAGS
	0	Static Water Level Elevation	T	Ft. MSL	FIELD	741.32							
S0907- -	2	Temperature	T	°C	FIELD	15.74							
16887-00-6	2	Chloride (s)	T	mg/L	9251	497							
S0130	0	Chemical Oxygen Demand	T	mg/L	410.4	94.1							
S0266	0	Total Dissolved Solids	T	mg/L	160.1	3140							
S0268	1	Total Organic Carbon	T	mg/L	9060	20.7							

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

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

RESIDENTIAL/CONTAINED - QUARTERLY

Permit Number: **033-00004**

Facility: **BLUE RIDGE LANDFILL** FINDS/UNIT: _____ /1

LAB ID: _____

For official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8003-8393							
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-17R							
CAS RN[4]		Constituent	TD[5]	Unit of Measure	Method	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS
S0145	1	Specific Conductance	-	UMHOS/CM	FIELD	4492							
S0595	0	Nitrate	T	mg/L	9200								
S0586	0	Total Organic Halides	T	mg/L	9020	0.16							
S0296	0	pH	-	No Units	FIELD	8.05							
7440-36-0	0	Antimony	T	mg/L	6010								
7440-38-2	0	Arsenic	T	mg/L	7060								
7440-39-3	0	Barium	T	mg/L	6010								
7440-41-7	0	Beryllium	T	mg/L	6010								
7440-43-9	0	Cadmium	T	mg/L	6010								
7440-47-3	0	Chromium	T	mg/L	6010								
7440-48-4	0	Cobalt	T	mg/L	6010								
7440-50-8	0	Copper	T	mg/L	6010								
7439-89-6	0	Iron	T	mg/L	6010	<0.10							
7439-92-1	0	Lead	T	mg/L	6010								
7439-97-6	0	Mercury	T	mg/L	7470								
7440-02-0	0	Nickel	T	mg/L	6010								
7782-49-2	0	Selenium	T	mg/L	7740								
740-22-4	0	Silver	T	mg/L	6010								
7440-23-5	0	Sodium	T	mg/L	6010	1120							
7440-28-0	0	Thallium	T	mg/L	6010								

Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL

FINDS/UNIT: _____ /1

LAB ID: _____

For official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

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

Permit Number: 033-00004

Facility: BLUE RIDGE LANDFILL FINDS/UNIT: _____ /1

LAB ID: _____

For official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

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

RESIDENTIAL/CONTAINED - QUARTERLY

Permit Number: **033-00004**

Facility: **BLUE RIDGE LANDFILL** FINDS/UNIT: _____ /1

LAB ID: _____

For official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8003-8393							
Facility's Local Well or Spring Number (e.g. MW-1, MW-2, etc.)						MW-17R							
CAS RN[4]		Constituent	TD[5]	Unit of Measure	Method	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS	Detected Value or PQL[5]	FLAGS
591-78-6	3	2-Hexanone	T	mg/L	8260								
74-88-4	4	Iodomethane	T	mg/L	8260								
124-48-1	4	Methane, Dibromochloro-	T	mg/L	8260								
56-23-5	1	Methane, Tetrachloro-	T	mg/L	8260								
75-09-2	0	Methylene chloride	T	mg/L	8260								
108-10-1	4	4-Methyl-2-pentanone	T	mg/L	8260								
96-12-8	2	Propane, 1,2-Dibromo-3-chloro	T	mg/L	8260								
78-87-5	1	Propane, 1,2-Dichloro-	T	mg/L	8260								
10061-02-6	3	1-Propene, 1,3-Dichloro-, (E)	T	mg/L	8260								
10061-01-5	4	1-Propene, 1,3-Dichloro-, (Z)	T	mg/L	8260								
156-60-5	2	trans-1,2-Dichloroethene	T	mg/L	8260								
75-69-4	0	Trichlorofluoromethane	T	mg/L	8260								
96-18-4	0	1,2,3-Trichloropropane	T	mg/L	8260								
95-50-1	7	Benzene, 1,2-Dichloro-	T	mg/L	8260								
106-46-7	6	Benzene, 1,4-Dichloro-	T	mg/L	8260								

APPENDIX D
STATISTICAL EVALUATIONS

Shewhart-Cusum Control Chart

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge Printed 12/9/2014, 10:53 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	85	n/a	n/a	23.53	None	No	No	NP Intra PL (normality)
Chemical Oxygen Demand (mg/L)	MW-10	No	1052	933	83	13.61	3.764	0	None	No	sqrt(x)	Param Intra
Chemical Oxygen Demand (mg/L)	MW-13	No	PL=1500	n/a	81	n/a	n/a	2.469	None	No	No	NP Intra PL (normality)
Chemical Oxygen Demand (mg/L)	MW-15R	No	PL=240	n/a	57	n/a	n/a	29.82	None	No	No	NP Intra PL (normality)
Chemical Oxygen Demand (mg/L)	MW-17R (bg)	No	PL=2170	n/a	16	n/a	n/a	0	None	No	No	NP Intra PL (normality)
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	2294	2019	84	18.29	5.92	0	None	No	sqrt(x)	Param Intra
Chloride (mg/L)	MW-13	No	PL=16000	n/a	81	n/a	n/a	1.235	None	No	No	NP Intra PL (normality)
Chloride (mg/L)	MW-15R	No	106.7	101.4	29	53.88	10.56	0	None	No	No	Param Intra
Chloride (mg/L)	MW-17R (bg)	No	PL=14000	n/a	16	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Iron (mg/L)	MW-7	No	PL=172	n/a	86	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Iron (mg/L)	MW-10	No	PL=56.62	n/a	83	n/a	n/a	1.205	None	No	No	NP Intra PL (normality) Deseas
Iron (mg/L)	MW-13	No	PL=8.59	n/a	81	n/a	n/a	33.33	None	No	No	NP Intra PL (normality)
Iron (mg/L)	MW-15R	No	205	167.3	58	2.028	0.7738	0	None	No	x^(1/3)	Param Intra
Iron (mg/L)	MW-17R (bg)	No	11401	4613	16	0.2921	1.81	12.5	None	No	ln(x)	Param Intra
pH (SU)	MW-7	No	PL=8.5&6.62	n/a	87	n/a	n/a	0	None	No	No	NP Intra PL (normality)
pH (SU)	MW-10	No	PL=8.07&6.12	n/a	84	n/a	n/a	0	None	No	No	NP Intra PL (normality)
pH (SU)	MW-13	No	PL=8.18&5.66	n/a	82	n/a	n/a	0	None	No	No	NP Intra PL (normality)
pH (SU)	MW-15R	No	PL=8.54&4.5	n/a	59	n/a	n/a	0	None	No	No	NP Intra PL (normality)
pH (SU)	MW-17R (bg)	No	9.91&4.697	9.649&4.958	14	7.304	0.5212	0	None	No	No	Param Intra
Sodium (mg/L)	MW-7	No	PL=1290	n/a	85	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Sodium (mg/L)	MW-10	No	PL=1160	n/a	82	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Sodium (mg/L)	MW-13	No	PL=4720	n/a	80	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Sodium (mg/L)	MW-15R	No	424.3	405.4	29	234.7	37.92	0	None	No	No	Param Intra
Sodium (mg/L)	MW-17R (bg)	No	PL=9850	n/a	15	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	9397	8517	84	50.43	9.302	0	None	No	sqrt(x)	Param Intra
Specific Conductance (umhos/cm)	MW-13	No	PL=18600	n/a	83	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	15	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Temperature (degree-C)	MW-7	No	24.2	23.31	78	15.33	1.774	0	None	Yes	No	Param Intra
Temperature (degree-C)	MW-10	No	PL=26.04	n/a	75	n/a	n/a	0	None	No	No	NP Intra PL (normality) Deseas
Temperature (degree-C)	MW-13	No	PL=18.38	n/a	74	n/a	n/a	0	None	No	No	NP Intra PL (normality) Deseas
Temperature (degree-C)	MW-15R	No	32.27	31.52	48	10659	4590	0	None	No	x^3	Param Intra
Temperature (degree-C)	MW-17R (bg)	No	21.21	20.74	15	3361	1236	0	None	Yes	x^3	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	PL=3100	n/a	83	n/a	n/a	0	None	No	No	NP Intra PL (normality)
Total Dissolved Solids (mg/L)	MW-13	No	PL=10600	n/a	81	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	93050	80044	16	83.83	44.24	0	None	Yes	sqrt(x)	Param Intra
Total Organic Carbon (mg/L)	MW-7	No	PL=19.4	n/a	88	n/a	n/a	9.091	None	No	No	NP Intra PL (normality)
Total Organic Carbon (mg/L)	MW-10	No	386.4	340.7	86	7.674	2.396	0	None	No	sqrt(x)	Param Intra
Total Organic Carbon (mg/L)	MW-13	No	PL=5.3	n/a	81	n/a	n/a	54.32	None	No	No	NP Intra PL (NDs)
Total Organic Carbon (mg/L)	MW-15R	No	24.52	22.79	57	7.295	3.444	1.754	None	No	No	Param Intra
Total Organic Carbon (mg/L)	MW-17R (bg)	No	181.3	167.1	16	39.74	28.31	0	None	No	No	Param Intra
TOX [Total Organic Halides] (mg/L)	MW-7	No	PL=0.539	n/a	84	n/a	n/a	34.52	None	No	No	NP Intra PL (normality)
TOX [Total Organic Halides] (mg/L)	MW-10	No	PL=1	n/a	81	n/a	n/a	3.704	None	No	No	NP Intra PL (normality)
TOX [Total Organic Halides] (mg/L)	MW-13	No	PL=1	n/a	80	n/a	n/a	6.25	None	No	No	NP Intra PL (normality)
TOX [Total Organic Halides] (mg/L)	MW-15R	No	PL=0.1	n/a	55	n/a	n/a	30.91	None	No	No	NP Intra PL (normality)
TOX [Total Organic Halides] (mg/L)	MW-17R (bg)	No	15.44	13.27	15	1.061	0.5737	0	None	No	sqrt(x)	Param Intra

Prediction Limit

Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge Printed 12/9/2014, 11:44 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-13	1500	10/13/2014	224	No	81	n/a	n/a	n/a	2.469	n/a	n/a	0.0122	NP Intra (normality)
Chemical Oxygen Demand (mg/L)	MW-15R	240	10/13/2014	50ND	No	57	n/a	n/a	n/a	29.82	n/a	n/a	0.01724	NP Intra (normality)
Chemical Oxygen Demand (mg/L)	MW-17R	2170	10/13/2014	94.1	No	16	n/a	n/a	n/a	0	n/a	n/a	0.05882	NP Intra (normality)
Chemical Oxygen Demand (mg/L)	MW-7	129	10/13/2014	78.2	No	85	n/a	n/a	n/a	23.53	n/a	n/a	0.01163	NP Intra (normality)
Chloride (mg/L)	MW-13	16000	10/13/2014	5120	No	81	n/a	n/a	n/a	1.235	n/a	n/a	0.0122	NP Intra (normality)
Chloride (mg/L)	MW-17R	14000	10/13/2014	497	No	16	n/a	n/a	n/a	0	n/a	n/a	0.05882	NP Intra (normality)
Chloride (mg/L)	**MW-7**	**912**	**10/13/2014**	**1120**	**Yes**	**82**	**n/a**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.01205**	**NP Intra (normality)**
Iron (mg/L)	MW-10	56.62	10/13/2014	0.008	No	83	n/a	n/a	n/a	1.205	n/a	n/a	0.0119	NP Intra (normality) Deseas
Iron (mg/L)	MW-13	8.59	10/13/2014	1.6	No	81	n/a	n/a	n/a	33.33	n/a	n/a	0.0122	NP Intra (normality)
Iron (mg/L)	MW-7	172	10/13/2014	3.52	No	86	n/a	n/a	n/a	0	n/a	n/a	0.01149	NP Intra (normality)
pH (SU)	MW-10	8.07	10/13/2014	7.4	No	84	n/a	n/a	n/a	0	n/a	n/a	0.02353	NP Intra (normality)
pH (SU)	MW-13	8.18	10/13/2014	7.14	No	82	n/a	n/a	n/a	0	n/a	n/a	0.0241	NP Intra (normality)
pH (SU)	MW-15R	8.54	10/13/2014	7.05	No	59	n/a	n/a	n/a	0	n/a	n/a	0.03333	NP Intra (normality)
pH (SU)	MW-7	8.5	10/13/2014	7.31	No	87	n/a	n/a	n/a	0	n/a	n/a	0.02273	NP Intra (normality)
Sodium (mg/L)	MW-10	1160	10/13/2014	485	No	82	n/a	n/a	n/a	0	n/a	n/a	0.01205	NP Intra (normality)
Sodium (mg/L)	MW-13	4720	10/13/2014	3050	No	80	n/a	n/a	n/a	0	n/a	n/a	0.01235	NP Intra (normality)
Sodium (mg/L)	MW-17R	9850	10/13/2014	1120	No	15	n/a	n/a	n/a	0	n/a	n/a	0.0625	NP Intra (normality)
Sodium (mg/L)	MW-7	1290	10/13/2014	1080	No	85	n/a	n/a	n/a	0	n/a	n/a	0.01163	NP Intra (normality)
Specific Conductance (umhos/cm)	MW-13	18600	10/13/2014	14110	No	83	n/a	n/a	n/a	0	n/a	n/a	0.0119	NP Intra (normality)
Specific Conductance (umhos/cm)	MW-17R	20000	10/13/2014	4492	No	15	n/a	n/a	n/a	0	n/a	n/a	0.0625	NP Intra (normality)
Temperature (degree-C)	MW-10	26.04	10/13/2014	15	No	75	n/a	n/a	n/a	0	n/a	n/a	0.01316	NP Intra (normality) Deseas
Temperature (degree-C)	MW-13	18.38	10/13/2014	13.72	No	74	n/a	n/a	n/a	0	n/a	n/a	0.01333	NP Intra (normality) Deseas
Total Dissolved Solids (mg/L)	MW-10	3100	10/13/2014	1290	No	83	n/a	n/a	n/a	0	n/a	n/a	0.0119	NP Intra (normality)
Total Dissolved Solids (mg/L)	MW-13	10600	10/13/2014	8720	No	81	n/a	n/a	n/a	0	n/a	n/a	0.0122	NP Intra (normality)
Total Dissolved Solids (mg/L)	**MW-7**	**2580**	**10/13/2014**	**2950**	**Yes**	**80**	**n/a**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.01235**	**NP Intra (normality)**
Total Organic Carbon (mg/L)	MW-13	5.3	10/13/2014	0.5ND	No	81	n/a	n/a	n/a	54.32	n/a	n/a	0.0122	NP Intra (NDs)
Total Organic Carbon (mg/L)	MW-7	19.4	10/13/2014	0.5ND	No	88	n/a	n/a	n/a	9.091	n/a	n/a	0.01124	NP Intra (normality)
TOX [Total Organic Halides] (mg/L)	MW-10	1	10/13/2014	0.26	No	81	n/a	n/a	n/a	3.704	n/a	n/a	0.0122	NP Intra (normality)
TOX [Total Organic Halides] (mg/L)	MW-13	1	10/13/2014	0.15	No	80	n/a	n/a	n/a	6.25	n/a	n/a	0.01235	NP Intra (normality)
TOX [Total Organic Halides] (mg/L)	MW-15R	0.1	10/13/2014	0.056	No	55	n/a	n/a	n/a	30.91	n/a	n/a	0.01786	NP Intra (normality)
TOX [Total Organic Halides] (mg/L)	MW-7	0.539	10/13/2014	0.093	No	84	n/a	n/a	n/a	34.52	n/a	n/a	0.01176	NP Intra (normality)

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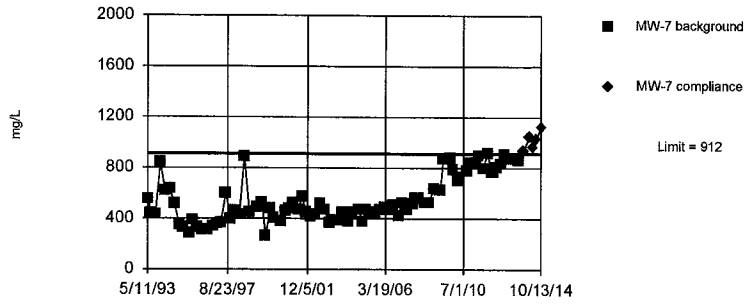
Exceeds Limit

Prediction Limit

Intrawell Non-parametric



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

Constituent: Chloride Analysis Run 12/9/2014 10:54 AM View: Short list

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

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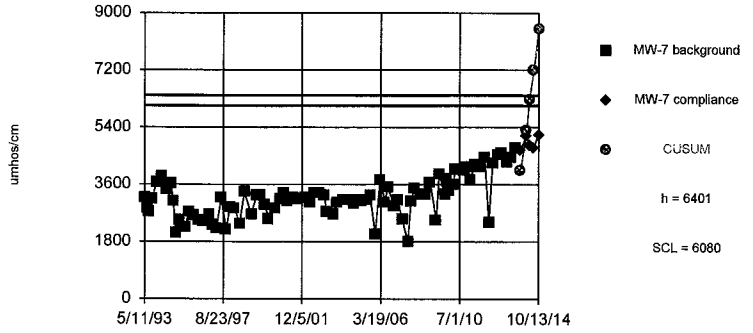
Exceeds Control Limits

Control Chart

MW-7



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 = 0.00013. Dates ending 7/11/2013 used for control stats. Unstandardized h=5, SCL=4.5.

Constituent: Specific Conductance Analysis Run 12/9/2014 10:55 AM View: Short list

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

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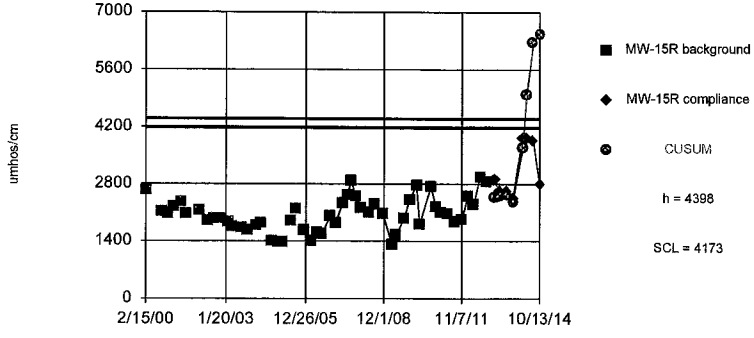
Exceeds Control Limits

Control Chart

MW-15R



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 = 0.001236. Dates ending 10/4/2012 used for control stats. Unstandardized h=5, SCL=4.5.

Constituent: Specific Conductance Analysis Run 12/9/2014 10:55 AM View: Short list

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

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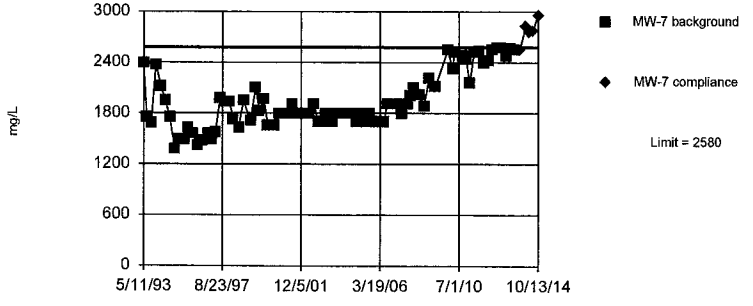
Exceeds Limit

Prediction Limit

Intrawell Non-parametric



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

Constituent: Total Dissolved Solids Analysis Run 12/9/2014 10:56 AM View: Short list

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

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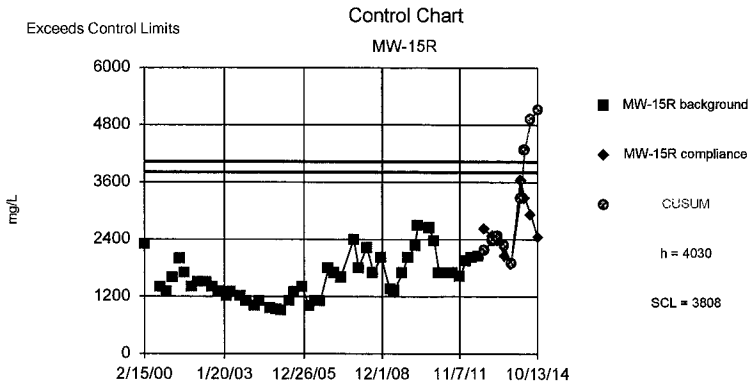

Background Data Summary: Mean=1810, Std. Dev.=443.8, n=27. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9692, critical = 0.923. Report alpha = 0.001938. Dates ending 7/17/2012 used for control stats. Unstandardized h=5, SCL=4.5.

Constituent: Total Dissolved Solids Analysis Run 12/9/2014 10:56 AM View: Short list

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

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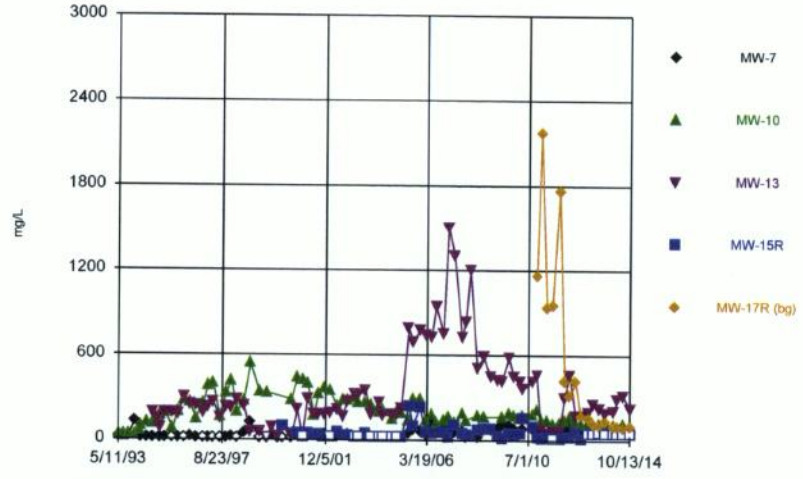
Hollow symbols indicate censored values.

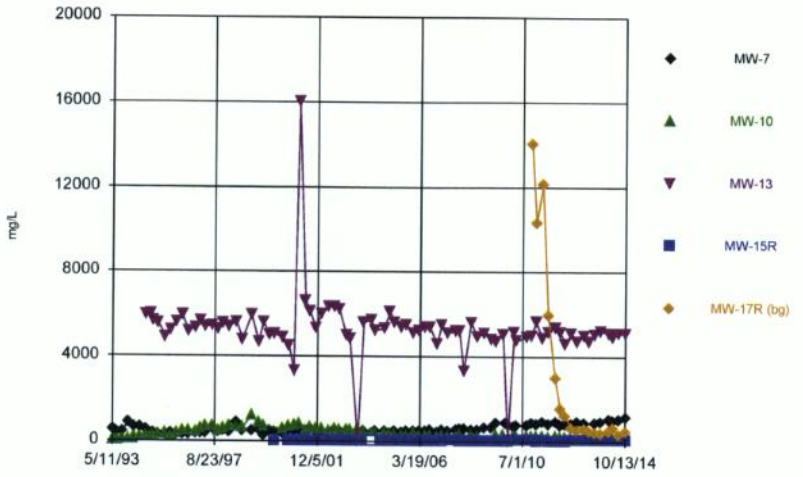
Time Series



Constituent: Chemical Oxygen Demand Analysis Run 12/9/2014 11:02 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Sanitas™ v.9.4.40 Sanitas software licensed to Cornerstone Engineering, EPA
Hollow symbols indicate censored values.

Time Series



Constituent: Chloride Analysis Run 12/9/2014 11:02 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

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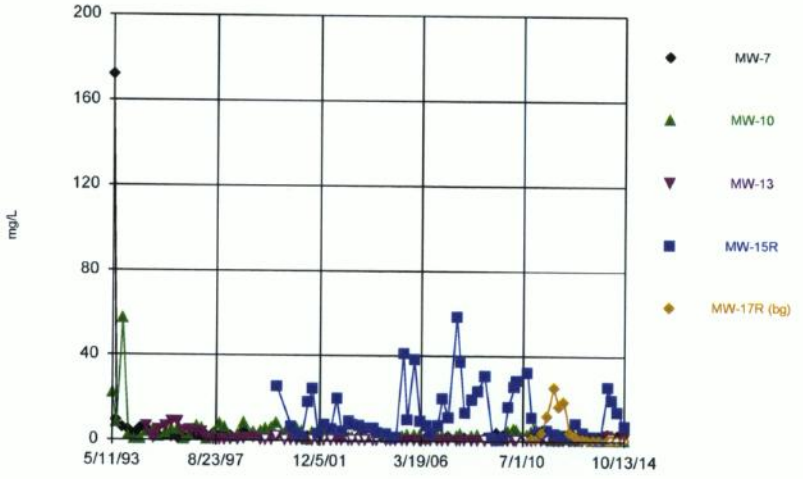
Hollow symbols indicate censored values.

Time Series



Constituent: Iron Analysis Run 12/9/2014 11:02 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

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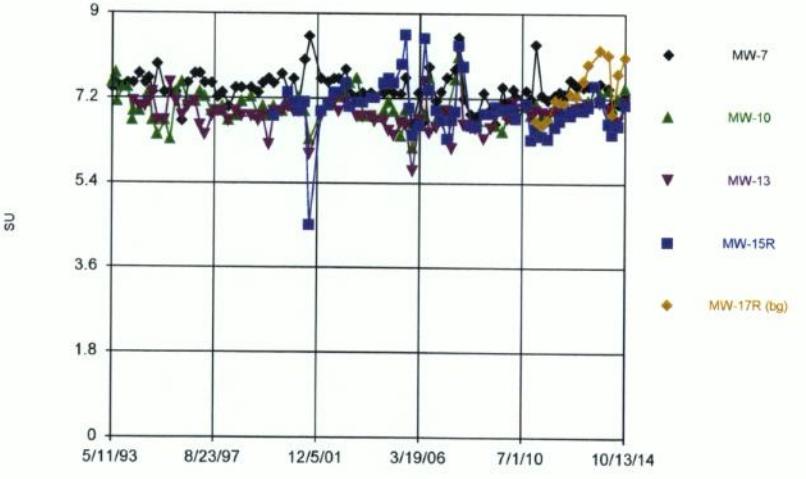
Time Series



Constituent: pH Analysis Run 12/9/2014 11:02 AM View: Short list
Facility: Blue Ridge Client: Cornerstone Environmental Group, LLC Data File: Historical Database - Blue Ridge

Time Series

Constituent: Chemical Oxygen Demand, Chloride, Iron, pH Analysis Run 12/9/2014 11:04 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)	MW-7	MW-10	MW-13	MW-15R
5/11/1993	21	35				554	19		
7/16/1993	17	24				438	30		
8/4/1993		36					35		
10/11/1993	22	38				435	79		
1/13/1994	129	32				842	92		
3/29/1994		61					95		
4/20/1994	16	98				622	179		
7/13/1994	13	125				639	214		
10/12/1994	10	112	184			519	236	5910	
12/6/1994		148					211		
12/23/1994			149					5990	
1/23/1995	10	173	80			347	274	5630	
4/13/1995	14	192	187			331	297	5520	
8/2/1995	<10	76	184			287	352	4890	
10/18/1995	11	195	176			386	238	5200	
1/18/1996	<10	282	300			329	372	5610	
4/17/1996	18	264	243			314	490	5910	
7/17/1996	15	148	234			307	474	5170	
11/7/1996	<10	256	188			336	438	5330	
1/22/1997	10	382	229			358	598	5650	
4/8/1997	<10	398	263			364	722	5360	
7/14/1997	<10	162	156			600	718	5430	
10/22/1997	12	329	228			397	479	5250	
1/7/1998	22	414	218			457	572	5570	
4/6/1998	<10	197	276			435	713	5400	
7/14/1998	46	274	235			889	674	5600	
10/20/1998	124	535	52			452	614	4790	
3/3/1999	<10	338	57			484	1180	5940	
6/22/1999	12.4	332	<10			522	850	4660	
8/31/1999	27.1		88			262	718	5590	
11/30/1999	<10		21			479		5010	
2/15/2000	<10		92	100		409		5040	27.4
6/27/2000	<10	283	27			377	564	4850	
9/26/2000	39	440	210	45		460	710	4500	27
12/12/2000	<20	420	<20	<20		480	770	3300	24
2/27/2001	21	400	290	50		530	800	16000	34
6/6/2001	29	170	180	29		470	500	6600	29
8/15/2001	<20	320	180	36		570	650	6100	22
11/7/2001	41	360	180	24		450	610	5300	21
2/6/2002	<20	350	190	<20		410	600	6000	22
5/22/2002	25	240	210	57		430	460	6300	23
8/21/2002	31	280	160	29		520	570	6300	27
11/7/2002	37	280	270	28		470	520	6200	25
2/21/2003	<20	300	320	<20		370	530	5000	25
4/16/2003	<20	260	310	<20		390	530	4800	25
8/14/2003			350	44				<10	28
8/15/2003	20	260				390	510		
11/12/2003	<20	250	180	<20		450	480	5600	21
3/3/2004	24	200	260	<20		380	370	5700	<50
5/4/2004	<20	210	170	<20		450	410	5200	26
9/21/2004	<20	150	180	<20		470	430	5300	25
12/15/2004	<20	200	180	<20		380	370	6100	26

Time Series

Constituent: Chemical Oxygen Demand, Chloride, Iron, pH Analysis Run 12/9/2014 11:04 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)	MW-7	MW-10	MW-13	MW-15R
2/22/2005	<20	190	220	22		470	360	5600	25
6/16/2005	46	140	790			430	310	5400	
6/17/2005				240					30
8/17/2005	67	290	690	100		450	330	5500	35
10/12/2005									
11/30/2005	65		770			470		5100	
12/1/2005		290		230			390		46
3/7/2006				58					36
3/8/2006		140	740				330	5200	
3/9/2006	40					490			
6/5/2006			720					5400	
6/6/2006	110	180		48		470	310		45
8/10/2006	49	120	940			510	290	5400	39
11/30/2006				53					63
12/1/2006	100	140	750			420	230	4600	
2/12/2007	61			25		530			48
2/13/2007		160	1500				290	5500	
5/14/2007	52	120	1300	105		470	260	5100	64
7/23/2007									79
9/10/2007	66	190	720	49		520	230	5200	56
11/11/2007		140	830				340	5200	
11/12/2007				39					55
11/13/2007	24					560			
1/15/2008			1200	33		560		3300	44
5/6/2008			502					5620	
5/7/2008	21.9	175		72.8		524	288		48.2
7/24/2008									
8/5/2008		163	587	81.3			267	4940	48
8/6/2008	67.2					525			
11/19/2008			443	77.4				5080	54
11/20/2008	69					640			
3/23/2009			426					4820	
3/24/2009	76.8			31.6		627			42.3
5/20/2009	102	164	412	14.6		873	294	4720	41.5
9/9/2009		189	584				299	5020	
9/10/2009	106			47					49.8
10/21/2009						883			
11/23/2009	83.2	175	444	41.4		783	28.1	49.5	57.1
2/23/2010	60.6	157	417	49.3		699	286	5150	69.6
4/6/2010	77.7	174	360	152		732	269	4750	72
9/13/2010	82.7	177	414	93.8		775	272	4950	69.3
11/17/2010			455	24.2				4990	62.8
11/18/2010	88.3	211			1160	843	270		
1/27/2011		140	68	11.8			267	5640	54
1/28/2011	17.3				2170	830			
4/29/2011	28	135	45.7	19.9	933	895	234	4870	64.5
7/26/2011		116	64.6	<10	946		211	5150	46.4
7/27/2011	26.3					792			
11/10/2011	21.2	125	50.6	11.7	1760	912	242	5370	48.6
1/5/2012						797			
1/31/2012	85.8	140	300		414	767	217	5150	
2/1/2012				17					52.4

Time Series

Constituent: Chemical Oxygen Demand, Chloride, Iron, pH Analysis Run 12/9/2014 11:04 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)	MW-7	MW-10	MW-13	MW-15R
4/17/2012	77.2	157	458	19.8	312	806	212	4580	50.8
7/17/2012	77.5	131	169	51.3	410	830	131	5110	56.3
10/4/2012	60.8	116	168	11.3	175	910	140	4700	58.5
1/24/2013	57.6	117	196	<50	151	869	157	5000	62.8
4/4/2013	50.8	105	257	<50	112		161	4700	60.8
7/11/2013	53	112	220	<52.6	103	859	157	5040	63.4
10/14/2013	65.4	114	189	<50	128	933	153	5220	62.2
2/17/2014	75.1	108	206	<50	98.7	1050	156	5090	80
4/10/2014	53.2	89.6	285	<50	98.7	967	141	4950	74
7/8/2014	73.6	112	317	<50	85	1030	141	5090	77.8
10/13/2014	78.2	98.7	224	<50	94.1	1120	136	5120	65.3

Time Series

Constituent: Chemical Oxygen Demand, Chloride, Iron, pH Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-17R (bg)	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)	MW-7	MW-10	MW-13
5/11/1993		172	21.8				7.4	7.5	
7/16/1993		9.2	8.3				7.5	7.7	
8/4/1993							7.4	7.1	
10/11/1993		5.7	56.9				7.4	7.4	
1/13/1994		4.6	2.06				7.5	7.4	
3/29/1994								6.7	
4/20/1994		2.6	0.295				7.5	6.9	7.1
7/13/1994		5.3	0.234				7.7	6.9	7
10/12/1994		5.3	3.51	6.43			7.5	7.1	7
12/6/1994							7.6	7.3	7.1
12/23/1994				1.7					
1/23/1995		1.7	4.95	0.561			7.3	6.7	7.3
4/13/1995		2	1.67	4.89			7.9	6.4	6.7
8/2/1995		1.7	2.87	6.17			7.3	6.7	6.7
10/18/1995		1.4	4.8	8.41			7.3	6.3	7.5
1/18/1996		1.1	4.77	8.59			7.3	7.3	7.1
4/17/1996		1.6	0.477	4.19			6.7	7.5	6.8
7/17/1996		1.5	2.09	4.47			7.5	7.1	7
11/7/1996		2.1	6.54	3.75			7.7	7.1	7.1
1/22/1997		2	5.15	3.77			7.7	7.3	6.6
4/8/1997		1.9	0.33	0.667			7.5	7.2	6.4
7/14/1997		3.1	2.92	0.178			7.5	6.9	6.8
10/22/1997		2	7.29	0.388			7.2	6.9	6.9
1/7/1998		3.5	5.76	0.339			7.3	7	6.9
4/6/1998		1.8	1.37	0.356			7	6.7	6.7
7/14/1998		1.3	2.61	0.292			7.4	6.8	6.9
10/20/1998		4.3	7.9	0.56			7.4	7.1	6.8
3/3/1999		1.4	3.7	1.2			7.4	7.2	6.8
6/22/1999		3.3	4	0.21			7.3	6.8	6.7
8/31/1999		1.8	5.5	<0.1			7.5	7	6.8
11/30/1999		2.5	6.1	0.12			7.6	6.8	6.2
2/15/2000		2.1	7.9	<2	25.6		7.5	7	6.9
6/27/2000		1.9	3.1	<0.1			7.7	6.9	6.9
9/26/2000		1.7	4.8	0.1	6.2		7.3	7.1	7
12/12/2000		1.5	5.4	0.092	3.2		7.6	7	6.9
2/27/2001		2	4.1	0.59	1.5		7.1	7.2	6.9
6/6/2001		1.7	0.42	0.083	18		8	6.9	7
8/15/2001		1.6	3.4	<0.02	24		8.5	6.3	6
11/7/2001		1.3	4.1	<0.02	2.8				
2/6/2002		1.3	4	<0.02	7.3		7.6	6.9	6.8
5/22/2002		2.9	3	<0.02	5.3		7.54	7.04	7.07
8/21/2002		1.3	2.7	0.03	20		7.6	7.2	7.1
11/7/2002		1	3.1	0.02	4.2		7.6	7.2	6.9
2/21/2003		1.3	1.3	<0.05	9		7.8	7.3	7.1
4/16/2003		0.61	1.6	<0.05	7.6		7.3	7.5	7
8/14/2003				<0.05	6.8				6.8
8/15/2003		1.7	2				7.2	7.6	
11/12/2003		1.3	1.5	<0.05	6		7.3	6.8	6.8
3/3/2004		0.94	2	<0.05	6		7.3	6.8	6.8
5/4/2004		0.88	1.7	<0.05	3.4		7.2	6.8	6.7
9/21/2004		0.85	1.5	<0.05	3.2		7.3	6.9	6.7
12/15/2004		1.5	1.6	<0.1	0.7		7.4	7.1	6.5

Time Series

Constituent: Chemical Oxygen Demand, Chloride, Iron, pH Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-17R (bg)	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)	MW-7	MW-10	MW-13
2/22/2005		1.2	1.6	<0.1	1.5		7.3	6.9	6.4
6/16/2005		0.79	2.2	0.021			7.28	6.37	6.69
6/17/2005					41				
8/17/2005		0.89	2.3	0.039	10		7.64	6.94	6.63
10/12/2005									
11/30/2005		0.62		0.08			6.62		5.66
12/1/2005			2.4		38			6.12	
3/7/2006					9.2				
3/8/2006			2.3	0.28				6.78	6.72
3/9/2006		0.98					7.3		
6/5/2006				0.12					7.55
6/6/2006		1.2	1		6.9		6.7	6.84	
8/10/2006		0.79	2.5	0.23	3		7.85	7.6	6.46
11/30/2006					7.2				
12/1/2006		0.93	2	0.098			7.12	6.71	6.57
2/12/2007		1.5			20		7.33		
2/13/2007			2.1	0.058				6.94	6.77
5/14/2007		1.8	2.1	0.046	11		7.63	6.89	6.92
7/23/2007									6.13
9/10/2007		0.62	2.2	0.077	58		7.8	7.59	
11/11/2007			2.8	0.083				8.07	8.18
11/12/2007					37				
11/13/2007		1					8.49		
1/15/2008		1.3		0.095	13		7.19		6.62
5/6/2008				0.042					6.58
5/7/2008		1.49	1.96		19		6.85	6.65	
7/24/2008									6.56
8/5/2008			2.53	0.1	23			6.64	6.63
8/6/2008		1.58					6.8		
11/19/2008				<0.05	30.4				6.32
11/20/2008		1.5					7.3		
3/23/2009				<0.05					6.55
3/24/2009		1.39			1.3		6.96		
5/20/2009		3.51	1.09	0.071	0.193		6.65	6.6	6.8
9/9/2009			1.02	<0.05				6.48	6.97
9/10/2009		2.66			1.24		7.44		
10/21/2009							7.1		
11/23/2009		2.32	4.25	<0.05	15.8		6.99	6.85	6.75
2/23/2010		2.16	5.16	<0.01	25.2		7.39	6.79	7.1
4/6/2010		2.1	4.67	<0.01	28.2		7.23	6.93	6.97
9/13/2010		1.64	2.66	<0.01	32.1		7.37	7.01	7.02
11/17/2010				<0.01	10.8				6.84
11/18/2010	14000	1.7	4.43			0.585	7.18	6.83	
1/27/2011			5.4	0.13	3.1			7.07	6.94
1/28/2011	10300	1.1				0.53	8.34		
4/29/2011	12100	2.2	1.7	0.079	4	3.4	7.26	6.78	6.89
7/26/2011	5950		0.84	<0.05	4.5	11.5		6.73	6.86
7/27/2011		1.5					7.16		
11/10/2011	3000	2.2	0.43	0.16	3.2	24.9	7.26	6.95	6.91
1/5/2012									
1/31/2012	1540	1.19	0.477	0.051		15.7	7.33	6.95	6.87
2/1/2012					2				

Time Series

Constituent: Chemical Oxygen Demand, Chloride, Iron, pH Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-17R (bg)	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)	MW-7	MW-10	MW-13
4/17/2012	1210	2.05	0.583	0.091	2.33	17.9	7.29	6.98	6.89
7/17/2012	622	1.78	0.716	<0.1	2.6	3.58	7.58	6.84	6.94
10/4/2012	517	1.8	0.276	0.0377	7.93	2.06	7.47	7	6.98
1/24/2013	576	2.02	2.23	0.193	3.44	0.928	7.44	7.03	7.01
4/4/2013	490	2.14	1.57	0.253	1.86	0.336	7.45	7.14	7.02
7/11/2013	392	1.36	0.455	0.142	1.89	0.248			
10/14/2013	382	1.97	0.315	0.17	0.133	0.156	7.52	7.29	7.1
2/17/2014	456	2.89	0.319	2.24	25.2	0.284	7.41	7.37	6.99
4/10/2014	651	2.33	<0.5	<1.25	19.1	<0.5	7.08	7	6.69
7/8/2014	331	2.77	0.251	0.423	13.9	<0.1	7.07	7.19	6.71
10/13/2014	497	3.52	0.284	1.6	6.93	<0.1	7.31	7.4	7.14

Time Series

Constituent: Chemical Oxygen Demand, Chloride, Iron, pH Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-15R	MW-17R (bg)
5/11/1993		
7/16/1993		
8/4/1993		
10/11/1993		
1/13/1994		
3/29/1994		
4/20/1994		
7/13/1994		
10/12/1994		
12/6/1994		
12/23/1994		
1/23/1995		
4/13/1995		
8/2/1995		
10/18/1995		
1/18/1996		
4/17/1996		
7/17/1996		
11/7/1996		
1/22/1997		
4/8/1997		
7/14/1997		
10/22/1997		
1/7/1998		
4/6/1998		
7/14/1998		
10/20/1998		
3/3/1999		
6/22/1999		
8/31/1999		
11/30/1999		
2/15/2000	6.8	
6/27/2000		
9/26/2000	7.3	
12/12/2000	7.1	
2/27/2001	6.9	
6/6/2001	7.1	
8/15/2001	4.5	
11/7/2001		
2/6/2002	6.9	
5/22/2002	7.06	
8/21/2002	7.3	
11/7/2002	7.3	
2/21/2003	7.5	
4/16/2003	7	
8/14/2003	7.1	
8/15/2003		
11/12/2003	7.1	
3/3/2004	7.2	
5/4/2004	7.2	
9/21/2004	7.5	
12/15/2004	7.6	

Time Series

Constituent: Chemical Oxygen Demand, Chloride, Iron, pH Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-15R	MW-17R (bg)
2/22/2005	7.5	
6/16/2005		
6/17/2005	7.92	
8/17/2005	8.54	
10/12/2005	6.98	
11/30/2005		
12/1/2005	6.41	
3/7/2006	6.6	
3/8/2006		
3/9/2006		
6/5/2006		
6/6/2006	8.46	
8/10/2006	7.37	
11/30/2006	6.92	
12/1/2006		
2/12/2007	6.72	
2/13/2007		
5/14/2007	6.33	
7/23/2007	6.72	
9/10/2007	6.9	
11/11/2007		
11/12/2007	8.31	
11/13/2007		
1/15/2008	7.86	
5/6/2008		
5/7/2008	6.6	
7/24/2008		
8/5/2008	6.58	
8/6/2008		
11/19/2008	6.85	
11/20/2008		
3/23/2009		
3/24/2009	6.86	
5/20/2009	7.01	
9/9/2009		
9/10/2009	6.94	
10/21/2009		
11/23/2009	6.92	
2/23/2010	6.98	
4/6/2010	6.76	
9/13/2010	7.07	
11/17/2010	6.31	
11/18/2010		
1/27/2011	6.52	
1/28/2011		6.71
4/29/2011	6.37	6.6
7/26/2011	6.34	6.73
7/27/2011		
11/10/2011	6.59	7.16
1/5/2012		
1/31/2012		7.11
2/1/2012	6.71	

Time Series

Constituent: Chemical Oxygen Demand, Chloride, Iron, pH Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-15R	MW-17R (bg)
4/17/2012	6.91	7.09
7/17/2012	6.84	7.29
10/4/2012	6.92	7.23
1/24/2013	6.92	7.56
4/4/2013	7	7.9
7/11/2013	7.46	
10/14/2013	7.13	8.2
2/17/2014	6.66	8.11
4/10/2014	6.42	6.85
7/8/2014	6.61	7.71
10/13/2014	7.05	8.05

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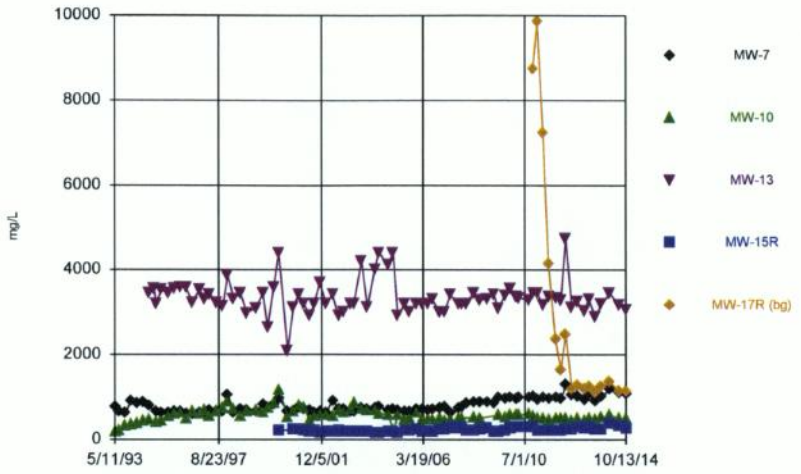
Time Series



Constituent: Sodium Analysis Run 12/9/2014 11:02 AM View: Short list

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

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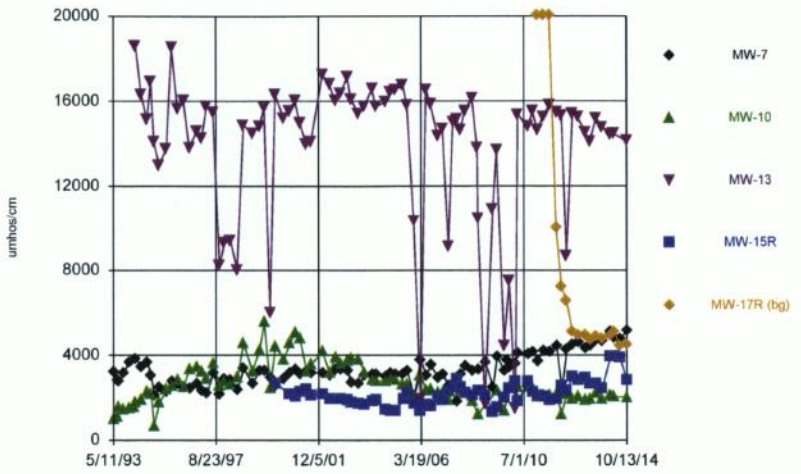
Time Series



Constituent: Specific Conductance Analysis Run 12/9/2014 11:02 AM View: Short list

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

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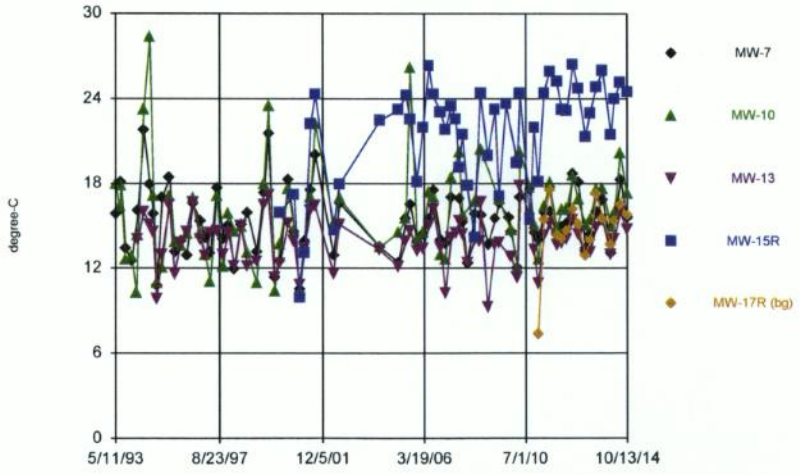
Time Series



Constituent: Temperature Analysis Run 12/9/2014 11:02 AM View: Short list

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

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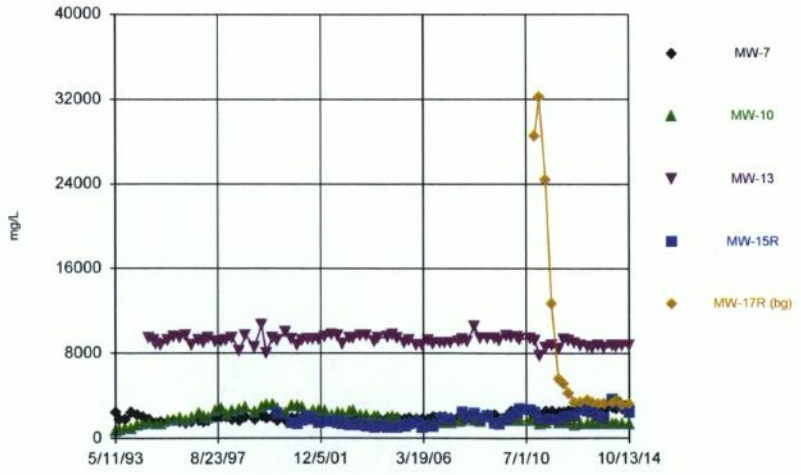
Time Series



Constituent: Total Dissolved Solids Analysis Run 12/9/2014 11:02 AM View: Short list

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

Time Series

Constituent: Sodium, Specific Conductance, Temperature, Total Dissolved Solids Analysis Run 12/9/2014 11:04 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)	MW-7	MW-10	MW-13	MW-15R
5/11/1993	773	194				3190	966		
7/16/1993	659	216				2830	1080		
8/4/1993						2740	1510		
10/11/1993	622	327				3160	1400		
1/13/1994	895	342				3670	1450		
3/29/1994							1532		
4/20/1994	844	363				3840	1730	18600	
7/13/1994	872	420				3440	1870	16300	
10/12/1994	783	458	3450			3640	2280	15100	
12/6/1994						3050	2130	16900	
12/23/1994			3550						
1/23/1995	651	407	3200			2080	665	14060	
4/13/1995	624	444	3510			2470	1745	12980	
8/2/1995	619	545	3440			2260	2340	13730	
10/18/1995	652	585	3560			2750	2560	18530	
1/18/1996	668	623	3580			2630	2820	15620	
4/17/1996	594	477	3580			2470	2480	16030	
7/17/1996	596	643	3230			2420	3340	13780	
11/7/1996	637	606	3510			2670	3400	14580	
1/22/1997	596	686	3310			2310	3210	14250	
4/8/1997	672	557	3420			2200	2870	15720	
7/14/1997	660	658	3230			3170	3580	15450	
10/22/1997	653	743	3120			2170	2530	8200	
1/7/1998	1050	882	3860			2890	2750	9290	
4/6/1998	620	702	3310			2840	2610	9410	
7/14/1998	701	550	3440			2370	2920	8020	
10/20/1998	683	666	2980			3350	4530	14860	
3/3/1999	649	670	3090			2650	3220	14460	
6/22/1999	820	639	3430			3260	4220	14780	
8/31/1999	726	732	2630			3250	5520	15690	
11/30/1999	808	839	3580			2950	2430	5980	
2/15/2000	956	1160	4400	202		2520	4400	16290	2650
6/27/2000	664	521	2080			2860	3770	15170	
9/26/2000	650	650	3100	230		3150	4530	15530	2140
12/12/2000	760	790	3400	230		3340	5060	16040	2060
2/27/2001	700	750	3200	200		3070	4750	14970	2230
6/6/2001	670	430	2900	190		3180	3210	13930	2350
8/15/2001	640	540	3200	200		3160	3540	14090	2070
11/7/2001	660	580	3700	160					
2/6/2002	630	580	3200	170		3170	4125	17240	2160
5/22/2002	910	550	3400	190		3020	3140	16770	1907
8/21/2002	710	670	2900	200		3330	3890	16010	1941
11/7/2002	700	620	3000	170		3330	3590	16340	1940
2/21/2003	650	720	3200	170		3240	3690	17110	1869
4/16/2003	660	840	3200	180		2720	3810	16100	1742
8/14/2003			4200	170				15380	1710
8/15/2003	750	710				2670	3740		
11/12/2003	700	680	3100	180		3040	3150	15760	1652
3/3/2004	730	670	4000	160		3110	2820	16550	1783
5/4/2004	770	610	4400	160		3100	2750	15730	1840
9/21/2004	680	580	4100	170		2990	2770	15940	1412
12/15/2004	710	210	4400	180		3120	2850	16380	1384

Time Series

Constituent: Sodium, Specific Conductance, Temperature, Total Dissolved Solids Analysis Run 12/9/2014 11:04 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)	MW-7	MW-10	MW-13	MW-15R
2/22/2005	690	560	2900	160		3080	2820	16500	1370
6/16/2005	660	460	3200			3114	2584	16760	
6/17/2005				200					1907
8/17/2005	660	490	3000	210		3261	2601	15770	2184
11/30/2005	700		3200			2014		10325	
12/1/2005		640		240			2025		1672
3/7/2006				190					1390
3/8/2006		450	3200				3010	1940	
3/9/2006	710					3750			
6/5/2006			3200					16545	
6/6/2006	690	450		180		3034	2330		1616
8/10/2006	700	460	3300	190		3523	2393	15837	1575
11/30/2006				240					2011
12/1/2006	750	480	3000			2936	2197	14336	
2/12/2007	760			230		3103			1843
2/13/2007		440	3000				2216	14681	
5/14/2007	640	450	3400	260		2524	1872	9087	2320
7/23/2007				280				15010	2531
9/10/2007	730	480	3200	270		1794	2519	15129	2890
11/11/2007		500	3200				2311	14601	
11/12/2007				270					2496
11/13/2007	760					3084			
1/15/2008	840		3200	210		3465		15516	2213
5/6/2008			3440					16110	
5/7/2008	875	513		202		3273	1808		2101
7/24/2008								13792	
8/5/2008		498	3280	245			1209	10432	2298
8/6/2008	868					3301			
11/19/2008			3310	251				1699	2070
11/20/2008	879					3660			
3/23/2009			3400					10899	
3/24/2009	850			179		2488			1310
5/20/2009	978	566	3070	193		3919	2299	13669	1536
9/9/2009		525	3390				1347	4449	
9/10/2009	966			196		3274			1954
10/21/2009						3768			
11/23/2009	994	566	3550	264		3413	2396	7502	2429
2/23/2010	960	567	3360	293		3580	2480	1455	2760
4/6/2010	976	568	3340	297		4090	2500	15340	1820
9/13/2010	1000	595	3270	304		4040	2480	14780	2730
11/17/2010			3440	295				15490	2250
11/18/2010	1010	537			8740	4160	2430		
1/27/2011		500	3440	210			2020	14620	2100
1/28/2011	930				9850	3730			
4/29/2011	1000	491	3160	219	7240	4230	2090	15250	2060
7/26/2011		467	3350	202	4140		2090	15790	1870
7/27/2011	952					4140			
11/10/2011	985	487	3320	206	2340	4430	2150	15460	1930
1/31/2012	964	494	3270		1640	2390	1220	15290	
2/1/2012				218					2510
4/17/2012	1290	486	4720	235	2470	4240	2140	8640	2310
7/17/2012	1050	429	3100	238	1180	4510	1930	15410	2970

Time Series

Constituent: Sodium, Specific Conductance, Temperature, Total Dissolved Solids Analysis Run 12/9/2014 11:04 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)	MW-7	MW-10	MW-13	MW-15R
10/4/2012	1030	476	3240	280	1260	4600	2010	15210	2840
1/24/2013	936	442	3030	270	1170	4290	1840	14530	2920
4/4/2013	1060	495	3310	280	1250	4430	1930	14040	2620
7/11/2013	915	454	2870	229	1110	4729	2210	15180	2625
10/14/2013	1020	506	3180	234	1250	4661	1925	14760	2446
2/17/2014	1170	567	3430	385	1340	5097	2094	14400	3912
4/10/2014						4826	2023	14430	3908
7/8/2014	1100	487	3170	320	1140	4750			3871
10/13/2014	1080	485	3050	253	1120	5155	1996	14110	2800

Time Series

Constituent: Sodium, Specific Conductance, Temperature, Total Dissolved Solids Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-17R (bg)	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)	MW-7	MW-10	MW-13
5/11/1993		15.8	17.9				2400	661	
7/16/1993		16.1	16.3				1750	746	
8/4/1993		18.1	17.8						
10/11/1993		13.4	12.6				1680	867	
1/13/1994		12.5	12.8				2370	890	
3/29/1994			10.2						
4/20/1994		16.1	14.3	14.1			2120	1140	
7/13/1994		21.8	23.2	16			1950	1260	
10/12/1994		17.9	28.3	15.1			1750	1440	9400
12/6/1994		15.8	17.1	14.6					
12/23/1994									9190
1/23/1995		10.7	10.9	9.8			1370	1260	8880
4/13/1995		17	12	13			1480	1280	8740
8/2/1995		18.4	17.1	16.5			1490	1640	9180
10/18/1995		13.2	13.8	11.6			1620	1650	9540
1/18/1996		13.9	13.6	13.8			1550	1860	9420
4/17/1996		12.9	14.4	14.6			1410	1640	9640
7/17/1996		16.6	16.9	16.7			1470	1840	8720
11/7/1996		15.3	14.5	14.1			1560	2250	9230
1/22/1997		14.2	12.9	12.9			1480	2000	8950
4/8/1997		13.1	11	14.5			1570	1790	9380
7/14/1997		17.7	17.1	14.7			1980	2540	9060
10/22/1997		14.1	12.1	13			1930	2700	9080
1/7/1998		15	15.8	14.5			1930	2180	9150
4/6/1998		11.9	14.6	12.2			1720	2550	9390
7/14/1998		15.1	14.9	15			1630	2630	8170
10/20/1998		15.9	13.1	12.2			1940	2810	9670
3/3/1999		13.2	10.9	12.5			1710	2390	8550
6/22/1999		17.3	17.9	16.5			2100	2820	10600
8/31/1999		21.5	23.4	17.2			1820	3100	7990
11/30/1999		11.3	10.3	11.3			1960	3090	9450
2/15/2000		12.5	13.7	12.3	15.9		1660	2700	9200
6/27/2000		18.3	17.6	15.2			1650	2260	9950
9/26/2000		14.6	14.7	13.9	17.2		1800	3000	9300
12/12/2000		10.5	10.4	10.8	9.9		1800	2900	8800
2/27/2001		13.9	13.5	13.4	13.1		1800	2800	9200
6/6/2001		17.5	17	16.1	22.2		1900	2100	9300
8/15/2001		20	22.2	16.4	24.3		1800	2500	9300
11/7/2001							1800	2500	9300
2/6/2002							1800	2500	9500
5/22/2002		12.9	15.2	11.6	14.7		1800	2100	9700
8/21/2002		16.6	16.9	15.1	17.9		1900	2300	9600
11/7/2002							1700	2200	8900
2/21/2003							1700	2400	9400
4/16/2003							1800	2500	9400
8/14/2003									9600
8/15/2003							1700	2100	
11/12/2003							1800	2100	9600
3/3/2004							1800	2000	9100
5/4/2004		13.5	13.5	13.3	22.4		1800	2000	9400
9/21/2004							1800	1800	9500
12/15/2004							1700	1900	9700

Time Series

Constituent: Sodium, Specific Conductance, Temperature, Total Dissolved Solids Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-17R (bg)	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)	MW-7	MW-10	MW-13
2/22/2005		12.4	14.5	12.1	23.2		1800	1800	9400
6/16/2005		15.46	15.47	13.94			1700	1500	9000
6/17/2005					24.18				
8/17/2005		16.52	26.1	14.7	22.48		1800	1600	9200
11/30/2005		13.91		13.25			1700		8800
12/1/2005			14.09		18.11			1700	
3/7/2006					21.9				
3/8/2006			14.5	13.4				1400	8800
3/9/2006		14.4					1700		
6/5/2006				15.02					9200
6/6/2006		15.49	17.3		26.28		1700	1400	
8/10/2006		17.5	17	16.21	24.26		1900	1400	8900
11/30/2006					23.01				
12/1/2006		14.03	12.94	13.5			1900	1500	9000
2/12/2007		13.76			21.78		1900		
2/13/2007			12.61	10.25				1400	9000
5/14/2007		17.04	18.37	14.15	23.4		1800	1400	9000
7/23/2007				14.49	22.54				
9/10/2007		16.9	20.2	15.3	19.1		1900	1500	9100
11/11/2007			15.73	14.39				1600	9300
11/12/2007					21.47				
11/13/2007		15.26					2000		
1/15/2008		12.32		12.38	17.87		2100		9100
5/6/2008				14					10500
5/7/2008		15.8	16.7		14.2		2010	1560	
7/24/2008				13.93					
8/5/2008			20.31	16.63	24.32			1490	9440
8/6/2008		15.76					1870		
11/19/2008				9.2	19.9				9430
11/20/2008		13.7					2210		
3/23/2009				13.64					9380
3/24/2009		15.5			23.2		2120		
5/20/2009		16.6	16.86	13.79	17.1			1640	9220
9/9/2009								1610	9630
9/10/2009					23.6				
10/21/2009		15.56							
11/23/2009		14.6	14.7	12.8			2540	1580	9530
2/23/2010		12	12	11.3	19.4		2320	1610	9510
4/6/2010		17	20.2	17.8	24.4		2520	1610	9340
9/13/2010		17.6	17.7	15.5	15.4		2480	1580	9410
11/17/2010				13.3	21.9				9240
11/18/2010		14.5	15.1				2430	1560	
1/27/2011			12.6	10.9	18.1			1320	7720
1/28/2011	20000	14				7.3	2150		
4/29/2011	20000	15.9	16.3	14.3	24.4	15.4	2520	1350	8550
7/26/2011	20000		18	15.2	25.9	17.5		1880	8700
7/27/2011		16					2530		
11/10/2011	9980	14.4	14.8	13.7	25.2	14.3	2400	1360	8420
1/31/2012	7210	14.9	16.1	13.8		14.1	2420	1430	9340
2/1/2012					23.2				
4/17/2012	6550	15.2	16.2	14.1	23.1	14.7	2550	1370	9192
7/17/2012	5070	18.7	18.5	15.4	26.4	16.2	2580	1220	8960

Time Series

Constituent: Sodium, Specific Conductance, Temperature, Total Dissolved Solids Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-17R (bg)	MW-7	MW-10	MW-13	MW-15R	MW-17R (bg)	MW-7	MW-10	MW-13
10/4/2012	4940	18.1	16.8	14.4	24.7	15.1	2570	1250	8790
1/24/2013	4910	13.4	15	12.9	21.3	12.9	2480	1320	8610
4/4/2013	4710	14.4	15.4	13.2	22.9	14	2560	1290	8560
7/11/2013	4870	15.98	17.53	14.9	24.79	17.24	2540	1330	8730
10/14/2013	4753	16.85	17.57	15.38	25.93	15.52	2540	1260	8520
2/17/2014	4930	13.08	14.9	12.98	21.47	13.66	2830	1330	8730
4/10/2014	5071	15.3	15.8	14.08	23.95	15.35	2750	1290	8650
7/8/2014	4440	18.27	20.13	16.03	25.11	16.51	2770	1310	8720
10/13/2014	4492	15.59	17.26	14.71	24.42	15.74	2950	1290	8720

Time Series

Constituent: Sodium, Specific Conductance, Temperature, Total Dissolved Solids Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-15R	MW-17R (bg)
5/11/1993		
7/16/1993		
8/4/1993		
10/11/1993		
1/13/1994		
3/29/1994		
4/20/1994		
7/13/1994		
10/12/1994		
12/6/1994		
12/23/1994		
1/23/1995		
4/13/1995		
8/2/1995		
10/18/1995		
1/18/1996		
4/17/1996		
7/17/1996		
11/7/1996		
1/22/1997		
4/8/1997		
7/14/1997		
10/22/1997		
1/7/1998		
4/6/1998		
7/14/1998		
10/20/1998		
3/3/1999		
6/22/1999		
8/31/1999		
11/30/1999		
2/15/2000	2290	
6/27/2000		
9/26/2000	1400	
12/12/2000	1300	
2/27/2001	1600	
6/6/2001	2000	
8/15/2001	1700	
11/7/2001	1400	
2/6/2002	1500	
5/22/2002	1500	
8/21/2002	1400	
11/7/2002	1300	
2/21/2003	1200	
4/16/2003	1300	
8/14/2003	1200	
8/15/2003		
11/12/2003	1100	
3/3/2004	1000	
5/4/2004	1100	
9/21/2004	960	
12/15/2004	930	

Time Series

Constituent: Sodium, Specific Conductance, Temperature, Total Dissolved Solids Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-15R	MW-17R (bg)
2/22/2005	910	
6/16/2005		
6/17/2005	1100	
8/17/2005	1300	
11/30/2005		
12/1/2005	1400	
3/7/2006	1000	
3/8/2006		
3/9/2006		
6/5/2006		
6/6/2006	1100	
8/10/2006	1100	
11/30/2006	1800	
12/1/2006		
2/12/2007	1700	
2/13/2007		
5/14/2007	1600	
7/23/2007		
9/10/2007		
11/11/2007		
11/12/2007	2400	
11/13/2007		
1/15/2008	1800	
5/6/2008		
5/7/2008	2230	
7/24/2008		
8/5/2008	1710	
8/6/2008		
11/19/2008	2010	
11/20/2008		
3/23/2009		
3/24/2009	1340	
5/20/2009	1320	
9/9/2009		
9/10/2009	1700	
10/21/2009		
11/23/2009	2020	
2/23/2010	2260	
4/6/2010	2680	
9/13/2010	2630	
11/17/2010	2380	
11/18/2010		28500
1/27/2011	1710	
1/28/2011		32100
4/29/2011	1690	24400
7/26/2011	1690	12600
7/27/2011		
11/10/2011	1620	5480
1/31/2012		5030
2/1/2012	1940	
4/17/2012	2010	4180
7/17/2012	2040	3260

Time Series

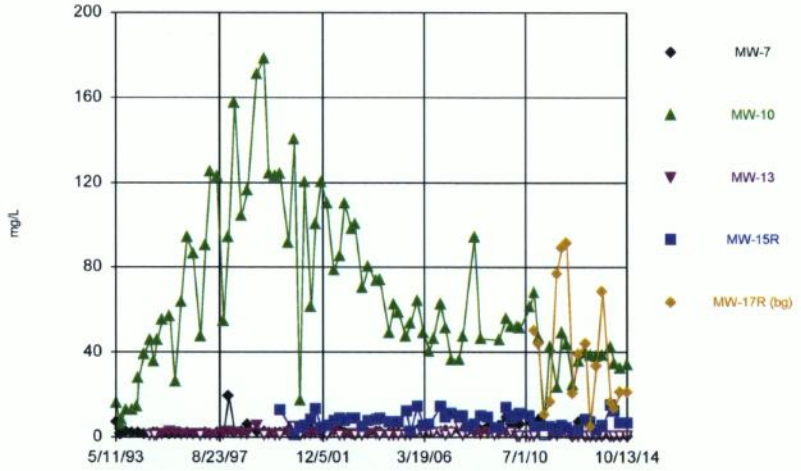
Constituent: Sodium, Specific Conductance, Temperature, Total Dissolved Solids Analysis Run 12/9/2014 11:04 AM View: Short list

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

	MW-15R	MW-17R (bg)
10/4/2012	2610	3300
1/24/2013	2460	3460
4/4/2013	2360	3250
7/11/2013	2050	3150
10/14/2013	1870	3200
2/17/2014	3620	3330
4/10/2014	3270	3520
7/8/2014	2910	3040
10/13/2014	2440	3140

Sanitas™ v.9.4.40 Sanitas software licensed to Cornerstone Engineering. EPA
Hollow symbols indicate censored values.

Time Series

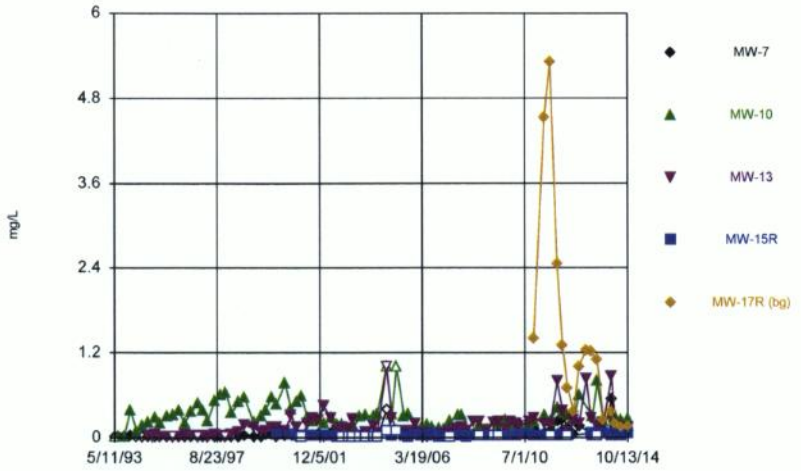


Constituent: Total Organic Carbon Analysis Run 12/9/2014 11:02 AM View: Short list

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

Sanitas™ v.9.4.40 Sanitas software licensed to Cornerstone Engineering. EPA
Hollow symbols indicate censored values.

Time Series



Constituent: TOX [Total Organic Halides] Analysis Run 12/9/2014 11:02 AM View: Short list

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

Time Series

Constituent: Total Organic Carbon, TOX [Total Organic Halides] Analysis Run 12/9/2014 11:05 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)	MW-7	MW-10	MW-13	MW-15R
5/11/1993	7.1	15.9				<0.005	<0.005		
7/16/1993	1.5	6				<0.005	0.01		
8/4/1993	1.4	8.1							
10/11/1993	2.3	12.5				0.008	0.016		
1/13/1994	1.7	12.8				0.028	0.384		
3/29/1994		14.1							
4/20/1994	1.9	27.5				<0.005	0.08		
7/13/1994	1.4	38.6				<0.01	0.166		
10/12/1994	1.5	45.6	<1			<0.01	0.203	0.033	
12/6/1994	1.9	35.4							
12/23/1994			<1					0.014	
1/23/1995	2.1	45.3	1.1			<0.01	0.271	0.048	
4/13/1995	1.3	54.6	1.5			<0.01	0.195	0.016	
8/2/1995	1.4	56.4	2.5			<0.01	0.287	0.013	
10/18/1995	1.6	25.9	1.9			<0.01	0.305	<0.01	
1/18/1996	1.4	63.4	1.5			<0.01	0.369	0.011	
4/17/1996	1.7	94	1.6			<0.01	0.193	0.047	
7/17/1996	1.6	86	1.6			<0.01	0.352	0.022	
11/7/1996	1.4	46.8	<1			<0.01	0.469	<0.01	
1/22/1997	2.2	90	1.5			<0.01	0.379	0.02	
4/8/1997	1.5	125	1			<0.01	0.231	0.015	
7/14/1997	2.1	123	1			<0.01	0.505	0.041	
10/22/1997	2.6	54.3	1.3			<0.01	0.588	0.0225	
1/7/1998	19.4	93.9	2.3			<0.01	0.621	<0.01	
4/6/1998	1.9	157.5	1.9			<0.01	0.345	0.036	
7/14/1998	2.3	104	1.6			0.011	0.487	0.077	
10/20/1998	5.7	116	1.4			0.023	0.552	0.183	
3/3/1999	2.35	171	5.3			0.012	0.203	0.14	
6/22/1999	2.5	178	<1			0.016	0.295	0.081	
8/31/1999	2	124	1.5			0.034	0.38	0.098	
11/30/1999	1.9	123	1.1			0.04	0.56	0.15	
2/15/2000	1.9	124	<1	12.7		0.0114	0.457	0.136	0.04
6/27/2000	3.2	90.9	1.9			0.0222	0.757	0.1	
9/26/2000	2	140	<5	1			0.39	0.31	0.04
12/12/2000	1	17	<1	4.1		0.011	0.5	0.14	0.03
2/27/2001	1.9	120	1.4	5.1		0.018	0.57	0.028	<0.01
6/6/2001	3.6	61	1.3	8.2		0.02	0.268	0.184	0.03
8/15/2001	2.7	100	2.1	13		0.021	0.224	0.271	0.02
11/7/2001	1.9	120	1	4.4		0.036	0.26	0.24	0.032
2/6/2002	1.5	110	<1	5.2		0.015	0.19	0.44	0.022
5/22/2002	2.8	78	2.3	7.4		0.053	0.28	0.27	0.024
8/21/2002	3.1	85	<1	8.4		0.021	0.17	0.1	0.012
11/7/2002	1.8	110	1	7.4		0.026	0.17	0.14	<0.01
2/21/2003	1.5	98	1.4	8.5		<0.01	0.12	0.12	<0.01
4/16/2003	1.1	100	<1	8.8		<0.01	0.12	0.253	<0.01
8/14/2003			<1	4.9				0.019	<0.01
8/15/2003	1.2	70				<0.01	0.29		
11/12/2003	2	80	1.2	7.5		<0.01	0.31	0.068	<0.01
3/3/2004	2.3	73	1.2	8.1		<0.01	0.29	0.16	<0.01
5/4/2004	2.3	74	<1	8.9		<0.01	0.33	0.058	<0.01
9/21/2004	2.1	49	<1	7.1		<0.4	<1	<1	<0.1
12/15/2004	2.2	62	1.1	6.8		0.025	0.33	0.27	0.018

Time Series

Constituent: Total Organic Carbon, TOX [Total Organic Halides] Analysis Run 12/9/2014 11:05 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)	MW-7	MW-10	MW-13	MW-15R
2/22/2005	1.8	58	<1	7.1		<0.1	<1	<0.1	<0.1
6/16/2005	2.2	47	<1			0.032	0.298	0.069	
6/17/2005				12					0.023
8/17/2005	2.1	53	<1	2.3		0.031	0.327	0.085	0.015
11/30/2005	2.8		<2			0.096		0.184	
12/1/2005		64		14			0.151		0.038
3/7/2006				5.4					0.017
3/8/2006		49	<2				0.119	0.072	
3/9/2006	2.2					0.094			
6/5/2006			<2					0.06	
6/6/2006	1.8	40		6		0.014	0.174		0.026
8/10/2006	2.6	46	<2			0.027	0.145	0.063	0.052
11/30/2006				14					0.015
12/1/2006	2.7	62	<2			0.019	0.13	0.047	
2/12/2007	2.8			9.1		0.077			0.022
2/13/2007		51	<1				0.114	0.059	
5/14/2007	2.4	36	<2	11		<0.01	0.223	0.098	<0.01
9/10/2007	3	36	<5	9.5		0.038	0.303	0.122	0.018
11/11/2007		47	<1				0.315	0.136	
11/12/2007				10					0.018
11/13/2007	4					0.069			
1/15/2008	2.4		<2	4.8		0.032		0.096	0.013
5/6/2008			1.81					0.22	
5/7/2008	2.66	93.6		5.94		0.038	0.022		0.029
8/5/2008		46	1.55	9.72			0.18	0.22	<0.02
8/6/2008	2.79					0.041			
11/19/2008			2.17	9.04				0.096	0.026
11/20/2008	4.67					0.039			
3/23/2009			<1					0.21	
3/24/2009	3.41			3.93		0.048			<0.02
5/20/2009	5.18	45.3	1.26	4.41		0.061	0.19	0.22	<0.02
9/9/2009		55.2	2.01				0.24	0.12	
9/10/2009	9.03			13.8		0.059			0.02
11/23/2009	5.96	51.6	<2	8.75		0.038	0.15	0.23	0.021
2/23/2010	6.52	51.7	<0.5	9.78		0.028	0.2	0.19	0.026
4/6/2010	5.69	50.9	<0.5	10.9		0.038	0.19	0.16	0.042
9/13/2010	6.78	61	<0.5	9.58		0.11	0.2	0.22	0.036
11/17/2010			<0.5	4.68				0.28	0.023
11/18/2010	6.64	67.9			49.8	0.13	0.22		
1/27/2011		46.6	2.6	4.5					
1/28/2011	8.2				44				
4/29/2011	1.2	5.9	<1	<1	10.5	0.0655	0.313	0.184	0.0215
7/26/2011		42.1	1.5	4.6	16.3		0.221	0.193	<0.02
7/27/2011	<1					0.0841			
11/10/2011	4.1	23	<1	2	76.4	0.219	0.417	0.793	0.0329
1/5/2012						0.24			
1/31/2012	4.33	48.5	<2		88.7	0.094	0.34	0.37	
2/1/2012				5.16					0.035
4/17/2012	4.87	43	<2	4.24	91.3	0.13	0.31	0.075	<0.02
7/17/2012	<0.5	24.4	<0.5	2	20.3	0.0495	0.258	0.247	
10/4/2012	6.8	35.2	0.072	3.2	38.9	0.157	0.591	0.187	
1/24/2013	0.51	39.4	<0.5	8	43.5			0.822	

Time Series

Constituent: Total Organic Carbon, TOX [Total Organic Halides] Analysis Run 12/9/2014 11:05 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)	MW-7	MW-10	MW-13	MW-15R
4/4/2013	<0.5	38.3	<0.5	7.1	5			0.282	0.058
5/1/2013						0.05	0.298		0.0274
7/11/2013	<0.5	37.6	<0.5	3.1	33	0.114	0.787	0.159	<0.02
10/14/2013	<0.5	37.9	<0.5	5.2	68.3	0.0943	0.226	0.214	0.0614
2/17/2014	<0.5	41.9	<0.5	14.5	16.1	0.539		0.856	0.0286
3/11/2014							0.32		
4/10/2014	<0.5	34.4	<0.5	11.7	12.9	<0.02	0.27	0.16	0.092
7/8/2014	<0.5	32.2	<0.5	6.3	20.8	0.069	0.24	0.094	0.024
10/13/2014	<0.5	33.9	<0.5	6.5	20.7	0.093	0.26	0.15	0.056

Time Series

Constituent: Total Organic Carbon, TOX [Total Organic Halides] Analysis Run 12/9/2014 11:05 AM View: Short list

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

	MW-17R (bg)
5/11/1993	
7/16/1993	
8/4/1993	
10/11/1993	
1/13/1994	
3/29/1994	
4/20/1994	
7/13/1994	
10/12/1994	
12/6/1994	
12/23/1994	
1/23/1995	
4/13/1995	
8/2/1995	
10/18/1995	
1/18/1996	
4/17/1996	
7/17/1996	
11/7/1996	
1/22/1997	
4/8/1997	
7/14/1997	
10/22/1997	
1/7/1998	
4/6/1998	
7/14/1998	
10/20/1998	
3/3/1999	
6/22/1999	
8/31/1999	
11/30/1999	
2/15/2000	
6/27/2000	
9/26/2000	
12/12/2000	
2/27/2001	
6/6/2001	
8/15/2001	
11/7/2001	
2/6/2002	
5/22/2002	
8/21/2002	
11/7/2002	
2/21/2003	
4/16/2003	
8/14/2003	
8/15/2003	
11/12/2003	
3/3/2004	
5/4/2004	
9/21/2004	
12/15/2004	

Time Series

Constituent: Total Organic Carbon, TOX [Total Organic Halides] Analysis Run 12/9/2014 11:05 AM View: Short list

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

	MW-17R (bg)
2/22/2005	
6/16/2005	
6/17/2005	
8/17/2005	
11/30/2005	
12/1/2005	
3/7/2006	
3/8/2006	
3/9/2006	
6/5/2006	
6/6/2006	
8/10/2006	
11/30/2006	
12/1/2006	
2/12/2007	
2/13/2007	
5/14/2007	
9/10/2007	
11/11/2007	
11/12/2007	
11/13/2007	
1/15/2008	
5/6/2008	
5/7/2008	
8/5/2008	
8/6/2008	
11/19/2008	
11/20/2008	
3/23/2009	
3/24/2009	
5/20/2009	
9/9/2009	
9/10/2009	
11/23/2009	
2/23/2010	
4/6/2010	
9/13/2010	
11/17/2010	
11/18/2010	1.4
1/27/2011	
1/28/2011	
4/29/2011	4.52
7/26/2011	5.3
7/27/2011	
11/10/2011	2.45
1/5/2012	
1/31/2012	1.3
2/1/2012	
4/17/2012	0.7
7/17/2012	0.359
10/4/2012	1
1/24/2013	1.23

Time Series

Constituent: Total Organic Carbon, TOX [Total Organic Halides] Analysis Run 12/9/2014 11:05 AM View: Short list

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

	MW-17R (bg)
4/4/2013	1.21
5/1/2013	
7/11/2013	1.09
10/14/2013	0.247
2/17/2014	0.351
3/11/2014	
4/10/2014	0.2
7/8/2014	0.14
10/13/2014	0.16

APPENDIX E
LABORATORY ANALYTICAL REPORT

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

November 11, 2014

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

RE: Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

Dear Dan Fleshour:
Enclosed are the analytical results for sample(s) received by the laboratory on October 15, 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 K Varga

Cindy Varga
cindy.varga@pacelabs.com
Project Manager

Enclosures

cc: Kari Wallover, Cornerstone Environmental Group, LLC

NELAP ACCREDITED LABORATORY

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40105317001	**MW-7**	Water	10/13/14 11:40	10/15/14 10:23
40105317002	**MW-10**	Water	10/13/14 14:25	10/15/14 10:23
40105317003	**MW-13**	Water	10/13/14 13:50	10/15/14 10:23
40105317004	**MW-15R**	Water	10/13/14 13:18	10/15/14 10:23
40105317005	**MW-17R**	Water	10/13/14 14:50	10/15/14 10:23
40105317006	**FIELD DUPLICATE**	Water	10/13/14 13:35	10/15/14 10:23

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SAMPLE ANALYTE COUNT

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40105317001	**MW-7**	EPA 6010	DLB, MMZ	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TMK	1	PASI-G
		SM 5310C	TMK	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
40105317002	**MW-10**	EPA 6010	DLB, MMZ	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TMK	1	PASI-G
		SM 5310C	TMK	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
40105317003	**MW-13**	EPA 6010	DLB, MMZ	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TMK	1	PASI-G
		SM 5310C	TMK	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
40105317004	**MW-15R**	EPA 6010	DLB, MMZ	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TMK	1	PASI-G
		SM 5310C	TJJ	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
40105317005	**MW-17R**	EPA 6010	DLB, MMZ	2	PASI-G
			MAT	3	PASI-G
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TMK	1	PASI-G
		SM 5310C	TMK	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G
40105317006	**FIELD DUPLICATE**	EPA 6010	DLB, MMZ	2	PASI-G
			MAT	3	PASI-G

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SAMPLE ANALYTE COUNT

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	MLH	1	PASI-G
		EPA 410.4	TMK	1	PASI-G
		SM 5310C	TMK	1	PASI-G
		EPA 9020B	JRP	1	PASI-N
		EPA 9056	HMB	1	PASI-G

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

Sample: MW-7 **Lab ID: 40105317001** Collected: 10/13/14 11:40 Received: 10/15/14 10:23 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	**3520**	ug/L	100	1	10/17/14 10:24	10/17/14 17:25	7439-89-6	
Sodium	**1080000**	ug/L	10000	10	10/17/14 10:24	10/20/14 14:46	7440-23-5	P6
Field Data	Analytical Method:							
Field pH	**7.31**	Std. Units		1		10/13/14 11:40		
Field Specific Conductance	**5155**	umhos/cm		1		10/13/14 11:40		
Temperature, Water (C)	**15.59**	deg C		1		10/13/14 11:40		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**2950**	mg/L	20.0	1		10/17/14 15:58		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4							
Chemical Oxygen Demand	**78.2**	mg/L	50.0	1	10/23/14 14:29	10/23/14 17:01		
5310C TOC	Analytical Method: SM 5310C							
Total Organic Carbon	**<0.50**	mg/L	0.50	1		10/30/14 22:44	7440-44-0	M0
Total Organic Halides	Analytical Method: EPA 9020B							
Total Organic Halides	**0.093**	mg/L	0.020	1		11/04/14 09:45		
9056 IC Anions	Analytical Method: EPA 9056							
Chloride	**1120**	mg/L	400	100		10/27/14 13:00	16887-00-6	

Sample: MW-10 **Lab ID: 40105317002** Collected: 10/13/14 14:25 Received: 10/15/14 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron	**284**	ug/L	100	1	10/17/14 10:24	10/17/14 17:31	7439-89-6	
Sodium	**485000**	ug/L	10000	10	10/17/14 10:24	10/20/14 14:53	7440-23-5	
Field Data	Analytical Method:							
Field pH	**7.40**	Std. Units		1		10/13/14 14:25		
Field Specific Conductance	**1996**	umhos/cm		1		10/13/14 14:25		
Temperature, Water (C)	**17.26**	deg C		1		10/13/14 14:25		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**1290**	mg/L	20.0	1		10/17/14 15:59		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4							
Chemical Oxygen Demand	**98.7**	mg/L	50.0	1	10/23/14 14:29	10/23/14 17:01		
5310C TOC	Analytical Method: SM 5310C							
Total Organic Carbon	**33.9**	mg/L	15.0	30		10/30/14 23:40	7440-44-0	

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

Sample: MW-10 **Lab ID: 40105317002** Collected: 10/13/14 14:25 Received: 10/15/14 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Total Organic Halides	Analytical Method: EPA 9020B							
Total Organic Halides	**0.26**	mg/L	0.020	1		11/04/14 11:26		
9056 IC Anions	Analytical Method: EPA 9056							
Chloride	**136**	mg/L	40.0	10		10/27/14 13:52	16887-00-6	

Sample: MW-13 **Lab ID: 40105317003** Collected: 10/13/14 13:50 Received: 10/15/14 10:23 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	**1600**	ug/L	100	1	10/17/14 10:24	10/17/14 17:33	7439-89-6	
Sodium	**3050000**	ug/L	50000	50	10/17/14 10:24	10/20/14 14:55	7440-23-5	
Field Data	Analytical Method:							
Field pH	**7.14**	Std. Units		1		10/13/14 13:50		
Field Specific Conductance	**14110**	umhos/cm		1		10/13/14 13:50		
Temperature, Water (C)	**14.71**	deg C		1		10/13/14 13:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**8720**	mg/L	20.0	1		10/17/14 15:59		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4							
Chemical Oxygen Demand	**224**	mg/L	50.0	1	10/23/14 14:29	10/23/14 17:07		
5310C TOC	Analytical Method: SM 5310C							
Total Organic Carbon	**<0.50**	mg/L	0.50	1		10/31/14 00:18	7440-44-0	
Total Organic Halides	Analytical Method: EPA 9020B							
Total Organic Halides	**0.15**	mg/L	0.020	1		11/04/14 12:03		
9056 IC Anions	Analytical Method: EPA 9056							
Chloride	**5120**	mg/L	400	100		10/27/14 14:03	16887-00-6	

Sample: MW-15R **Lab ID: 40105317004** Collected: 10/13/14 13:18 Received: 10/15/14 10:23 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	**6930**	ug/L	100	1	10/17/14 10:24	10/17/14 17:36	7439-89-6	
Sodium	**253000**	ug/L	10000	10	10/17/14 10:24	10/20/14 15:02	7440-23-5	
Field Data	Analytical Method:							
Field pH	**7.05**	Std. Units		1		10/13/14 13:18		

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

Sample: MW-15R **Lab ID: 40105317004** Collected: 10/13/14 13:18 Received: 10/15/14 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:							
Field Specific Conductance	**2800**	umhos/cm		1		10/13/14 13:18		
Temperature, Water (C)	**24.42**	deg C		1		10/13/14 13:18		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**2440**	mg/L	20.0	1		10/17/14 15:59		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4							
Chemical Oxygen Demand	**<50.0**	mg/L	50.0	1	10/23/14 14:29	10/23/14 17:02		
5310C TOC	Analytical Method: SM 5310C							
Total Organic Carbon	**6.5**	mg/L	1.5	3		10/31/14 13:34	7440-44-0	
Total Organic Halides	Analytical Method: EPA 9020B							
Total Organic Halides	**0.056**	mg/L	0.020	1		11/04/14 13:33		
9056 IC Anions	Analytical Method: EPA 9056							
Chloride	**65.3**	mg/L	20.0	5		10/27/14 14:13	16887-00-6	

Sample: MW-17R **Lab ID: 40105317005** Collected: 10/13/14 14:50 Received: 10/15/14 10:23 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	10/17/14 10:24	10/17/14 17:38	7439-89-6	
Sodium	**1120000**	ug/L	50000	50	10/17/14 10:24	10/20/14 15:04	7440-23-5	
Field Data	Analytical Method:							
Field pH	**8.05**	Std. Units		1		10/13/14 14:50		
Field Specific Conductance	**4492**	umhos/cm		1		10/13/14 14:50		
Temperature, Water (C)	**15.74**	deg C		1		10/13/14 14:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**3140**	mg/L	20.0	1		10/17/14 16:00		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4							
Chemical Oxygen Demand	**94.1**	mg/L	50.0	1	10/23/14 14:29	10/23/14 17:02		
5310C TOC	Analytical Method: SM 5310C							
Total Organic Carbon	**20.7**	mg/L	15.0	30		10/31/14 00:56	7440-44-0	
Total Organic Halides	Analytical Method: EPA 9020B							
Total Organic Halides	**0.16**	mg/L	0.020	1		11/04/14 14:50		

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ANALYTICAL RESULTS

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

Sample: MW-17R **Lab ID: 40105317005** Collected: 10/13/14 14:50 Received: 10/15/14 10:23 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Chloride	**497**	mg/L	400	100		10/27/14 14:24	16887-00-6	

Sample: FIELD DUPLICATE **Lab ID: 40105317006** Collected: 10/13/14 13:35 Received: 10/15/14 10:23 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	**1440**	ug/L	100	1	10/17/14 10:24	10/17/14 17:41	7439-89-6	
Sodium	**3050000**	ug/L	50000	50	10/17/14 10:24	10/20/14 15:06	7440-23-5	
Field Data	Analytical Method:							
Field pH	**7.13**	Std. Units		1		10/13/14 13:35		
Field Specific Conductance	**14110**	umhos/cm		1		10/13/14 13:35		
Temperature, Water (C)	**14.71**	deg C		1		10/13/14 13:35		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**8780**	mg/L	20.0	1		10/17/14 16:00		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4							
Chemical Oxygen Demand	**192**	mg/L	50.0	1	10/23/14 14:29	10/23/14 17:02		
5310C TOC	Analytical Method: SM 5310C							
Total Organic Carbon	**<0.50**	mg/L	0.50	1		10/31/14 01:14	7440-44-0	
Total Organic Halides	Analytical Method: EPA 9020B							
Total Organic Halides	**0.17**	mg/L	0.020	1		11/04/14 15:49		
9056 IC Anions	Analytical Method: EPA 9056							
Chloride	**5130**	mg/L	400	100		10/27/14 14:34	16887-00-6	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

QC Batch: MPRP/10960 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

METHOD BLANK: 1065598 Matrix: Water
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron	ug/L	<100	100	10/17/14 17:16	
Sodium	ug/L	<1000	1000	10/20/14 14:35	

LABORATORY CONTROL SAMPLE: 1065599

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	5000	5220	104	80-120	
Sodium	ug/L	5000	5020	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1065600 1065601

Parameter	Units	40105317001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	3520	5000	5000	8600	8710	102	104	75-125	1	20	
Sodium	ug/L	1080000	5000	5000	1100000	1100000	280	380	75-125	0	20	P6

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

QC Batch: WET/20340 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

METHOD BLANK: 1066091 Matrix: Water
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<20.0	20.0	10/17/14 15:56	

LABORATORY CONTROL SAMPLE: 1066092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	600	572	95	80-120	

SAMPLE DUPLICATE: 1066093

Parameter	Units	40105204001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	366	372	2	10	

SAMPLE DUPLICATE: 1066094

Parameter	Units	40105317003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	8720	8790	1	10	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

QC Batch: WETA/25790 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

METHOD BLANK: 1069002 Matrix: Water
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<50.0	50.0	10/23/14 16:56	

LABORATORY CONTROL SAMPLE: 1069003

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	506	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1069004 1069005

Parameter	Units	40105204003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	15.3J	526	526	547	556	101	103	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1069006 1069007

Parameter	Units	40105271001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	295	526	526	822	805	100	97	90-110	2	10	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

QC Batch: WETA/25853 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

METHOD BLANK: 1071556 Matrix: Water
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.50	0.50	10/30/14 17:22	

LABORATORY CONTROL SAMPLE: 1071557

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.5	2.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1071558 1071559

Parameter	Units	40105245001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	705 ug/L	2.5	2.5	3.1	3.1	97	97	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1071560 1071561

Parameter	Units	40105317001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<0.50	2.5	2.5	0.66	0.67	14	15	80-120	2	20	M0

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

QC Batch: WETA/3645 Analysis Method: EPA 9020B
QC Batch Method: EPA 9020B Analysis Description: 9020B W TOX
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

METHOD BLANK: 67328 Matrix: Water
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Halides	mg/L	<0.020	0.020	11/04/14 09:21	

LABORATORY CONTROL SAMPLE: 67329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Halides	mg/L	.1	0.095	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 67345 67346

Parameter	Units	40105317001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Halides	mg/L	0.093	.1	.1	0.19	0.18	95	86	78-116	4	20	

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QUALITY CONTROL DATA

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

QC Batch: WETA/25809 Analysis Method: EPA 9056
QC Batch Method: EPA 9056 Analysis Description: 9056 IC Anions
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

METHOD BLANK: 1069782 Matrix: Water
Associated Lab Samples: 40105317001, 40105317002, 40105317003, 40105317004, 40105317005, 40105317006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<4.0	4.0	10/27/14 10:53	

LABORATORY CONTROL SAMPLE: 1069783

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.4	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1069786 1069787

Parameter	Units	40105708007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.1	20	20	21.9	22.1	89	90	90-110	1	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1069788 1069789

Parameter	Units	40105317001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1120	2000	2000	3020	3030	95	95	90-110	0	20	

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QUALIFIERS

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

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.

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TNI - The NELAC Institute.

LABORATORIES

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

ANALYTE QUALIFIERS

M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BLUE RIDGE GW OCT 2014
Pace Project No.: 40105317

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40105317001	MW-7	EPA 3010	MPRP/10960	EPA 6010	ICP/9716
40105317002	MW-10	EPA 3010	MPRP/10960	EPA 6010	ICP/9716
40105317003	MW-13	EPA 3010	MPRP/10960	EPA 6010	ICP/9716
40105317004	MW-15R	EPA 3010	MPRP/10960	EPA 6010	ICP/9716
40105317005	MW-17R	EPA 3010	MPRP/10960	EPA 6010	ICP/9716
40105317006	FIELD DUPLICATE	EPA 3010	MPRP/10960	EPA 6010	ICP/9716
40105317001	MW-7		PM/		
40105317002	MW-10		PM/		
40105317003	MW-13		PM/		
40105317004	MW-15R		PM/		
40105317005	MW-17R		PM/		
40105317006	FIELD DUPLICATE		PM/		
40105317001	MW-7	SM 2540C	WET/20340		
40105317002	MW-10	SM 2540C	WET/20340		
40105317003	MW-13	SM 2540C	WET/20340		
40105317004	MW-15R	SM 2540C	WET/20340		
40105317005	MW-17R	SM 2540C	WET/20340		
40105317006	FIELD DUPLICATE	SM 2540C	WET/20340		
40105317001	MW-7	EPA 410.4	WETA/25790	EPA 410.4	WETA/25793
40105317002	MW-10	EPA 410.4	WETA/25790	EPA 410.4	WETA/25793
40105317003	MW-13	EPA 410.4	WETA/25790	EPA 410.4	WETA/25793
40105317004	MW-15R	EPA 410.4	WETA/25790	EPA 410.4	WETA/25793
40105317005	MW-17R	EPA 410.4	WETA/25790	EPA 410.4	WETA/25793
40105317006	FIELD DUPLICATE	EPA 410.4	WETA/25790	EPA 410.4	WETA/25793
40105317001	MW-7	SM 5310C	WETA/25853		
40105317002	MW-10	SM 5310C	WETA/25853		
40105317003	MW-13	SM 5310C	WETA/25853		
40105317004	MW-15R	SM 5310C	WETA/25853		
40105317005	MW-17R	SM 5310C	WETA/25853		
40105317006	FIELD DUPLICATE	SM 5310C	WETA/25853		
40105317001	MW-7	EPA 9020B	WETA/3645		
40105317002	MW-10	EPA 9020B	WETA/3645		
40105317003	MW-13	EPA 9020B	WETA/3645		
40105317004	MW-15R	EPA 9020B	WETA/3645		
40105317005	MW-17R	EPA 9020B	WETA/3645		
40105317006	FIELD DUPLICATE	EPA 9020B	WETA/3645		
40105317001	MW-7	EPA 9056	WETA/25809		
40105317002	MW-10	EPA 9056	WETA/25809		
40105317003	MW-13	EPA 9056	WETA/25809		
40105317004	MW-15R	EPA 9056	WETA/25809		
40105317005	MW-17R	EPA 9056	WETA/25809		
40105317006	FIELD DUPLICATE	EPA 9056	WETA/25809		

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Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Page: 1 of 1

Section A — Required Client Information:

Company: Advanced Disposal - Blue Ridge	
Address: 2700 Winchester Rd.	
Irvine, KY 40336	
Email To: Dan.Fleshour@advanceddisposal.com	
Phone: (513) 985-8067	Fax:
Requested Due Date/TAT: Standard TAT	

Section B — Required Project Information:

Report To: Dan Fleshour	
Copy To: Kari Wallover (kari.wallover@cornerston	
Purchase Order No.:	
Project Name: Groundwater	
Project Number:	

Section C — Invoice Information:

Attention: Dan Fleshour	
Company Name: Advanced Disposal	
Address: 2700 Winchester Rd., Irvine, KY, 40336	
Pace Quote Reference:	
Pace Project Manager: Cindy Varga	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ SC ☐ WI ☑ OTHER KY

Section D Required Client Information

SAMPLE ID

One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	pH	Cond	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED DATE	COLLECTED TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analyses: TOC	TOX	COD	TDS	Chloride	T Fe, Na	Residual Chlorine (Y/N)	Pace Project Number / Lab I.D.
1	MW-7	7.31	5155	GW	G			10/3	1140	16.59	5	1	3	1						X	X	X	X	X	X	N	001
2	MW-10	7.40	1996	GW	G				1425	17.26	5	1	3	1						X	X	X	X	X	X	N	002
3	MW-13	7.14	14110	GW	G				1350	14.71	5	1	3	1						X	X	X	X	X	X	N	003
4	MW-15R	7.05	2800	GW	G				1318	24.42	5	1	3	1						X	X	X	X	X	X	N	004
5	MW-17R	~~8.05~~	4492	GW	G				1450	15.74	5	1	3	1						X	X	X	X	X	X	N	005
6	Field Duplicate	7.13	14110	GW	G				1335	14.71	5	1	3	1						X	X	X	X	X	X	N	006
7	~~8.05 4492~~																										
8																											
9																											
10																											
11																											
12																											

1-500mlag^C, 1-125mlag^C, 3-250mlp^ENO

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Keith Johnson/Cornerstone	10/4	1700			
UPS	10/5/14	1023	Susan Tullis Pace	10/5/14	1023

SAMPLE CONDITIONS

	Y/N	Y/N	Y/N
4	N	Y	Y
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

Temp in °C | Received on Ice | Custody Sealed Cooler | Samples Intact

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Keith Johnson

SIGNATURE of SAMPLER: Keith Johnson

DATE Signed (MM / DD / YY): 10/04/14

E-File,(ALLQ020rev.3,31Mar05), 13Jun2005

Sample Condition Upon Receipt

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

Pace Analytical™

Client Name: ADS

Project #: WO#: 40105317

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

Tracking #: 1Z90E6F32310003437

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: SR49 Type of Ice: (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature: Uncorr: 4.5 /Corr: 4 Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents: Date: 10/15/14 Initials: SKW

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

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. 004- 1-250ml A Label unlegible - placed on packaged with other bottles for sample point. 10/15/14 SKW
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☑ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, (Phenolics) OTHER: 10/15/14 MV 10/15/14 MV	☑Yes ☐No	Initial when completed: KW / Lab Std #ID of preservative / Date/Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Lee Date: 10/15/14