JETT ENVIRONMENTAL CONSULTING

December 19, 2014

1592
CMN 14-01
4Q GWST

Ms. Deborah DeLong
Kentucky Department for Environmental Protection
Division of Waste Management
Solid Waste Branch
200 Fair Oaks Lane, 2nd Floor
Frankfort, KY 40601

Re: Fourth Quarter 2014 Groundwater Sampling Event, Statistical Analysis Report
Green Valley Landfill, Ashland, Kentucky

Dear Ms. DeLong:

On behalf of the Green Valley Landfill, Jett Environmental Consulting is submitting a hardcopy of the Fourth Quarter 2014 Groundwater Statistical Analysis Report.

If you have any questions or comments, please contact me at steve.jett@jettenviro.com or 314-496-4654.

Sincerely,

Steve Jett, P.G.
Owner

Attachment: *Groundwater Statistical Analysis Report (1 Copy)*

cc: *Green Valley Landfill (1 hardcopy)*
Bill Chlebowy, Republic Services, Inc. (PDF via email)

RECEIVED
DEC 23 2014
Division of Waste Management
Solid Waste Branch

10 Quiet Brook Court
St. Charles, MO 63303

314-496-4654
www.jettenviro.com

Groundwater
Statistical Analysis Report

Fourth Quarter 2014
Sampling Event

Green Valley Landfill
Ashland, Kentucky
Permit No. 045-00012

December 2014

Prepared by:



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1.0 INTRODUCTION

On behalf of Green Valley Landfill General Partnership, Jett Environmental Consulting statistically evaluated the Fourth Quarter (October) 2014 groundwater data. Sampling was performed by Kenvirons, Inc. and analytical testing was performed by Pace Analytical Services, Inc. The statistical evaluation software package utilized, *Sanitas™,* follows a documented decision logic that incorporates the following applicable guidance document: USEPA "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance" (March 2009).

2.0 SITE BACKGROUND AND MONITORING NETWORK

Jett Environmental Consulting statistically analyzed parameters from the Green Valley Landfill Fourth Quarter 2014 monitoring event using intra-well prediction limits from the historical background data. Prediction limits are considered a powerful tool for groundwater statistical analysis, when feasible, due to their inherent low false negative and false positive rates utilizing confirmatory resampling, if necessary. **Table 1** lists the groundwater monitoring wells at the site. The site submitted a Groundwater Statistical Monitoring Plan on December 9, 2011. The Kentucky Department for Environmental Protection (KDEP) approved the statistical analysis plan for the monitoring wells in correspondence dated August 16, 2012. **Table 2** details background dates and parameters used for statistical evaluations at the site. The background database for the Green Valley Landfill will be updated approximately every one to two years.

The facility received KDEP permission on August 16, 2012 to reduce the groundwater program to annual sampling for parameters in KAR Title 401 Chapter 48:300 Section 11(3)(a) and (b) and quarterly sampling for parameters in KAR Title 401 Chapter 48:300 Section 11(3)(f).

During the Fourth Quarter 2014 sampling event, each well was sampled for the quarterly parameters listed in Section 11(3)(f).

3.0 SITE HYDROGEOLOGY

As identified in the *Modification to Permit No. 045-00012,* dated July 1997 by Kenvirons, Inc. hydrogeologic conditions at the site consist of three aquifers: alluvial/fracture zone, Princess No. 3 coal zone, and the Fire Clay coal zone. Recharge for the alluvial/fracture zone is from secondary porosity due to naturally occurring stress relief fractures in the upper zone of the bedrock. The direction of flow in the alluvium/fracture zone aquifer is a subdued reflection of the topographic relief with the area of recharge limited to the watershed divide.

The alluvium/fracture zone is considered the uppermost aquifer at the site and is utilized for detection of possible facility impacts. **Appendix A** provides a potentiometric surface map for the alluvial/fracture zone utilizing groundwater level data from the Fourth Quarter 2014 event. Groundwater flow direction for the Fourth Quarter 2014 event is generally to the west/northwest, consistent with past events. Groundwater flow rate for the Fourth Quarter 2014 event was estimated to be 3.5 feet/year. Flow rate calculations are available in **Appendix A**.

4.0 STATISTICAL PROCEDURES

The *Sanitas™* program was utilized to compile and statistically evaluate the data for the October 2014 sampling event. Summary tables for the intra-well prediction interval analysis are available in **Appendix B**.

4.1 Outlier Analysis

The background data were evaluated for the presence of statistical outliers. Methodologies for determining a statistical outlier are defined in the EPA document, Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities – Unified Guidance (March 2009). Any statistical outliers that were determined were removed from the background data set prior to performing prediction interval statistical analysis. According to the EPA guidance documents above, data that are not normally or log-normally distributed are not recommended for evaluation of outliers. In cases where the data were not normally or log-normally distributed, outliers were not removed from the data set. Background outliers flagged for removal are identified on the statistical plots provided in **Appendix B**.

4.2 Intra-Well Prediction Intervals

The prediction interval is a statistical method used to compare a single observation to a group of observations. The prediction interval is calculated to include observations from the same population with a specified confidence. In groundwater monitoring, a prediction interval approach may be used to make comparisons between background and compliance data. The interval is developed to contain all future observations, within a certain probability. For the site, intra-well prediction intervals have been developed based on a 99% confidence that future observations will fall within the range. If any future observation exceeds the prediction interval, this is considered statistically significant evidence that the observation is not representative of the background group.

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, *K*, 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 data's sample mean and standard deviation are adjusted according to the Kaplan-Meier method. However, when the background data are not transformed-normal or contain greater than 50% observations below the reporting limit, *Sanitas™* 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.

During the October 2014 event, six results exceeded an intra-well prediction limit: field pH at MW-1A; chloride and field specific conductance at MW-3; chloride and total organic carbon (TOC) at MW-28D; and field pH at MW-28E. None of these parameters have an established National Primary Drinking Water Standard-Maximum Contaminant Level (MCL) or KDEP MCL. **Table 3** summarizes the October 2014 prediction limit exceedances. Included in **Appendix B** are the prediction interval summary tables.

The following points are noted with respect to the intra-well prediction limit exceedances observed during the October 2014 event:

- The October 2014 field pH at MW-1A (5.88 SU) is consistent with historical pH values at MW-1A (5.53 to 8.45 SU). The October 2014 field pH at MW-28E (5.66 SU) is consistent with historical pH values at MW-28E (4.76 to 6.82 SU). Six of the seven site wells exhibited slightly lower field pH values during the October 2014 event in comparison to the previous event. The slightly lower field pH during the October 2014 event at MW-1A and MW-28E appears to be due to naturally occurring conditions.

- The October 2014 chloride concentrations at MW-3 (28 mg/L) and MW-28D (25 mg/L) are well below the National Secondary Drinking Water Standard of 250 mg/L. Each of the seven site wells exhibited an increase in chloride during the October 2014 event in comparison to the previous event. The chloride increase during the October 2014 event at MW-3 and MW-28D appears to be due to naturally occurring conditions.

- The October 2014 TOC concentration at MW-28D (2.4 mg/L) is slightly higher than the historical range of TOC at MW-28D (1.2 to 2.2 mg/L). Five of the seven site wells had slightly higher TOC concentrations during the October 2014 event in comparison to the previous event. The slightly higher TOC concentration during the October 2014 event at MW-28D appears to be due to naturally occurring conditions.

- The October 2014 field specific conductance at MW-3 (528 umhos/cm) is consistent with historical specific conductance values at MW-3 (52 to 815 umhos/cm). The October 2014 specific conductance at MW-3 (528 umhos/cm) is lower than the October 2014 specific conductance at wells upgradient to MW-3 (e.g., MW-28C, 594 umhos/cm and MW-28E, 766 umhos/cm). The slightly higher specific conductance during the October 2014 event at MW-3 appears to be due to naturally occurring conditions.

None of the statistical exceedances observed during the October 2014 event were observed during the previous quarterly event (Third Quarter 2014). It is recommended to utilize the next quarterly event (January 2015) as a verification sampling event to confirm these new exceedances.

As recommended in the Second Quarter 2014 event report, well MW-28C was redeveloped by Kenvirons prior to the Fourth Quarter 2014 event in effort to lower suspended sediment and total metal concentrations. Well MW-28C exhibited no statistical exceedances during the Fourth Quarter 2014 event.

Included in **Appendix B** are time series plots for each of the parameters statistically analyzed for this reporting period. **Appendix C** contains a copy of the laboratory analytical report and field information logs for the October 2014 event.

5.0 STATISTICAL RESULTS SUMMARY

During the October 2014 event, six results exceeded an intra-well prediction limit: field pH at MW-1A; chloride and field specific conductance at MW-3; chloride and TOC at MW-28D; and field pH at MW-28E. None of these parameters have an established National Primary Drinking Water Standard-Maximum Contaminant Level (MCL) or KDEP MCL.

The October 2014 values that exhibited statistical exceedances are either (1) consistent with historical data for the respective wells, (2) consistent with site-wide increases (or decreases in the case of pH), or (3) lower in concentration that upgradient wells. Therefore, the October 2014 exceedances appear due to naturally occurring conditions and not attributable to the landfill.

None of the statistical exceedances observed during the October 2014 event were observed during the previous quarterly event (Third Quarter 2014). It is recommended to utilize the next quarterly event (January 2015) as a verification sampling event to confirm these new exceedances.

Continuation of Detection Monitoring is recommended for the site.

TABLES

TABLE 1 GROUNDWATER MONITORING WELLS GREEN VALLEY LANDFILL
MW-1, MW-1A, MW-1B, MW-3, MW-28C, MW-28D, MW-28E

TABLE 2 BACKGROUND DATA USED IN STATISTICAL REPORTING GREEN VALLEY LANDFILL		
Well	**Parameters**	**Background Dates**
MW-1, MW-1A, MW-1B, MW-3	Annual	9/1992 - 5/2013
	Quarterly	9/1992 - 11/2013
MW-28C, MW-28D, MW-28E	Annual	10/2009 - 5/2013
	Quarterly	10/2009 - 11/2013

Notes:

•Annual sampling includes parameters listed in KAR Title 401 Chapter 48:300 Section 11(3)(a) and (b).

•Quarterly sampling includes parameters listed in KAR Title 401 Chapter 48:300 Section 11(3)(f).

•Background dates taken from Groundwater Statistical Monitoring Plan dated December 9, 2011 and approved by KDEP on August 16, 2012.

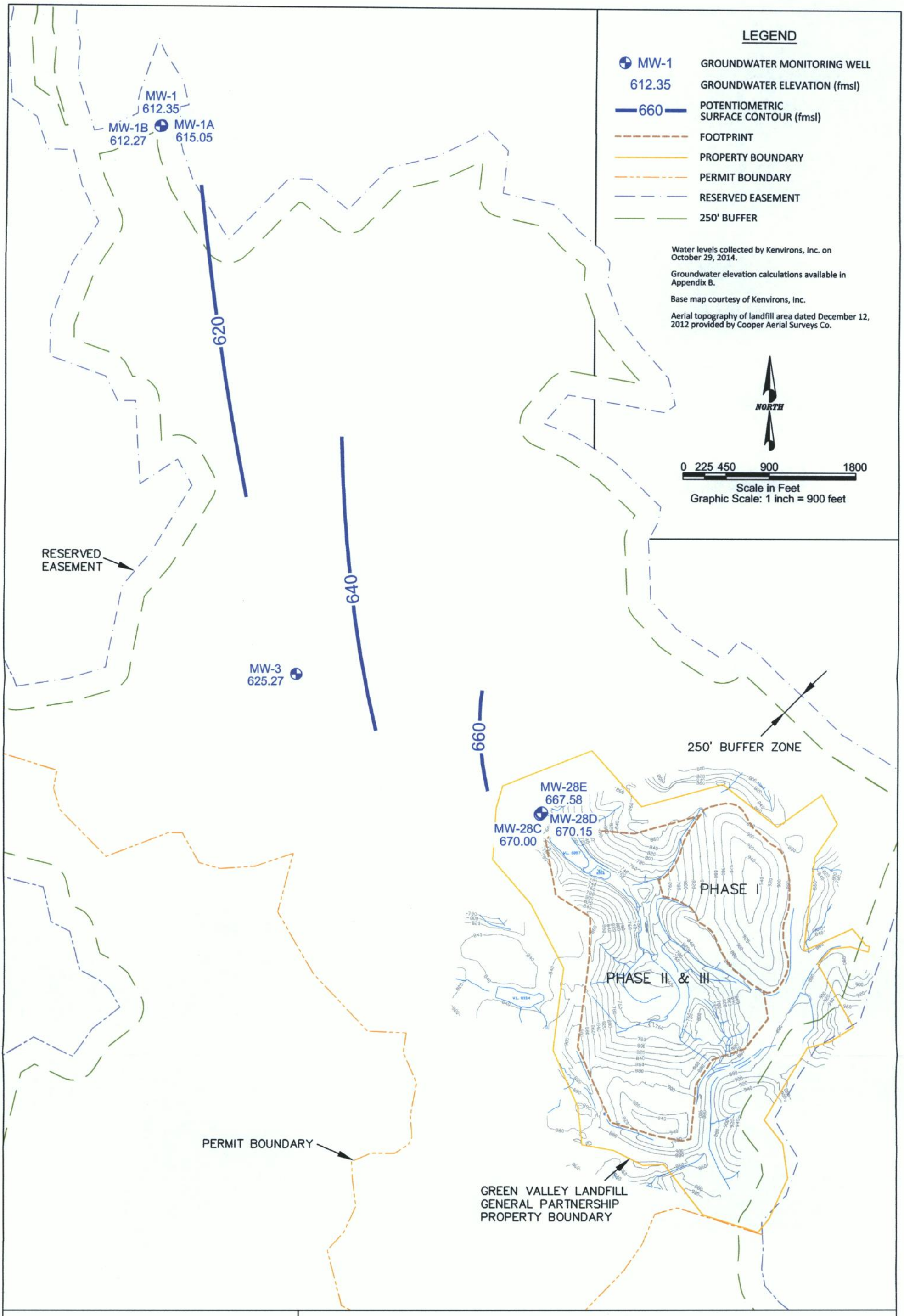
TABLE 3
INTRA-WELL PREDICTION LIMIT EXCEEDANCES
FOURTH QUARTER 2014 MONITORING EVENT
GREEN VALLEY LANDFILL

Well	Parameter	Results	Prediction Limit
MW-1A	pH (field)	5.88 SU	6.20 - 8.00 SU
MW-3	Chloride	28 mg/L	15 mg/L
	Specific Conductance (field)	528 umhos/cm	430 umhos/cm
MW-28D	Chloride	25 mg/L	23 mg/L
	Total Organic Carbon (TOC)	2.4 mg/L	2.1 mg/L
MW-28E	pH (field)	5.66 SU	6.00 - 7.00 SU

APPENDICES

APPENDIX A

POTENTIOMETRIC SURFACE MAP



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Fourth Quarter 2014 Event
Alluvial-Fracture Zone, Potentiometric Surface Map
Green Valley Landfill, Ashland, Kentucky

Groundwater Elevation Summary Table
Green Valley Landfill

Well	Top of PVC Casing Elevation (fmsl)[1]	Depth to Water (ft)[2]	Groundwater Elevation (fmsl)
MW-1	617.80	5.45	612.35
MW-1A	618.60	3.55	615.05
MW-1B	618.70	6.43	612.27
MW-3	630.80	5.53	625.27
MW-28C	674.40	4.40	670.00
MW-28D	675.20	5.05	670.15
MW-28E	677.00	9.42	667.58

Note 1: Top of PVC Casing Elevations for MW-1, MW-1A, MW-1B, and MW-3 from the Groundwater Monitoring Plan compiled by Kenvirons, Inc. dated 4/23/04. Top of PVC Casing Elevations for MW-28C, MW-28D, and MW-28E from the Summary of Monitoring Well Abandonments and Installations by Stantec Consulting Services, Inc. dated 10/2/09.

Note 2: Depth to water collected by Kenvirons, Inc. on 10/29/14.

Groundwater Flow Velocity Calculations
Green Valley Landfill, Kentucky
Fourth Quarter 2014 Event

Velocity
$V = [(k)(i)]/(n)$
$V = [(1 \times 10^2 \text{ ft/year})(0.007 \text{ ft/ft})]/0.20$
$V =$ **3.5 ft/year**

Hydraulic conductivity (k_1) of the alluvium/fracture zone was noted in a Fuller, Mossbarger, Scott, & May (FMSM) Engineers, Inc. report entitled "Report of Geotechnical Exploration", dated August, 1992. The geotechnical exploration report indicates the alluvium to be predominantly silty and clayey sands type soils. As noted in the August 1992 FMSM "Report of Geotechnical Exploration", a hydraulic conductivity value of 1×10^2 feet/year, typical for silty and clayey sand soils was assumed for the alluvium.

Effective porosity (n): An effective porosity (n) of 0.20 was assumed for the alluvium.

Gradient (i) is from the average gradient at site using the potentiometric surface map from well MW-28C to well MW-1.

Gradient(i) = Change in Groundwater Elevation along Flow Path
i: From MW-28C (670.00 fmsl) to MW-1 (612.35 fmsl)/ Distance = 57.65 ft / 8,199 ft = 0.007

APPENDIX B

STATISTICAL EVALUATIONS

INTRA-WELL PREDICTION LIMITS
OLDER WELLS
QUARTERLY PARAMETERS

Prediction Limit

Facility: Green Valley Client: RSI Data File: GREENVALLEY Printed 12/10/2014, 11:01 AM

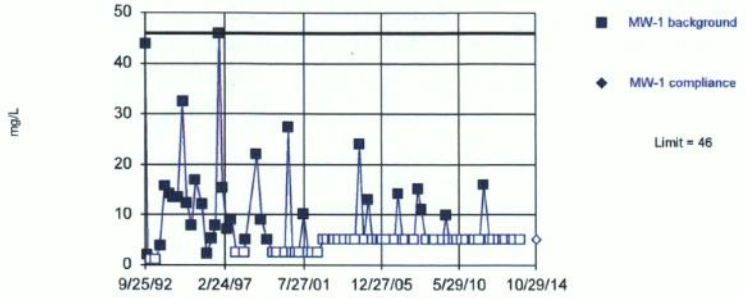
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chemical Oxygen Demand [COD] (mg/L)	MW-1	46	n/a	10/29/2014	5ND	No	84	n/a	n/a	61.9	n/a	n/a	0.0002756	NP Intra (NDs) 1 of 2
Chemical Oxygen Demand [COD] (mg/L)	MW-1A	47	n/a	10/29/2014	5ND	No	85	n/a	n/a	71.76	n/a	n/a	0.0002694	NP Intra (NDs) 1 of 2
Chemical Oxygen Demand [COD] (mg/L)	MW-1B	41	n/a	10/29/2014	5ND	No	85	n/a	n/a	67.06	n/a	n/a	0.0002694	NP Intra (NDs) 1 of 2
Chemical Oxygen Demand [COD] (mg/L)	MW-3	47	n/a	10/29/2014	5ND	No	82	n/a	n/a	69.51	n/a	n/a	0.000288	NP Intra (NDs) 1 of 2
Chloride (mg/L)	MW-1	10	n/a	10/29/2014	1.3	No	84	n/a	n/a	13.1	n/a	n/a	0.0002756	NP Intra (normality) 1 of 2
Chloride (mg/L)	MW-1A	3.9	n/a	10/29/2014	3.7	No	85	10.16	2.663	0	None	x^2	0.0007314	Param Intra 1 of 2
Chloride (mg/L)	MW-1B	52	n/a	10/29/2014	38	No	85	n/a	n/a	0	n/a	n/a	0.0002694	NP Intra (normality) 1 of 2
Chloride (mg/L)	**MW-3**	**15**	**n/a**	**10/29/2014**	**28**	**Yes**	**82**	**n/a**	**n/a**	**15.85**	**n/a**	**n/a**	**0.000288**	**NP Intra (normality) 1 of 2**
Iron Total (mg/L)	MW-1	23	n/a	10/29/2014	0.22	No	84	n/a	n/a	0	n/a	n/a	0.0002756	NP Intra (normality) 1 of 2
Iron Total (mg/L)	MW-1A	8.8	n/a	10/29/2014	2	No	85	0.7703	0.7023	0	None	ln(x)	0.0007314	Param Intra 1 of 2
Iron Total (mg/L)	MW-1B	11	n/a	10/29/2014	0.6877	No	85	n/a	n/a	4.706	n/a	n/a	0.0002694	NP Intra (normality) 1 of 2 Deseas
Iron Total (mg/L)	MW-3	58	n/a	10/29/2014	9.5	No	82	n/a	n/a	3.659	n/a	n/a	0.000288	NP Intra (normality) 1 of 2
pH [Field] (su)	MW-1	8.3	4.7	10/29/2014	5.16	No	84	6.5	0.8894	0	None	No	0.0003657	Param Intra 1 of 2
pH [Field] (su)	**MW-1A**	**8**	**6.2**	**10/29/2014**	**5.88**	**Yes**	**84**	**1.92**	**0.03908**	**0**	**None**	**x^(1/3)**	**0.0003657**	**Param Intra 1 of 2**
pH [Field] (su)	MW-1B	9.8	6.2	n/a	1 future	n/a	85	n/a	n/a	0	n/a	n/a	0.002155	NP Intra (normality) 1 of 2
pH [Field] (su)	MW-3	8	4.6	10/29/2014	5.15	No	81	1.806	0.138	0	None	ln(x)	0.0003657	Param Intra 1 of 2
Sodium Total (mg/L)	MW-1	4.4	n/a	10/29/2014	1.699	No	82	0.703	0.3848	0	None	ln(x)	0.0007314	Param Intra 1 of 2 Deseas
Sodium Total (mg/L)	MW-1A	360	n/a	10/29/2014	23	No	85	n/a	n/a	0	n/a	n/a	0.0002694	NP Intra (normality) 1 of 2
Sodium Total (mg/L)	MW-1B	600	n/a	10/29/2014	120	No	85	n/a	n/a	0	n/a	n/a	0.0002694	NP Intra (normality) 1 of 2
Sodium Total (mg/L)	MW-3	340	n/a	10/29/2014	15	No	82	n/a	n/a	0	n/a	n/a	0.000288	NP Intra (normality) 1 of 2
Specific Conductance [Field] (umhos/cm)	MW-1	880	n/a	10/29/2014	11.45	No	84	n/a	n/a	0	n/a	n/a	0.0002756	NP Intra (normality) 1 of 2 Deseas
Specific Conductance [Field] (umhos/cm)	MW-1A	440	n/a	10/29/2014	412	No	82	120248	36097	0	None	x^2	0.0007314	Param Intra 1 of 2
Specific Conductance [Field] (umhos/cm)	MW-1B	760	n/a	n/a	1 future	n/a	83	318256	127304	0	None	x^2	0.0007314	Param Intra 1 of 2
Specific Conductance [Field] (umhos/cm)	**MW-3**	**430**	**n/a**	**10/29/2014**	**528**	**Yes**	**82**	**5.006**	**0.5279**	**0**	**None**	**ln(x)**	**0.0007314**	**Param Intra 1 of 2**
Total Dissolved Solids [TDS] (mg/L)	MW-1	120	n/a	10/29/2014	56	No	83	6.981	1.883	3.614	None	sqrt(x)	0.0007314	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-1A	410	n/a	10/29/2014	240	No	85	n/a	n/a	0	n/a	n/a	0.0002694	NP Intra (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-1B	920	n/a	10/29/2014	390	No	85	n/a	n/a	0	n/a	n/a	0.0002694	NP Intra (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-3	320	n/a	10/29/2014	320	No	82	4.647	0.5563	0	None	ln(x)	0.0007314	Param Intra 1 of 2
Total Organic Carbon [TOC] (mg/L)	MW-1	10	n/a	10/29/2014	1.5	No	84	n/a	n/a	41.67	n/a	n/a	0.0002756	NP Intra (normality) 1 of 2
Total Organic Carbon [TOC] (mg/L)	MW-1A	26	n/a	10/29/2014	1.3	No	85	n/a	n/a	61.18	n/a	n/a	0.0002694	NP Intra (NDs) 1 of 2
Total Organic Carbon [TOC] (mg/L)	MW-1B	38	n/a	10/29/2014	1.6	No	85	n/a	n/a	58.82	n/a	n/a	0.0002694	NP Intra (NDs) 1 of 2
Total Organic Carbon [TOC] (mg/L)	MW-3	16	n/a	10/29/2014	2.3	No	82	n/a	n/a	21.95	n/a	n/a	0.000288	NP Intra (normality) 1 of 2
Total Organic Halides (mg/L)	MW-1	0.33	n/a	10/29/2014	0.005ND	No	84	n/a	n/a	78.57	n/a	n/a	0.0002756	NP Intra (NDs) 1 of 2
Total Organic Halides (mg/L)	MW-1A	1.0	n/a	10/29/2014	0.015	No	85	n/a	n/a	74.12	n/a	n/a	0.0002694	NP Intra (NDs) 1 of 2
Total Organic Halides (mg/L)	MW-1B	0.27	n/a	10/29/2014	0.02828	No	85	n/a	n/a	60	n/a	n/a	0.0002694	NP Intra (NDs) 1 of 2 Deseas
Total Organic Halides (mg/L)	MW-3	0.37	n/a	10/29/2014	0.032	No	82	n/a	n/a	67.07	n/a	n/a	0.000288	NP Intra (NDs) 1 of 2

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 84 background values. 61.9% NDs. Well-constituent pair annual alpha = 0.001102. Individual comparison alpha = 0.0002756 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

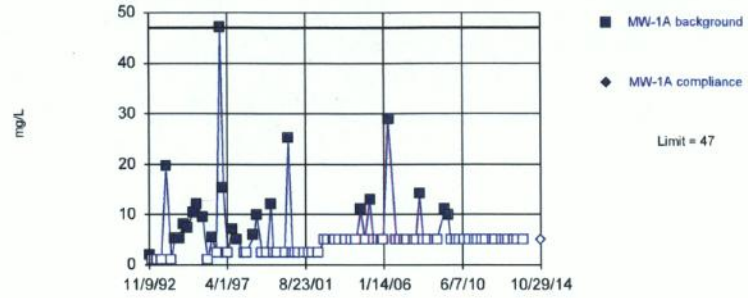
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Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 85 background values. 71.76% NDs. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

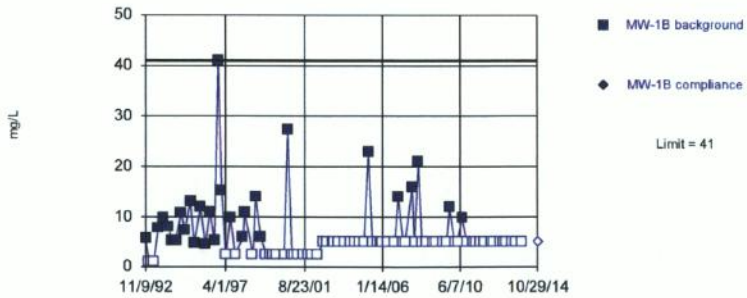
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Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 85 background values. 67.06% NDs. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

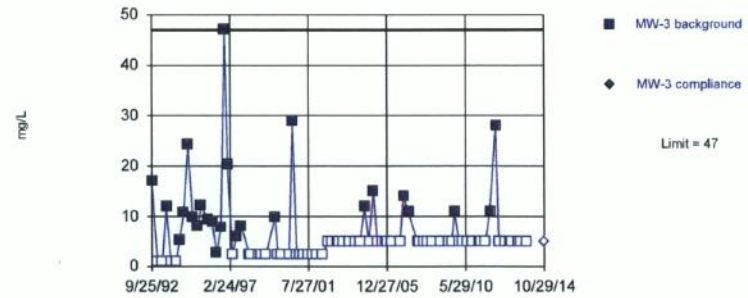
Constituent: Chemical Oxygen Demand [COD] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 82 background values. 69.51% NDs. Well-constituent pair annual alpha = 0.001152. Individual comparison alpha = 0.000288 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

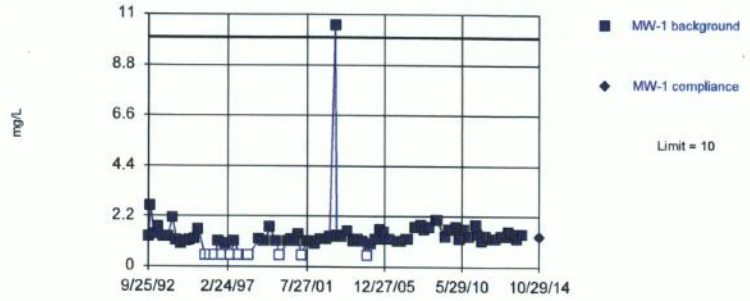
Constituent: Chemical Oxygen Demand [COD] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 84 background values. 13.1% NDs. Well-constituent pair annual alpha = 0.001102. Individual comparison alpha = 0.0002756 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=10.16, Std. Dev.=2.663, n=85. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.971, critical = 0.961. Kappa = 2.001 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

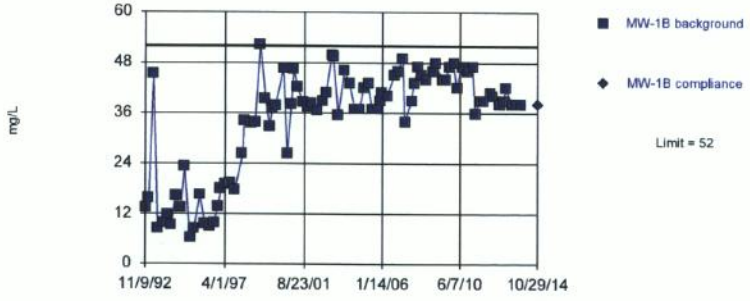
Constituent: Chloride Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

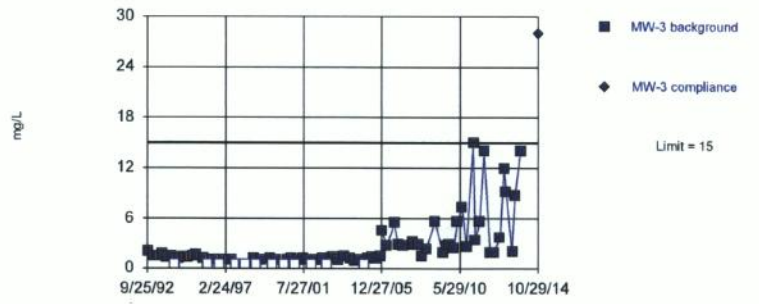
Constituent: Chloride Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Exceeds Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 82 background values. 15.85% NDs. Well-constituent pair annual alpha = 0.001152. Individual comparison alpha = 0.000288 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

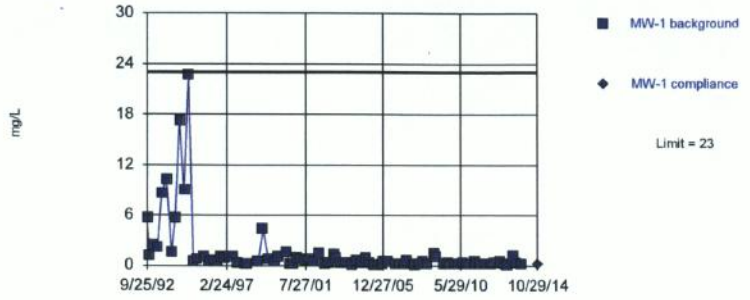
Constituent: Chloride Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 84 background values. Well-constituent pair annual alpha = 0.001102. Individual comparison alpha = 0.0002756 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

Constituent: Iron Total Analysis Run 12/10/2014 10:59 AM

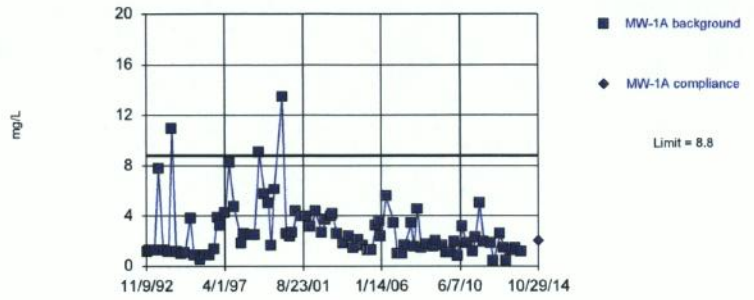
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=0.7703, Std. Dev.=0.7023, n=85. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.986, critical = 0.961. Kappa = 2.001 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

Constituent: Iron Total Analysis Run 12/10/2014 10:59 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

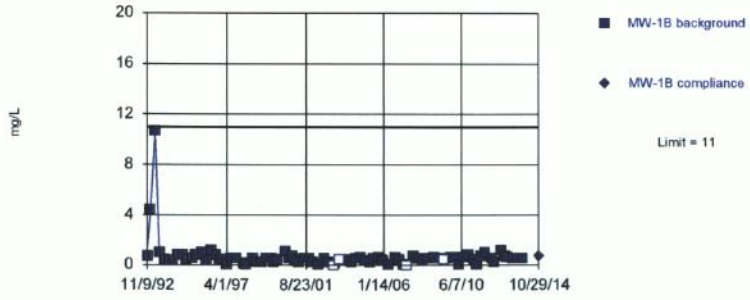
Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. 4.706% NDs. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Data were deseasonalized.

Constituent: Iron Total Analysis Run 12/10/2014 10:59 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

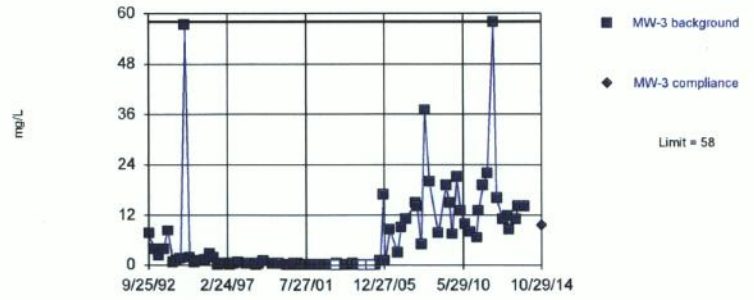
Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 82 background values. 3.659% NDs. Well-constituent pair annual alpha = 0.001152. Individual comparison alpha = 0.000288 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

Constituent: Iron Total Analysis Run 12/10/2014 10:59 AM

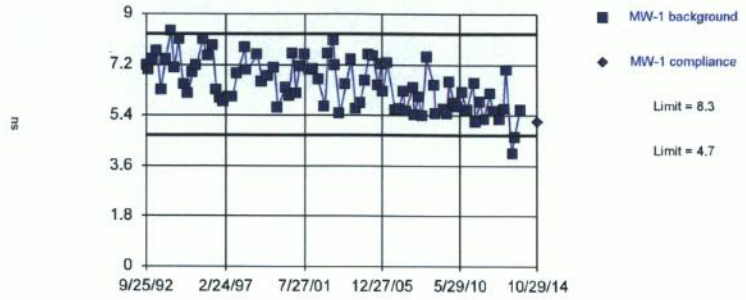
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.5, Std. Dev.=0.8894, n=84. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9812, critical = 0.96. Kappa = 2.002 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. Rosner's Outlier Test was performed on the background data. No background outliers were found.

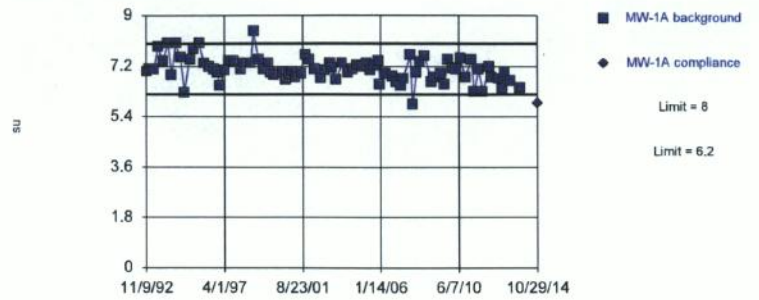
Constituent: pH [Field] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Exceeds Limits

Prediction Limit

Intrawell Parametric



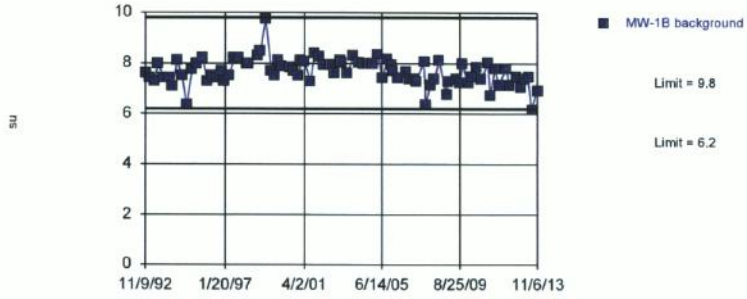
Background Data Summary (based on cube root transformation): Mean=1.92, Std. Dev.=0.03908, n=84. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9748, critical = 0.96. Kappa = 2.002 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. Rosner's Outlier Test was performed on the background data. One background outlier was removed: 5.53 (7/17/2013).

Constituent: pH [Field] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Prediction Limit

Intrawell Non-parametric, MW-1B



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 85 background values. Well-constituent pair annual alpha = 0.002155. Individual comparison alpha = 0.0005389 (1 of 2). Assumes 1 future value. Distribution was found to be non-normal after removal of suspect values, so outliers could not be indentified. Seasonality was not detected with 95% confidence.

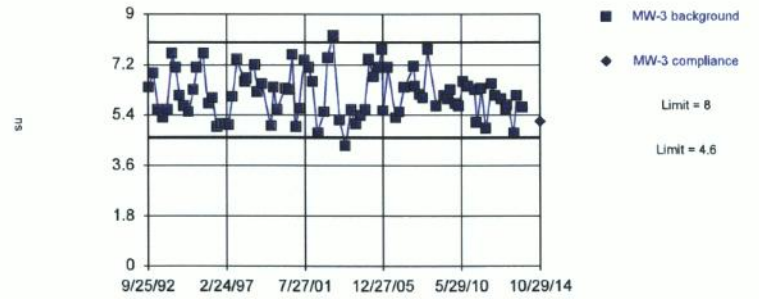
Constituent: pH [Field] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=1.806, Std. Dev.=0.138, n=81. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9896, critical = 0.958. Kappa = 2.005 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

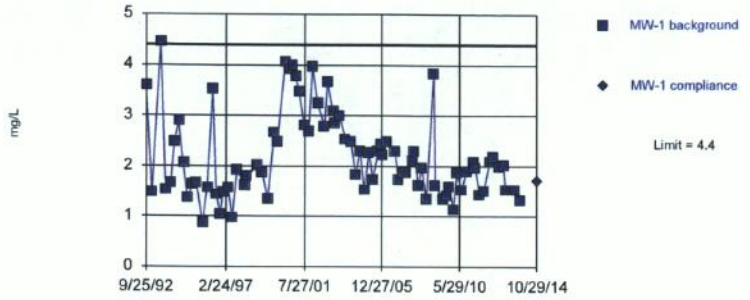
Constituent: pH [Field] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=0.703, Std. Dev.=0.3848, n=82. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9718, critical = 0.959. Kappa = 2.004 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. Rosner's Outlier Test was performed on the background data. Two background outliers were removed: 26.4 (11/9/1992); 131 (4/26/1993).

Constituent: Sodium Total Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). Distribution was found to be non-normal after removal of suspect values, so outliers could not be indentified. Seasonality was not detected with 95% confidence.

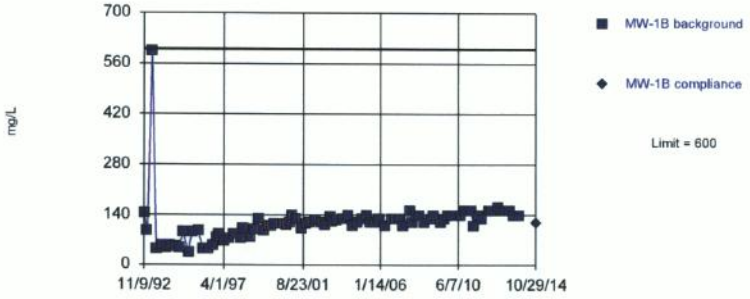
Constituent: Sodium Total Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

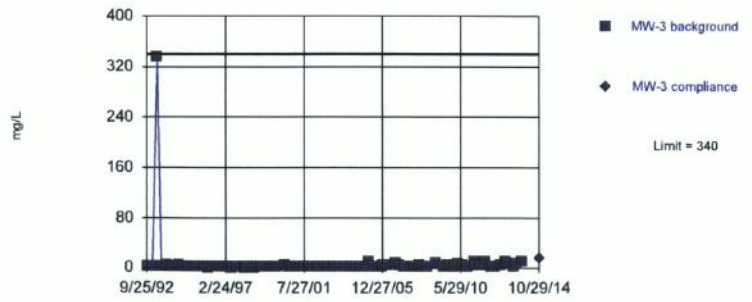
Constituent: Sodium Total Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 82 background values. Well-constituent pair annual alpha = 0.001152. Individual comparison alpha = 0.000288 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

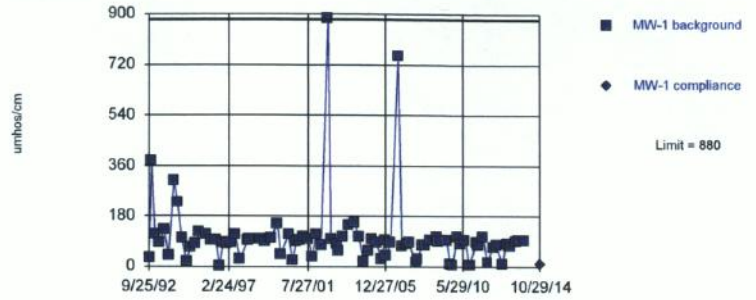
Constituent: Sodium Total Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 84 background values. Well-constituent pair annual alpha = 0.001102. Individual comparison alpha = 0.0002756 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Data were deseasonalized.

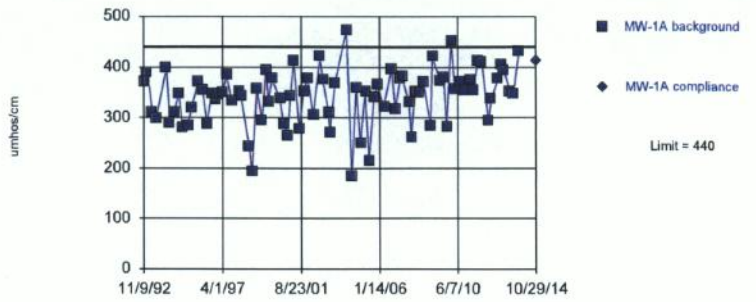
Constituent: Specific Conductance [Field] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



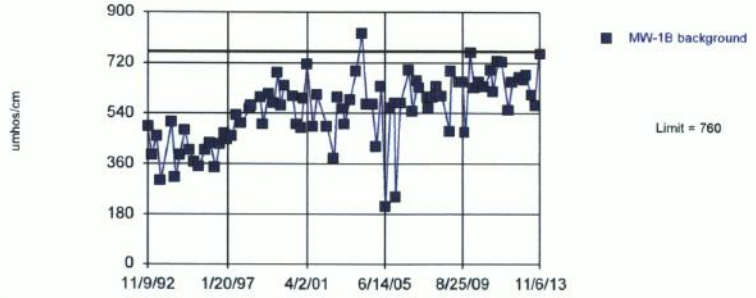
Background Data Summary (based on square transformation): Mean=120248, Std. Dev.=36097, n=82. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9855, critical = 0.959. Kappa = 2.004 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. Rosner's Outlier Test was performed on the background data. Three background outliers were removed: 100 (10/19/1993); 640 (11/25/2003); 140 (1/9/2006).

Constituent: Specific Conductance [Field] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Prediction Limit

Intrawell Parametric, MW-1B



Background Data Summary (based on square transformation): Mean=318256, Std. Dev.=127304, n=83. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9926, critical = 0.96. Kappa = 2.003 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. Assumes 1 future value. Rosner's Outlier Test was performed on the background data. Two background outliers were removed: 100 (10/19/1993); 1038 (1/14/2002).

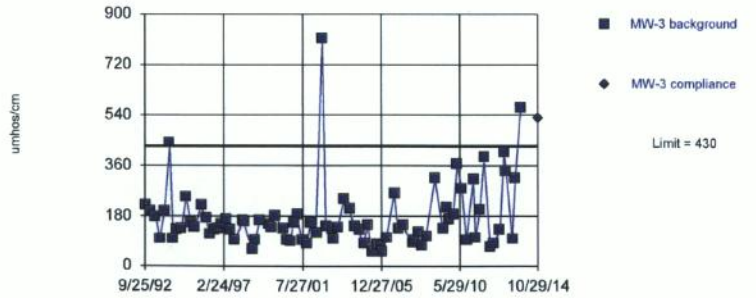
Constituent: Specific Conductance [Field] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=5.006, Std. Dev.=0.5279, n=82. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9676, critical = 0.959. Kappa = 2.004 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. Rosner's Outlier Test was performed on the background data. No background outliers were found.

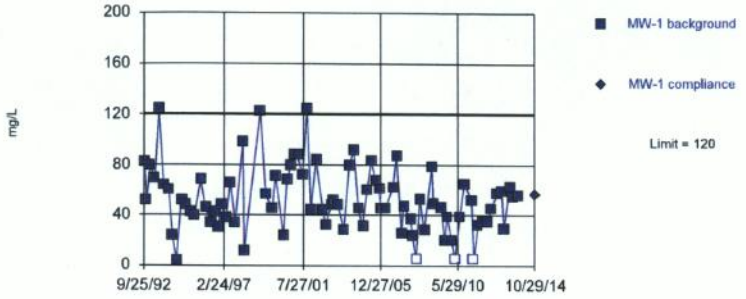
Constituent: Specific Conductance [Field] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=6.981, Std. Dev.=1.883, n=83, 3.614% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9688, critical = 0.96. Kappa = 2.003 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. Rosner's Outlier Test was performed on the background data. One background outlier was removed: 308 (12/1/1998).

Constituent: Total Dissolved Solids [TDS] Analysis Run 12/10/2014 10:59 AM

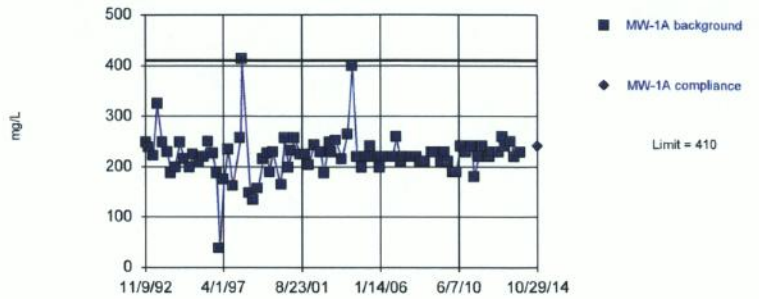
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). Distribution was found to be non-normal after removal of suspect values, so outliers could not be indentified. Seasonality was not detected with 95% confidence.

Constituent: Total Dissolved Solids [TDS] Analysis Run 12/10/2014 10:59 AM

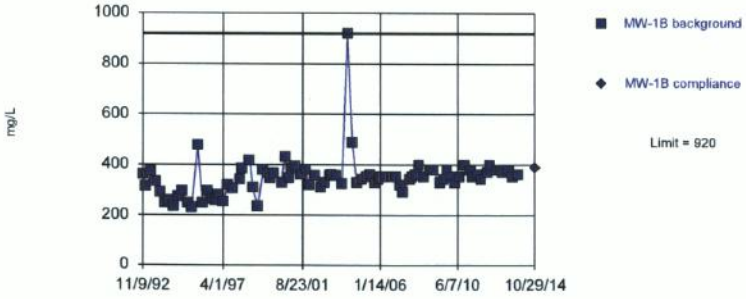
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

Constituent: Total Dissolved Solids [TDS] Analysis Run 12/10/2014 10:59 AM

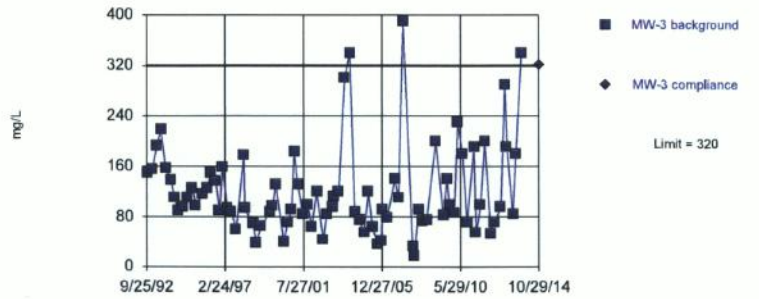
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=4.647, Std. Dev.=0.5563, n=82. Seasonality was not detected with 95% confidence. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9784, critical = 0.959. Kappa = 2.004 (c=9, w=4, 1 of 2, event alpha = 0.026). Report alpha = 0.0007314. Rosner's Outlier Test was performed on the background data. No background outliers were found.

Constituent: Total Dissolved Solids [TDS] Analysis Run 12/10/2014 10:59 AM

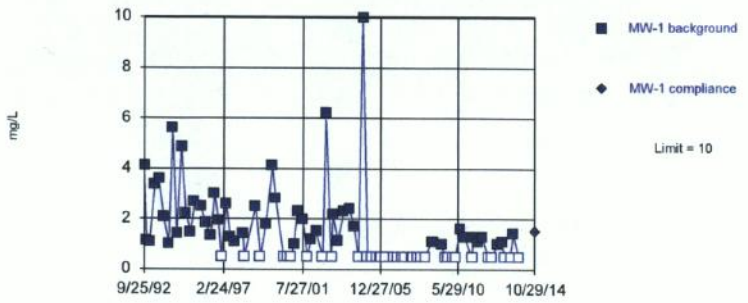
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 84 background values. 41.67% NDs. Well-constituent pair annual alpha = 0.001102. Individual comparison alpha = 0.0002756 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

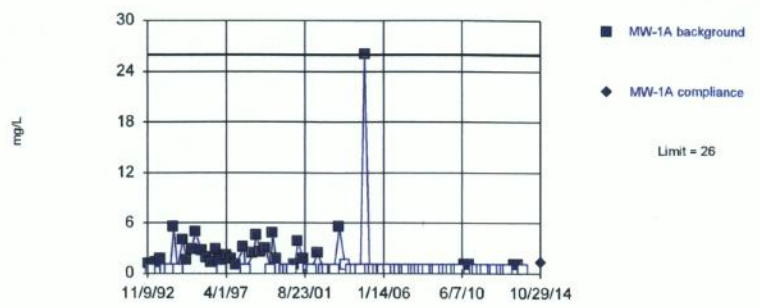
Constituent: Total Organic Carbon [TOC] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 85 background values. 61.18% NDs. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

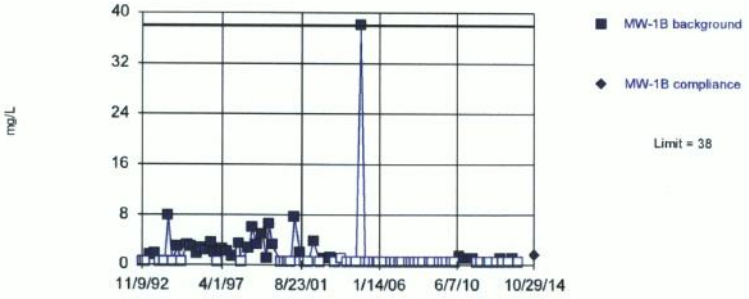
Constituent: Total Organic Carbon [TOC] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 85 background values. 58.82% NDs. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

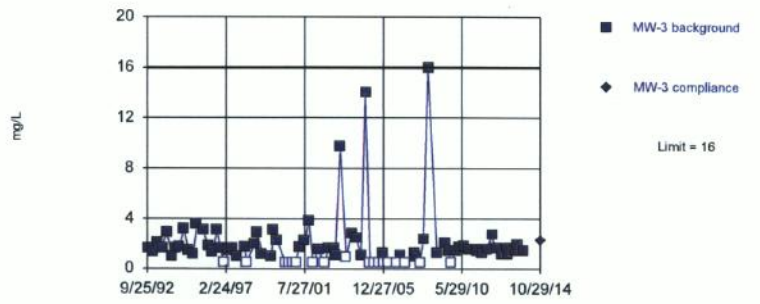
Constituent: Total Organic Carbon [TOC] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 82 background values. 21.95% NDs. Well-constituent pair annual alpha = 0.001152. Individual comparison alpha = 0.000288 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

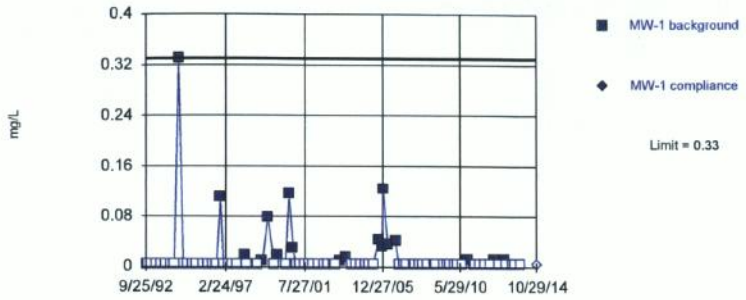
Constituent: Total Organic Carbon [TOC] Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 84 background values. 78.57% NDs. Well-constituent pair annual alpha = 0.001102. Individual comparison alpha = 0.0002756 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

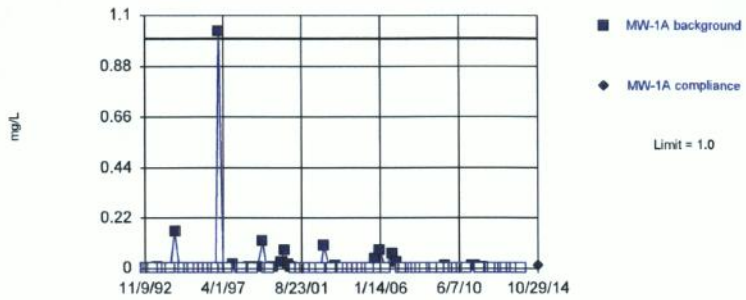
Constituent: Total Organic Halides Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 85 background values. 74.12% NDs. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

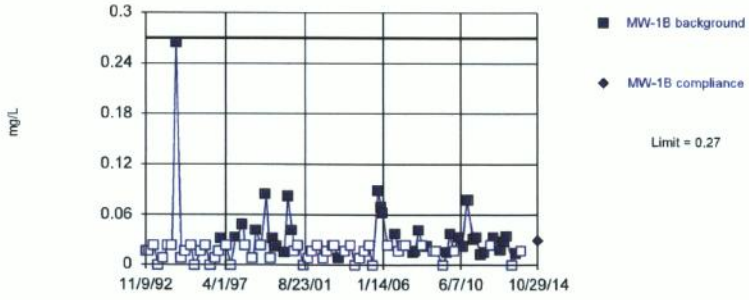
Constituent: Total Organic Halides Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 85 background values. 60% NDs. Well-constituent pair annual alpha = 0.001077. Individual comparison alpha = 0.0002694 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Data were deseasonalized.

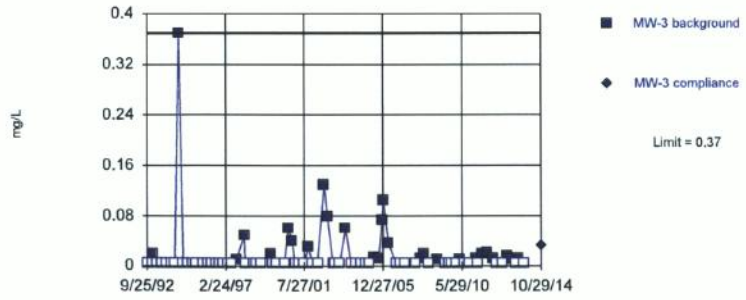
Constituent: Total Organic Halides Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 82 background values. 67.07% NDs. Well-constituent pair annual alpha = 0.001152. Individual comparison alpha = 0.000288 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

Constituent: Total Organic Halides Analysis Run 12/10/2014 10:59 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

INTRA-WELL PREDICTION LIMITS
NEWER WELLS
QUARTERLY PARAMETERS

Prediction Limit

Facility: Green Valley Client: RSI Data File: GREENVALLEY Printed 12/10/2014, 10:56 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chemical Oxygen Demand [COD] (mg/L)	MW-28E	5.0	n/a	10/29/2014	5ND	No	19	n/a	n/a	100	n/a	n/a	0.004738	NP Intra (NDs) 1 of 2
Chemical Oxygen Demand [COD] (mg/L)	MW-28D	12	n/a	10/29/2014	5ND	No	19	n/a	n/a	89.47	n/a	n/a	0.004738	NP Intra (NDs) 1 of 2
Chemical Oxygen Demand [COD] (mg/L)	MW-28C	27	n/a	10/29/2014	5ND	No	19	n/a	n/a	73.68	n/a	n/a	0.004738	NP Intra (NDs) 1 of 2
Chloride (mg/L)	MW-28E	2.4	n/a	10/29/2014	1.7	No	19	8.769	2.198	0	None	x^3	0.0009751	Param Intra 1 of 2
Chloride (mg/L)	**MW-28D**	**23**	**n/a**	**10/29/2014**	**25**	**Yes**	**19**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.004738**	**NP Intra (normality) 1 of 2**
Chloride (mg/L)	MW-28C	39	n/a	10/29/2014	27	No	19	2.507	0.4018	0	None	x^(1/3)	0.0009751	Param Intra 1 of 2
Iron Total (mg/L)	MW-28E	1.7	n/a	10/29/2014	0.056	No	19	-1.962	1.111	5.263	None	ln(x)	0.0009751	Param Intra 1 of 2
Iron Total (mg/L)	MW-28D	160	n/a	10/29/2014	22	No	19	0.9493	1.847	0	None	ln(x)	0.0009751	Param Intra 1 of 2
Iron Total (mg/L)	MW-28C	72	n/a	10/29/2014	0.56	No	19	n/a	n/a	0	n/a	n/a	0.004738	NP Intra (normality) 1 of 2
pH [Field] (su)	**MW-28E**	**7**	**6**	**10/29/2014**	**5.66**	**Yes**	**16**	**1.866**	**0.03519**	**0**	**None**	**ln(x)**	**0.0004875**	**Param Intra 1 of 2**
pH [Field] (su)	MW-28D	6.7	4.4	10/29/2014	5.14	No	19	195.1	48.09	0	None	x^3	0.0004875	Param Intra 1 of 2
pH [Field] (su)	MW-28C	6.5	3.9	10/29/2014	4.57	No	19	167.2	48.45	0	None	x^3	0.0004875	Param Intra 1 of 2
Sodium Total (mg/L)	MW-28E	21	n/a	10/29/2014	11	No	19	247.1	96.1	0	None	x^2	0.0009751	Param Intra 1 of 2
Sodium Total (mg/L)	MW-28D	38	n/a	10/29/2014	30	No	19	722.6	316.8	0	None	x^2	0.0009751	Param Intra 1 of 2
Sodium Total (mg/L)	MW-28C	28	n/a	10/29/2014	18	No	19	16.86	4.952	0	None	No	0.0009751	Param Intra 1 of 2
Specific Conductance [Field] (umhos/cm)	MW-28E	410	n/a	10/29/2014	329	No	18	5.799	0.09481	0	None	ln(x)	0.0009751	Param Intra 1 of 2
Specific Conductance [Field] (umhos/cm)	MW-28D	790	n/a	10/29/2014	766	No	19	334002	126564	0	None	x^2	0.0009751	Param Intra 1 of 2
Specific Conductance [Field] (umhos/cm)	MW-28C	810	n/a	10/29/2014	594	No	19	536.5	124.3	0	None	No	0.0009751	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-28E	240	n/a	10/29/2014	180	No	18	6646389	2842487	0	None	x^3	0.0009751	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-28D	460	n/a	10/29/2014	450	No	19	3.7e15	2.4e15	0	None	x^6	0.0009751	Param Intra 1 of 2
Total Dissolved Solids [TDS] (mg/L)	MW-28C	520	n/a	10/29/2014	350	No	19	360.5	71.53	0	None	No	0.0009751	Param Intra 1 of 2
Total Organic Carbon [TOC] (mg/L)	MW-28E	1.6	n/a	10/29/2014	1.3	No	19	1.11	0.228	21.05	Kaplan-Meier	No	0.0009751	Param Intra 1 of 2
Total Organic Carbon [TOC] (mg/L)	**MW-28D**	**2.1**	**n/a**	**10/29/2014**	**2.4**	**Yes**	**19**	**0.4476**	**0.1376**	**0**	**None**	**ln(x)**	**0.0009751**	**Param Intra 1 of 2**
Total Organic Carbon [TOC] (mg/L)	MW-28C	2.8	n/a	10/29/2014	2	No	17	0.6108	0.1771	0	None	ln(x)	0.0009751	Param Intra 1 of 2
Total Organic Halides (mg/L)	MW-28E	0.034	n/a	10/29/2014	0.005ND	No	19	n/a	n/a	73.68	n/a	n/a	0.004738	NP Intra (NDs) 1 of 2
Total Organic Halides (mg/L)	MW-28D	0.034	n/a	10/29/2014	0.013	No	19	n/a	n/a	36.84	n/a	n/a	0.004738	NP Intra (normality) 1 of 2
Total Organic Halides (mg/L)	MW-28C	0.055	n/a	10/29/2014	0.039	No	19	0.2636	0.05244	10.53	None	x^(1/3)	0.0009751	Param Intra 1 of 2

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 100% NDs. Well-constituent pair annual alpha = 0.01882. Individual comparison alpha = 0.004738 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

Constituent: Chemical Oxygen Demand [COD] Analysis Run 12/10/2014 10:52 AM

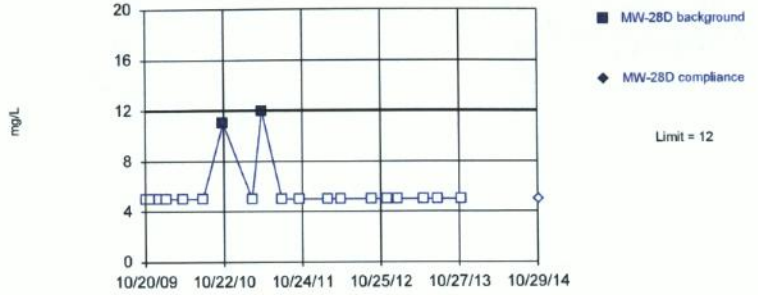
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 89.47% NDs. Well-constituent pair annual alpha = 0.01882. Individual comparison alpha = 0.004738 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

Constituent: Chemical Oxygen Demand [COD] Analysis Run 12/10/2014 10:52 AM

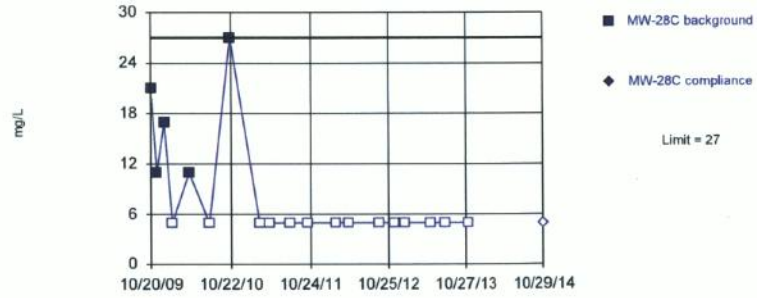
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 73.68% NDs. Well-constituent pair annual alpha = 0.01882. Individual comparison alpha = 0.004738 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

Constituent: Chemical Oxygen Demand [COD] Analysis Run 12/10/2014 10:52 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube transformation): Mean=8.769, Std. Dev.=2.198, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9124, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. After outlier removal distribution was non-normal, so outlier results were invalidated.

Constituent: Chloride Analysis Run 12/10/2014 10:52 AM

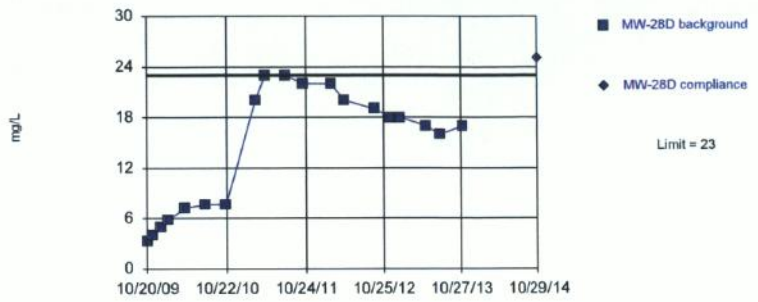
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Exceeds Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 19 background values. Well-constituent pair annual alpha = 0.01882. Individual comparison alpha = 0.004738 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

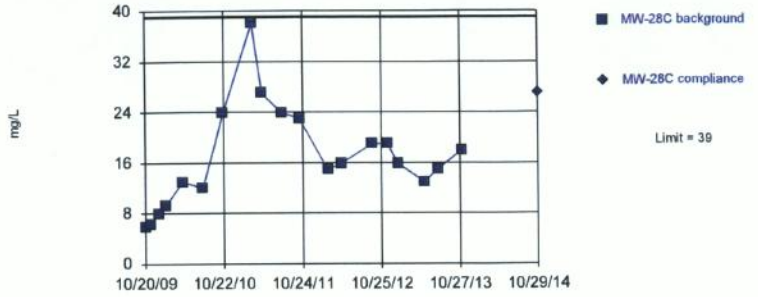
Constituent: Chloride Analysis Run 12/10/2014 10:52 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube root transformation): Mean=2.507, Std. Dev.=0.4018, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.979, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

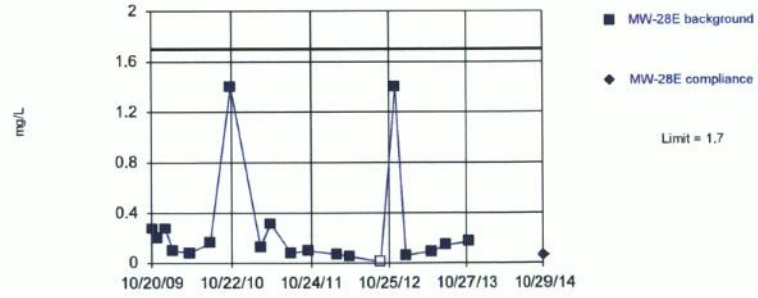
Constituent: Chloride Analysis Run 12/10/2014 10:52 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=-1.962, Std. Dev.=1.111, n=19, 5.263% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9173, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

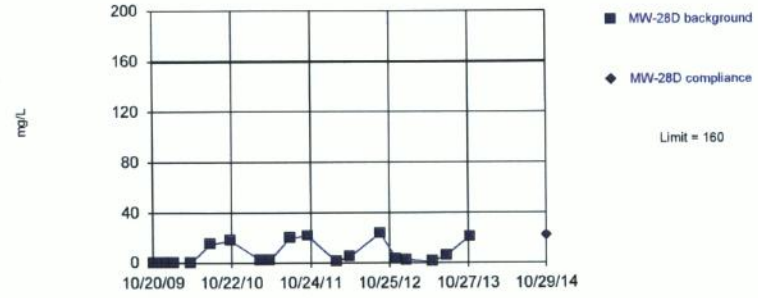
Constituent: Iron Total Analysis Run 12/10/2014 10:52 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=0.9493, Std. Dev.=1.847, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.914, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

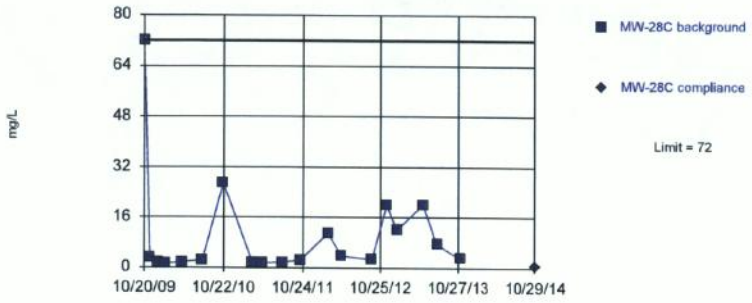
Constituent: Iron Total Analysis Run 12/10/2014 10:52 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 19 background values. Well-constituent pair annual alpha = 0.01882. Individual comparison alpha = 0.004738 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

Constituent: Iron Total Analysis Run 12/10/2014 10:52 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Exceeds Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=1.866, Std. Dev.=0.03519, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9494, critical = 0.887. Kappa = 2.31 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. Dixon's Outlier Test was performed on the background data. Three background outliers were removed: 4.76 (4/19/2011); 5.29 (10/11/2011); 5.44 (5/15/2013).

Constituent: pH [Field] Analysis Run 12/10/2014 10:52 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube transformation): Mean=195.1, Std. Dev.=48.09, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.989, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. Dixon's Outlier Test was performed on the background data. No background outliers were found.

Constituent: pH [Field] Analysis Run 12/10/2014 10:52 AM

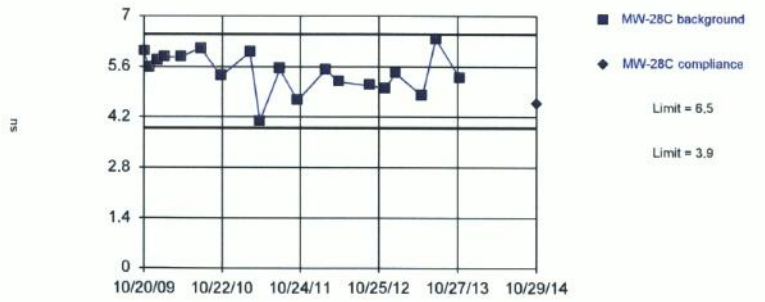
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube transformation): Mean=167.2, Std. Dev.=48.45, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9925, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. Dixon's Outlier Test was performed on the background data. No background outliers were found.

Constituent: pH [Field] Analysis Run 12/10/2014 10:52 AM

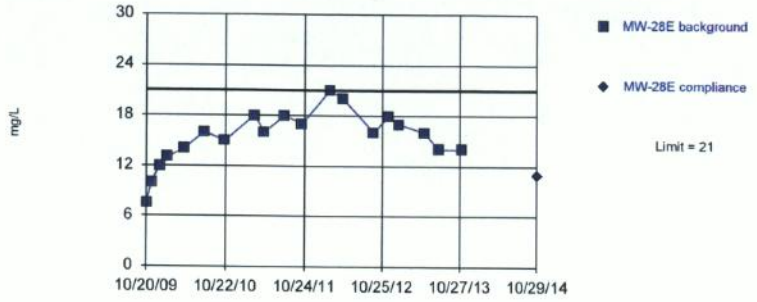
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=247.1, Std. Dev.=96.1, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9822, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. Dixon's Outlier Test was performed on the background data. No background outliers were found.

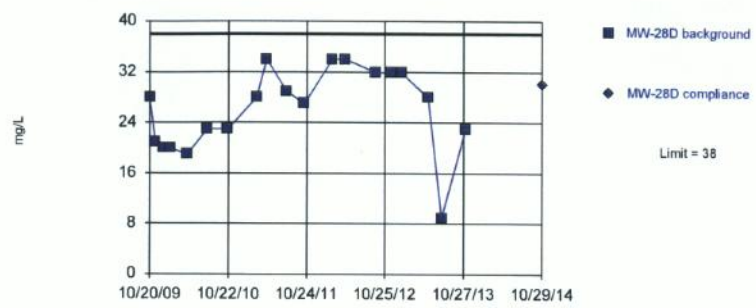
Constituent: Sodium Total Analysis Run 12/10/2014 10:52 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=722.6, Std. Dev.=316.8, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9382, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. Dixon's Outlier Test was performed on the background data. No background outliers were found.

Constituent: Sodium Total Analysis Run 12/10/2014 10:52 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=16.86, Std. Dev.=4.952, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9629, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

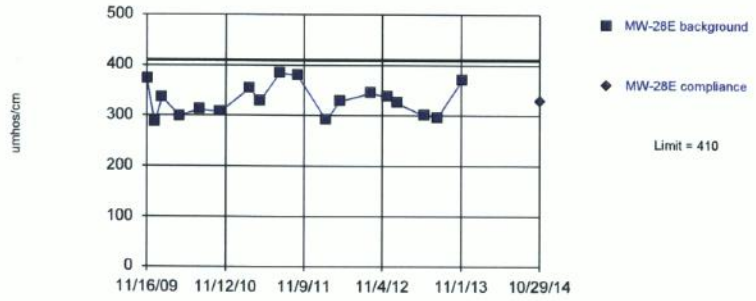
Constituent: Sodium Total Analysis Run 12/10/2014 10:52 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=5.799, Std. Dev.=0.09481, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9463, critical = 0.897. Kappa = 2.258 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. Dixon's Outlier Test was performed on the background data. One background outlier was removed: 210 (10/20/2009).

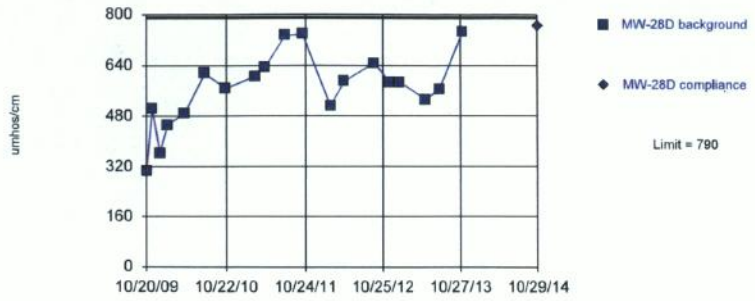
Constituent: Specific Conductance [Field] Analysis Run 12/10/2014 10:53 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=334002, Std. Dev.=126564, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9603, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. Dixon's Outlier Test was performed on the background data. No background outliers were found.

Constituent: Specific Conductance [Field] Analysis Run 12/10/2014 10:53 AM

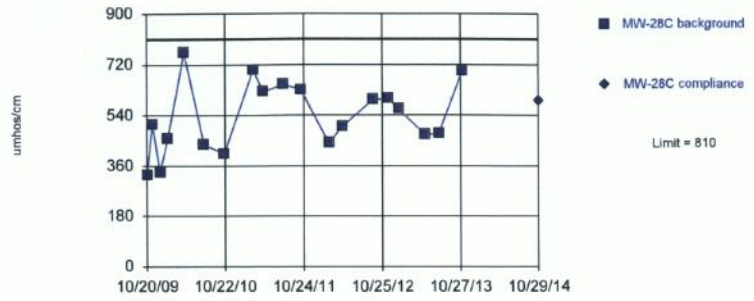
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=536.5, Std. Dev.=124.3, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9702, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

Constituent: Specific Conductance [Field] Analysis Run 12/10/2014 10:53 AM

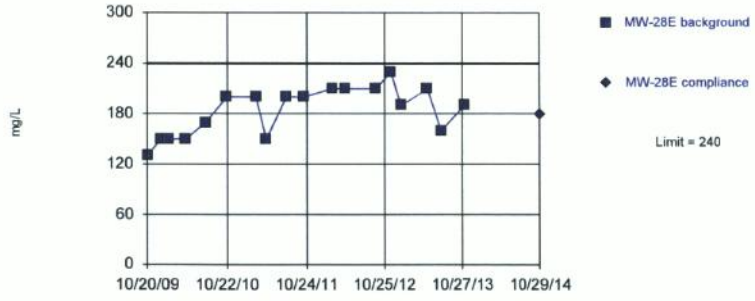
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube transformation): Mean=6646389, Std. Dev.=2842487, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.916, critical = 0.897. Kappa = 2.258 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. Dixon's Outlier Test was performed on the background data. One background outlier was removed: 910 (11/16/2009).

Constituent: Total Dissolved Solids [TDS] Analysis Run 12/10/2014 10:53 AM

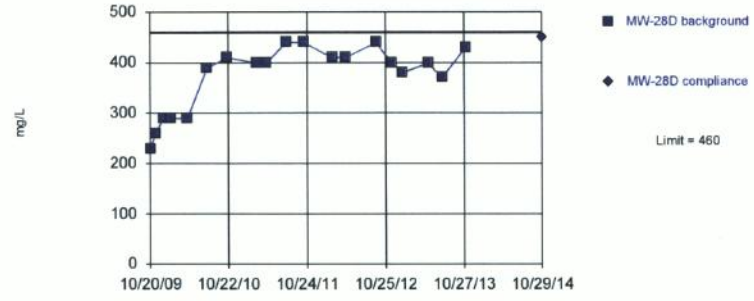
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on x^6 transformation): Mean=3.7e15, Std. Dev.=2.4e15, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9093, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. After outlier removal distribution was non-normal, so outlier results were invalidated.

Constituent: Total Dissolved Solids [TDS] Analysis Run 12/10/2014 10:53 AM

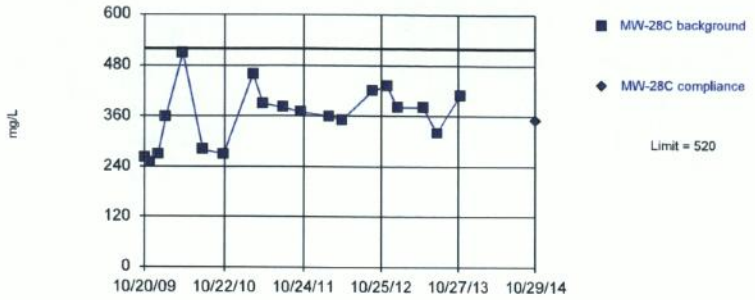
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=360.5, Std. Dev.=71.53, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9537, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

Constituent: Total Dissolved Solids [TDS] Analysis Run 12/10/2014 10:53 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

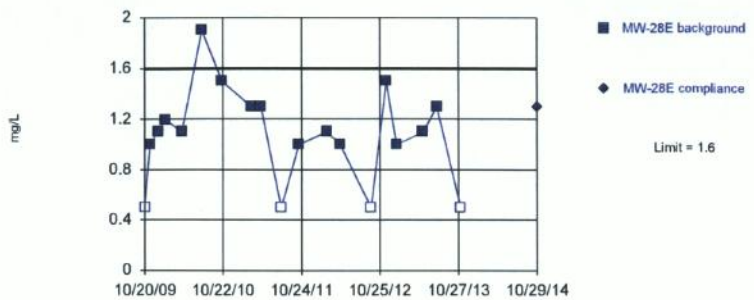
Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (after Kaplan-Meier Adjustment): Mean=1.11, Std. Dev.=0.228, n=19, 21.05% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9147, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

Constituent: Total Organic Carbon [TOC] Analysis Run 12/10/2014 10:53 AM

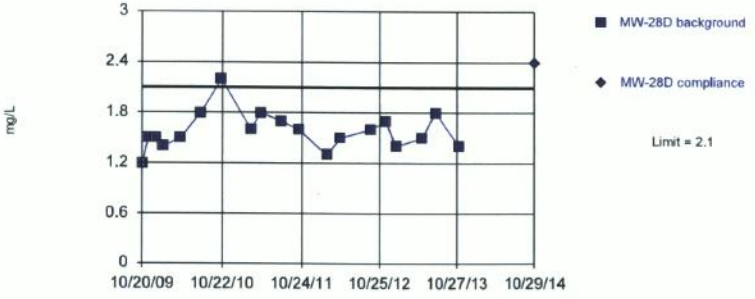
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=0.4476, Std. Dev.=0.1376, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9607, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

Constituent: Total Organic Carbon [TOC] Analysis Run 12/10/2014 10:53 AM

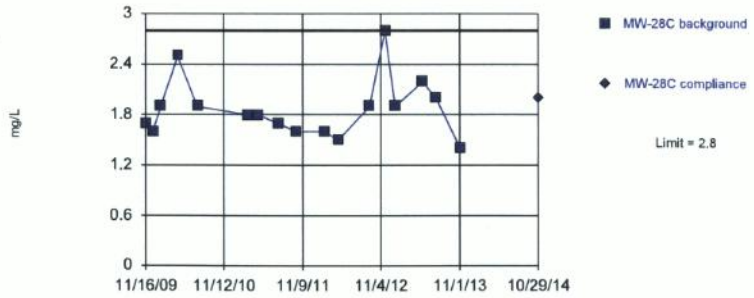
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=0.6108, Std. Dev.=0.1771, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9361, critical = 0.892. Kappa = 2.284 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. Dixon's Outlier Test was performed on the background data. Two background outliers were removed: 5.9 (10/20/2009); 7.5 (10/19/2010).

Constituent: Total Organic Carbon [TOC] Analysis Run 12/10/2014 10:53 AM

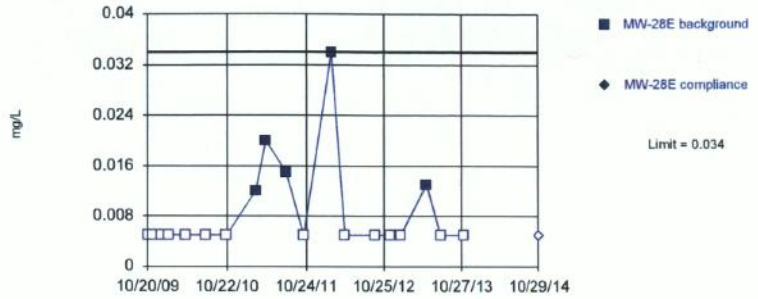
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 73.68% NDs. Well-constituent pair annual alpha = 0.01882. Individual comparison alpha = 0.004738 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

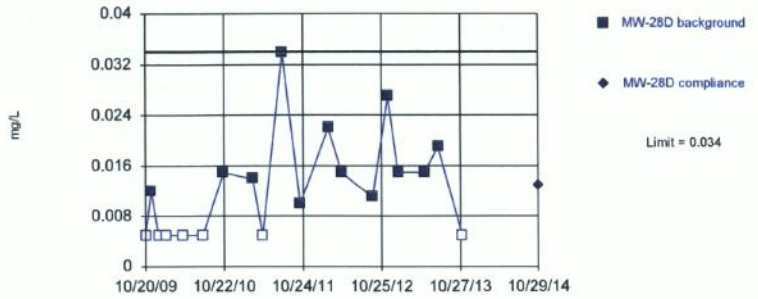
Constituent: Total Organic Halides Analysis Run 12/10/2014 10:53 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 19 background values. 36.84% NDs. Well-constituent pair annual alpha = 0.01882. Individual comparison alpha = 0.004738 (1 of 2). After outlier removal distribution was non-normal, so outlier results were invalidated. Seasonality was not detected with 95% confidence.

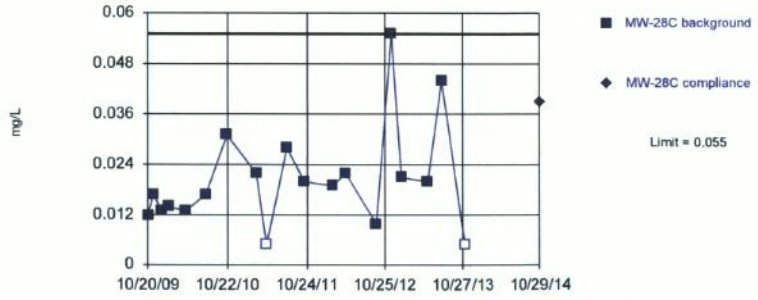
Constituent: Total Organic Halides Analysis Run 12/10/2014 10:53 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting, UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



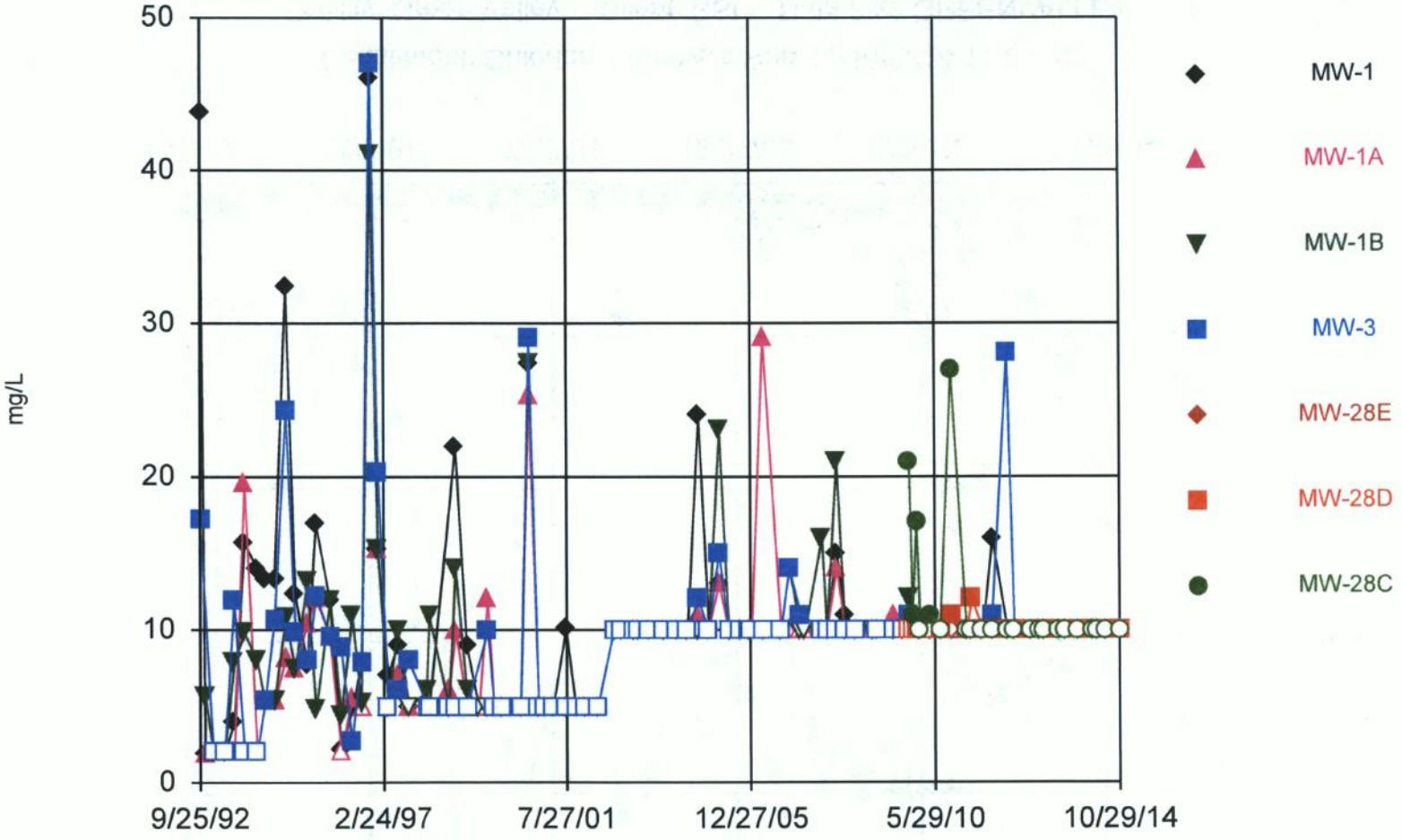
Background Data Summary (based on cube root transformation): Mean=0.2636, Std. Dev.=0.05244, n=19, 10.53% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9585, critical = 0.901. Kappa = 2.232 (c=9, w=3, 1 of 2, event alpha = 0.026). Report alpha = 0.0009751. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

Constituent: Total Organic Halides Analysis Run 12/10/2014 10:53 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

TIME SERIES PLOTS & DATA

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

Time Series

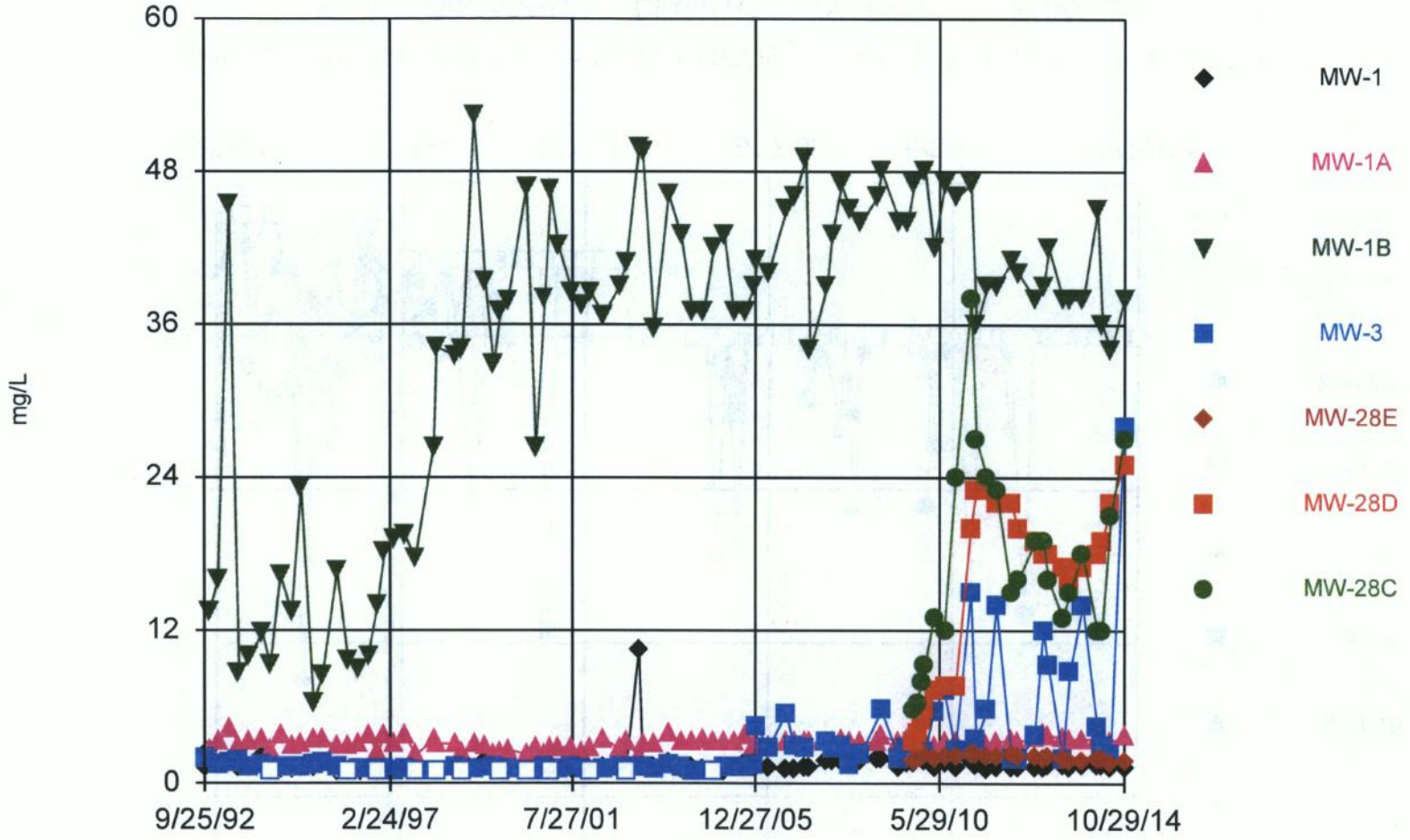


Constituent: Chemical Oxygen Demand [COD] Analysis Run 12/10/2014 11:03 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

Time Series

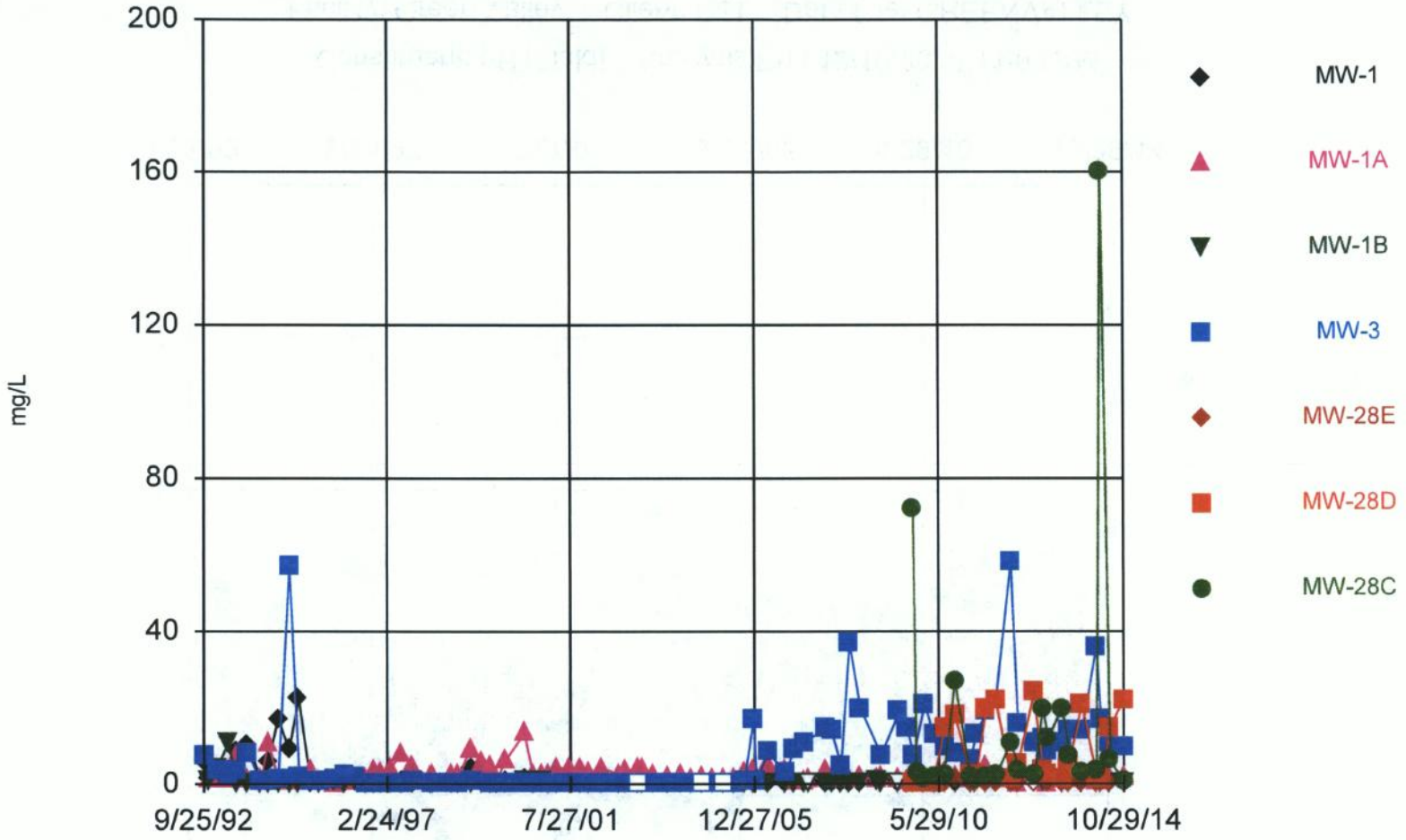


Constituent: Chloride Analysis Run 12/10/2014 11:03 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

Time Series

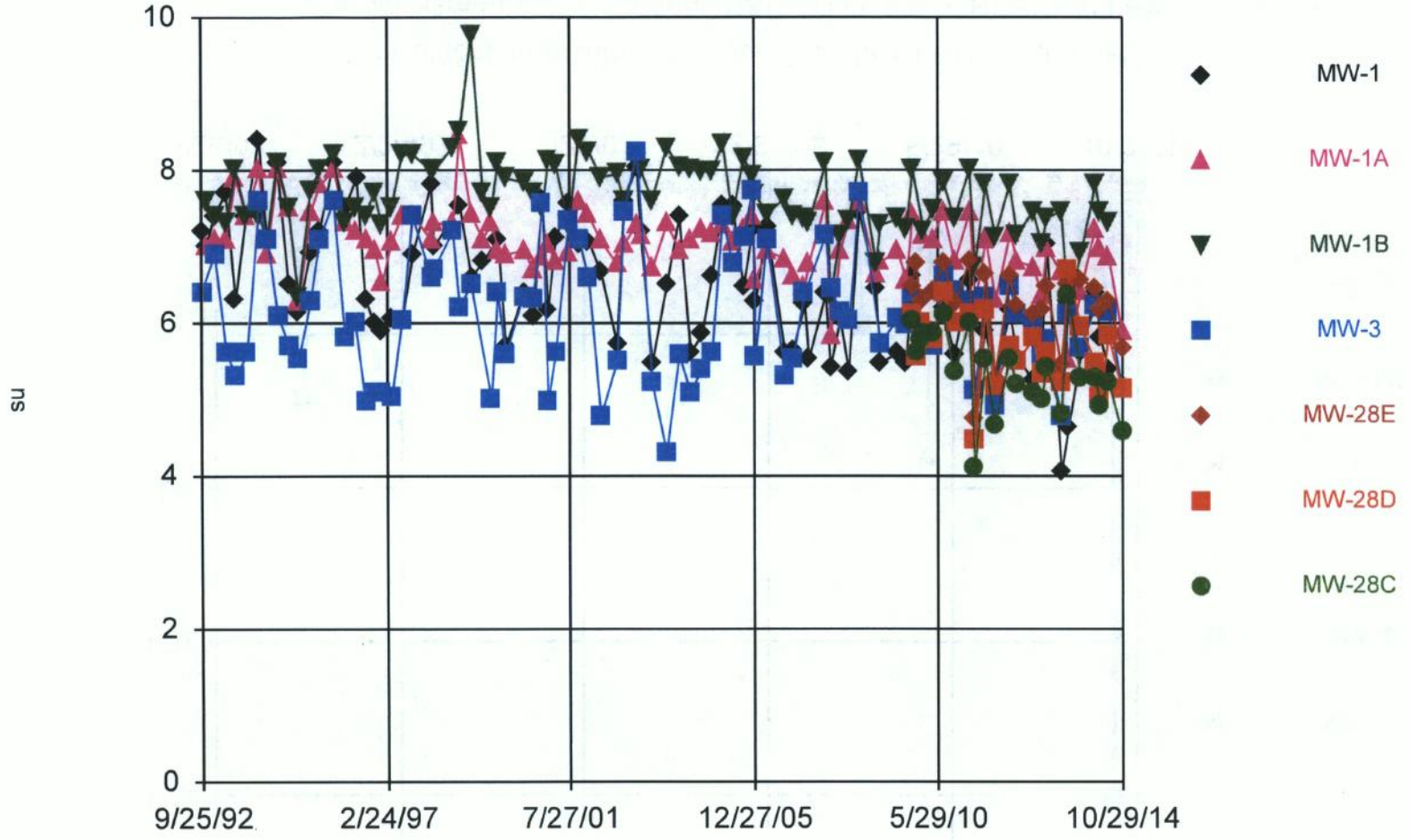


Constituent: Iron Total Analysis Run 12/10/2014 11:03 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG

Time Series

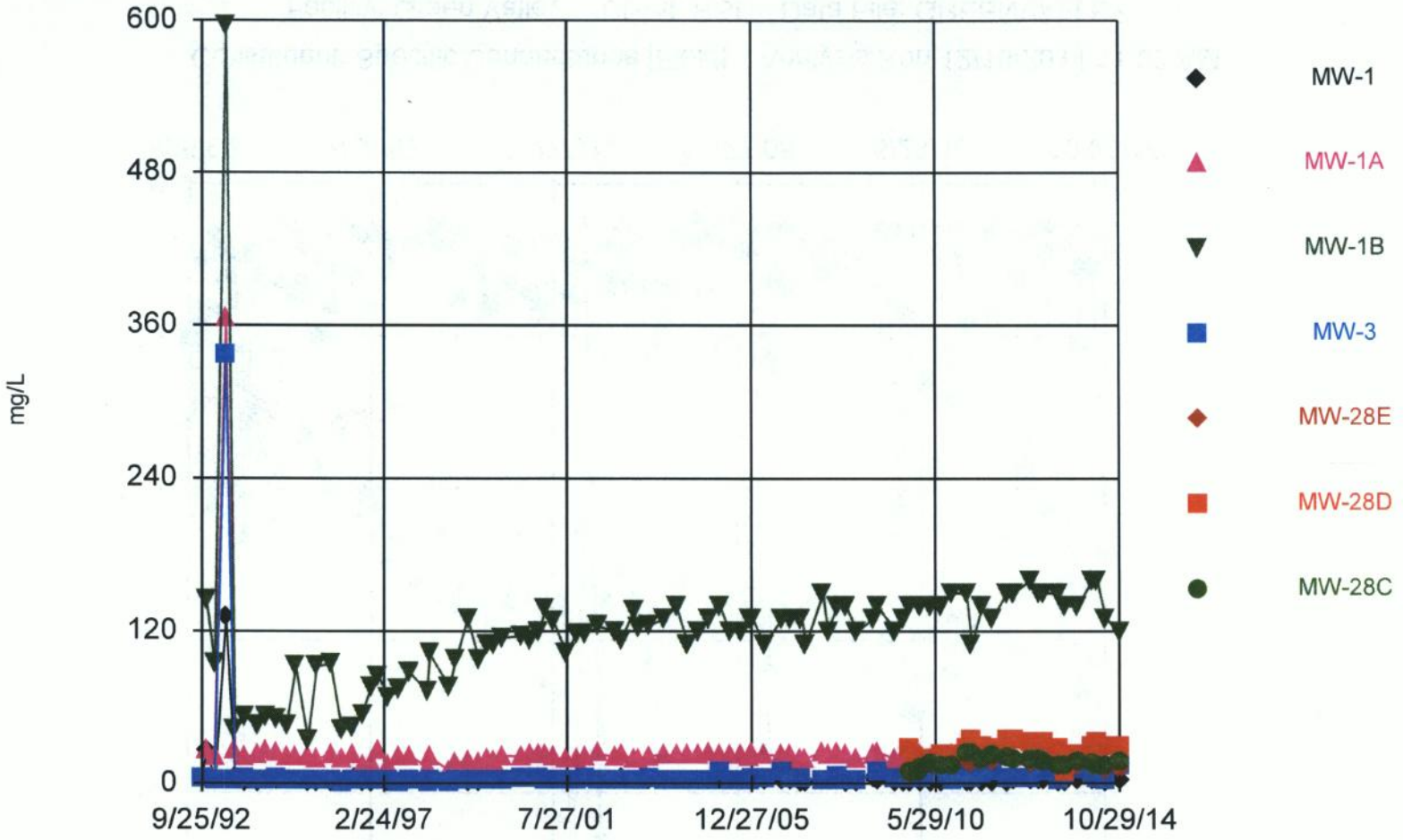


Constituent: pH [Field] Analysis Run 12/10/2014 11:03 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG

Time Series

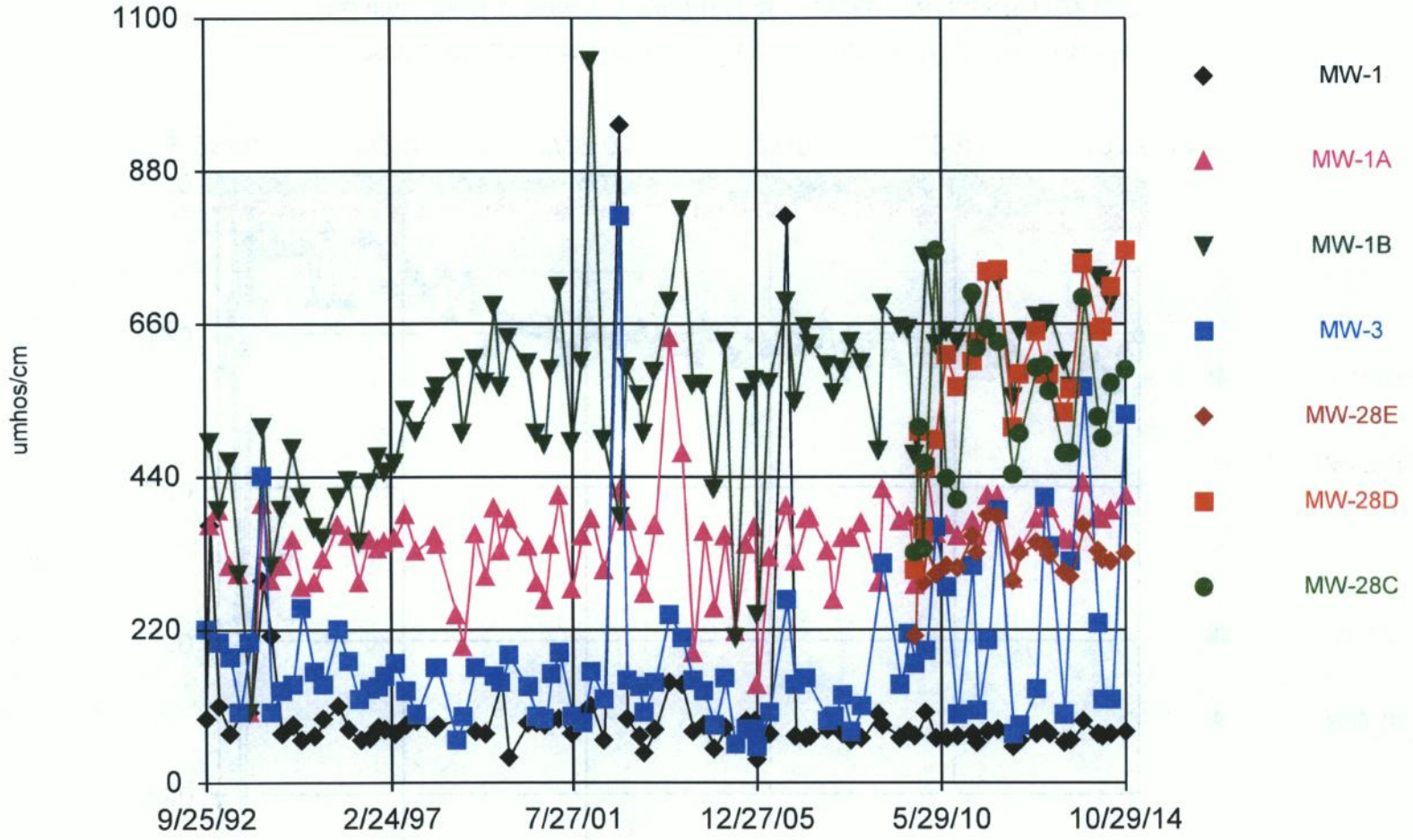


Constituent: Sodium Total Analysis Run 12/10/2014 11:03 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG

Time Series

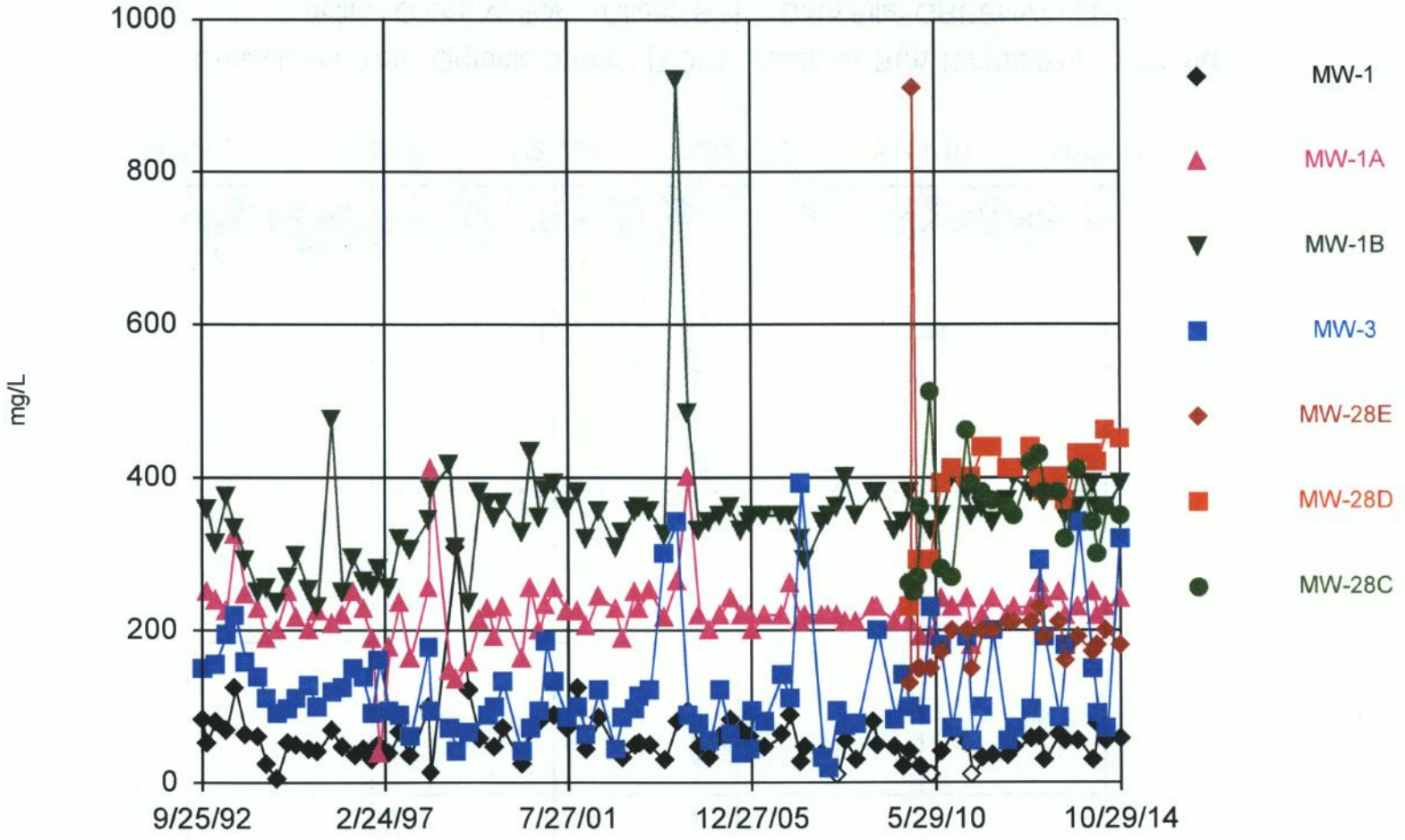


Constituent: Specific Conductance [Field] Analysis Run 12/10/2014 11:03 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Hollow symbols indicate censored values.

Time Series

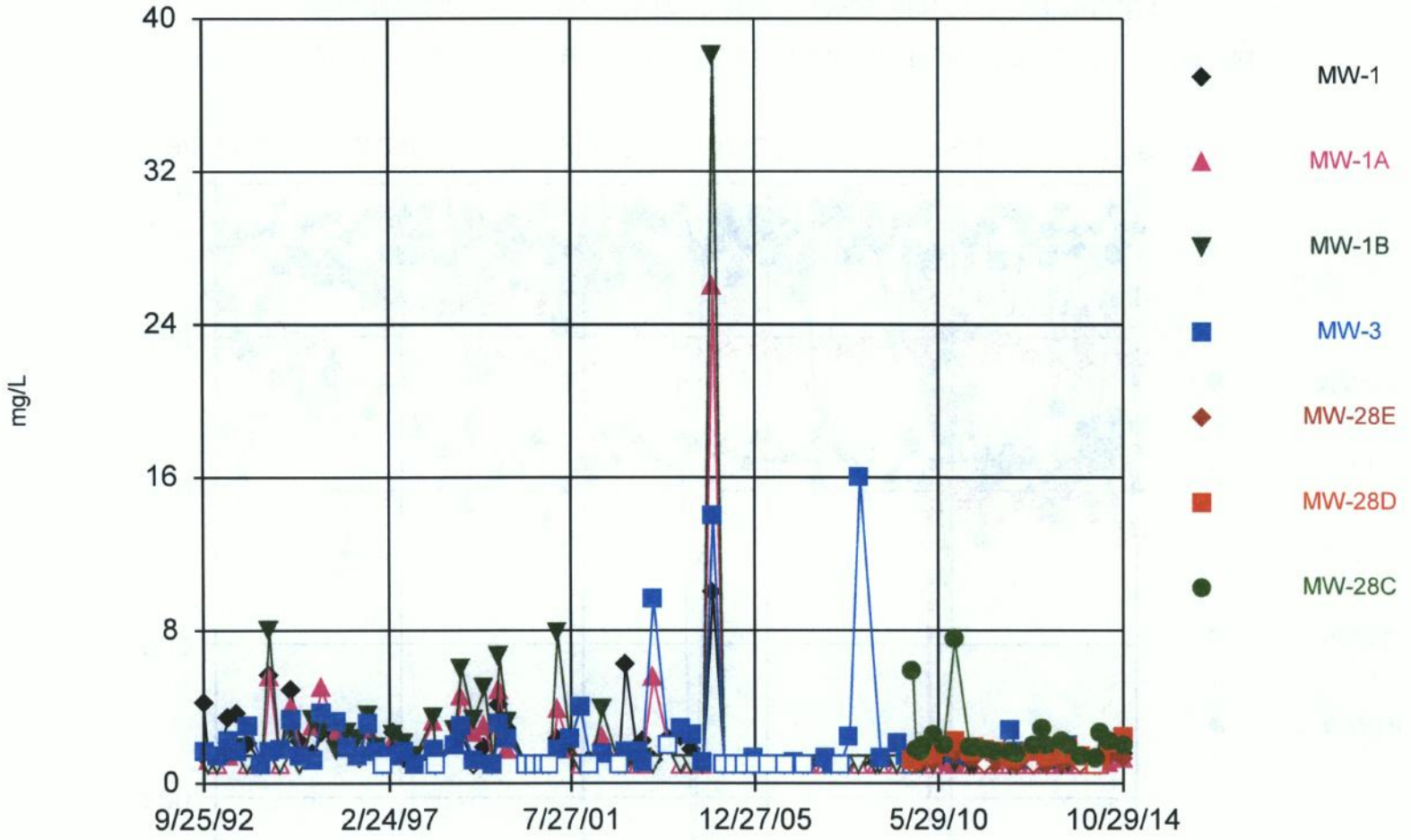


Constituent: Total Dissolved Solids [TDS] Analysis Run 12/10/2014 11:03 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

Time Series

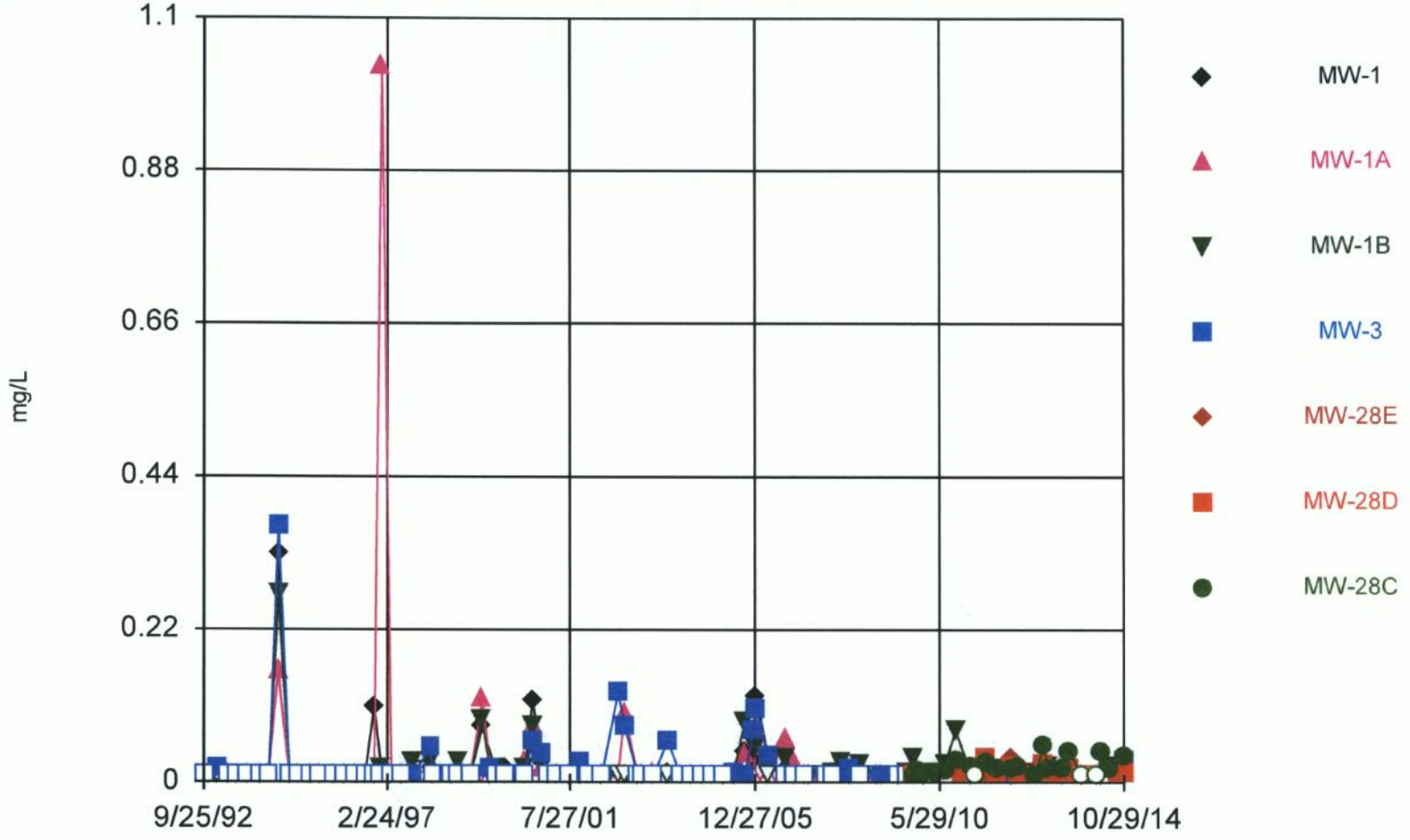


Constituent: Total Organic Carbon [TOC] Analysis Run 12/10/2014 11:03 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.40 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Total Organic Halides Analysis Run 12/10/2014 11:03 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Time Series

Constituent: Chemical Oxygen Demand [COD] (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
9/25/1992	43.8			17.2			
11/9/1992	1.9	1.9	5.71				
1/18/1993		<2		<2			
1/19/1993	<2		<2				
4/26/1993	<2	<2	<2	<2			
7/19/1993	3.92	<2	7.84				
7/20/1993				11.9			
10/19/1993	15.7	19.6	9.8				
10/20/1993				<2			
2/8/1994	14	<2	8				
2/9/1994				<2			
4/18/1994	13.3	5.33	5.33				
4/20/1994				5.33			
7/13/1994				10.7			
7/14/1994	13.3	5.33	5.33				
10/18/1994				24.3			
10/19/1994	32.4	8.11	10.8				
1/11/1995	12.3	7.41	7.41	9.88			
4/25/1995				8			
4/26/1995	7.79	10.4	13.2				
7/10/1995				12.2			
7/11/1995	16.9	12	4.82				
11/14/1995	11.9	9.52		9.52			
11/15/1995			11.9				
2/19/1996				8.89			
2/20/1996	2.22	<2	4.44				
5/21/1996		5.48		2.74			
5/22/1996			11				
6/5/1996	5.13						
8/19/1996	7.89	<5	5.26	7.89			
11/5/1996	46	47	41	47			
1/7/1997	15.2	15.2	15.2	20.3			
4/8/1997	7	<5	<5	<5			
7/8/1997	9	7	10	6			
10/9/1997	<5	5	<5	8			
3/19/1998	<5	<5	6	<5			
4/14/1998	5	<5	11	<5			
9/30/1998		6	<5	<5			
12/1/1998	22	10	14	<5			
3/9/1999	9	<5	6	<5			
6/22/1999	5	<5	<5				
9/7/1999		12	<5	10			
11/2/1999	<5	<5	<5	<5			
1/5/2000	<5	<5	<5	<5			
6/19/2000				<5			
6/20/2000	<5	<5	<5				
9/6/2000	27.3	25.3	27.4	29			
11/28/2000	<5	<5	<5	<5			
1/22/2001	<5	<5	<5	<5			
4/2/2001	<5	<5	<5	<5			
7/26/2001	10.1	<5	<5	<5			
10/18/2001	<5	<5	<5				

Time Series

Constituent: Chemical Oxygen Demand [COD] (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
10/19/2001				<5			
1/14/2002	<5	<5	<5				
1/15/2002				<5			
4/29/2002	<5	<5	<5				
4/30/2002				<5			
9/18/2002	<10	<10	<10	<10			
11/19/2002	<10	<10	<10	<10			
3/10/2003	<10	<10	<10	<10			
4/10/2003	<10	<10	<10	<10			
7/22/2003	<10	<10	<10	<10			
11/25/2003	<10	<10	<10				
11/26/2003				<10			
3/16/2004				<10			
3/17/2004	<10	<10	<10				
6/23/2004	<10	<10	<10	<10			
9/29/2004	24	11	<10	12			
12/27/2004	<10	<10	<10	<10			
3/30/2005	13	13	23	15			
6/20/2005	<10	<10	<10	<10			
9/27/2005	<10	<10	<10	<10			
12/16/2005	<10	<10	<10	<10			
1/9/2006	<10	<10	<10	<10			
4/19/2006	<10	29	<10	<10			
9/24/2006	<10	<10	<10	<10			
12/5/2006	14	<10	14	14			
3/14/2007				11			
3/16/2007	<10	<10	<10				
4/23/2007	<10	<10	<10				
9/19/2007	<10	<10	16	<10			
10/30/2007	<10	<10	<10	<10			
1/23/2008	15	14	21	<10			
4/7/2008	11	<10	<10				
4/8/2008				<10			
7/9/2008	<10	<10	<10	<10			
12/2/2008	<10	<10	<10				
1/7/2009	<10	<10	<10	<10			
6/15/2009	<10	11	<10	<10			
8/26/2009	10	10	<10	<10			
10/20/2009	<10	<10	12	11	<10	<10	21
11/16/2009					<10	<10	11
12/21/2009					<10	<10	17
1/25/2010	<10	<10	<10	<10	<10	<10	<10
4/13/2010	<10	<10	<10	<10	<10	<10	11
7/14/2010				<10	<10	<10	<10
7/15/2010	<10	<10	10				
10/19/2010	<10	<10	<10	<10	<10	11	27
3/3/2011	<10	<10	<10	<10	<10	<10	<10
4/19/2011	<10	<10	<10	<10	<10	12	<10
7/20/2011	<10	<10	<10	<10	<10	<10	<10
10/11/2011				11	<10	<10	<10
10/12/2011	16	<10	<10				
2/20/2012	<10	<10	<10	28	<10	<10	<10

Time Series

Constituent: Chemical Oxygen Demand [COD] (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
4/23/2012	<10	<10	<10	<10	<10	<10	<10
9/10/2012	<10	<10	<10	<10			
9/14/2012					<10	<10	<10
11/26/2012	<10	<10	<10	<10	<10	<10	<10
1/10/2013				<10	<10	<10	<10
1/11/2013	<10	<10	<10				
5/15/2013	<10	<10	<10	<10	<10	<10	<10
7/17/2013	<10	<10	<10	<10	<10	<10	<10
11/6/2013	<10	<10	<10	<10	<10	<10	<10
3/12/2014	<10	<10	<10	<10	<10	<10	<10
4/21/2014	<10	<10	<10	<10	<10	<10	<10
7/8/2014	<10	<10	<10	<10	<10	<10	<10
10/29/2014	<10	<10	<10	<10	<10	<10	<10

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
9/25/1992	1.29			1.98			
11/9/1992	2.61	2.61	13.4				
1/18/1993		3.2		1.47			
1/19/1993	1.39		15.9				
4/26/1993	1.71	4.34	45.3	1.53			
7/19/1993	1.32	2.89	8.65				
7/20/1993				1.81			
10/19/1993	1.31	3.18	9.91				
10/20/1993				1.3			
2/8/1994	2.14	3.44	11.8				
2/9/1994				1.45			
4/18/1994	1.13	2.51	9.25				
4/20/1994				<1			
7/13/1994				1.22			
7/14/1994	1.01	3.83	16.3				
10/18/1994				1.3			
10/19/1994	1.08	2.88	13.4				
1/11/1995	1.17	3.09	23.2	1.3			
4/25/1995				1.5			
4/26/1995	1.18	3.36	6.23				
7/10/1995				1.59			
7/11/1995	1.59	3.36	8.51				
11/14/1995	<1	2.94		1.18			
11/15/1995			16.7				
2/19/1996				<1			
2/20/1996	<1	2.99	9.61				
5/21/1996		3.13		1.02			
5/22/1996			9.02				
6/5/1996	<1						
8/19/1996	1.1	3.79	9.98	1.04			
11/5/1996	<1	2.36	13.9	<1			
1/7/1997	1	3.7	18.1	1.1			
4/8/1997	<1	3.1	19.2	1			
7/8/1997	1.1	3.7	19.5	1.1			
10/9/1997	<1	2.2	17.6	<1			
3/19/1998	<1	3.4	26.4	<1			
4/14/1998	<1	3.1	34.2	<1			
9/30/1998		3.1	33.5	1.2			
12/1/1998	1.2	2.49	34	<1			
3/9/1999	1.1	3.1	52.4	1.1			
6/22/1999	1.7	3	39.4				
9/7/1999		2.2	32.8	1.2			
11/2/1999	1.1	2.5	37.1	<1			
1/5/2000	<1	2.6	37.9	1.1			
6/19/2000				<1			
6/20/2000	1.1	2.3	46.7				
9/6/2000	1.2	2.7	26.4	1			
11/28/2000	1.1	2.3	38.1	1.2			
1/22/2001	1.4	2.8	46.5	<1			
4/2/2001	<1	2.8	42.2	1.1			
7/26/2001	1.1	2.8	38.6	1.2			
10/18/2001	1.1	2.5	37.6				

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
10/19/2001				1.1			
1/14/2002	1	2.8	38.5				
1/15/2002				<1			
4/29/2002	1.2	3.5	36.7				
4/30/2002				1.1			
9/18/2002	1.2	2.7	39	1.2			
11/19/2002	1.3	3.2	40.9	<1			
3/10/2003	10.5	2.16	49.9	1.27			
4/10/2003	1.36	3.17	49.6	1.28			
7/22/2003	1.29	3.09	35.7	1.03			
11/25/2003	1.55	3.85	46.2				
11/26/2003				1.5			
3/16/2004				1.2			
3/17/2004	1.1	3.3	43				
6/23/2004	1.2	3.3	37	0.96			
9/29/2004	1.1	3.5	37	1			
12/27/2004	<1	3.3	42	<1			
3/30/2005	1	3.3	43	1.2			
6/20/2005	1.2	3.2	37	1.3			
9/27/2005	1.6	3.7	37	1.2			
12/16/2005	1.5	3	39	1.5			
1/9/2006	1.2	3.2	41	4.5			
4/19/2006	1.2	2.9	40	2.7			
9/24/2006	1.1	3.3	45	5.5			
12/5/2006	1.1	3.2	46	2.9			
3/14/2007				2.7			
3/16/2007	1.2	3.3	49				
4/23/2007	1.2	3.2	34				
9/19/2007	1.7	3.2	39	3.2			
10/30/2007	1.7	3.2	43	2.8			
1/23/2008	1.8	3.4	47	2.9			
4/7/2008	1.6	3.3	45				
4/8/2008				1.4			
7/9/2008	1.7	3.2	44	2.3			
12/2/2008	2	3.3	46				
1/7/2009	2	3.8	48	5.7			
6/15/2009	1.3	3.2	44	1.9			
8/26/2009	1.6	3.4	44	2.7			
10/20/2009	1.6	3.6	47	2.9	1.7	3.3	5.8
11/16/2009					2	4	6.3
12/21/2009					2.1	5	7.9
1/25/2010	1.7	3.4	48	2.4	2.3	5.8	9.3
4/13/2010	1.2	3	42	5.6	1.9	7.2	13
7/14/2010				7.3	2.1	7.6	12
7/15/2010	1.6	3.3	47				
10/19/2010	1.3	3.2	46	2.6	2.1	7.6	24
3/3/2011	1.8	3.2	47	15	2.3	20	38
4/19/2011	1.4	3.4	36	3.4	2.3	23	27
7/20/2011	1.1	3.1	39	5.7	2.1	23	24
10/11/2011				14	2.1	22	23
10/12/2011	1.3	3.3	39				
2/20/2012	1.2	3.4	41	1.9	2.2	22	15

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
4/23/2012	1.2	3.3	40	1.9	2.1	20	16
9/10/2012	1.3	3.6	38	3.7			
9/14/2012					2.1	19	19
11/26/2012	1.3	3.9	39	12	1.9	18	19
1/10/2013				9.2	2.1	18	16
1/11/2013	1.5	3.8	42				
5/15/2013	1.4	3.6	38	2	2	17	13
7/17/2013	1.2	3.5	38	8.7	1.7	16	15
11/6/2013	1.4	3.5	38	14	1.8	17	18
3/12/2014	1.5	3.5	45	4.5	1.9	18	12
4/21/2014	1.4	3.4	36	2.9	1.9	19	12
7/8/2014	1.2	3.3	34	2.2	1.6	22	21
10/29/2014	1.3	3.7	38	28	1.7	25	27

Time Series

Constituent: Iron Total (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
9/25/1992	5.59			7.74			
11/9/1992	1.16	1.16	0.64				
1/18/1993		1.27		3.71			
1/19/1993	2.41		4.34				
4/26/1993	2.22	1.27	10.7	2.32			
7/19/1993	8.55	7.79	0.49				
7/20/1993				3.65			
10/19/1993	10.3	1.24	0.1				
10/20/1993				8.25			
2/8/1994	1.62	1.19	0.32				
2/9/1994				0.71			
4/18/1994	5.66	10.9	0.38				
4/20/1994				1.02			
7/13/1994				1.42			
7/14/1994	17.2	1.16	0.37				
10/18/1994				57.3			
10/19/1994	9.02	0.95	0.47				
1/11/1995	22.7	1.05	0.36	1.92			
4/25/1995				0.68			
4/26/1995	0.46	3.81	0.56				
7/10/1995				0.879			
7/11/1995	0.7	0.871	0.354				
11/14/1995	1.04	0.51		1.12			
11/15/1995			0.87				
2/19/1996				2.77			
2/20/1996	0.47	0.89	0.37				
5/21/1996		0.85		1.72			
5/22/1996			0.7				
6/5/1996	0.6						
8/19/1996	0.44	1.32	0.47	0.22			
11/5/1996	1.08	3.85	0.27	0.37			
1/7/1997	0.91	3.24	0.33	0.31			
4/8/1997	1.01	4.2	0.07	0.25			
7/8/1997	1.1	8.23	0.05	0.47			
10/9/1997	0.35	4.69	0.19	0.67			
3/19/1998	0.27	1.84	0.18	0.34			
4/14/1998	0.16	2.53	0.1	0.29			
9/30/1998		2.42	0.25	0.18			
12/1/1998	0.45	2.49	0.21	0.37			
3/9/1999	4.36	9.03	0.21	0.98			
6/22/1999	0.76	5.75	0.05				
9/7/1999		4.97	0.19	0.39			
11/2/1999	0.43	1.59	0.15	0.3			
1/5/2000	0.98	6.13	0.359	0.5			
6/19/2000				0.25			
6/20/2000	1.62	13.4	0.6				
9/6/2000	0.23	2.58	0.26	0.17			
11/28/2000	0.14	2.36	0.62	0.43			
1/22/2001	0.96	2.62	0.36	0.34			
4/2/2001	0.75	4.33	0.2	0.06			
7/26/2001	0.58	3.99	0.07	0.14			
10/18/2001	0.82	3.93	0.19				

Time Series

Constituent: Iron Total (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
10/19/2001				0.17			
1/14/2002	0.43	3.15	0.16				
1/15/2002				0.07			
4/29/2002	1.44	4.28	0.02				
4/30/2002				0.16			
9/18/2002	0.144	2.63	0.2	0.113			
11/19/2002	0.354	3.64	0.211	0.185			
3/10/2003	1.38	3.97	<0.02	<0.02			
4/10/2003	0.85	4.1	0.146	0.305			
7/22/2003	0.37	2.53	<0.02	0.164			
11/25/2003	0.41	1.82	0.386				
11/26/2003				0.109			
3/16/2004				0.28			
3/17/2004	0.08	2.4	0.23				
6/23/2004	0.65	1.4	0.059	0.17			
9/29/2004	0.36	2.1	0.28	<0.02			
12/27/2004	0.87	1.6	0.27	0.042			
3/30/2005	0.32	1.3	0.21	<0.02			
6/20/2005	0.12	1.3	0.027	0.26			
9/27/2005	0.11	3.2	0.29	1.1			
12/16/2005	0.22	3.6	0.36	17			
1/9/2006	0.46	2.4	0.26	1			
4/19/2006	0.5	5.5	0.02	8.6			
9/24/2006	0.15	3.4	0.36	3			
12/5/2006	0.23	0.97	0.34	9.1			
3/14/2007				11			
3/16/2007	0.18	0.95	0.046				
4/23/2007	0.56	1.6	<0.02				
9/19/2007	0.24	3.4	0.44	15			
10/30/2007	0.13	1.5	0.22	14			
1/23/2008	0.19	4.5	0.44	5			
4/7/2008	0.45	1.4	0.37				
4/8/2008				37			
7/9/2008	0.23	1.7	0.042	20			
12/2/2008	1.5	1.5	0.58				
1/7/2009	1	2	0.47	7.7			
6/15/2009	0.16	1.6	<0.02	19			
8/26/2009	0.33	1.1	0.26	15			
10/20/2009	0.15	1.1	0.29	7.4	0.27	0.26	72
11/16/2009					0.2	0.23	3
12/21/2009					0.27	0.08	1.8
1/25/2010	0.22	1.9	0.52	21	0.1	0.18	1.2
4/13/2010	0.16	0.78	0.028	13	0.082	0.35	1.8
7/14/2010				10	0.16	15	2.4
7/15/2010	0.32	3.1	0.13				
10/19/2010	0.14	1.8	0.5	8	1.4	18	27
3/3/2011	0.53	1.2	0.45	6.5	0.13	2.7	1.7
4/19/2011	0.21	2.3	0.036	13	0.31	2.4	1.5
7/20/2011	0.21	5	0.21	19	0.08	20	1.8
10/11/2011				22	0.1	22	2.4
10/12/2011	0.21	1.9	0.71				
2/20/2012	0.24	1.8	0.54	58	0.071	1.6	11

Time Series

Constituent: Iron Total (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
4/23/2012	0.38	0.46	0.23	16	0.054	5.2	3.8
9/10/2012	0.46	2.6	0.84	11			
9/14/2012					<0.02	24	2.7
11/26/2012	0.23	1.4	0.67	12	1.4	3.6	20
1/10/2013				8.6	0.064	2.7	12
1/11/2013	0.07	0.45	0.57				
5/15/2013	1.2	1.3	0.033	11	0.092	1.2	20
7/17/2013	0.32	1.4	0.035	14	0.14	6	7.6
11/6/2013	0.27	1.2	0.41	14	0.17	21	3
3/12/2014	0.68	0.68	0.41	36	0.031	2.4	3.5
4/21/2014	1.4	1	0.13	17	0.17	1.3	160
7/8/2014	0.13	1.9	0.028	11	0.09	15	6.2
10/29/2014	0.22	2	0.4	9.5	0.056	22	0.56

Time Series

Constituent: pH [Field] (su) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
9/25/1992	7.2			6.4			
11/9/1992	7	7	7.6				
1/18/1993		7.1		6.9			
1/19/1993	7.4		7.4				
4/26/1993	7.7	7.1	7.3	5.6			
7/19/1993	6.3	7.9	8				
7/20/1993				5.3			
10/19/1993	7.4	7.4	7.4				
10/20/1993				5.6			
2/8/1994	8.4	8	7.4				
2/9/1994				7.6			
4/18/1994	7.1	6.9	7.1				
4/20/1994				7.1			
7/13/1994				6.1			
7/14/1994	8.1	8	8.1				
10/18/1994				5.7			
10/19/1994	6.5	7.5	7.5				
1/11/1995	6.155 (D)	6.275 (D)	6.335 (D)	5.52 (D)			
4/25/1995				6.28			
4/26/1995	6.93	7.45	7.73				
7/10/1995				7.1			
7/11/1995	7.2	7.8	8				
11/14/1995	8.1	8		7.6			
11/15/1995			8.2				
2/19/1996				5.8			
2/20/1996	7.5	7.3	7.3				
5/21/1996		7.2		6			
5/22/1996			7.5				
6/5/1996	7.9						
8/19/1996	6.32	7.09	7.4	4.96			
11/5/1996	5.99	6.96	7.71	5.09			
1/7/1997	5.9	6.52	7.28	5.07			
4/8/1997	6.05	7.07	7.5	5.03			
7/8/1997	6.03	7.4	8.2	6.03			
10/9/1997	6.9	7.4	8.2	7.4			
3/19/1998	7.8	7.1	8	6.6			
4/14/1998	7	7.3	8	6.7			
9/30/1998		7.3	8.3	7.2			
12/1/1998	7.54	8.45	8.5	6.2			
3/9/1999	6.6	7.42	9.75	6.5			
6/22/1999	6.8	7.1	7.7				
9/7/1999		7.3	7.5	5			
11/2/1999	7.1	6.95	8.1	6.39			
1/5/2000	5.69	6.9	7.89	5.58			
6/19/2000				6.35			
6/20/2000	6.39	6.95	7.84				
9/6/2000	6.08	6.71	7.7	6.32			
11/28/2000	7.61	6.87	7.51	7.56			
1/22/2001	6.18	7.03	8.11	4.96			
4/2/2001	7.12	6.8	8.06	5.61			
7/26/2001	7.57	6.91	7.29	7.35			
10/18/2001	7.03	7.6	8.4				

Time Series

Constituent: pH [Field] (su) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
10/19/2001				7.1			
1/14/2002	7.07	7.41	8.24				
1/15/2002				6.58			
4/29/2002	6.67	7.08	7.91				
4/30/2002				4.77			
9/18/2002	5.73	6.77	7.94	5.49			
11/19/2002	7.6	7.04	7.59	7.44			
3/10/2003	8.04	7.29	8.1	8.24			
4/10/2003	7.2	7.14	8.01				
7/22/2003	5.47	6.72	7.6	5.22			
11/25/2003	6.5	7.3	8.3				
11/26/2003				4.3			
3/16/2004				5.58			
3/17/2004	7.39	6.96	8.03				
6/23/2004	5.61	7.08	8	5.09			
9/29/2004	5.85	7.24	7.99	5.4			
12/27/2004	6.62	7.18	7.98	5.6			
3/30/2005	7.54	7.29	8.35	7.39			
6/20/2005	7.53	7.07	7.4	6.78			
9/27/2005	6.47	7.22	8.16	7.11			
12/16/2005	7.24	7.4	7.93	7.74			
1/9/2006	6.27	6.57	7.68	5.56			
4/19/2006	7.26	6.94	7.43	7.1			
9/24/2006	5.6	6.85	7.63	5.3			
12/5/2006	5.64	6.62	7.39	5.52			
3/14/2007				6.38			
3/16/2007	6.24	6.49	7.38				
4/23/2007	5.53	6.78	7.3				
9/19/2007	6.38	7.58	8.08	7.15			
10/30/2007	5.42	5.84	6.34	6.44			
1/23/2008	6.05	6.96	7.15	6.15			
4/7/2008	5.37	7.35	7.35				
4/8/2008				6.02			
7/9/2008	7.46	7.57	8.13	7.71			
12/2/2008	6.46	6.65	6.77				
1/7/2009	5.47	6.8	7.28	5.73			
6/15/2009	5.61	6.94	7.36	6.07			
8/26/2009	5.46	6.55	7.22	5.98			
10/20/2009	6.61	7.43	8	6.31	6.49	6.11	6.04
11/16/2009					6.79	5.55	5.6
12/21/2009					6.29	5.99	5.78
1/25/2010	5.84	7.14	7.21	5.8	6.31	5.9	5.87
4/13/2010	5.72	7.1	7.47	5.71	6.43	5.77	5.87
7/14/2010				6.61	6.78	6.4	6.12
7/15/2010	6.21	7.46	7.84				
10/19/2010	5.58	6.8	7.36	6.41	6.24	6	5.35
3/3/2011	6.57	7.45	8.01	6.28	6.82	6.12	6.01
4/19/2011	5.15	6.28	6.74	5.12	4.76	4.46	4.1
7/20/2011	5.9	7.09	7.8	6.34	6.65	6.18	5.54
10/11/2011				4.91	5.29	5.16	4.67
10/12/2011	5.24	6.3	7.13				
2/20/2012	6.16	7.17	7.81	6.49	6.61	5.7	5.53

Time Series

Constituent: pH [Field] (su) Analysis Run 12/10/2014 11:04 AM
Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
4/23/2012	5.55	6.81	7.15	6.11	6.22	5.5	5.19
9/10/2012	5.25	6.74	7.46	5.96			
9/14/2012					6.12	5.8	5.08
11/26/2012	5.61	6.37	7.03	5.57	6.16	5.33	5.01
1/10/2013				5.77	6.47	5.62	5.43
1/11/2013	7.02	6.98	7.38				
5/15/2013	4.04	6.66	7.46	4.77	5.44	5.22	4.8
7/17/2013	4.63	5.53	6.16	6.11	6.5	6.69	6.37
11/6/2013	5.6	6.43	6.92	5.68	6.57	5.94	5.28
3/12/2014	6.4	7.24	7.81	6.22	6.46	5.48	5.27
4/21/2014	5.8	6.97	7.44	6.2	6.18	5.02	4.92
7/8/2014	5.38	6.87	7.31	6.13	6.29	5.83	5.22
10/29/2014	5.16	5.88		5.15	5.66	5.14	4.57

Time Series

Constituent: Sodium Total (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
9/25/1992	3.6			3.44			
11/9/1992	26.4	26.4	144				
1/18/1993		21.2		3.06			
1/19/1993	1.96		95				
4/26/1993	131	365	595	336			
7/19/1993	4.43	26.2	42.8				
7/20/1993				3.19			
10/19/1993	1.53	21.4	52.5				
10/20/1993				4.38			
2/8/1994	1.19	22.1	45.6				
2/9/1994				2.03			
4/18/1994	2	25.9	53				
4/20/1994				2.55			
7/13/1994				4.62			
7/14/1994	2.85	23.9	51.2				
10/18/1994				2.8			
10/19/1994	2.06	21.6	45.9				
1/11/1995	1.83	21.1	92.5	1.91			
4/25/1995				1.95			
4/26/1995	1.16	20.2	34.7				
7/10/1995				2.51			
7/11/1995	1.63	19.5	92.5				
11/14/1995	1.34	22.8		2.29			
11/15/1995			94.5				
2/19/1996				1.58			
2/20/1996	1.1	19.3	42.8				
5/21/1996		22.5		2.5			
5/22/1996			44.5				
6/5/1996	3.49						
8/19/1996	1.43	15	54.4	2.25			
11/5/1996	1.52	16.2	76.2	2.28			
1/7/1997	1.95	26.2	85	1.92			
4/8/1997	1.1	15	67.5	1.95			
7/8/1997	0.93	21.3	73.8	1.03			
10/9/1997	1.91	21.3	87.5	2.91			
3/19/1998	1.15	13	72.5	1.5			
4/14/1998	1.32	20.6	102	2.25			
9/30/1998		9.75	76.3	1.28			
12/1/1998	2.48	16.4	98.1	2.28			
3/9/1999	1.4	18.1	130	2			
6/22/1999	1.3	15.7	97				
9/7/1999		18.8	110	2.39			
11/2/1999	3.13	18.3	110	2.27			
1/5/2000	2.95	21.7	115	2.63			
6/19/2000				3.98			
6/20/2000	4.03	21.4	116				
9/6/2000	3.93	21.9	112	3.66			
11/28/2000	4.46	22.1	120	3.71			
1/22/2001	4.25	23.3	138	3.18			
4/2/2001	3.01	21.1	128	2.78			
7/26/2001	2.76	18.4	103	2.91			
10/18/2001	2.68	19.4	117				

Time Series

Constituent: Sodium Total (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
10/19/2001				2.95			
1/14/2002	4.44	20.1	118				
1/15/2002				3.37			
4/29/2002	2.78	23.7	124				
4/30/2002				3.05			
9/18/2002	2.79	20.8	120	3.16			
11/19/2002	4.13	23.2	113	3.24			
3/10/2003	2.6	19.4	136	2.31			
4/10/2003	2.38	19.8	123	2.86			
7/22/2003	2.95	21.7	125	3.44			
11/25/2003	3	23	129				
11/26/2003				3.26			
3/16/2004				2.4			
3/17/2004	2	22	140				
6/23/2004	1.8	22	110	2.7			
9/29/2004	2.3	23	120	2.6			
12/27/2004	2	24	130	2.6			
3/30/2005	1.8	22	140	9.9			
6/20/2005	1.7	23	120	2.7			
9/27/2005	2.3	22	120	2.7			
12/16/2005	2.9	21	130	3.1			
1/9/2006	2.7	24	130	3.8			
4/19/2006	2	23	110	4.8			
9/24/2006	2.3	22	130	9			
12/5/2006	2.2	22	130	4.6			
3/14/2007				3.6			
3/16/2007	1.4	20	130				
4/23/2007	1.4	20	110				
9/19/2007	2.1	25	150	3			
10/30/2007	2.3	23	120	2.9			
1/23/2008	2.1	24	140	5.1			
4/7/2008	1.5	22	140				
4/8/2008				3			
7/9/2008	1.3	19	120	3.1			
12/2/2008	4.3	22	130				
1/7/2009	2.1	25	140	9			
6/15/2009	1.3	19	120	3.5			
8/26/2009	1.4	21	130	4.2			
10/20/2009	1.6	24	140	4.7	7.4	28	9.1
11/16/2009					10	21	8.4
12/21/2009					12	20	9.9
1/25/2010	1.6	22	140	3.7	13	20	12
4/13/2010	1.4	20	140	6	14	19	16
7/14/2010				5.5	16	23	14
7/15/2010	1.5	21	140				
10/19/2010	1.9	22	150	3.3	15	23	14
3/3/2011	1.6	22	150	9.8	18	28	24
4/19/2011	1.5	19	110	4.2	16	34	25
7/20/2011	1.4	20	140	5.3	18	29	20
10/11/2011				9.8	17	27	23
10/12/2011	1.5	21	130				
2/20/2012	1.6	22	150	3.6	21	34	21

Time Series

Constituent: Sodium Total (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
4/23/2012	1.7	21	150	3.4	20	34	20
9/10/2012	2	26	160	4.6			
9/14/2012					16	32	19
11/26/2012	2.5	27	150	10	18	32	20
1/10/2013				8.9	17	32	18
1/11/2013	2	24	150				
5/15/2013	1.5	25	150	3.2	16	28	15
7/17/2013	1.5	21	140	6.9	14	8.9	14
11/6/2013	1.8	20	140	11	14	23	18
3/12/2014	1.8	23	160	6.2	15	30	16
4/21/2014	1.8	22	160	3.9	14	33	14
7/8/2014	1.4	20	130	3.1	11	29	15
10/29/2014	1.7	23	120	15	11	30	18

Time Series

Constituent: Specific Conductance [Field] (umhos/cm) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
9/25/1992	90			220			
11/9/1992	370	370	490				
1/18/1993		390		200			
1/19/1993	110		390				
4/26/1993	70	310	460	180			
7/19/1993	100	300	300				
7/20/1993				100			
10/19/1993	100	100	100				
10/20/1993				200			
2/8/1994	290	400	510				
2/9/1994				440			
4/18/1994	210	290	310				
4/20/1994				100			
7/13/1994				130			
7/14/1994	70	310	390				
10/18/1994				138			
10/19/1994	80	348	480				
1/11/1995	60	280	410	250			
4/25/1995				158			
4/26/1995	65	285	365				
7/10/1995				140			
7/11/1995	90	320	350				
11/14/1995	110	370		220			
11/15/1995			410				
2/19/1996				172			
2/20/1996	75	355	434				
5/21/1996		287		117			
5/22/1996			346				
6/5/1996	60.3						
8/19/1996	64.3	347	429	133			
11/5/1996	77	337	466	135			
1/7/1997	74	345	445	151			
4/8/1997	70	351	458	170			
7/8/1997	81	384	535	131			
10/9/1997	86	333	505	96			
3/19/1998	78	353	554	164			
4/14/1998	82	342	569	163			
9/30/1998		242	595	60			
12/1/1998	93	195	501	93			
3/9/1999	71	358	607	164			
6/22/1999	70	295	576				
9/7/1999		394	685	152			
11/2/1999	145	332	567	142			
1/5/2000	36	377	640	183			
6/19/2000				135			
6/20/2000	84	339	601				
9/6/2000	84	287	502	93			
11/28/2000	81	263	486	89			
1/22/2001	86	343	593	156			
4/2/2001	90	412	713	185			
7/26/2001	68	278	490	94			
10/18/2001	96.6	353.3	605				

Time Series

Constituent: Specific Conductance [Field] (umhos/cm) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
10/19/2001				83.3			
1/14/2002	108	379	1038				
1/15/2002				158			
4/29/2002	60	305	492				
4/30/2002				118			
9/18/2002	945	421	380	815			
11/19/2002	90	375	596	146			
3/10/2003	65	311	555	136			
4/10/2003	40	270	500	100			
7/22/2003	76	369	589	142			
11/25/2003	143	640	690				
11/26/2003				242			
3/16/2004				208			
3/17/2004	140	474	823				
6/23/2004	73	186	570	145			
9/29/2004	80	360	570	130			
12/27/2004	49	250	421	80			
3/30/2005	78.7	353	633	148			
6/20/2005	52.1	215	208	54			
9/27/2005	87.1	341	560	75.7			
12/16/2005	88	366	577	74			
1/9/2006	33	140	239	52			
4/19/2006	69	322	576	101			
9/24/2006	814	397	691	262			
12/5/2006	66	318	547	138			
3/14/2007				148			
3/16/2007	63	377	655				
4/23/2007	67	382	629				
9/19/2007	75	331	598	87			
10/30/2007	88	261	560	94			
1/23/2008	70	352	595	125			
4/7/2008	61	351	634				
4/8/2008				72			
7/9/2008	63	371	602	108			
12/2/2008	98	286	476				
1/7/2009	82	422	688	315			
6/15/2009	64	374	653	138			
8/26/2009	71	381	650	212			
10/20/2009	65	282	471	171	210	306	329
11/16/2009					373	503	510
12/21/2009					287	364	337
1/25/2010	101	452	754	188	336	452	458
4/13/2010	63	358	629	365	300	491	764
7/14/2010				279	312	615	436
7/15/2010	64	370	649				
10/19/2010	65	355	633	95	308	568	406
3/3/2011	69	376	691	312	355	605	703
4/19/2011	58	355	619	102	329	634	624
7/20/2011	73	413	727	203	386	734	650
10/11/2011				392	380	737	632
10/12/2011	76	411	721				
2/20/2012	51	294	552	68	291	511	442

Time Series

Constituent: Specific Conductance [Field] (umhos/cm) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
4/23/2012	59	339	649	80	329	588	501
9/10/2012	69	377	669	133			
9/14/2012					345	647	596
11/26/2012	75	405	658	409	338	587	599
1/10/2013				340	326	587	562
1/11/2013	68	394	674				
5/15/2013	56	352	606	98	301	532	473
7/17/2013	61	347	568	316	297	564	474
11/6/2013	86	431	753	567	370	745	698
3/12/2014	70	384	728	229	333	649	526
4/21/2014	67	378	721	117	319	653	494
7/8/2014	70	391	692	117	316	713	575
10/29/2014	72	412		528	329	766	594

Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
9/25/1992	82			149			
11/9/1992	52	248	359				
1/18/1993		239		155			
1/19/1993	80		313				
4/26/1993	69	223	374	193			
7/19/1993	124	325	333				
7/20/1993				218			
10/19/1993	64	247	292				
10/20/1993				158			
2/8/1994	60	228	248				
2/9/1994				138			
4/18/1994	24	188	256				
4/20/1994				110			
7/13/1994				90			
7/14/1994	4	200	234				
10/18/1994				96			
10/19/1994	52	248	270				
1/11/1995	48	216	296	110			
4/25/1995				126			
4/26/1995	42	198	251				
7/10/1995				98			
7/11/1995	40	224	229				
11/14/1995	68	208		117			
11/15/1995			476				
2/19/1996				125			
2/20/1996	46	220	248				
5/21/1996		250		150			
5/22/1996			294				
6/5/1996	34						
8/19/1996	42	226	264	137			
11/5/1996	30	188	258	90			
1/7/1997	48	38	280	160			
4/8/1997	38	176	254	94			
7/8/1997	66	234	318	88			
10/9/1997	34	162	306	60			
3/19/1998	98	256	344	178			
4/14/1998	12	412	382	94			
9/30/1998		147	416	70			
12/1/1998	308	134	307	39			
3/9/1999	122	158	236	66			
6/22/1999	56	214	379				
9/7/1999		226	367	88			
11/2/1999	45	190	348	98			
1/5/2000	71	230	365	132			
6/19/2000				40			
6/20/2000	24	164	328				
9/6/2000	68	256	432	72			
11/28/2000	80	200	348	92			
1/22/2001	88	232	384	184			
4/2/2001	88	256	392	132			
7/26/2001	72	224	360	84			
10/18/2001	124	224	380				

Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
10/19/2001				100			
1/14/2002	44	204	320				
1/15/2002				64			
4/29/2002	84	244	356				
4/30/2002				120			
9/18/2002	44	228	308	44			
11/19/2002	32	188	328	84			
3/10/2003	48	248	356	96			
4/10/2003	52	228	360	112			
7/22/2003	48	252	356	120			
11/25/2003	28	216	324				
11/26/2003				300			
3/16/2004				340			
3/17/2004	80	264	920				
6/23/2004	92	400	484	88			
9/29/2004	45	220	330	76			
12/27/2004	31	200	340	54			
3/30/2005	60	220	350	120			
6/20/2005	83	240	360	64			
9/27/2005	67	220	330	37			
12/16/2005	61	220	340	42			
1/9/2006	45	200	350	93			
4/19/2006	45	220	350	80			
9/24/2006	62	220	350	140			
12/5/2006	87	260	350	110			
3/14/2007				390			
3/16/2007	26	210	320				
4/23/2007	47	220	290				
9/19/2007	37	220	340	33			
10/30/2007	24	220	350	18			
1/23/2008	<10	220	360	92			
4/7/2008	53	210	400				
4/8/2008				74			
7/9/2008	28	210	350	76			
12/2/2008	79	230	380				
1/7/2009	49	230	380	200			
6/15/2009	46	210	330	82			
8/26/2009	20	230	340	140			
10/20/2009	39	210	380	100	130	230	260
11/16/2009					910	260	250
12/21/2009					150	290	270
1/25/2010	20	190	350	87	150	290	360
4/13/2010	<10	190	330	230	150	290	510
7/14/2010				180	170	390	280
7/15/2010	39	240	350				
10/19/2010	65	230	400	72	200	410	270
3/3/2011	52	240	380	190	200	400	460
4/19/2011	<10	180	350	54	150	400	390
7/20/2011	32	220	360	100	200	440	380
10/11/2011				200	200	440	370
10/12/2011	35	240	340				
2/20/2012	35	220	370	53	210	410	360

Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
4/23/2012	45	230	400	71	210	410	350
9/10/2012	57	230	380	96			
9/14/2012					210	440	420
11/26/2012	59	260	380	290	230	400	430
1/10/2013				190	190	380	380
1/11/2013	29	240	370				
5/15/2013	63	250	380	84	210	400	380
7/17/2013	54	220	350	180	160	370	320
11/6/2013	55	230	360	340	190	430	410
3/12/2014	28	250	390	150	170	430	340
4/21/2014	77	220	360	91	180	420	300
7/8/2014	53	230	360	70	200	460	360
10/29/2014	56	240	390	320	180	450	350

Time Series

Constituent: Total Organic Carbon [TOC] (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
9/25/1992	4.13			1.67			
11/9/1992	1.13	1.13	<1				
1/18/1993		<1		1.39			
1/19/1993	1.11		<1				
4/26/1993	3.38	1.37	1.63	2.13			
7/19/1993	3.6	1.75	1.84				
7/20/1993				1.64			
10/19/1993	2.07	<1	<1				
10/20/1993				2.96			
2/8/1994	1	<1	<1				
2/9/1994				1			
4/18/1994	5.6	5.54	7.99				
4/20/1994				1.59			
7/13/1994				1.71			
7/14/1994	1.41	<1	<1				
10/18/1994				3.24			
10/19/1994	4.85	3.96	2.87				
1/11/1995	2.22	1.61	<1	1.44			
4/25/1995				1.13			
4/26/1995	1.45	2.92	3.33				
7/10/1995				3.59			
7/11/1995	2.67	4.93	2.83				
11/14/1995	2.47	2.66		3.14			
11/15/1995			1.72				
2/19/1996				1.86			
2/20/1996	1.84	1.83	2.61				
5/21/1996		1.39		1.36			
5/22/1996			2.28				
6/5/1996	1.31						
8/19/1996	3	2.86	3.55	3.07			
11/5/1996	1.93	1.66	1.88	1.62			
1/7/1997	<1	<1	<1	<1			
4/8/1997	2.6	2.2	2.5	1.4			
7/8/1997	1.3	1.7	2.1	1.6			
10/9/1997	1.1	1	1.4	1			
3/19/1998	1.4	3.2	3.4	1.7			
4/14/1998	<1	<1	<1	<1			
9/30/1998		2.4	2.7	2			
12/1/1998	2.5	4.5	6	2.9			
3/9/1999	<1	2.6	3.3	1.2			
6/22/1999	1.8	3	5				
9/7/1999		<1	1	1			
11/2/1999	4.1	4.8	6.6	3.1			
1/5/2000	2.8	1.7	3.2	2.3			
6/19/2000				<1			
6/20/2000	<1	<1	<1				
9/6/2000	<1	<1	<1	<1			
11/28/2000	<1	<1	<1	<1			
1/22/2001	1	1	<1	<1			
4/2/2001	2.3	3.8	7.8	1.7			
7/26/2001	2	1.7	1.9	2.3			
10/18/2001	<1	<1	<1				

Time Series

Constituent: Total Organic Carbon [TOC] (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
10/19/2001				3.9			
1/14/2002	1.2	<1	<1				
1/15/2002				<1			
4/29/2002	1.5	2.4	3.8				
4/30/2002				1.5			
9/18/2002	<1	<1	<1	<1			
11/19/2002	6.2	<1	1	1.6			
3/10/2003	<1	<1	1.01	1.64			
4/10/2003	2.15	<1	1.3	1.03			
7/22/2003	1.14	5.52	<1	9.68			
11/25/2003	2.3	<2	<2				
11/26/2003				<2			
3/16/2004				2.8			
3/17/2004	2.4	<1	<1				
6/23/2004	1.7	<1	<1	2.5			
9/29/2004	<1	<1	<1	1.1			
12/27/2004	10	26	38	14			
3/30/2005	<1	<1	<1	<1			
6/20/2005	<1	<1	<1	<1			
9/27/2005	<1	<1	<1	<1			
12/16/2005	<1	<1	<1	1.3			
1/9/2006	<1	<1	<1	<1			
4/19/2006	<1	<1	<1	<1			
9/24/2006	<1	<1	<1	<1			
12/5/2006	<1	<1	<1	1.1			
3/14/2007				<1			
3/16/2007	<1	<1	<1				
4/23/2007	<1	<1	<1				
9/19/2007	<1	<1	<1	1.3			
10/30/2007	<1	<1	<1	1			
1/23/2008	<1	<1	<1	<1			
4/7/2008	<1	<1	<1				
4/8/2008				2.4			
7/9/2008	<1	<1	<1	16			
12/2/2008	1.1	<1	<1				
1/7/2009	1.1	<1	<1	1.3			
6/15/2009	1	<1	<1	2.1			
8/26/2009	<1	<1	<1	1.4			
10/20/2009	<1	<1	<1	<1	<1	1.2	5.9
11/16/2009					1	1.5	1.7
12/21/2009					1.1	1.5	1.6
1/25/2010	<1	<1	<1	1.4	1.2	1.4	1.9
4/13/2010	<1	<1	<1	1.7	1.1	1.5	2.5
7/14/2010				1.8	1.9	1.8	1.9
7/15/2010	1.6	1.1	1.4				
10/19/2010	1.3	1	1.1	1.5	1.5	2.2	7.5
3/3/2011	<1	<1	1	1.5	1.3	1.6	1.8
4/19/2011	1.3	<1	1	1.4	1.3	1.8	1.8
7/20/2011	1.1	<1	<1	1.3	<1	1.7	1.7
10/11/2011				1.5	1	1.6	1.6
10/12/2011	1.3	<1	<1				
2/20/2012	<1	<1	<1	2.7	1.1	1.3	1.6

Time Series

Constituent: Total Organic Carbon [TOC] (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
4/23/2012	<1	<1	<1	1.6	1	1.5	1.5
9/10/2012	1	<1	<1	1.2			
9/14/2012					<1	1.6	1.9
11/26/2012	1.1	<1	1.1	1.6	1.5	1.7	2.8
1/10/2013				1.2	1	1.4	1.9
1/11/2013	<1	<1	<1				
5/15/2013	<1	1	<1	1.4	1.1	1.5	2.2
7/17/2013	1.4	1.1	1.1	1.9	1.3	1.8	2
11/6/2013	<1	<1	<1	1.4	<1	1.4	1.4
3/12/2014	<1	<1	<1	1.2	<1	<1	1.3
4/21/2014	1	<1	<1	1.2	<1	1.2	2.6
7/8/2014	1.3	1.1	1.4	1.8	1.4	2.1	2.2
10/29/2014	1.5	1.3	1.6	2.3	1.3	2.4	2

Time Series

Constituent: Total Organic Halides (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
9/25/1992	<0.01			<0.01			
11/9/1992	<0.01	<0.01	<0.01				
1/18/1993		<0.01		0.02			
1/19/1993	<0.01		<0.01				
4/26/1993	<0.01	<0.01	<0.01	<0.01			
7/19/1993	<0.01	0.01	<0.01				
7/20/1993				<0.01			
10/19/1993	<0.01	<0.01	<0.01				
10/20/1993				<0.01			
2/8/1994	<0.01	<0.01	<0.01				
2/9/1994				<0.01			
4/18/1994	<0.01	<0.01	<0.01				
4/20/1994				<0.01			
7/13/1994				0.37			
7/14/1994	0.33	0.16	0.27				
10/18/1994				<0.01			
10/19/1994	<0.01	<0.01	<0.01				
1/11/1995	<0.01	<0.01	<0.01	<0.01			
4/25/1995				<0.01			
4/26/1995	<0.01	<0.01	<0.01				
7/10/1995				<0.01			
7/11/1995	<0.01	<0.01	<0.01				
11/14/1995	<0.01	<0.01		<0.01			
11/15/1995			<0.01				
2/19/1996				<0.01			
2/20/1996	<0.01	<0.01	<0.01				
5/21/1996		<0.01		<0.01			
5/22/1996			<0.01				
6/5/1996	<0.01						
8/19/1996	<0.01	<0.01	<0.01	<0.01			
11/5/1996	0.11	<0.01	<0.01	<0.01			
1/7/1997	<0.01	1.03	0.02	<0.01			
4/8/1997	<0.01	<0.01	<0.01	<0.01			
7/8/1997	<0.01	<0.01	<0.01	<0.01			
10/9/1997	<0.01	0.02	0.03	0.01			
3/19/1998	0.02	<0.01	0.03	0.05			
4/14/1998	<0.01	<0.01	<0.01	<0.01			
9/30/1998		0.01	<0.01	<0.01			
12/1/1998	<0.01	<0.01	0.03	<0.01			
3/9/1999	0.01	0.01	<0.01	<0.01			
6/22/1999	0.08	0.12	0.09				
9/7/1999		<0.01	<0.01	0.02			
11/2/1999	<0.01	<0.01	0.02	<0.01			
1/5/2000	0.02	0.01	0.01	<0.01			
6/19/2000				<0.01			
6/20/2000	<0.01	0.03	0.02				
9/6/2000	0.117	0.08	0.08	0.06			
11/28/2000	0.03	0.02	0.03	0.04			
1/22/2001	<0.01	0.01	<0.01	<0.01			
4/2/2001	<0.01	<0.01	<0.01	<0.01			
7/26/2001	<0.01	<0.01	<0.01	<0.01			
10/18/2001	<0.01	<0.01	<0.01				

Time Series

Constituent: Total Organic Halides (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
10/19/2001				0.03			
1/14/2002	<0.01	<0.01	<0.01				
1/15/2002				<0.01			
4/29/2002	<0.01	<0.01	<0.01				
4/30/2002				<0.01			
9/18/2002	<0.01	<0.01	<0.01	0.13			
11/19/2002	<0.01	0.1	<0.01	0.08			
3/10/2003	<0.01	<0.01	<0.01	<0.01			
4/10/2003	<0.01	<0.01	<0.01	<0.01			
7/22/2003	0.01	0.014	0.012	<0.01			
11/25/2003	0.015	<0.01	<0.01				
11/26/2003				0.061			
3/16/2004				<0.01			
3/17/2004	<0.01	<0.01	<0.01				
6/23/2004	<0.01	<0.01	<0.01	<0.01			
9/29/2004	<0.01	<0.01	<0.01	<0.01			
12/27/2004	<0.01	<0.01	<0.01	<0.01			
3/30/2005	<0.01	<0.01	<0.01	<0.01			
6/20/2005	<0.01	<0.01	<0.01	0.014			
9/27/2005	0.043	0.042	0.086	0.012			
12/16/2005	0.033	<0.01	0.058	0.074			
1/9/2006	0.123	0.081	0.051	0.105			
4/19/2006	0.037	<0.01	<0.01	0.037			
9/24/2006	0.042	0.064	0.034	<0.01			
12/5/2006	<0.01	0.028	<0.01	<0.01			
3/14/2007				<0.01			
3/16/2007	<0.01	<0.01	<0.01				
4/23/2007	<0.01	<0.01	<0.01				
9/19/2007	<0.01	<0.01	0.012	<0.01			
10/30/2007	<0.01	<0.01	0.014	<0.01			
1/23/2008	<0.01	<0.01	0.03	0.012			
4/7/2008	<0.01	<0.01	<0.01				
4/8/2008				0.019			
7/9/2008	<0.01	<0.01	0.026	<0.01			
12/2/2008	<0.01	<0.01	<0.01				
1/7/2009	<0.01	<0.01	<0.01	0.01			
6/15/2009	<0.01	<0.01	<0.01	<0.01			
8/26/2009	<0.01	0.015	0.013	<0.01			
10/20/2009	<0.01	<0.01	0.034	<0.01	<0.01	<0.01	0.012
11/16/2009					<0.01	0.012	0.017
12/21/2009					<0.01	<0.01	0.013
1/25/2010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.014
4/13/2010	<0.01	<0.01	0.014	0.011	<0.01	<0.01	0.013
7/14/2010				<0.01	<0.01	<0.01	0.017
7/15/2010	<0.01	<0.01	0.027				
10/19/2010	0.012	<0.01	0.075	<0.01	<0.01	0.015	0.031
3/3/2011	<0.01	0.014	0.011	0.012	0.012	0.014	0.022
4/19/2011	<0.01	0.011	0.015	<0.01	0.02	<0.01	<0.01
7/20/2011	<0.01	<0.01	0.017	0.019	0.015	0.034	0.028
10/11/2011				0.021	<0.01	0.01	0.02
10/12/2011	<0.01	0.01	0.013				
2/20/2012	<0.01	<0.01	<0.01	0.012	0.034	0.022	0.019

Time Series

Constituent: Total Organic Halides (mg/L) Analysis Run 12/10/2014 11:04 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

	MW-1	MW-1A	MW-1B	MW-3	MW-28E	MW-28D	MW-28C
4/23/2012	0.012	<0.01	0.015	<0.01	<0.01	0.015	0.022
9/10/2012	<0.01	<0.01	0.015	<0.01			
9/14/2012					<0.01	0.011	0.01
11/26/2012	0.012	<0.01	0.016	0.015	<0.01	0.027	0.055
1/10/2013				0.01	<0.01	0.015	0.021
1/11/2013	<0.01	<0.01	0.023				
5/15/2013	<0.01	<0.01	<0.01	<0.01	0.013	0.015	0.02
7/17/2013	<0.01	<0.01	0.018	0.013	<0.01	0.019	0.044
11/6/2013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/12/2014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/21/2014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.045
7/8/2014	<0.01	<0.01	0.022	<0.01	<0.01	0.011	0.021
10/29/2014	<0.01	0.015	0.026	0.032	<0.01	0.013	0.039

APPENDIX C

LABORATORY ANALYTICAL REPORT
&
FIELD INFORMATION LOGS

Pace Analytical®

Pace Analytical Services, Inc.

Quality Assurance Report # 66994

Pace Analytical Services, INC.
7901 W. Morris St.
Indianapolis, IN 46231
(317)243-8304

Visit us at : www.pacelabs.com

Report To:

GREEN VALLEY LANDFILL

Po Box 9

Rush, KY 41168

Attn : Bill Chlebowy

Submitter/Project Information

Submitter : KY-ALLIED-GREEN VALLEY LANDFILL

Project : GROUNDWATER - GREEN VALLEY LANDFILL



Christopher Boyle - Project Manager
chris.boyle@heritage-enviro.com
(317)390-3128



Pace Analytical®

Pace Analytical Services, Inc.

Sample Summary

COC ID# : KENVIRONS

COC Doc # : 01109600

Date/Time Sampled	Date Complete	LabSampleID	Client SampleID
10/27/2014 11:55:00	12/08/2014	AA31225	SW-3
10/27/2014 12:15:00	12/08/2014	AA31226	SW-4
10/27/2014 12:50:00	12/08/2014	AA31227	SW-1A

COC Doc # : 01109812

Date/Time Sampled	Date Complete	LabSampleID	Client SampleID
10/29/2014 09:42:00	12/08/2014	AA31787	MW-3
10/29/2014 10:30:00	12/08/2014	AA31788	MW-28C
10/29/2014 11:10:00	12/08/2014	AA31789	MW-28D
10/29/2014 11:45:00	12/08/2014	AA31790	MW-28E
10/29/2014 12:47:00	12/08/2014	AA31791	MW-1
10/29/2014 13:17:00	12/08/2014	AA31792	MW-1A
10/29/2014 14:05:00	12/08/2014	AA31793	FB
10/29/2014	12/08/2014	AA31794	DUP
10/29/2014 13:40:00	12/08/2014	AA31795	MW-1B

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Pace Analytical Services, Inc.

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	04-NOV-14	AA31787
	Completed	**PO Number**
	08-DEC-14	4595482
	Printed	**Sampled**
	08-DEC-14	29-OCT-14 09:42

Report To	Bill To
BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: MW-3
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: GROUNDWATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8000-8085

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 06-NOV-14 13:41 | Instrument: IC | Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	28	1.3	mg/L

1:5 Dilution.

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) NELAC:Y

Analyst: B. LEDFORD | Analysis Date: 11-NOV-14 11:30 | Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 NELAC:Y

Analyst: J. BOULSE | Analysis Date: 05-NOV-14 10:45 | Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	320	10	mg/L

TOTAL ORGANIC CARBON SW846-9060A NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 04-NOV-14 13:47 | Instrument: TOC | Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	2.3	1.0	mg/L

ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

Analyst: K. KAMARA | Analysis Date: 06-NOV-14 09:00 | Instrument: PREP | Test: P129.4.0

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Sample ID: AA31787 MW-3

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:19 Instrument: ICP Test: M115.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
IRON	9.5	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 22:19 Instrument: ICP Test: M131.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
SODIUM	15	0.10	mg/L

TOTAL ORGANIC HALIDES (TOX) SW846-9020B NELAC:Y

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 26-NOV-14 Instrument: TOX Test: O404.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC HALOGEN (TOX)	0.032	0.010	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 29-OCT-14 09:42 Instrument: FIELD Test: G600.0.0

Parameter	Result	Det. Limit	Units
ELEVATION OF GROUNDWATER SURFACE	625.27		Feet/MSL
ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL)	630.80		Feet/MSL
DEPTH TO WATER (FT. BELOW MEASURING POINT)	5.53		ft

FIELD PH (AQUEOUS) SW846-9040C NELAC:Y

Analysis Date: 29-OCT-14 09:42 Instrument: FIELD Test: G607.0.0

Parameter	Result	Det. Limit	Units
PH	5.15	0.1	Std. Units

FIELD SPECIFIC CONDUCTANCE SW846-9050A NELAC:Y

Analysis Date: 29-OCT-14 09:42 Instrument: FIELD Test: G604.0.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	528	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000 NELAC:N

Analysis Date: 29-OCT-14 09:42 Instrument: FIELD Test: G603.1.0

Parameter	Result	Det. Limit	Units
TEMPERATURE	14.49		Degrees C

Sample Comments

BDL Below Detection Limit

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31787 MW-3

Sample Comments

Sample was received on ice at temperature .8 C.
Sample chain of custody number KENVIRONS.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Pace Analytical Services, INC. certifies that the test results indicated as NELAP (National Environmental Laboratory Accreditation Program) accredited (Yes for NELAP) meet all requirements of NELAP and Kansas (KDHE) unless otherwise explained or justified as to the the exact nature of the deviations.
KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

As indicated, some testing was performed at the following locations:

KEYSTONE LABORATORIES, INC.
600 EAST 17TH ST. SOUTH , NEWTON, IA 50208

Approved by: CHRISTOPHER BOYLE 07-DEC-14

Package # 66994

Pace Analytical®
Pace Analytical Services, Inc.

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	04-NOV-14	AA31788
	Completed 08-DEC-14	**PO Number** 4595482
	Printed 08-DEC-14	**Sampled** 29-OCT-14 10:30

Report To	Bill To
BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: MW-28C
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: GROUNDWATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8005-7101

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 05-NOV-14 17:35 | Instrument: IC | Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	27	1.3	mg/L

1:5 Dilution.

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) NELAC:Y

Analyst: B. LEDFORD | Analysis Date: 11-NOV-14 11:30 | Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 NELAC:Y

Analyst: J. BOULSE | Analysis Date: 05-NOV-14 10:45 | Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	350	10	mg/L

TOTAL ORGANIC CARBON SW846-9060A NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 04-NOV-14 13:47 | Instrument: TOC | Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	2.0	1.0	mg/L

ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

Analyst: K. KAMARA | Analysis Date: 06-NOV-14 09:00 | Instrument: PREP | Test: P129.4.0

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Pace Analytical Services, Inc.

Sample ID: AA31788 MW-28C

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:02 Instrument: ICP Test: M115.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
IRON	0.56	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 22:22 Instrument: ICP Test: M131.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
SODIUM	18	0.10	mg/L

TOTAL ORGANIC HALIDES (TOX) SW846-9020B NELAC:Y

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 26-NOV-14 Instrument: TOX Test: O404.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC HALOGEN (TOX)	0.039	0.010	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 29-OCT-14 10:30 Instrument: FIELD Test: G600.0.0

Parameter	Result	Det. Limit	Units
ELEVATION OF GROUNDWATER SURFACE	670.00		Feet/MSL
ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL)	974.40		Feet/MSL
DEPTH TO WATER (FT. BELOW MEASURING POINT)	4.40		ft

FIELD PH (AQUEOUS) SW846-9040C NELAC:Y

Analysis Date: 29-OCT-14 10:30 Instrument: FIELD Test: G607.0.0

Parameter	Result	Det. Limit	Units
PH	4.57	0.1	Std. Units

FIELD SPECIFIC CONDUCTANCE SW846-9050A NELAC:Y

Analysis Date: 29-OCT-14 10:30 Instrument: FIELD Test: G604.0.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	594	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000 NELAC:N

Analysis Date: 29-OCT-14 10:30 Instrument: FIELD Test: G603.1.0

Parameter	Result	Det. Limit	Units
TEMPERATURE	15.03		Degrees C

Sample Comments

BDL Below Detection Limit

Package # 66994

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31788 MW-28C

Sample Comments

Sample was received on ice at temperature .8 C.
Sample chain of custody number KENVIRONS.

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KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

As indicated, some testing was performed at the following locations:

KEYSTONE LABORATORIES, INC.
600 EAST 17TH ST. SOUTH , NEWTON, IA 50208

Approved by: CHRISTOPHER BOYLE 07-DEC-14

Pace Analytical®
Pace Analytical Services, Inc.

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	04-NOV-14	AA31789
	Completed	**PO Number**
	08-DEC-14	4595482
	Printed	**Sampled**
	08-DEC-14	29-OCT-14 11:10

Report To	Bill To
BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: MW-28D
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: GROUNDWATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8005-7102

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 — NELAC:Y

Analyst: R. DALAL — Analysis Date: 05-NOV-14 17:51 — Instrument: IC — Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	25	1.3	mg/L

1:5 Dilution.

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) — NELAC:Y

Analyst: B. LEDFORD — Analysis Date: 11-NOV-14 11:30 — Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 — NELAC:Y

Analyst: J. BOULSE — Analysis Date: 05-NOV-14 10:45 — Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	450	10	mg/L

TOTAL ORGANIC CARBON SW846-9060A — NELAC:Y

Analyst: D. DICKERSON — Analysis Date: 04-NOV-14 13:47 — Instrument: TOC — Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	2.4	1.0	mg/L

ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

Analyst: K. KAMARA — Analysis Date: 06-NOV-14 09:00 — Instrument: PREP — Test: P129.4.0

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Pace Analytical Services, Inc.

Sample ID: AA31789 MW-28D

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:23 Instrument: ICP Test: M115.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
IRON	22	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 22:26 Instrument: ICP Test: M131.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
SODIUM	30	0.10	mg/L

TOTAL ORGANIC HALIDES (TOX) SW846-9020B NELAC:Y

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 26-NOV-14 Instrument: TOX Test: O404.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC HALOGEN (TOX)	0.013	0.010	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 29-OCT-14 11:10 Instrument: FIELD Test: G600.0.0

Parameter	Result	Det. Limit	Units
ELEVATION OF GROUNDWATER SURFACE	670.15		Feet/MSL
ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL)	675.20		Feet/MSL
DEPTH TO WATER (FT. BELOW MEASURING POINT)	5.05		ft

FIELD PH (AQUEOUS) SW846-9040C NELAC:Y

Analysis Date: 29-OCT-14 11:10 Instrument: FIELD Test: G607.0.0

Parameter	Result	Det. Limit	Units
PH	5.14	0.1	Std. Units

FIELD SPECIFIC CONDUCTANCE SW846-9050A NELAC:Y

Analysis Date: 29-OCT-14 11:10 Instrument: FIELD Test: G604.0.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	766	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000 NELAC:N

Analysis Date: 29-OCT-14 11:10 Instrument: FIELD Test: G603.1.0

Parameter	Result	Det. Limit	Units
TEMPERATURE	16.17		Degrees C

Sample Comments

BDL Below Detection Limit

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31789 MW-28D

Sample Comments

Sample was received on ice at temperature .8 C.
Sample chain of custody number KENVIRONS.

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KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

As indicated, some testing was performed at the following locations:

KEYSTONE LABORATORIES, INC.
600 EAST 17TH ST. SOUTH , NEWTON, IA 50208

Approved by: CHRISTOPHER BOYLE 07-DEC-14

Package # 66994

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CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	04-NOV-14	AA31790
	Completed 08-DEC-14	PO Number 4595482
	Printed 08-DEC-14	Sampled 29-OCT-14 11:45

Report To	Bill To
BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: MW-28E
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: GROUNDWATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8005-7103

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 05-NOV-14 18:07 | Instrument: IC | Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	1.7	1.0	mg/L

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) NELAC:Y

Analyst: B. LEDFORD | Analysis Date: 11-NOV-14 11:30 | Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 NELAC:Y

Analyst: J. BOULSE | Analysis Date: 05-NOV-14 10:45 | Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	180	10	mg/L

TOTAL ORGANIC CARBON SW846-9060A NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 04-NOV-14 13:47 | Instrument: TOC | Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	1.3	1.0	mg/L

ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

Analyst: K. KAMARA | Analysis Date: 06-NOV-14 09:00 | Instrument: PREP | Test: P129.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31790 MW-28E

Parameter	Result	Det. Limit	Units
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:26 Instrument: ICP Test: M115.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
IRON	0.056	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:26 Instrument: ICP Test: M131.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
SODIUM	11	0.10	mg/L

TOTAL ORGANIC HALIDES (TOX) SW846-9020B NELAC:Y

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 26-NOV-14 Instrument: TOX Test: O404.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC HALOGEN (TOX)	BDL	0.010	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 29-OCT-14 11:45 Instrument: FIELD Test: G600.0.0

Parameter	Result	Det. Limit	Units
ELEVATION OF GROUNDWATER SURFACE	667.58		Feet/MSL
ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL)	677.00		Feet/MSL
DEPTH TO WATER (FT. BELOW MEASURING POINT)	9.42		ft

FIELD PH (AQUEOUS) SW846-9040C NELAC:Y

Analysis Date: 29-OCT-14 11:45 Instrument: FIELD Test: G607.0.0

Parameter	Result	Det. Limit	Units
PH	5.66	0.1	Std. Units

FIELD SPECIFIC CONDUCTANCE SW846-9050A NELAC:Y

Analysis Date: 29-OCT-14 11:45 Instrument: FIELD Test: G604.0.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	329	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000 NELAC:N

Analysis Date: 29-OCT-14 11:45 Instrument: FIELD Test: G603.1.0

Parameter	Result	Det. Limit	Units
TEMPERATURE	16.33		Degrees C

Sample Comments

BDL Below Detection Limit

Sample was received on ice at temperature .8 C.

Package # 66994

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Sample ID: AA31790 MW-28E

Sample Comments

Sample chain of custody number KENVIRONS.

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KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

As indicated, some testing was performed at the following locations:

KEYSTONE LABORATORIES, INC.
600 EAST 17TH ST. SOUTH , NEWTON, IA 50208

Approved by: CHRISTOPHER BOYLE 07-DEC-14

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Pace Analytical Services, Inc.

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	04-NOV-14	AA31791
	Completed	**PO Number**
	08-DEC-14	4595482
	Printed	**Sampled**
	08-DEC-14	29-OCT-14 12:47

Report To	Bill To
BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: MW-1
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: GROUNDWATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8000-8086

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 05-NOV-14 19:12 | Instrument: IC | Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	1.3	1.0	mg/L

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) NELAC:Y

Analyst: B. LEDFORD | Analysis Date: 11-NOV-14 11:30 | Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 NELAC:Y

Analyst: J. BOULSE | Analysis Date: 05-NOV-14 10:45 | Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	56	10	mg/L

TOTAL ORGANIC CARBON SW846-9060A NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 04-NOV-14 13:47 | Instrument: TOC | Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	1.5	1.0	mg/L

ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

Analyst: K. KAMARA | Analysis Date: 06-NOV-14 09:00 | Instrument: PREP | Test: P129.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31791 MW-1

Parameter	Result	Det. Limit	Units
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:30 Instrument: ICP Test: M115.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
IRON	0.22	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 22:29 Instrument: ICP Test: M131.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
SODIUM	1.7	0.10	mg/L

TOTAL ORGANIC HALIDES (TOX) SW846-9020B NELAC:Y

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 26-NOV-14 Instrument: TOX Test: O404.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC HALOGEN (TOX)	BDL	0.010	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 29-OCT-14 12:47 Instrument: FIELD Test: G600.0.0

Parameter	Result	Det. Limit	Units
ELEVATION OF GROUNDWATER SURFACE	612.35		Feet/MSL
ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL)	617.80		Feet/MSL
DEPTH TO WATER (FT. BELOW MEASURING POINT)	5.45		ft

FIELD PH (AQUEOUS) SW846-9040C NELAC:Y

Analysis Date: 29-OCT-14 12:47 Instrument: FIELD Test: G607.0.0

Parameter	Result	Det. Limit	Units
PH	5.16	0.1	Std. Units

FIELD SPECIFIC CONDUCTANCE SW846-9050A NELAC:Y

Analysis Date: 29-OCT-14 12:47 Instrument: FIELD Test: G604.0.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	72	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000 NELAC:N

Analysis Date: 29-OCT-14 12:47 Instrument: FIELD Test: G603.1.0

Parameter	Result	Det. Limit	Units
TEMPERATURE	14.21		Degrees C

Sample Comments

BDL Below Detection Limit

Sample was received on ice at temperature .8 C.

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31791 MW-1

Sample Comments

Sample chain of custody number KENVIRONS.

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KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

As indicated, some testing was performed at the following locations:

KEYSTONE LABORATORIES, INC.
600 EAST 17TH ST. SOUTH , NEWTON, IA 50208

Approved by: CHRISTOPHER BOYLE 07-DEC-14

Package # 66994

Pace Analytical®
Pace Analytical Services, Inc.

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	04-NOV-14	AA31792
	Completed 08-DEC-14	PO Number 4595482
	Printed 08-DEC-14	Sampled 29-OCT-14 13:17

Report To	Bill To
BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: MW-1A
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: GROUNDWATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8000-2931

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 — NELAC:Y

Analyst: R. DALAL — Analysis Date: 05-NOV-14 20:01 — Instrument: IC — Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	3.7	1.0	mg/L

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) — NELAC:Y

Analyst: B. LEDFORD — Analysis Date: 11-NOV-14 11:30 — Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 — NELAC:Y

Analyst: J. BOULSE — Analysis Date: 05-NOV-14 10:45 — Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	240	10	mg/L

TOTAL ORGANIC CARBON SW846-9060A — NELAC:Y

Analyst: D. DICKERSON — Analysis Date: 04-NOV-14 13:47 — Instrument: TOC — Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	1.3	1.0	mg/L

ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

Analyst: K. KAMARA — Analysis Date: 06-NOV-14 09:00 — Instrument: PREP — Test: P129.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31792 MW-1A

Parameter	Result	Det. Limit	Units
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:33 Instrument: ICP Test: M115.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
IRON	2.0	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 22:32 Instrument: ICP Test: M131.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
SODIUM	23	0.10	mg/L

TOTAL ORGANIC HALIDES (TOX) SW846-9020B NELAC:Y

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 26-NOV-14 Instrument: TOX Test: O404.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC HALOGEN (TOX)	0.015	0.010	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 29-OCT-14 13:17 Instrument: FIELD Test: G600.0.0

Parameter	Result	Det. Limit	Units
ELEVATION OF GROUNDWATER SURFACE	615.05		Feet/MSL
ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL)	618.60		Feet/MSL
DEPTH TO WATER (FT. BELOW MEASURING POINT)	3.55		ft

FIELD PH (AQUEOUS) SW846-9040C NELAC:Y

Analysis Date: 29-OCT-14 13:17 Instrument: FIELD Test: G607.0.0

Parameter	Result	Det. Limit	Units
PH	5.88	0.1	Std. Units

FIELD SPECIFIC CONDUCTANCE SW846-9050A NELAC:Y

Analysis Date: 29-OCT-14 13:17 Instrument: FIELD Test: G604.0.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	412	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000 NELAC:N

Analysis Date: 29-OCT-14 13:17 Instrument: FIELD Test: G603.1.0

Parameter	Result	Det. Limit	Units
TEMPERATURE	13.21		Degrees C

Sample Comments

BDL Below Detection Limit

Sample was received on ice at temperature .8 C.

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Sample ID: AA31792 MW-1A

Sample Comments

Sample chain of custody number KENVIRONS.

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KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

As indicated, some testing was performed at the following locations:

KEYSTONE LABORATORIES, INC.
600 EAST 17TH ST. SOUTH , NEWTON, IA 50208

Approved by: CHRISTOPHER BOYLE 07-DEC-14

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Pace Analytical Services, Inc.

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	04-NOV-14	AA31793
	Completed 08-DEC-14	PO Number 4595482
	Printed 08-DEC-14	Sampled 29-OCT-14 14:05

Report To	Bill To
BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: FB
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: GROUNDWATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: N/A

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 — NELAC:Y

Analyst: R. DALAL — Analysis Date: 06-NOV-14 01:44 — Instrument: IC — Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	BDL	1.0	mg/L

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) — NELAC:Y

Analyst: B. LEDFORD — Analysis Date: 11-NOV-14 11:30 — Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 — NELAC:Y

Analyst: J. BOULSE — Analysis Date: 05-NOV-14 10:45 — Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	BDL	10	mg/L

TOTAL ORGANIC CARBON SW846-9060A — NELAC:Y

Analyst: D. DICKERSON — Analysis Date: 04-NOV-14 13:47 — Instrument: TOC — Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	1.0	mg/L

ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

Analyst: K. KAMARA — Analysis Date: 06-NOV-14 09:00 — Instrument: PREP — Test: P129.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31793 FB

Parameter	Result	Det. Limit	Units
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:36 Instrument: ICP Test: M115.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
IRON	BDL	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:36 Instrument: ICP Test: M131.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
SODIUM	BDL	0.10	mg/L

TOTAL ORGANIC HALIDES (TOX) SW846-9020B NELAC:Y

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 26-NOV-14 Instrument: TOX Test: O404.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC HALOGEN (TOX)	BDL	0.010	mg/L

Sample Comments

BDL Below Detection Limit

Sample was received on ice at temperature .8 C.
Sample chain of custody number KENVIRONS.

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KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

As indicated, some testing was performed at the following locations:

KEYSTONE LABORATORIES, INC.
600 EAST 17TH ST. SOUTH , NEWTON, IA 50208

Approved by: CHRISTOPHER BOYLE 07-DEC-14

Package # 66994

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CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	04-NOV-14	AA31794
	Completed 08-DEC-14	PO Number 4595482
	Printed 08-DEC-14	Sampled 29-OCT-14

Report To	Bill To
BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: DUP
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: GROUNDWATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: N/A

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 — NELAC:Y

Analyst: R. DALAL — Analysis Date: 06-NOV-14 13:57 — Instrument: IC — Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	1.3	1.0	mg/L

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) — NELAC:Y

Analyst: B. LEDFORD — Analysis Date: 11-NOV-14 11:30 — Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 — NELAC:Y

Analyst: J. BOULSE — Analysis Date: 05-NOV-14 10:45 — Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	34	10	mg/L

TOTAL ORGANIC CARBON SW846-9060A — NELAC:Y

Analyst: D. DICKERSON — Analysis Date: 04-NOV-14 13:47 — Instrument: TOC — Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	1.0	mg/L

ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

Analyst: K. KAMARA — Analysis Date: 06-NOV-14 09:00 — Instrument: PREP — Test: P129.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL

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Pace Analytical Services, Inc.

Sample ID: AA31794 DUP

Parameter	Result	Det. Limit	Units
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 05:40 Instrument: ICP Test: M115.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
IRON	0.16	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 07-NOV-14 22:36 Instrument: ICP Test: M131.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
SODIUM	1.7	0.10	mg/L

TOTAL ORGANIC HALIDES (TOX) SW846-9020B NELAC:Y

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 26-NOV-14 Instrument: TOX Test: O404.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC HALOGEN (TOX)	BDL	0.010	mg/L

Sample Comments

BDL Below Detection Limit

Sample was received on ice at temperature .8 C.
Sample chain of custody number KENVIRONS.

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KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

As indicated, some testing was performed at the following locations:

KEYSTONE LABORATORIES, INC.
600 EAST 17TH ST. SOUTH , NEWTON, IA 50208

Approved by: CHRISTOPHER BOYLE 07-DEC-14

Package # 66994

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CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	04-NOV-14	AA31795
	Completed	**PO Number**
	08-DEC-14	4595482
	Printed	**Sampled**
	08-DEC-14	29-OCT-14 13:40

Report To	Bill To
BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: MW-1B
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: GROUNDWATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8000-2932

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 — NELAC:Y

Analyst: R. DALAL — Analysis Date: 05-NOV-14 20:34 — Instrument: IC — Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	38	1.3	mg/L

1:5 Dilution.

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) — NELAC:Y

Analyst: B. LEDFORD — Analysis Date: 11-NOV-14 11:30 — Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

MS and/or MSD do not meet control limits. Results for this sample are estimated.

TOTAL DISSOLVED SOLIDS SM2540 C 1997 — NELAC:Y

Analyst: J. BOULSE — Analysis Date: 05-NOV-14 10:45 — Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	390	10	mg/L

TOTAL ORGANIC CARBON SW846-9060A — NELAC:Y

Analyst: D. DICKERSON — Analysis Date: 04-NOV-14 13:47 — Instrument: TOC — Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	1.6	1.0	mg/L

Sample ID: AA31795 MW-1B

ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

Analyst: K. KAMARA | Analysis Date: 06-NOV-14 09:00 | Instrument: PREP | Test: P129.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER | Analysis Date: 07-NOV-14 05:43 | Instrument: ICP | Test: M115.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
IRON	0.40	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER | Analysis Date: 07-NOV-14 05:43 | Instrument: ICP | Test: M131.3.0

Prep: ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8 P129.4.0

Parameter	Result	Det. Limit	Units
SODIUM	120	0.10	mg/L

TOTAL ORGANIC HALIDES (TOX) SW846-9020B NELAC:Y

Vendor: KEYSTONE LABORATORIES, INC. | Analysis Date: 26-NOV-14 | Instrument: TOX | Test: O404.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC HALOGEN (TOX)	0.026	0.010	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 29-OCT-14 13:40 | Instrument: FIELD | Test: G600.0.0

Parameter	Result	Det. Limit	Units
ELEVATION OF GROUNDWATER SURFACE	612.27		Feet/MSL
ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL)	618.70		Feet/MSL
DEPTH TO WATER (FT. BELOW MEASURING POINT)	6.43		ft

FIELD PH (AQUEOUS) SW846-9040C NELAC:Y

Analysis Date: 29-OCT-14 13:40 | Instrument: FIELD | Test: G607.0.0

Parameter	Result	Det. Limit	Units
PH	NA	0.1	Std. Units

FIELD SPECIFIC CONDUCTANCE SW846-9050A NELAC:Y

Analysis Date: 29-OCT-14 13:40 | Instrument: FIELD | Test: G604.0.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	NA	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000 NELAC:N

Analysis Date: 29-OCT-14 13:40 | Instrument: FIELD | Test: G603.1.0

Parameter	Result	Det. Limit	Units
TEMPERATURE	NA		Degrees C

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Sample ID: AA31795 MW-1B

Sample Comments

BDL Below Detection Limit
NA Not Applicable

Sample was received on ice at temperature .8 C.
Sample chain of custody number KENVIRONS.

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KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

As indicated, some testing was performed at the following locations:

KEYSTONE LABORATORIES, INC.
600 EAST 17TH ST. SOUTH , NEWTON, IA 50208

Approved by: CHRISTOPHER BOYLE 07-DEC-14

Package # 66994

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CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	28-OCT-14	AA31225
	Completed 08-DEC-14	PO Number 4595482
	Printed 08-DEC-14	Sampled 27-OCT-14 11:55

Report To	Bill To
DANIEL DEBORDE GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: SW-3
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: SURFACE WATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: SURFACE WATERS - QUARTERLY
SITE: GREEN VALLEY LANDFILL

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 29-OCT-14 17:13 | Instrument: IC | Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	9.6	1.0	mg/L

SULFATE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 29-OCT-14 17:30 | Instrument: IC | Test: G310.7.0

Parameter	Result	Det. Limit	Units
SULFATE	390	5.0	mg/L

1:10 Dilution.

TOTAL ORGANIC CARBON SW846-9060A NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 04-NOV-14 13:47 | Instrument: TOC | Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	2.9	2.0	mg/L

1:2 Dilution.

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) NELAC:Y

Analyst: B. LEDFORD | Analysis Date: 04-NOV-14 11:50 | Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

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Sample ID: AA31225 SW-3

TOTAL SUSPENDED SOLIDS DRIED AT 103-105 DEGREES C SM2540 D 19TH ED NELAC:Y

Analyst: C. ANYANWUTAKU Analysis Date: 29-OCT-14 11:05 Test: G403.8.0

Parameter	Result	Det. Limit	Units
SUSPENDED SOLIDS	BDL	1	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 NELAC:Y

Analyst: C. ANYANWUTAKU Analysis Date: 30-OCT-14 10:30 Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	620	10	mg/L

TOTAL SOLIDS DRIED AT 103-105 DEGREES C SM2540 B 1997 NELAC:Y

Analyst: C. ANYANWUTAKU Analysis Date: 28-OCT-14 15:05 Test: G401.6.0

Parameter	Result	Det. Limit	Units
SOLIDS	670	10	mg/L

Sample fails precision (RPD is outside) control limits. Results for this sample are estimated.

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A

Analyst: K. KAMARA Analysis Date: 31-OCT-14 09:00 Instrument: PREP Test: P130.5.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 01-NOV-14 07:44 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A P130.5.0

Parameter	Result	Det. Limit	Units
IRON	0.091	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 01-NOV-14 07:44 Instrument: ICP Test: M131.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A P130.5.0

Parameter	Result	Det. Limit	Units
SODIUM	9.5	0.10	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 27-OCT-14 Instrument: FIELD Test: G600.0.0

Parameter	Result	Det. Limit	Units
FLOW RATE (CMF)	20		Gal/Min

FIELD PH (AQUEOUS) SW846-9040C NELAC:Y

Analysis Date: 27-OCT-14 Instrument: FIELD Test: G607.0.0

Parameter	Result	Det. Limit	Units

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31225 SW-3

Parameter	Result	Det. Limit	Units
PH	7.24	0.1	Std. Units

FIELD SPECIFIC CONDUCTANCE SW846-9050A NELAC:Y

Analysis Date: 27-OCT-14 Instrument: FIELD Test: G604.0.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	927	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000 NELAC:N

Analysis Date: 27-OCT-14 Instrument: FIELD Test: G603.1.0

Parameter	Result	Det. Limit	Units
TEMPERATURE	12.53		Degrees C

Sample Comments

BDL Below Detection Limit

Sample was received on ice at temperature .8 C.
Sample chain of custody number KENVIRONS.

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KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

Approved by: CHRISTOPHER BOYLE 10-NOV-14

Package # 66994

Pace Analytical®
Pace Analytical Services, Inc.

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	28-OCT-14	AA31226
	Completed 08-DEC-14	PO Number 4595482
	Printed 08-DEC-14	Sampled 27-OCT-14 12:15

Report To	Bill To
DANIEL DEBORDE GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: SW-4
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: SURFACE WATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: SURFACE WATERS - QUARTERLY
SITE: GREEN VALLEY LANDFILL

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 29-OCT-14 17:46 | Instrument: IC | Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	4.9	0.25	mg/L

SULFATE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 30-OCT-14 15:45 | Instrument: IC | Test: G310.7.0

Parameter	Result	Det. Limit	Units
SULFATE	580	6.3	mg/L

1:25 Dilution.

TOTAL ORGANIC CARBON SW846-9060A NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 06-NOV-14 10:27 | Instrument: TOC | Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	2.9	1.0	mg/L

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) NELAC:Y

Analyst: B. LEDFORD | Analysis Date: 04-NOV-14 11:50 | Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

TOTAL SUSPENDED SOLIDS DRIED AT 103-105 DEGREES C SM2540 D 19TH ED NELAC:Y

Analyst: C. ANYANWUTAKU | Analysis Date: 29-OCT-14 11:05 | Test: G403.8.0

Parameter	Result	Det. Limit	Units

Sample ID: AA31226 SW-4

Parameter	Result	Det. Limit	Units
SUSPENDED SOLIDS	3	1	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 NELAC:Y

Analyst: C. ANYANWUTAKU Analysis Date: 30-OCT-14 10:30 Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	910	10	mg/L

TOTAL SOLIDS DRIED AT 103-105 DEGREES C SM2540 B 1997 NELAC:Y

Analyst: C. ANYANWUTAKU Analysis Date: 28-OCT-14 15:05 Test: G401.6.0

Parameter	Result	Det. Limit	Units
SOLIDS	980	10	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A

Analyst: K. KAMARA Analysis Date: 31-OCT-14 09:00 Instrument: PREP Test: P130.5.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

IRON ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 01-NOV-14 07:47 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A P130.5.0

Parameter	Result	Det. Limit	Units
IRON	1.1	0.020	mg/L

SODIUM ICP SW846-6010B NELAC:Y

Analyst: J. KRAMER Analysis Date: 01-NOV-14 07:47 Instrument: ICP Test: M131.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A P130.5.0

Parameter	Result	Det. Limit	Units
SODIUM	9.5	0.10	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 27-OCT-14 Instrument: FIELD Test: G600.0.0

Parameter	Result	Det. Limit	Units
FLOW RATE (CMF)	15		Gal/Min

FIELD PH (AQUEOUS) SW846-9040C NELAC:Y

Analysis Date: 27-OCT-14 Instrument: FIELD Test: G607.0.0

Parameter	Result	Det. Limit	Units
PH	7.23	0.1	Std. Units

FIELD SPECIFIC CONDUCTANCE SW846-9050A NELAC:Y

Analysis Date: 27-OCT-14 Instrument: FIELD Test: G604.0.0

Parameter	Result	Det. Limit	Units

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31226 SW-4

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	1205	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000 NELAC:N

Analysis Date: 27-OCT-14 Instrument: FIELD Test: G603.1.0

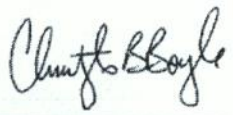
Parameter	Result	Det. Limit	Units
TEMPERATURE	12.24		Degrees C

Sample Comments

BDL Below Detection Limit

Sample was received on ice at temperature .8 C.
Sample chain of custody number KENVIRONS.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Pace Analytical Services, INC. certifies that the test results indicated as NELAP (National Environmental Laboratory Accreditation Program) accredited (Yes for NELAP) meet all requirements of NELAP and Kansas (KDHE) unless otherwise explained or justified as to the the exact nature of the deviations.
KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01



Approved by: CHRISTOPHER BOYLE 13-NOV-14

Package # 66994

Pace Analytical®
Pace Analytical Services, Inc.

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	28-OCT-14	AA31227
	Completed 08-DEC-14	**PO Number** 4595482
	Printed 08-DEC-14	**Sampled** 27-OCT-14 12:50

Report To	Bill To
DANIEL DEBORDE GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168	ALLIED WASTE SYSTEMS 258 North Fork Road Wheeling, WV 26003

Sample Description

CLIENT ID: SW-1A
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: SURFACE WATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66994
DESCRIPTION: SURFACE WATERS - QUARTERLY
SITE: GREEN VALLEY LANDFILL

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 29-OCT-14 18:35 | Instrument: IC | Test: G310.2.0

Parameter	Result	Det. Limit	Units
CHLORIDE	82	2.5	mg/L

1:10 Dilution.

SULFATE BY ION CHROMATOGRAPHY SW846-9056 NELAC:Y

Analyst: R. DALAL | Analysis Date: 30-OCT-14 16:02 | Instrument: IC | Test: G310.7.0

Parameter	Result	Det. Limit	Units
SULFATE	740	6.3	mg/L

1:25 Dilution.

TOTAL ORGANIC CARBON SW846-9060A NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 04-NOV-14 13:47 | Instrument: TOC | Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	5.6	5.0	mg/L

1:5 Dilution.

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) NELAC:Y

Analyst: B. LEDFORD | Analysis Date: 04-NOV-14 11:50 | Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	BDL	10	mg/L

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31227 SW-1A

TOTAL SUSPENDED SOLIDS DRIED AT 103-105 DEGREES C SM2540 D 19TH ED — NELAC:Y

Analyst: C. ANYANWUTAKU — Analysis Date: 29-OCT-14 11:05 — Test: G403.8.0

Parameter	Result	Det. Limit	Units
SUSPENDED SOLIDS	11	1	mg/L

TOTAL DISSOLVED SOLIDS SM2540 C 1997 — NELAC:Y

Analyst: C. ANYANWUTAKU — Analysis Date: 30-OCT-14 10:30 — Test: G402.9.0

Parameter	Result	Det. Limit	Units
DISSOLVED SOLIDS	1400	10	mg/L

TOTAL SOLIDS DRIED AT 103-105 DEGREES C SM2540 B 1997 — NELAC:Y

Analyst: C. ANYANWUTAKU — Analysis Date: 28-OCT-14 15:05 — Test: G401.6.0

Parameter	Result	Det. Limit	Units
SOLIDS	1500	10	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A

Analyst: K. KAMARA — Analysis Date: 31-OCT-14 09:00 — Instrument: PREP — Test: P130.5.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

IRON ICP SW846-6010B — NELAC:Y

Analyst: J. KRAMER — Analysis Date: 01-NOV-14 07:51 — Instrument: ICP — Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A P130.5.0

Parameter	Result	Det. Limit	Units
IRON	6.6	0.020	mg/L

SODIUM ICP SW846-6010B — NELAC:Y

Analyst: J. KRAMER — Analysis Date: 01-NOV-14 07:51 — Instrument: ICP — Test: M131.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A P130.5.0

Parameter	Result	Det. Limit	Units
SODIUM	53	0.10	mg/L

GROUNDWATER MONITORING WELL DATA SAS

Analysis Date: 27-OCT-14 — Instrument: FIELD — Test: G600.0.0

Parameter	Result	Det. Limit	Units
FLOW RATE (CMF)	15		Gal/Min

FIELD PH (AQUEOUS) SW846-9040C — NELAC:Y

Analysis Date: 27-OCT-14 — Instrument: FIELD — Test: G607.0.0

Parameter	Result	Det. Limit	Units
PH	6.94	0.1	Std. Units

Pace Analytical®
Pace Analytical Services, Inc.

Sample ID: AA31227 SW-1A

FIELD SPECIFIC CONDUCTANCE SW846-9050A			NELAC:Y
	Analysis Date: 27-OCT-14	Instrument: FIELD	Test: G604.0.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	1937	1.0	umHOS/cm

FIELD TEMPERATURE SM2550 B 2000			NELAC:N
	Analysis Date: 27-OCT-14	Instrument: FIELD	Test: G603.1.0

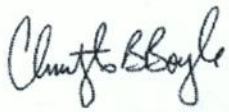
Parameter	Result	Det. Limit	Units
TEMPERATURE	15.38		Degrees C

Sample Comments

BDL Below Detection Limit

Sample was received on ice at temperature .8 C.
Sample chain of custody number KENVIRONS.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Pace Analytical Services, INC. certifies that the test results indicated as NELAP (National Environmental Laboratory Accreditation Program) accredited (Yes for NELAP) meet all requirements of NELAP and Kansas (KDHE) unless otherwise explained or justified as to the the exact nature of the deviations.
KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01



Approved by: CHRISTOPHER BOYLE 10-NOV-14

Package # 66994

01109600

KENVIRONS, INC.
CHAIN OF CUSTODY RECORD

452 Versailles Road; Frankfort, KY 40601
www.kenvirons.com (502) 695-4357 Fax: (502) 695-4363

Customer Name: Kenvirons | Submitter No. 9795

Project Number: 2011033

Client: Green Valley LF

Sampled By: BFK III / BTB/BFK

Send Report To: Bill Knoch

Address: Kenvirons, Inc.

E-mail:

Sample Turn Around Time
Standard: X Rush Date: ___/___/___
(Accelerated TAT subject to Additional Charge)
(Date must be Accepted and Approved by Lab)

Date Sampled	Time Sampled	Comp	Grab	Sample ID and/or Location	Sample type (Waste: DW, GW, WW, Soil, Sludge, Other)	Number of Containers	Flow (Gal/Min)	Field Turbidity	Field pH	Field Conductance	Field Temperature	Field Dissolved Oxygen	ORP	Z Quote number	Lab use only Sample No.
10/27/14	1155		X	SW-3	SW	4	20	—	7.24	927	12.53	—	—	146799	AA31225
10/27/14	1215		X	SW-4	SW	4	15	—	7.23	1205	12.24	—	—	146799	226
10/27/14	1250		X	SW-1A	SW	4	15	—	6.94	1932	15.38	—	—	146799	227

Relinquished by: (Signature) Date/Time: 10/27/14 1700 — Received by: (Signature): Sent Via UPS

Relinquished by: (Signature) Date/Time: / — Received by: (Signature)

Relinquished by: (Signature) Date/Time: / — Received by: (Signature)

Received for Laboratory: (Signature) Date: 10/28/14 Time: 1030 — 0.2 °C — ROI? Yes / No

Laboratory Use Only	yes	no
Custody seals present/intact?	—	
Broken containers?		—
COC agree with sample labels?	—	
Correct containers for testing?	—	
Headspace issues acceptable?	—	
Holding time(s) acceptable?	—	
Preservative pH's acceptable?	—	
Was pH left unadjusted?	—	

Comments:

White - Kenvirons Laboratory
Yellow - Third Party Laboratory
Pink - Sampler

Package # 66994

Sample Receiving Check Sheet

COC ID: 375602

	Sulfuric plastic <2	Sulfuric Diss Plastic<2	Sulfuric glass <2	Nitric plastic <2	Nitric Diss Plastic <2	NaOH/ZnAOC <12	NaOH plastic >12	preservative added?	pH after addition	Residual C12 present Y/N	Headspace >1/4"	Sample is UNP or other than aqueous	HCL Preserved Containers*	Comments
Line 1 on COC				2										
Line 2 on COC				2										
Line 3 on COC				2										
Line 4 on COC														
Line 5 on COC														
Line 6 on COC														
Line 7 on COC														
Line 8 on COC														
Line 9 on COC														
Line 10 on COC														
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Line 13 on COC														
Line 14 on COC														
Line 15 on COC														
Line 16 on COC														
Line 17 on COC														
Line 18 on COC														
Line 19 on COC														
Line 20 on COC														
Line 21 on COC														
Line 22 on COC														
Line 23 on COC														
Line 24 on COC														
Line 25 on COC														

Aqueous samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container then record the pH in the box. If approved by the project chemist then add acid or base to the sample to achieve the correct pH. Add up to two times the volume initially added to the sample container. Record pH after the addition of this preservative.

Preservative sizes for addition:

120ml NaOH	1 mL
500ml H2SO4	2 mL
1000ml H2SO4	4 mL
500ml HNO3	2 mL
1000ml HNO3	4 mL

Drop Off FedEx UPS Courier

Tracking #

Checked by:

*pH of HCL preserved containers checked by analysts

Comments:

01109812

KENVIRONS, INC.
CHAIN OF CUSTODY RECORD

452 Versailles Road; Frankfort, KY 40601
www.kenvirons.com (502) 695-4357 Fax: (502) 695-4363

Customer Name: Kenvirons | Submitter No. 9795

Project Number: 20070006

Client: Green Valley LF

Sampled By: BFK III / BTB / BFK III

Send Report To: Bill Knarr

Address: Kenvirons, Inc.

E-mail:

Sample Turn Around Time

Standard: ____ Rush Date: ____/____/____

(Accelerated TAT subject to Additional Charges)
(Date must be Accepted and Approved by Lab)

Date Sampled	Time Sampled	Comp	Grab	Sample ID and/or Location	Sample type (Matrix): DW, GW, WW, Soil, Sludge, Other	Number of Containers	Flow (Gal/Min)	Field Turbidity	Field pH	Field Conductance	Field Temperature	Field Dissolved Oxygen	ORP	Z Quote number	Lab use only Sample No.
10/29/14	0942 AM PM		X	MW-3	GW	5	—	6.3	5.15	528	14.49	1.88	—	144756	AA31787
10/29/14	1030 AM PM		X	MW-28C	GW	5	—	6.1	4.57	594	15.03	1.08	—	144756	788
10/29/14	1110 AM PM		X	MW-28D	GW	5	—	16.6	5.14	766	16.17	1.48	—	144756	789
10/29/14	1145 AM PM		X	MW-28E	GW	5	—	5.2	5.66	329	16.33	2.04	—	144756	790
10/29/14	1247 AM PM		X	MW-1	GW	5	—	8.4	5.16	72	14.21	6.30	—	144756	791
10/29/14	1317 AM PM		X	MW-1A	GW	5	—	8.3	5.88	412	13.21	2.24	—	144756	792
10/29/14	1405 AM PM		X	FB	—	5	—	—	—	—	—	—	—	144756	793
10/29/14	AM PM		X	Dup	GW	5	—	—	—	—	—	—	—	144756	794
10/29/14	1346 AM PM			MW-1B		5									795
	AM PM														
	AM PM														
	AM PM														
	AM PM														
	AM PM														
	AM PM														

Relinquished by: (Signature) Date/Time: 11/3/14 1600

Received by: (Signature): Sent Via UPS

Relinquished by: (Signature) Date/Time

Received by: (Signature)

Relinquished by: (Signature) Date/Time

Received by: (Signature)

Received for Lab by: (Signature)

Date: 11/4/14 Time: 1025

0.8 °C

Room Temp / No

Laboratory Use Only	yes	no
Custody seals present/intact?	—	
Broken containers?		—
COC agree with sample labels?		—
Correct containers for testing?	✓	
Headspace issues acceptable?	✓	
Holding time(s) acceptable?	✓	
Preservative pH's acceptable?	✓	
Was pH left unadjusted?	✓	

Comments: MW-1B Rcvd ADDED TO COC By MTW

White - Kenvirons Laboratory
Yellow - Third Party Laboratory
Pink - Sampler

Package # 66994

Sample Receiving Check Sheet

COC ID: 607812

	Sulfuric plastic <2	Sulfuric Diss Plastic<2	Sulfuric glass <2	Nitric plastic <2	Nitric Diss Plastic <2	NaOH/ZnAOC <12	NaOH plastic>12	preservative added?	pH after addition	Residual Cl2 present Y/N	Headspace >1/4"	Sample is UNP or other than aqueous	HCL Preserved Containers*	Comments
Line 1 on COC	2		X	2										
Line 2 on COC	2		X	2										
Line 3 on COC	2		X	2										
Line 4 on COC	2		X	2										
Line 5 on COC	2		X	2										
Line 6 on COC	2		X	2										
Line 7 on COC	2		X	2										
Line 8 on COC	2		X	2										
Line 9 on COC	2		X	2										
Line 10 on COC														
Line 11 on COC														
Line 12 on COC														
Line 13 on COC														
Line 14 on COC														
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Line 20 on COC														
Line 21 on COC														
Line 22 on COC														
Line 23 on COC														
Line 24 on COC														
Line 25 on COC														

Aqueous samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container then record the pH in the box. If approved by the project chemist then add acid or base to the sample to achieve the correct pH. Add up to two times the volume initially added to the sample container. Record pH after the addition of this preservative.

Preservative sizes for addition:

120ml NaOH	1 mL
500ml H2SO4	2 mL
1000ml H2SO4	4 mL
500ml HNO3	2 mL
1000ml HNO3	4 mL

Drop Off FedEx UPS Courier

Tracking #

Checked by

*pH of HCL preserved containers checked by analysts

Comments:

Pace Analytical®

Pace Analytical Services, Inc.

Quality Assurance Report

66994

08-DEC-14

Service Location	Submitter
Pace Analytical Services, INC. 7901 West Morris Street Indianapolis, IN 46231 (317) 243-8304	BILL CHLEBOWY GREEN VALLEY LANDFILL PO BOX 9 RUSH, KY 41168

Sample ID	Client ID	Date/Time Sampled	Date Received	Date Released
AA31225	SW-3	27-Oct-14 11:55	28-Oct-14	10-Nov-2014
	DESCRIPTION :	SURFACE WATERS - QUARTERLY		
	SITE :	GREEN VALLEY LANDFILL		
AA31226	SW-4	27-Oct-14 12:15	28-Oct-14	13-Nov-2014
	DESCRIPTION :	SURFACE WATERS - QUARTERLY		
	SITE :	GREEN VALLEY LANDFILL		
AA31227	SW-1A	27-Oct-14 12:50	28-Oct-14	10-Nov-2014
	DESCRIPTION :	SURFACE WATERS - QUARTERLY		
	SITE :	GREEN VALLEY LANDFILL		
AA31787	MW-3	29-Oct-14 09:42	04-Nov-14	07-Dec-2014
	DESCRIPTION :	GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)		
	LOCATION :	GREEN VALLEY LANDFILL		
	AKGWA # :	8000-8085		
AA31788	MW-28C	29-Oct-14 10:30	04-Nov-14	07-Dec-2014
	DESCRIPTION :	GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)		
	LOCATION :	GREEN VALLEY LANDFILL		
	AKGWA # :	8005-7101		
AA31789	MW-28D	29-Oct-14 11:10	04-Nov-14	07-Dec-2014
	DESCRIPTION :	GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)		
	LOCATION :	GREEN VALLEY LANDFILL		
	AKGWA # :	8005-7102		
AA31790	MW-28E	29-Oct-14 11:45	04-Nov-14	07-Dec-2014
	DESCRIPTION :	GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)		
	LOCATION :	GREEN VALLEY LANDFILL		
	AKGWA # :	8005-7103		
AA31791	MW-1	29-Oct-14 12:47	04-Nov-14	07-Dec-2014
	DESCRIPTION :	GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)		
	LOCATION :	GREEN VALLEY LANDFILL		
	AKGWA # :	8000-8086		
AA31792	MW-1A	29-Oct-14 13:17	04-Nov-14	07-Dec-2014
	DESCRIPTION :	GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)		
	LOCATION :	GREEN VALLEY LANDFILL		
	AKGWA # :	8000-2931		
AA31793	FB	29-Oct-14 14:05	04-Nov-14	07-Dec-2014
	DESCRIPTION :	GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)		
	LOCATION :	GREEN VALLEY LANDFILL		
	AKGWA # :	N/A		

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Pace Analytical Services, Inc.

Quality Assurance Report

66994

08-DEC-14

Sample ID	Client ID	Date/Time Sampled	Date Received	Date Released
AA31794	DUP	29-Oct-14	04-Nov-14	07-Dec-2014
	DESCRIPTION :	GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)		
	LOCATION :	GREEN VALLEY LANDFILL		
	AKGWA # :	N/A		
AA31795	MW-1B	29-Oct-14 13:40	04-Nov-14	07-Dec-2014
	DESCRIPTION :	GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)		
	LOCATION :	GREEN VALLEY LANDFILL		
	AKGWA # :	8000-2932		

Pace Analytical®

Pace Analytical Services, Inc.

Quality Assurance Report **66994**

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4 REV. 2.0 (1993) G301.1

R632384 Analyst: B LEDFORD Run Date: 04-Nov-14
Analytical Reviewer: P SPENCE Review Date: 04-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
CDL01	Q2877879		CHEMICAL OXYGEN DEMAND	10.0			8.67	mg/L	86.7	
ICV01	Q2877880		CHEMICAL OXYGEN DEMAND	100			92.5	mg/L	92.5	
ICV01	Q2877888		CHEMICAL OXYGEN DEMAND	100			92.2	mg/L	92.2	
CCV	Q2877889		CHEMICAL OXYGEN DEMAND	100			102	mg/L	102.0	
BLA01	Q2877890		CHEMICAL OXYGEN DEMAND			BDL	5	mg/L		
SPI01	Q2877891	AA31223	CHEMICAL OXYGEN DEMAND	12.4	50.0		62.4	mg/L	100.0	
DPS01	Q2877892	AA31223	CHEMICAL OXYGEN DEMAND	12.4	50.0		54.6	mg/L	84.4	16.9
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
CCV	Q2877893		CHEMICAL OXYGEN DEMAND	100			101	mg/L	101.0	
BLA01	Q2877894		CHEMICAL OXYGEN DEMAND			BDL	5	mg/L		
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							
ICV01	Q2877895		CHEMICAL OXYGEN DEMAND	100			94.2	mg/L	94.2	
CCV	Q2877896		CHEMICAL OXYGEN DEMAND	100			100	mg/L	100.0	
BLA01	Q2877897		CHEMICAL OXYGEN DEMAND			BDL	10	mg/L		

Q2877892 MS and/or MSD do not meet control limits. Results for this sample are
Q2877892 estimated.

R632697 Analyst: B LEDFORD Run Date: 11-Nov-14
Analytical Reviewer: P SPENCE Review Date: 12-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2881029		CHEMICAL OXYGEN DEMAND			BDL	5	mg/L		
CDL01	Q2881030		CHEMICAL OXYGEN DEMAND	10.0			7.75	mg/L	77.5	
ICV01	Q2881031		CHEMICAL OXYGEN DEMAND	100			92.4	mg/L	92.4	
CCV	Q2881032		CHEMICAL OXYGEN DEMAND	100			104	mg/L	104.0	
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31793		See Certificate of Analysis, Rep: 0							
CCV	Q2881035		CHEMICAL OXYGEN DEMAND	100			101	mg/L	101.0	
BLA01	Q2881036		CHEMICAL OXYGEN DEMAND			BDL	5	mg/L		
SAMPLE	AA31794		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							
SPI01	Q2881037	AA31795	CHEMICAL OXYGEN DEMAND	0.0	50.0		51.0	mg/L	102.0	
DPS01	Q2881038	AA31795	CHEMICAL OXYGEN DEMAND	0.0	50.0		55.4	mg/L	110.8	8.3
ICV01	Q2881039		CHEMICAL OXYGEN DEMAND	100			92.3	mg/L	92.3	
CCV	Q2881040		CHEMICAL OXYGEN DEMAND	100			99.5	mg/L	99.5	
BLA01	Q2881041		CHEMICAL OXYGEN DEMAND			BDL	5	mg/L		
ICV01	Q2881046		CHEMICAL OXYGEN DEMAND	100			93.3	mg/L	93.3	

Q2881038 MS and/or MSD do not meet control limits. Results for this sample are
Q2881038 estimated.

Pace Analytical®

Pace Analytical Services, Inc.

Quality Assurance Report 66994

CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 G310.2

R632217 Analyst: R DALAL Run Date: 29-Oct-14 Instrument: IC
Analytical Reviewer: E WERNZ Review Date: 30-Oct-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
LFB01H	Q2876283		CHLORIDE	12.5			11.9	mg/L	95.2	
LFB01L	Q2876284		CHLORIDE	1.25			1.23	mg/L	98.4	
CCVL	Q2876287		CHLORIDE	1.25			1.26	mg/L	100.8	
CCVH	Q2876288		CHLORIDE	5.00			4.74	mg/L	94.8	
BLA01	Q2876289		CHLORIDE			BDL	0.05	mg/L		
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							
SPI01	Q2876290	AA31227	CHLORIDE	73.4	12.5		84.0	mg/L	84.8	
DPS01	Q2876291	AA31227	CHLORIDE	73.4	12.5		83.9	mg/L	84.0	0.9
CCVL	Q2876292		CHLORIDE	1.25			1.24	mg/L	99.2	
CCVH	Q2876293		CHLORIDE	5.00			4.73	mg/L	94.6	
BLA01	Q2876294		CHLORIDE			BDL	0.05	mg/L		
LFB01L	Q2876295		CHLORIDE	1.25			1.23	mg/L	98.4	

Q2876290 1:10 Dilution.
Q2876291 1:10 Dilution.

R632478 Analyst: R DALAL Run Date: 05-Nov-14 Instrument: IC
Analytical Reviewer: E WERNZ Review Date: 06-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2878785		CHLORIDE			BDL	0.05	mg/L		
CCVL	Q2878786		CHLORIDE	1.25			1.23	mg/L	98.4	
CCVH	Q2878787		CHLORIDE	5.00			5.39	mg/L	107.8	
LFB01L	Q2878788		CHLORIDE	1.25			1.25	mg/L	100.0	
LFB01H	Q2878789		CHLORIDE	12.5			12.0	mg/L	96.0	
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
CCVL	Q2878792		CHLORIDE	1.25			1.23	mg/L	98.4	
CCVH	Q2878793		CHLORIDE	5.00			4.80	mg/L	96.0	
BLA01	Q2878794		CHLORIDE			BDL	0.05	mg/L		
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SPI01	Q2878796	AA31791	CHLORIDE	1.14	1.25		2.37	mg/L	98.4	
DPS01	Q2878797	AA31791	CHLORIDE	1.14	1.25		2.36	mg/L	97.6	0.8
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							
CCVL	Q2878798		CHLORIDE	1.25			1.25	mg/L	100.0	
CCVH	Q2878799		CHLORIDE	5.00			4.83	mg/L	96.6	
BLA01	Q2878800		CHLORIDE			BDL	0.05	mg/L		
LFB01L	Q2878801		CHLORIDE	1.25			1.24	mg/L	99.2	
CCVL	Q2878804		CHLORIDE	1.25			1.26	mg/L	100.8	
CCVH	Q2878805		CHLORIDE	5.00			4.82	mg/L	96.4	
BLA01	Q2878806		CHLORIDE			BDL	0.05	mg/L		
SAMPLE	AA31793		See Certificate of Analysis, Rep: 0							
CCVL	Q2878822		CHLORIDE	1.25			1.25	mg/L	100.0	
CCVH	Q2878823		CHLORIDE	5.00			4.85	mg/L	97.0	

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CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 G310.2

R632478 Analyst: R DALAL
Analytical Reviewer: E WERNZ
Run Date: 05-Nov-14
Review Date: 06-Nov-14
Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2878824		CHLORIDE			BDL	0.05	mg/L		
LFB01L	Q2878825		CHLORIDE	1.25			1.25	mg/L	100.0	

R632538 Analyst: R DALAL
Analytical Reviewer: E WERNZ
Run Date: 06-Nov-14
Review Date: 07-Nov-14
Instrument: IC

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2879297		CHLORIDE			BDL	0.05	mg/L		
CCVL	Q2879298		CHLORIDE	1.25			1.26	mg/L	100.8	
CCVH	Q2879299		CHLORIDE	5.00			4.79	mg/L	95.8	
LFB01L	Q2879300		CHLORIDE	1.25			1.25	mg/L	100.0	
LFB01H	Q2879301		CHLORIDE	12.5			12.1	mg/L	96.8	
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31794		See Certificate of Analysis, Rep: 0							
SPI01	Q2879302	AA31802	CHLORIDE	575	62.5		633	mg/L	92.8	
DPS01	Q2879303	AA31802	CHLORIDE	575	62.5		632	mg/L	91.2	1.7
CCVL	Q2879304		CHLORIDE	1.25			1.26	mg/L	100.8	
CCVH	Q2879305		CHLORIDE	5.00			4.84	mg/L	96.8	
BLA01	Q2879306		CHLORIDE			BDL	0.05	mg/L		
LFB01L	Q2879319		CHLORIDE	1.25			1.25	mg/L	100.0	

Q2879302 1:50 Dilution.
Q2879303 1:50 Dilution.

FIELD PH (AQUEOUS) SW846-9040C G607.0

R632131 Analyst:
Analytical Reviewer:
Run Date: 27-Oct-14
Review Date: 29-Oct-14
Instrument: FIELD

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							

R632483 Analyst:
Analytical Reviewer:
Run Date: 29-Oct-14
Review Date: 06-Nov-14
Instrument: FIELD

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							

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FIELD SPECIFIC CONDUCTANCE SW846-9050A G604.0

R632131 Analyst: Run Date: 27-Oct-14 Instrument: FIELD
Analytical Reviewer: Review Date: 29-Oct-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							

R632483 Analyst: Run Date: 29-Oct-14 Instrument: FIELD
Analytical Reviewer: Review Date: 06-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							

FIELD TEMPERATURE SM2550 B 2000 G603.1

R632131 Analyst: Run Date: 27-Oct-14 Instrument: FIELD
Analytical Reviewer: Review Date: 29-Oct-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							

R632483 Analyst: Run Date: 29-Oct-14 Instrument: FIELD
Analytical Reviewer: Review Date: 06-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							

GROUNDWATER MONITORING WELL DATA SAS G600.0

R632131 Analyst: Run Date: 27-Oct-14 Instrument: FIELD
Analytical Reviewer: Review Date: 29-Oct-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							

R632483 Analyst: Run Date: 29-Oct-14 Instrument: FIELD
Analytical Reviewer: Review Date: 06-Nov-14

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GROUNDWATER MONITORING WELL DATA SAS G600.0

R632483 Analyst:
Analytical Reviewer:
Run Date: 29-Oct-14
Review Date: 06-Nov-14
Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							

IRON ICP SW846-6010B M115.3
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A

R632244 Analyst: K KAMARA
Prep Reviewer: S ENDERSEN
Run Date: 31-Oct-14
Review Date: 31-Oct-14
Instrument: PREP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2876610		Analytical Run: R632305							
LCS	Q2876611		Analytical Run: R632305							
DUP02	Q2876612		Analytical Run: R632305							
SPI02	Q2876613		Analytical Run: R632305							
SAMPLE	AA31225	Rep: 0	Analytical Run: R632305							
SAMPLE	AA31226	Rep: 0	Analytical Run: R632305							
SAMPLE	AA31227	Rep: 0	Analytical Run: R632305							

R632305 Analyst: J KRAMER
Analytical Reviewer: S ENDERSEN
Run Date: 31-Oct-14
Review Date: 03-Nov-14
Instrument: ICP

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2877189		IRON	1			1.01	mg/L	101.0	
CDL01	Q2877180		IRON	10			9.96	mg/L	99.6	
ICS-A	Q2877181		IRON	200			187	mg/L	93.5	
ICS-AB	Q2877153		IRON	200			185	mg/L	92.5	
BLA02	Q2876610		IRON			<	0.00800	mg/L		
LCS	Q2876611		IRON	1			0.918	mg/L	91.8	
SER01	Q2877184	AA31008	IRON	0.861			0.892	mg/L		3.5
DUP02	Q2876612	AA31008	IRON	0.861			0.857	mg/L		0.5
SPI02	Q2876613	AA31008	IRON	0.861	1.00		1.74	mg/L	87.9	
CCV	Q2877168		IRON	5.00			4.81	mg/L	96.2	
BLA01	Q2877147		IRON			<	0.00800	mg/L		
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							
CCV	Q2877169		IRON	5.00			4.77	mg/L	95.4	
BLA01	Q2877148		IRON			<	0.00800	mg/L		
CDL01	Q2877179		IRON	0.02			0.0447	mg/L	223.5	
ICS-A	Q2877182		IRON	200			180	mg/L	90.0	
ICS-AB	Q2877154		IRON	200			176	mg/L	88.0	

Q2877184 1:5 Dilution.
Q2877184 There was possible matrix interference for K
Q2877184 as indicated by the serial dilution results.

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IRON ICP SW846-6010B M115.3
Prep : ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

R632449 Analyst: K KAMARA Run Date: 06-Nov-14 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 06-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2878407		Analytical Run: R632509							
LCS	Q2878408		Analytical Run: R632509							
DUP02	Q2878409		Analytical Run: R632509							
SPI02	Q2878410		Analytical Run: R632509							
SAMPLE	AA31787	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31788	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31789	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31790	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31791	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31792	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31793	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31794	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31795	Rep: 0	Analytical Run: R632509							

R632509 Analyst: J KRAMER Run Date: 06-Nov-14 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 07-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2879027		IRON	1			1.04	mg/L	104.0	
CDL01	Q2879023		IRON	10			10.0	mg/L	100.0	
ICS-A	Q2879024		IRON	200			181	mg/L	90.5	
ICS-AB	Q2879019		IRON	200			179	mg/L	89.5	
CCV	Q2879055		IRON	5.00			4.92	mg/L	98.4	
BLA01	Q2879036		IRON			<	0.00800	mg/L		
BLA02	Q2878407		IRON			<	0.00800	mg/L		
LCS	Q2878408		IRON	1			0.998	mg/L	99.8	
SER01	Q2879070	AA31788	IRON	0.558			0.563	mg/L		0.9
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
DUP02	Q2878409	AA31788	IRON	0.558			0.531	mg/L		5.0
SPI02	Q2878410	AA31788	IRON	0.558	1.00		1.48	mg/L	92.2	
CCV	Q2879056		IRON	5.00			4.96	mg/L	99.2	
BLA01	Q2879037		IRON			<	0.00800	mg/L		
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31793		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31794		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							
CCV	Q2879057		IRON	5.00			4.86	mg/L	97.2	
BLA01	Q2879038		IRON			<	0.00800	mg/L		
SER01	Q2879069	AA31770	IRON	5.82			6.05	mg/L		3.9
CDL01	Q2879066		IRON	0.02			0.0186	mg/L	93.0	
ICS-A	Q2879067		IRON	200			169	mg/L	84.5	
ICS-AB	Q2879045		IRON	200			166	mg/L	83.0	

Q2879069 1:5 Dilution.

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IRON ICP SW846-6010B **M115.3**
Prep : ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

R632509 Analyst: J KRAMER Run Date: 06-Nov-14
Analytical Reviewer: S ENDERSEN Review Date: 07-Nov-14 Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
Q2879069	There was possible matrix interference for K									
Q2879069	as indicated by the serial dilution results.									
Q2879070	1:5 Dilution.									
Q2879070	There was possible matrix interference for K and Na									
Q2879070	as indicated by the serial dilution results.									

SODIUM ICP SW846-6010B **M131.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3010A

R632244 Analyst: K KAMARA Run Date: 31-Oct-14 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 31-Oct-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2876610		Analytical Run: R632305							
LCS	Q2876611		Analytical Run: R632305							
DUP02	Q2876612		Analytical Run: R632305							
SPI02	Q2876613		Analytical Run: R632305							
SAMPLE	AA31225	Rep: 0	Analytical Run: R632305							
SAMPLE	AA31226	Rep: 0	Analytical Run: R632305							
SAMPLE	AA31227	Rep: 0	Analytical Run: R632305							

R632305 Analyst: J KRAMER Run Date: 31-Oct-14 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2877189		SODIUM	20			21.2	mg/L	106.0	
CDL01	Q2877178		SODIUM	0.1			0.0921	mg/L	92.1	
BLA02	Q2876610		SODIUM			<	0.0400	mg/L		
LCS	Q2876611		SODIUM	100			91.2	mg/L	91.2	
SER01	Q2877184	AA31008	SODIUM	140			150	mg/L		6.9
DUP02	Q2876612	AA31008	SODIUM	140			138	mg/L		1.4
SPI02	Q2876613	AA31008	SODIUM	140	100		235	mg/L	95.0	
CCV	Q2877168		SODIUM	50			53.4	mg/L	106.8	
BLA01	Q2877147		SODIUM			<	0.0400	mg/L		
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							
CCV	Q2877169		SODIUM	50			53.2	mg/L	106.4	
BLA01	Q2877148		SODIUM			<	0.0400	mg/L		
CDL01	Q2877179		SODIUM	0.1			0.0932	mg/L	93.2	
Q2877184	1:5 Dilution.									
Q2877184	There was possible matrix interference for K									
Q2877184	as indicated by the serial dilution results.									

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SODIUM ICP SW846-6010B M131.3

Prep : ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

R632449 Analyst: K KAMARA Run Date: 06-Nov-14 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 06-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA02	Q2878407		Analytical Run: R632509							
LCS	Q2878408		Analytical Run: R632509							
DUP02	Q2878409		Analytical Run: R632509							
SPI02	Q2878410		Analytical Run: R632509							
SAMPLE	AA31787	Rep: 0	Analytical Run: R632571							
SAMPLE	AA31788	Rep: 0	Analytical Run: R632571							
SAMPLE	AA31789	Rep: 0	Analytical Run: R632571							
SAMPLE	AA31790	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31791	Rep: 0	Analytical Run: R632571							
SAMPLE	AA31792	Rep: 0	Analytical Run: R632571							
SAMPLE	AA31793	Rep: 0	Analytical Run: R632509							
SAMPLE	AA31794	Rep: 0	Analytical Run: R632571							
SAMPLE	AA31795	Rep: 0	Analytical Run: R632509							

R632509 Analyst: J KRAMER Run Date: 06-Nov-14 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 07-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2879027		SODIUM	20			21.4	mg/L	107.0	
CDL01	Q2879022		SODIUM	0.1			0.0921	mg/L	92.1	
BLA02	Q2878407		SODIUM			<	0.0400	mg/L		
LCS	Q2878408		SODIUM	100			98.2	mg/L	98.2	
SER01	Q2879070	AA31788	SODIUM	19.6			17.3	mg/L		12.5
DUP02	Q2878409	AA31788	SODIUM	19.6			18.6	mg/L		5.2
SPI02	Q2878410	AA31788	SODIUM	19.6	100		108	mg/L	88.4	
CCV	Q2879056		SODIUM	50			46.3	mg/L	92.6	
BLA01	Q2879037		SODIUM			<	0.0400	mg/L		
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31793		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							
CCV	Q2879057		SODIUM	50			54.2	mg/L	108.4	
BLA01	Q2879038		SODIUM			<	0.0400	mg/L		
SER01	Q2879069	AA31770	SODIUM	43.2			40.8	mg/L		5.7
CDL01	Q2879066		SODIUM	0.1			0.0888	mg/L	88.8	

Q2879069 1:5 Dilution.
Q2879069 There was possible matrix interference for K
Q2879069 as indicated by the serial dilution results.
Q2879070 1:5 Dilution.
Q2879070 There was possible matrix interference for K and Na
Q2879070 as indicated by the serial dilution results.

R632571 Analyst: J KRAMER Run Date: 07-Nov-14 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 09-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2879569		SODIUM	20			19.9	mg/L	99.5	
CDL01	Q2879563		SODIUM	0.1			0.0885	mg/L	88.5	
CCV	Q2879558		SODIUM	50			50.8	mg/L	101.6	

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SODIUM ICP SW846-6010B M131.3

Prep : ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8

R632571 Analytical — Analyst: J KRAMER, Reviewer: S ENDERSEN — Run Date: 07-Nov-14, Review Date: 09-Nov-14 — Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2879553		SODIUM			<	0.0400	mg/L		
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31794		See Certificate of Analysis, Rep: 0							
CCV	Q2879559		SODIUM	50			49.1	mg/L	98.2	
BLA01	Q2879554		SODIUM			<	0.0400	mg/L		
SER01	Q2879567	AA32113	SODIUM	526			489	mg/L		7.3
CDL01	Q2879606		SODIUM	0.1			0.0817	mg/L	81.7	
Q2879567	1:5 Dilution.									

SULFATE BY ION CHROMATOGRAPHY SW846-9056 G310.7

R632217 Analytical — Analyst: R DALAL, Reviewer: E WERNZ — Run Date: 29-Oct-14, Review Date: 30-Oct-14 — Instrument: IC

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
LFB01H	Q2876283		SULFATE	25.0			24.0	mg/L	96.0	
LFB01L	Q2876284		SULFATE	2.50			2.46	mg/L	98.4	
CCVL	Q2876287		SULFATE	2.50			2.42	mg/L	96.8	
CCVH	Q2876288		SULFATE	10.0			9.57	mg/L	95.7	
BLA01	Q2876289		SULFATE			BDL	0.05	mg/L		
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
CCVL	Q2876292		SULFATE	2.50			2.50	mg/L	100.0	
CCVH	Q2876293		SULFATE	10.0			9.56	mg/L	95.6	
BLA01	Q2876294		SULFATE			BDL	0.05	mg/L		
LFB01L	Q2876295		SULFATE	2.50			2.53	mg/L	101.2	
SPI01	Q2876312	AA31261	SULFATE	13.3	25.0		36.8	mg/L	94.0	
DPS01	Q2876313	AA31261	SULFATE	13.3	25.0		36.8	mg/L	94.0	0
Q2876312	1:10 Dilution.									
Q2876313	1:10 Dilution.									

R632254 Analytical — Analyst: R DALAL, Reviewer: E WERNZ — Run Date: 30-Oct-14, Review Date: 31-Oct-14 — Instrument: IC

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2876556		SULFATE			BDL	0.05	mg/L		
CCVL	Q2876557		SULFATE	2.50			2.36	mg/L	94.4	
CCVH	Q2876558		SULFATE	10.0			9.38	mg/L	93.8	
LFB01H	Q2876559		SULFATE	25.0			23.3	mg/L	93.2	
LFB01L	Q2876560		SULFATE	2.50			2.52	mg/L	100.8	
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							
SPI01	Q2876562	AA31230	SULFATE	23.3	25.0		48.2	mg/L	99.6	
DPS01	Q2876563	AA31230	SULFATE	23.3	25.0		48.5	mg/L	100.8	1.2
CCVL	Q2876564		SULFATE	2.50			2.31	mg/L	92.4	

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SULFATE BY ION CHROMATOGRAPHY SW846-9056 G310.7

R632254 Analyst: R DALAL
Analytical Reviewer: E WERNZ
Run Date: 30-Oct-14
Review Date: 31-Oct-14
Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
CCVH	Q2876565		SULFATE	10.0			9.36	mg/L	93.6	
BLA01	Q2876566		SULFATE			BDL	0.05	mg/L		
LFB01L	Q2876569		SULFATE	2.50			2.39	mg/L	95.6	
Q2876562	1:10 Dilution.									
Q2876563	1:10 Dilution.									

TOTAL DISSOLVED SOLIDS SM2540 C 1997 G402.9

R632222 Analyst: C ANYANWUTAKU
Analytical Reviewer: P SPENCE
Run Date: 30-Oct-14
Review Date: 04-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2876369		DISSOLVED SOLIDS			BDL	10	mg/L		
LFB01	Q2876370		DISSOLVED SOLIDS	500			452	mg/L	90.4	
SPI01	Q2876374	AA31129	DISSOLVED SOLIDS	244	250		468	mg/L	89.6	
DPS01	Q2876375	AA31129	DISSOLVED SOLIDS	244	250		466	mg/L	88.8	0.9
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							
DUP01	Q2876376	AA31315	DISSOLVED SOLIDS	418			403	mg/L		3.6
LFB01	Q2876377		DISSOLVED SOLIDS	500			486	mg/L	97.2	
BLA01	Q2876379		DISSOLVED SOLIDS			BDL	10	mg/L		

R632428 Analyst: J BOULSE
Analytical Reviewer: P SPENCE
Run Date: 05-Nov-14
Review Date: 10-Nov-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2878289		DISSOLVED SOLIDS			BDL	10	mg/L		
LFB01	Q2878290		DISSOLVED SOLIDS	500			476	mg/L	95.2	
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
DUP01	Q2878291	AA31791	DISSOLVED SOLIDS	177			174	mg/L		1.7
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31793		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31794		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							
SPI01	Q2878292	AA31766	DISSOLVED SOLIDS	494	250		745	mg/L	100.4	
DPS01	Q2878293	AA31766	DISSOLVED SOLIDS	494	250		748	mg/L	101.6	1.2
LFB01	Q2878296		DISSOLVED SOLIDS	500			489	mg/L	97.8	
BLA01	Q2878297		DISSOLVED SOLIDS			BDL	10	mg/L		

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Quality Assurance Report

66994

TOTAL ORGANIC CARBON SW846-9060A

O401.0

R632429 Analytical — Analyst: D DICKERSON — Reviewer: P SPENCE — Run Date: 04-Nov-14 — Review Date: 06-Nov-14 — Instrument: TOC

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
CDL01	Q2878299		TOTAL ORGANIC CARBON (TOC)	1.00			1.41	mg/L	141.0	
ICV01	Q2878300		TOTAL ORGANIC CARBON (TOC)	12.5			13.5	mg/L	108.0	
CCVL	Q2878305		TOTAL ORGANIC CARBON (TOC)	5.00			5.34	mg/L	106.8	
CCVH	Q2878309		TOTAL ORGANIC CARBON (TOC)	15.0			15.8	mg/L	105.3	
BLA01	Q2878310		TOTAL ORGANIC CARBON (TOC)			BDL	0.5	mg/L		
ICV01	Q2878311		TOTAL ORGANIC CARBON (TOC)	12.5			12.8	mg/L	102.4	
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							
CCVL	Q2878312		TOTAL ORGANIC CARBON (TOC)	5.00			5.00	mg/L	100.0	
BLA01	Q2878313		TOTAL ORGANIC CARBON (TOC)			BDL	0.5	mg/L		
CCVH	Q2878318		TOTAL ORGANIC CARBON (TOC)	15.0			15.9	mg/L	106.0	
ICV01	Q2878320		TOTAL ORGANIC CARBON (TOC)	12.5			13.1	mg/L	104.8	
CCVL	Q2878436		TOTAL ORGANIC CARBON (TOC)	5.00			5.30	mg/L	106.0	
BLA01	Q2878437		TOTAL ORGANIC CARBON (TOC)			BDL	1.0	mg/L		
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31793		See Certificate of Analysis, Rep: 0							
CCVL	Q2878487		TOTAL ORGANIC CARBON (TOC)	5.00			5.28	mg/L	105.6	
BLA01	Q2878488		TOTAL ORGANIC CARBON (TOC)			BDL	1.0	mg/L		
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31794		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							
SPI01	Q2878489	AA31795	TOTAL ORGANIC CARBON (TOC)	1.56	12.5		14.5	mg/L	103.5	
DPS01	Q2878490	AA31795	TOTAL ORGANIC CARBON (TOC)	1.56	12.5		14.4	mg/L	102.7	0.8
CCVH	Q2878491		TOTAL ORGANIC CARBON (TOC)	15.0			15.8	mg/L	105.3	
BLA01	Q2878492		TOTAL ORGANIC CARBON (TOC)			BDL	1.0	mg/L		
CCVL	Q2878495		TOTAL ORGANIC CARBON (TOC)	5.00			5.03	mg/L	100.6	
BLA01	Q2878496		TOTAL ORGANIC CARBON (TOC)			BDL	1.0	mg/L		
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
CCVH	Q2878499		TOTAL ORGANIC CARBON (TOC)	15.0			15.2	mg/L	101.3	
BLA01	Q2878500		TOTAL ORGANIC CARBON (TOC)			BDL	1.0	mg/L		

R632536 Analytical — Analyst: D DICKERSON — Reviewer: P SPENCE — Run Date: 06-Nov-14 — Review Date: 11-Nov-14 — Instrument: TOC

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2879245		TOTAL ORGANIC CARBON (TOC)			BDL	0.5	mg/L		
CDL01	Q2879246		TOTAL ORGANIC CARBON (TOC)	1.00			0.890	mg/L	89.0	
ICV01	Q2879247		TOTAL ORGANIC CARBON (TOC)	12.5			13.0	mg/L	104.0	
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SPI01	Q2879248	AA31012	TOTAL ORGANIC CARBON (TOC)	2.14	12.5		15.4	mg/L	106.1	
DPS01	Q2879249	AA31012	TOTAL ORGANIC CARBON (TOC)	2.14	12.5		15.3	mg/L	105.3	0.8
CCVL	Q2879250		TOTAL ORGANIC CARBON (TOC)	5.00			5.14	mg/L	102.8	
BLA01	Q2879251		TOTAL ORGANIC CARBON (TOC)			BDL	0.5	mg/L		
CCVH	Q2879254		TOTAL ORGANIC CARBON (TOC)	15.0			15.4	mg/L	102.7	
ICV01	Q2879256		TOTAL ORGANIC CARBON (TOC)	12.5			12.6	mg/L	100.8	

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TOTAL ORGANIC CARBON SW846-9060A O401.0

R632536 Analyst: D DICKERSON Run Date: 06-Nov-14
Analytical Reviewer: P SPENCE Review Date: 11-Nov-14 Continued

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
ICV01	Q2879265		TOTAL ORGANIC CARBON (TOC)	12.5			12.9	mg/L	103.2	
ICV01	Q2880141		TOTAL ORGANIC CARBON (TOC)	12.5			12.7	mg/L	101.6	
ICV01	Q2880159		TOTAL ORGANIC CARBON (TOC)	12.5			12.1	mg/L	96.8	

TOTAL ORGANIC HALIDES (TOX) SW846-9020B O404.0

R632488 Analyst: KEYSTONE LABORATORIES, INC. Run Date: 26-Nov-14 Instrument: TOX
Analytical Reviewer: C BOYLE Review Date: 07-Dec-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
SAMPLE	AA31795		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31794		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31793		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31792		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31791		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31790		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31789		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31788		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31787		See Certificate of Analysis, Rep: 0							

TOTAL SOLIDS DRIED AT 103-105 DEGREES C SM2540 B 1997 G401.6

R632096 Analyst: C ANYANWUTAKU Run Date: 28-Oct-14
Analytical Reviewer: P SPENCE Review Date: 29-Oct-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2875237		SOLIDS			BDL	10	mg/L		
LFB01	Q2875238		SOLIDS	500			496	mg/L	99.2	
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SPI01	Q2875239	AA31225	SOLIDS	336	250		588	mg/L	100.8	
DPS01	Q2875240	AA31225	SOLIDS	336	250		606	mg/L	108.0	6.9
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							
LFB01	Q2875241		SOLIDS	500			494	mg/L	98.8	
BLA01	Q2875243		SOLIDS			BDL	10	mg/L		

Q2875239 Sample fails precision (RPD is outside) control limits. Results for this sample
Q2875239 are estimated.
Q2875240 Sample fails precision (RPD is outside) control limits. Results for this sample
Q2875240 are estimated.

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TOTAL SUSPENDED SOLIDS DRIED AT 103-105 DEGREES C SM2540 D 19TH ED G403.8

R632150 Analyst: C ANYANWUTAKU Run Date: 29-Oct-14
Analytical Reviewer: P SPENCE Review Date: 31-Oct-14

QC Type	Lab ID	Source	Parameter	True / Sample	Spike Value	RQL	Observed	Units	Rec	RPD
BLA01	Q2875790		SUSPENDED SOLIDS			BDL	1	mg/L		
LFB01	Q2875791		SUSPENDED SOLIDS	140			157	mg/L	112.1	
SPI01	Q2875794	AA31224	SUSPENDED SOLIDS	0	70		58	mg/L	82.8	
DPS01	Q2875795	AA31224	SUSPENDED SOLIDS	0	70		60	mg/L	85.7	3.4
SAMPLE	AA31225		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31226		See Certificate of Analysis, Rep: 0							
SAMPLE	AA31227		See Certificate of Analysis, Rep: 0							
DUP01	Q2875796	AA31234	SUSPENDED SOLIDS	3			3	mg/L		0
LFB01	Q2875798		SUSPENDED SOLIDS	140			118	mg/L	84.3	
BLA01	Q2875800		SUSPENDED SOLIDS			BDL	1	mg/L		

RQL	Result Qualifier Definition
<	Less Than
BDL	Below Detection Limit

QC Type	Definition
BLA01	CALIBRATION (INSTRUMENT) BLANK
BLA02	PREPPED (CALIBRATION) BLANK OR METHOD BLANK
CCV	CONTINUING CALIBRATION VERIFICATION
CCVH	HIGH CONTINUING CALIBRATION VERIFICATION
CCVL	LOW CONTINUING CALIBRATION VERIFICATION
CDL01	DETECTION LIMIT STANDARD
DPS01	DUPLICATE MATRIX SPIKE
DUP01	DUPLICATE SAMPLE ANALYSIS
DUP02	PREPPED DUPLICATE SAMPLE ANALYSIS
ICS-A	INTERFERENCE CHECK SAMPLE A
ICS-AB	INTERFERENCE CHECK SAMPLE AB
ICV01	INITIAL CALIBRATION VERIFICATION DIFFERENT SOURCE
LCS	LABORATORY CONTROL SAMPLE PREPPED
LFB01	LABORATORY FORTIFIED BLANK
LFB01H	HIGH LEVEL LABORATORY FORTIFIED BLANK
LFB01L	LOW LEVEL LABORATORY FORTIFIED BLANK
SER01	ICP SERIAL DILUTION
SPI01	MATRIX SPIKE
SPI02	PREPPED MATRIX SPIKE

Approved By : CHRISTOPHER BOYLE

Keystone LABORATORIES, INC.

MEMBER ACIL

December 01 2014

Chris Boyle
Pace Analytical-IN
7726 Moller Road
Indianapolis, IN 46268

RE: PAS Subcontract-CB
R632488

Enclosed are the results of analyses for samples received by the laboratory on 11/07/14 10:30. If you have any questions concerning this report, please feel free to contact me at 1-800-858-5227.

ANALYTICAL REPORT FOR SAMPLES

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AA31795 MW-1B	1K40461-01	Water	10/29/14 13:40	11/07/14 10:30
AA31794 DUP	1K40461-02	Water	10/29/14 00:00	11/07/14 10:30
AA31793 FB	1K40461-03	Water	10/29/14 14:05	11/07/14 10:30
AA31792 MW-1A	1K40461-04	Water	10/29/14 13:17	11/07/14 10:30
AA31791 MW-1	1K40461-05	Water	10/29/14 12:47	11/07/14 10:30
AA31790 MW-28E	1K40461-06	Water	10/29/14 11:45	11/07/14 10:30
AA31789 MW-28D	1K40461-07	Water	10/29/14 11:10	11/07/14 10:30
AA31788 MW-28C	1K40461-08	Water	10/29/14 10:30	11/07/14 10:30
AA31787 MW-3	1K40461-09	Water	10/29/14 09:42	11/07/14 10:30

Client Supplied Containers

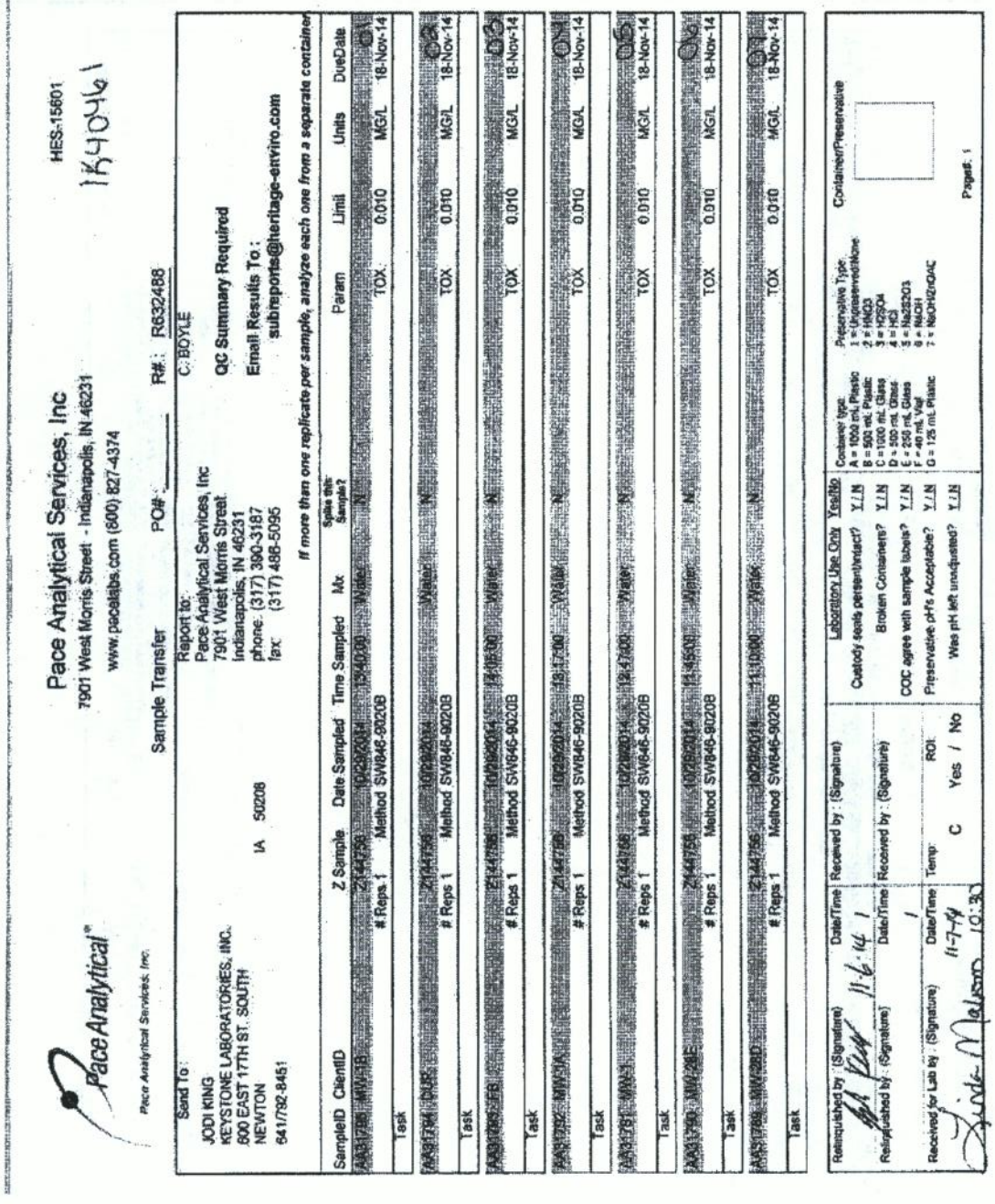
The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record. This report must be reproduced in its entirety.

Phone 641-792-8451
600 East 17th Street South
Newton, IA 50208
Fax 641-792-7989

Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55



Pace Analytical Services, Inc
7901 West Morris Street - Indianapolis, IN 46231
www.pacelabs.com (800) 827-4374

HES-15601
164044

Sample Transfer PO#: _____ R#: R632488

Send To:
JODI KING
KEYSTONE LABORATORIES, INC.
800 EAST 17TH ST. SOUTH
NEWTON IA 50208
641/792-8451

Report to:
Pace Analytical Services, Inc
7901 West Morris Street
Indianapolis, IN 46231
phone: (317) 390-3187
fax: (317) 488-5095

C: BOYLE

QC Summary Required

Email Results To:
subreports@heritage-enviro.com

If more than one replicate per sample, analyze each one from a separate container

SampleID	ClientID	Z Sample	Date Sampled	Time Sampled	Mx	Spike this Sample?	Param	Limit	Units	DueDate	
AA91788	MW-1B	Z144756	10/29/2014	13:40:00	Water	N					01
	# Reps 1	Method SW846-9020B					TOX	0.010	MG/L	18-Nov-14	
Task											
AA91789	DUP	Z144766	10/29/2014		Water	N					02
	# Reps 1	Method SW846-9020B					TOX	0.010	MG/L	18-Nov-14	
Task											
AA91790	FB	Z144768	10/29/2014	14:15:00	Water	N					03
	# Reps 1	Method SW846-9020B					TOX	0.010	MG/L	18-Nov-14	
Task											
AA91792	MW-1A	Z144769	10/29/2014	15:17:00	Water	N					04
	# Reps 1	Method SW846-9020B					TOX	0.010	MG/L	18-Nov-14	
Task											
AA91791	MW-1	Z144767	10/29/2014	12:47:00	Water	N					05
	# Reps 1	Method SW846-9020B					TOX	0.010	MG/L	18-Nov-14	
Task											
AA91793	MW-2E	Z144770	10/29/2014	13:45:00	Water	N					06
	# Reps 1	Method SW846-9020B					TOX	0.010	MG/L	18-Nov-14	
Task											
AA91794	MW-2D	Z144771	10/29/2014	11:10:00	Water	N					07
	# Reps 1	Method SW846-9020B					TOX	0.010	MG/L	18-Nov-14	
Task											

Laboratory Use Only — Yes/No

Custody seals present/intact? Y/N
Broken Containers? Y/N
COC agree with sample labels? Y/N
Preservative pH's Acceptable? Y/N
Was pH left unadjusted? Y/N

Container type:
A = 1000 mL Plastic
B = 500 mL Plastic
C = 1000 mL Glass
D = 500 mL Glass
E = 250 mL Glass
F = 40 mL Vial
G = 125 mL Plastic

Preservative Type:
1 = Unpreserved/None
2 = HNO3
3 = H2SO4
4 = HCl
5 = Na2S2O3
6 = NaOH
7 = NaOH/ZnOAC

Container/Preservative

Relinquished by: (Signature) Date/Time: 11-6-14 1
Received by: (Signature)
Relinquished by: (Signature) Date/Time: 1
Received by: (Signature)
Received for Lab by: (Signature) Date/Time: 11-7-14 10:30
Temp: C Yes / No ROI:

Page#: 1

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record. This report must be reproduced in its entirety.

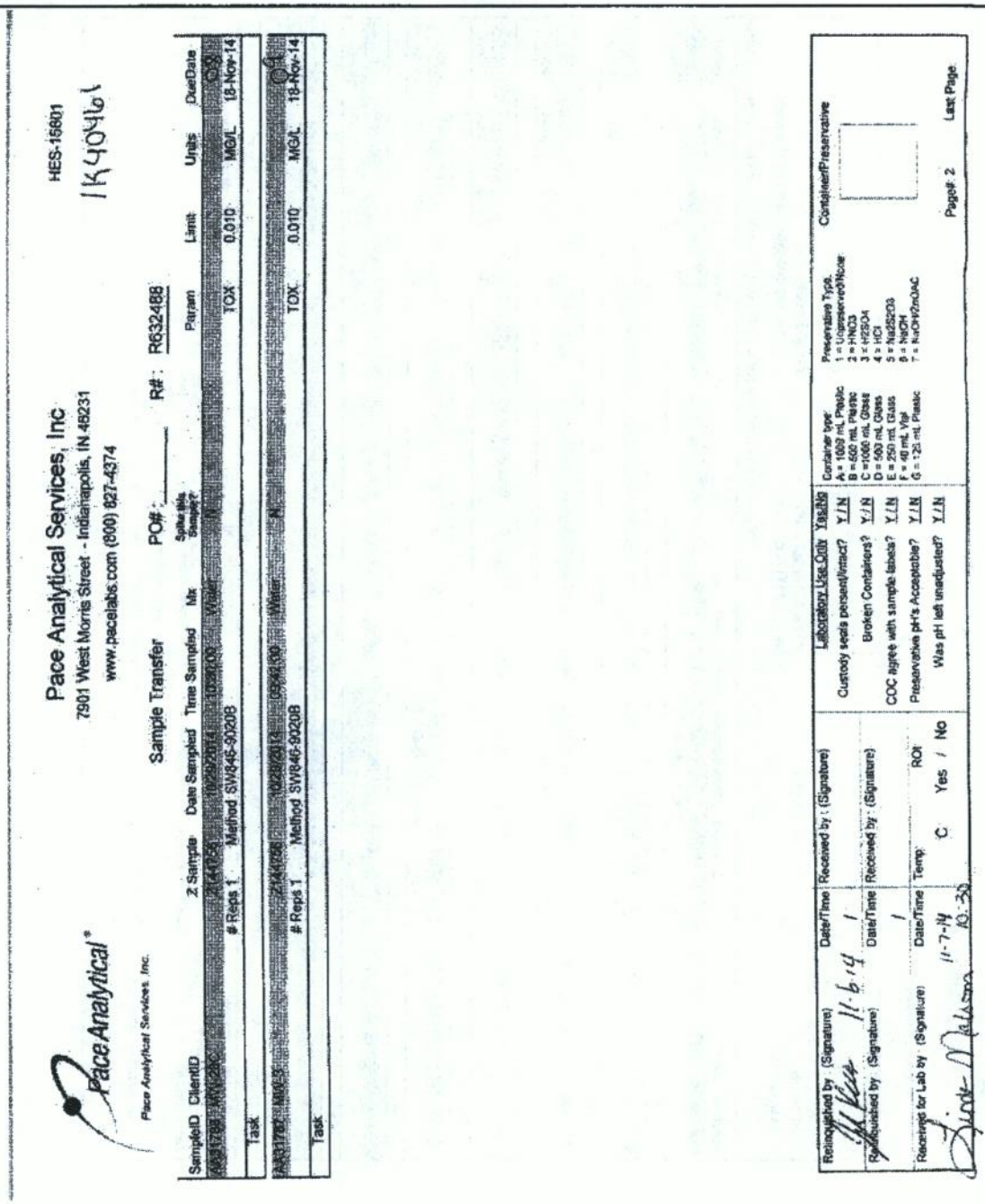
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600 East 17th Street South
Newton, IA 50208
Fax 641-792-7989

Package # 66994

Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55



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7901 West Morris Street - Indianapolis, IN 46231
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HES-15601
1K40946

Sample Transfer PO#: _____ R#: R632488

SampleID	ClientID	Z Sample	Date Sampled	Time Sampled	Mx	Sample Shipped?	Param	Limit	Units	DueDate
		2644056	10/29/2014	1000:00	Water	N	TOX	0.010	MG/L	18-Nov-14
		# Reps 1	Method SW846-9020B							
Task										
		2644058	10/29/2014	0904:00	Water	N	TOX	0.010	MG/L	18-Nov-14
		# Reps 1	Method SW846-9020B							
Task										

Container type:
A = 1000 mL Plastic
B = 500 mL Plastic
C = 1000 mL Glass
D = 500 mL Glass
E = 250 mL Glass
F = 40 mL Vial
G = 125 mL Plastic

Preservative Type:
1 = Unpreserved/None
2 = HNO3
3 = H2SO4
4 = HCl
5 = Na2S2O3
6 = NaOH
7 = NaOH/ZnAC

Container/Preservative

Page# 2 Last Page

Relinquished by: (Signature) Date/Time: 11-6-14 Received by: (Signature)

Relinquished by: (Signature) Date/Time: 1 Received by: (Signature)

Received for Lab by: (Signature) Date/Time: 11-7-14 10:30 Temp: C Yes / No ROI

Laboratory Use Only

	Yes/No
Custody seals present/intact?	Y/N
Broken Containers?	Y/N
COC agree with sample labels?	Y/N
Preservative pH's Acceptable?	Y/N
Was pH left unadjusted?	Y/N

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record. This report must be reproduced in its entirety.

Phone 641-792-8451
600 East 17th Street South
Newton, IA 50208
Fax 641-792-7989

Keystone
LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

AA31795 MW-1B

1K40461-01 (Water)

Date Sampled:10/29/2014 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Conventional Chemistry Parameters									
Total Organic Halogens (TOX)	**0.026**	0.010	mg/L	1	1XL0019	11/26/14	11/26/14 15:00	EPA 9020	

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Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

AA31794 DUP

1K40461-02 (Water)

Date Sampled:10/29/2014 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Conventional Chemistry Parameters									
Total Organic Halogens (TOX)	ND	0.010	mg/L	1	1XL0019	11/26/14	11/26/14 15:00	EPA 9020	

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Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

AA31793 FB

1K40461-03 (Water)

Date Sampled:10/29/2014 2:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Conventional Chemistry Parameters									
Total Organic Halogens (TOX)	ND	0.010	mg/L	1	1XL0019	11/26/14	11/26/14 15:00	EPA 9020	

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Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

AA31792 MW-1A

1K40461-04 (Water)

Date Sampled:10/29/2014 1:17:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Conventional Chemistry Parameters									
Total Organic Halogens (TOX)	**0.015**	0.010	mg/L	1	1XL0019	11/26/14	11/26/14 15:00	EPA 9020	

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Newton, IA 50208

Fax 641-792-7989

Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

AA31791 MW-1

1K40461-05 (Water)

Date Sampled:10/29/2014 12:47:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Conventional Chemistry Parameters									
Total Organic Halogens (TOX)	ND	0.010	mg/L	1	1XL0019	11/26/14	11/26/14 15:00	EPA 9020	

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

AA31790 MW-28E

1K40461-06 (Water)

Date Sampled:10/29/2014 11:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Conventional Chemistry Parameters									
Total Organic Halogens (TOX)	ND	0.010	mg/L	1	1XL0019	11/26/14	11/26/14 15:00	EPA 9020	

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Newton, IA 50208

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Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

AA31789 MW-28D

1K40461-07 (Water)

Date Sampled:10/29/2014 11:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Conventional Chemistry Parameters									
Total Organic Halogens (TOX)	**0.013**	0.010	mg/L	1	1XL0019	11/26/14	11/26/14 15:00	EPA 9020	

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Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

AA31788 MW-28C

1K40461-08 (Water)

Date Sampled:10/29/2014 10:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Conventional Chemistry Parameters									
Total Organic Halogens (TOX)	**0.039**	0.010	mg/L	1	1XL0019	11/26/14	11/26/14 15:00	EPA 9020	

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Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

AA31787 MW-3

1K40461-09 (Water)

Date Sampled:10/29/2014 9:42:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Keystone Laboratories, Inc. - Newton									
Determination of Conventional Chemistry Parameters									
Total Organic Halogens (TOX)	**0.032**	0.010	mg/L	1	1XL0019	11/26/14	11/26/14 15:00	EPA 9020	

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Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN	Project: PAS Subcontract-CB	Reported
7726 Moller Road	Project Number: R632488	12/01/14 16:55
Indianapolis, IN 46268	Project Manager: Chris Boyle	

Determination of Conventional Chemistry Parameters - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1XL0019 - TOX/TX/EOX										
Blank (1XL0019-BLK1)				Prepared & Analyzed: 11/26/14						
Total Organic Halogens (TOX)	ND	0.010	mg/L							
LCS (1XL0019-BS1)				Prepared & Analyzed: 11/26/14						
Total Organic Halogens (TOX)	0.1076	0.010	mg/L	0.0949060		113	69-125			
Reference (1XL0019-SRM1)				Prepared & Analyzed: 11/26/14						
Total Organic Halogens (TOX)	0.0920	0.010	mg/L	0.0953376		96.5	0-200			
Reference (1XL0019-SRM2)				Prepared & Analyzed: 11/26/14						
Total Organic Halogens (TOX)	0.0950	0.010	mg/L	0.0953376		99.7	0-200			

Certified Analyses Included in This Report

Method/Matrix	Analyte	Certifications
EPA 9020 in Water		
	Total Organic Halogens (TOX)	NELAC,KS-NT,SIA1X

Code	Certifying Authority	Certificate Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2015
KS-NT	Kansas Department of Health and Environment	E-10287	01/31/2015
MO-KC	Missouri Department of Natural Resources	140	04/30/2015
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2015
SIA1X	Iowa Department of Natural Resources	95	02/01/2014

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Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Keystone LABORATORIES, INC.

MEMBER ACIL

Pace Analytical-IN 7726 Moller Road Indianapolis, IN 46268	Project: PAS Subcontract-CB Project Number: R632488 Project Manager: Chris Boyle	Reported 12/01/14 16:55

Sue Thompson

Sue Thompson

Project Manager II

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record. This report must be reproduced in its entirety.

Phone 641-792-8451

600 East 17th Street South
Newton, IA 50208

Fax 641-792-7989

KENVIRONS, INC.
452 Versailles Road
Frankfort, KY 40601
502-695-4357
502-695-4363 (fax)

Green Valley Landfill (2007006)

Well No.	Depth to water	Well Depth	AKGWA No.	Sample Collected		Well / Under Drain Dry	Insufficient Recharge
				YES	NO		
MW-1	5.45	14.80	8000-8086	☒	☐	☐	☐
MW-1A	3.55	41.00	8000-2931	☒	☐	☐	☐
MW-1B	6.43	61.00	8000-2932	☒	☐	☐	☐
MW-3	5.53	14.10	8000-8085	☒	☐	☐	☐
MW-28C	4.40	12.90	8000-2937	☒	☐	☐	☐
MW-28D	5.05	16.30	8000-2938	☒	☐	☐	☐
MW-28E	9.42	27.30	8000-2939	☒	☐	☐	☐
DUP		-	-				
FB		-	-				

Notes:

TECHNICIAN Bill F. Knarr, III / Ben Bray / Bill F. Knarr, II DATE 10/29/14

KENVIRONS, INC.

Well / Spring Field Reading Log

Facility: Green Valley LF

Date: 10/29/14 Sampler(s) Kenvirons - BFK/BFK III / BTB Ky. EPA - Kevin Francis

Well / Spring No.		pH	Conductivity	Temp	DO	ORP	Turbidity
Well No.	MW-1	5.16	72	14.21	6.30	—	8.4
Well No.	MW-1A	5.88	412	13.21	2.24	—	8.3
Well No.	MW-1B	6.37	702	13.17	2.65	—	3.9
Well No.	MW-3	5.15	528	14.49	1.88	—	6.3
Well No.	MW-28C	4.57	594	15.03	1.08	—	6.1
Well No.	MW-28D	5.14	766	16.17	1.48	—	16.6
Well No.	MW-28E	5.66	329	16.33	2.04	—	5.2
Well No.							
Well No.							
Well No.							
Well No.							
Well No.							
Well No.							
Well No.							
Well No.							
Well No.							
Well No.							
Well No.							
Well No.							

Sampler(s) Signature: B.QO K TM Date: 10/29/14

KENVIRONS INC.,
GROUNDWATER FIELD LOG

Site Name: Green Valley Landfill	Well No. MW-1	Total Depth (ft) 14.80	Initial Depth to Water (ft.) 5.45	Height of Water Column (ft.) 9.35	Date 10/29	Time 1222	Project No. 2007006
Site Location Greenup Co., KY	AKGWA # 8000-8086	Casing Diameter ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16	Measuring Point (ft. MSL) 617.80	Groundwater Elevation 612.35	Well Volume (gallons) 6.26		Z # 1447756

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☒ Clear ☐ Partly Cloudy ☐ Overcast ☐ Windy Temp. 60 (F°/ C°)

Time	ET (min)	Depth to Water (ft)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Cont./Pres.	#
1233	0	5.45	200	0	14.74	82	3.78	5.83	—	10.7	GA- 40ml Vials HCL	
1236	3		200	.6	14.45	79	4.60	5.37	—	8.4	G- 40ml Vials HCL	
1239	6		200	1.2	14.28	76	5.61	5.24	—	10.4	P-500 ml HNO_3	1
1242	9		200	1.8	14.21	75	6.39	5.18	—	7.1	P-500 ml H_2SO_4	1
1245	12	7.23	200	2.4	14.21	72	6.30	5.16	—	8.4	P-500 ml Unp.	1
											P-1L Unp.	
											P-1L NaOH	
											P-1L NaOH + Zn A	
											P-120 ml Unp.	
											GA- 250 ml H_2SO_4	2
											GA- 250 ml H_3PO_4	
											GA- 500 ml H_2SO_4	
											GA- 1L Unp.	
											G- 1L Unp.	
											Comments	
For Three (3) Consecutive Readings			Required Purge	Actual Purge	+/- 1 (°C)	+/- 10%	+/- .3 (Mg/L)	+/- .10 SU	+/- 10% mV	+/- 10% unless <10 NTU		

Well Cond.	Pad Cond	Lock Funct.	Bladder Pump	Casing S.S. ☐ Casing PVC ☒	☐ Field Blank Collected Time:
OK	OK	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:

Sample Time	Depth to Water (ft)	Color	Odor	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Appearance
1247	7.65	None	Slight	14.21	72	10.30	5.16	—	8.4	clear

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☒ Duplicate Collected Time: 1251 DTW: 8.01

Sampler(s) Signature Bob F. Kemm **Date** 10/29/14

F:\WORK IN PROGRESS\BTB\SAMPLING FORMS\GREEN VALLEY\GROUNDWATER 2007006\GREEN VALLEY STABILIZATION FORM.doc

MONITORING WELL INTEGRITY FIELD SURVEY

Facility Name: Green Valley Landfill
Evaluator: BFK III
Evaluation Date: 10/29/14
Well Identification Number MW-1
AKGWA Number 8000-8080

	Y	N	NA	A
1) Is the well location appropriately shown on the facility permit/and or design drawing?	☒	☐	☐	☐
2) Are the wells in hard to find areas adequately flagged?	☒	☐	☐	☐
3) Is the elevation information correct?	☒	☐	☐	☐
Well Characteristics & Integrity				
4) Is the well ☒Aboveground? ☐Flush with the surface?	☒	☐	☐	☐
5) No physical damage to well?	☒	☐	☐	☐
6) Is the well labeled on the inside?	☐	☒	☐	☐
7) Is the well labeled on the outside?	☒	☐	☐	☐
8) Does the well have protective posts (if warranted)?	☒	☐	☐	☐
9) No evidence of ponded water around the well?	☒	☐	☐	☐
10) Do aboveground well have weep holes at the base of the protective cover?	☒	☐	☐	☐
11) Does the area around the well appear to be clean? (i.e., no mounds of waste; no dead animals?	☐	☒	☐	☐
12) Is the casing secure (attempt to move along perpendicular axes)?	☒	☐	☐	☐
13) Is the surface seal void of differential erosion around and under the base?	☒	☐	☐	☐
14) Is the surface seal free of cracks?	☒	☐	☐	☐
15) Is the surface seal slope to prevent ponding in the immediate vicinity of the of the surface seal?	☒	☐	☐	☐
16) Is the monitoring well locked to prevent unauthorized access?	☒	☐	☐	☐
17) Is the cap void of large gaps which would breach security?	☒	☐	☐	☐
18) Is the locking cap free of rust?	☐	☒	☐	☐

Comments: The pad is covered with grass & the weeds are grown up around the well. Well needs painted & new well numbers put on it.

NOTES: 1) Response box legend:
Y = YES
N = NO (A negative response must be identified as an "A" unless a comment is made that demonstrates compliance)
N/A = Not Applicable
2) Shaded boxes indicate that an issue and appropriate corrective action must be entered into CARS

KENVIRONS INC.,
GROUNDWATER FIELD LOG

Site Name: Green Valley Landfill	Well No. MW-1A	Total Depth (ft) 41.00	Initial Depth to Water (ft.) 3.55	Height of Water Column (ft.) 37.45	Date 10/29	Time 1225	Project No. 2007006
Site Location Greenup Co., KY	AKGWA # 8000-2931	Casing Diameter ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16	Measuring Point (ft. MSL) 618.60	Groundwater Elevation 615.05	Well Volume (gallons) 25.09		Z # 144756

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☐ Overcast ☐ Windy Temp._____ (F° / C°)

Time	ET (min)	Depth to Water (ft)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Cont./Pres.	#
1300	0	3.55	200	0	13.21	402	4.25	5.40	—	11.4	GA- 40ml Vials HCL	
1303	3		200	.6	13.14	408	3.32	5.51	—	9.9	G- 40ml Vials HCL	
1306	6		200	1.2	13.19	411	2.58	5.65	—	9.2	P-500 ml HNO_3	1
1309	9		200	1.8	13.12	412	2.46	5.92	—	8.7	P-500 ml H_2SO_4	1
1312	12		200	2.4	13.17	412	2.33	5.83	—	9.5	P-500 ml Unp.	1
1315	15	4.36	200	3.0	13.21	412	2.24	5.88	—	8.3	P-1L Unp.	
											P-1L NaOH	
											P-1L NaOH + Zn A	
											P-120 ml Unp.	
											GA- 250 ml H_2SO_4	2
											GA- 250 ml H_3PO_4	
											GA- 500 ml H_2SO_4	
											GA- 1L Unp.	
											G- 1L Unp.	
											Comments	
For Three (3) Consecutive Readings			Required Purge	Actual Purge	+/- 1 (°C)	+/- 10%	+/- .3 (Mg/L)	+/- .10 SU	+/- 10% mV	+/- 10% unless <10 NTU		

Well Cond.	Pad Cond	Lock Funct.	Bladder Pump	Casing S.S. ☐ Casing PVC ☒	☐ Field Blank Collected Time:
needs Painted OK	OK	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:

Sample Time	Depth to Water (ft)	Color	Odor	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Appearance
1317	4.38	None	None	13.21	412	2.24	5.88	—	8.3	clear

☐ Annual ☐ Semi-Annual ☐ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

Sampler(s) Signature B.P. E. K. M **Date** 10/29/14

MONITORING WELL INTEGRITY FIELD SURVEY

Facility Name: Green Valley Landfill
Evaluator: BFK III
Evaluation Date: 10/29/14
Well Identification Number MW-1A
AKGWA Number 8000-2931

	Y	N	NA	A
1) Is the well location appropriately shown on the facility permit/and or design drawing?	☒	☐	☐	■
2) Are the wells in hard to find areas adequately flagged?	☒	☐	☐	■
3) Is the elevation information correct?	☒	☐	☐	■
Well Characteristics & Integrity				
4) Is the well ☒Aboveground? ☐Flush with the surface?	☒	☐	☐	■
5) No physical damage to well?	☒	☐	☐	■
6) Is the well labeled on the inside?	☐	☒	☐	■
7) Is the well labeled on the outside?	☒	☐	☐	■
8) Does the well have protective posts (if warranted)?	☒	☐	☐	■
9) No evidence of ponded water around the well?	☒	☐	☐	■
10) Do aboveground well have weep holes at the base of the protective cover?	☒	☐	☐	■
11) Does the area around the well appear to be clean? (i.e., no mounds of waste; no dead animals?	☐	☒	☐	■
12) Is the casing secure (attempt to move along perpendicular axes)?	☒	☐	☐	■
13) Is the surface seal void of differential erosion around and under the base?	☒	☐	☐	■
14) Is the surface seal free of cracks?	☒	☐	☐	■
15) Is the surface seal slope to prevent ponding in the immediate vicinity of the of the surface seal?	☒	☐	☐	■
16) Is the monitoring well locked to prevent unauthorized access?	☒	☐	☐	■
17) Is the cap void of large gaps which would breach security?	☒	☐	☐	■
18) Is the locking cap free of rust?	☐	☒	☐	■

Comments: Well & pad are covered in weeds, well needs painted & new label on the outside.

NOTES: 1) Response box legend:
Y = YES
N = NO (A negative response must be identified as an "A" unless a comment is made that demonstrates compliance)
N/A = Not Applicable
2) Shaded boxes indicate that an issue and appropriate corrective action must be entered into CARS

KENVIRONS INC.,
GROUNDWATER FIELD LOG

Site Name: Green Valley Landfill	Well No.	Total Depth (ft)	Initial Depth to Water (ft.)	Height of Water Column (ft.)	Date	Time	Project No.
	MW-1B	61.00	6.43	54.57	10/29	1228	2007006

Site Location	AKGWA #	Casing Diameter	Measuring Point (ft. MSL)	Groundwater Elevation	Well Volume (gallons)	Z #
Greenup Co., KY	8000 - 2932	☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16	618.70	612.27	36.56	144756

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☒ Clear ☐ Partly Cloudy ☐ Overcast ☐ Windy Temp. 60 (F°) C°)

Time	ET (min)	Depth to Water (ft)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Cont./Pres.	#
1329	0	6.43	200	0	13.43	692	4.15	6.34	—	4.3	GA- 40ml Vials HCL	
1332	3		200	.6	13.20	700	3.21	6.32	—	3.8	G- 40ml Vials HCL	
1335	6		200	1.2	13.17	702	2.79	6.34	—	4.0	P-500 ml HNO_3	1
1338	9	7.64	200	1.8	13.17	702	2.65	6.37	—	3.9	P-500 ml H_2SO_4	1
											P-500 ml Unp.	1
											P-1L Unp.	
											P-1L NaOH	
											P-1L NaOH + Zn A	
											P-120 ml Unp.	
											GA- 250 ml H_2SO_4	2
											GA- 250 ml H_3PO_4	
											GA- 500 ml H_2SO_4	
											GA- 1L Unp.	
											G- 1L Unp.	
											Comments	
For Three (3) Consecutive Readings			Required Purge	Actual Purge	+/- 1 (°C)	+/- 10%	+/- .3 (Mg/L)	+/- .10 SU	+/- 10% mV	+/- 10% unless <10 NTU		

Well Cond.	Pad Cond	Lock Funct.	Bladder Pump	Casing S.S. ☐ Casing PVC ☒	☒ Field Blank Collected Time: 1405
needs painted OK	OK	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:

Sample Time	Depth to Water (ft)	Color	Odor	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Appearance
1340	8.31	None	Strong	13.17	702	2.65	6.37	—	3.9	Clear

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

Sampler(s) Signature Bill F. K III **Date** 10/29/14

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MONITORING WELL INTEGRITY FIELD SURVEY

Facility Name: Green Valley Landfill
Evaluator: BFK III
Evaluation Date: 10/29/14
Well Identification Number MW-1B
AKGWA Number 8000-2932

	Y	N	NA	A
1) Is the well location appropriately shown on the facility permit/and or design 1drawing?	☒	☐	☐	▨
2) Are the wells in hard to find areas adequately flagged?	☒	☐	☐	▨
3) Is the elevation information correct?	☒	☐	☐	▨
Well Characteristics & Integrity				
4) Is the well ☒Aboveground?☐Flush with the surface?	☒	☐	☐	▨
5) No physical damage to well?	☒	☐	☐	▨
6) Is the well labeled on the inside?	☐	☒	☐	▨
7) Is the well labeled on the outside?	☒	☐	☐	▨
8) Does the well have protective posts (if warranted)?	☒	☐	☐	▨
9) No evidence of ponded water around the well?	☒	☐	☐	▨
10) Do aboveground well have weep holes at the base of the protective cover?	☒	☐	☐	▨
11) Does the area around the well appear to be clean? (i.e., no mounds of waste; no dead animals?	☐	☒	☐	▨
12) Is the casing secure (attempt to move along perpendicular axes)?	☒	☐	☐	▨
13) Is the surface seal void of differential erosion around and under the base?	☒	☐	☐	▨
14) Is the surface seal free of cracks?	☒	☐	☐	▨
15) Is the surface seal slope to prevent ponding in the immediate vicinity of the of the surface seal?	☒	☐	☐	▨
16) Is the monitoring well locked to prevent unauthorized access?	☒	☐	☐	▨
17) Is the cap void of large gaps which would breach security?	☒	☐	☐	▨
18) Is the locking cap free of rust?	☐	☒	☐	▨

Comments: Well needs painted & new label on outside. Weeds grown up around well & pad.

NOTES: 1) Response box legend:
Y = YES
N = NO (A negative response must be identified as an "A" unless a comment is made that demonstrates compliance)
N/A = Not Applicable

2) Shaded boxes indicate that an issue and appropriate corrective action must be entered into CARS

KENVIRONS INC.,
GROUNDWATER FIELD LOG

Site Name: Green Valley Landfill	Well No. MW-3	Total Depth (ft) 14.10	Initial Depth to Water (ft.) 5.53	Height of Water Column (ft.) 8.57	Date 10/29	Time 0830	Project No. 2007006
Site Location Greenup Co., KY	**AKGWA #** 8000-8085	**Casing Diameter** ☒ 4" ☐ 2" **Conversion fact.** 4"- 0.67/2"- 0.16	**Measuring Point (ft. MSL)** 630.80	**Groundwater Elevation** 625.27	**Well Volume (gallons)** 5.74		**Z #** 1447456

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☒ Overcast ☐ Windy Temp. 50 (F°/ C°)

Time	ET (min)	Depth to Water (ft)	Purge Rate ml/min	Volume Purged (L)	Temp (°C) ✓	Sp. Cond (µS or mS) ✓	DO (mg/L)	pH (SU) ✓	eH/ORP (mV)	Turbidity (ntu)	Cont./Pres.	#
0916	0	5.53	200	0	13.69	359	6.65	7.25	—	9.9	GA- 40ml Vials HCL	
0919	3		200	.6	13.89	400	4.92	6.57	—	8.3	G- 40ml Vials HCL	
0922	6		200	1.2	14.09	432	4.28	6.01	—	7.4	P-500 ml HNO_3	1
0925	9		200	1.8	14.22	471	3.36	5.63	—	7.0	P-500 ml H_2SO_4	1
0928	12		200	2.4	14.36	490	2.85	5.42	—	7.6	P-500 ml Unp.	1
0931	15		200	3.0	14.36	504	2.84	5.30	—	8.3	P-1L Unp.	
0934	18		200	3.6	14.42	515	2.58	5.22	—	20.7	P-1L NaOH	
0937	21		200	4.2	14.47	522	2.02	5.18	—	6.6	P-1L NaOH + Zn A	
0940	24	5.82	200	4.8	14.49	528	1.88	5.15	—	6.3	P-120 ml Unp.	
											GA- 250 ml H_2SO_4	2
											GA- 250 ml H_3PO_4	
											GA- 500 ml H_2SO_4	
											GA- 1L Unp.	
											G- 1L Unp.	
											Comments	
For Three (3) Consecutive Readings			Required Purge	Actual Purge	+/- 1 (°C)	+/- 10%	+/- .3 (Mg/L)	+/- .10 SU	+/- 10% mV	+/- 10% unless <10 NTU		

Well Cond.	Pad Cond	Lock Funct.	Bladder Pump	Casing S.S. ☐ Casing PVC ☒	☐ Field Blank Collected Time:
Needs Painted OK	OK	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☐ Yes ☒ No With:

Sample Time	Depth to Water (ft)	Color	Odor	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Appearance
0942	5.81	None	None	14.49	528	1.88	5.15	—	6.3	clear

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

Sampler(s) Signature Bill E. K [illegible] **Date** 10/29/14

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MONITORING WELL INTEGRITY FIELD SURVEY

Facility Name: Green Valley Landfill
Evaluator: BFK III
Evaluation Date: 10/29/14
Well Identification Number MW-3
AKGWA Number 8000 - 8085

	Y	N	NA	A
1) Is the well location appropriately shown on the facility permit/and or design drawing?	☒	☐	☐	☐
2) Are the wells in hard to find areas adequately flagged?	☒	☐	☐	☐
3) Is the elevation information correct?	☒	☐	☐	☐
Well Characteristics & Integrity				
4) Is the well ☒Aboveground?☐Flush with the surface?	☒	☐	☐	☐
5) No physical damage to well?	☒	☐	☐	☐
6) Is the well labeled on the inside?	☒	☐	☐	☐
7) Is the well labeled on the outside?	☒	☐	☐	☐
8) Does the well have protective posts (if warranted)?	☒	☐	☐	☐
9) No evidence of ponded water around the well?	☒	☐	☐	☐
10) Do aboveground well have weep holes at the base of the protective cover?	☒	☐	☐	☐
11) Does the area around the well appear to be clean? (i.e., no mounds of waste; no dead animals?	☒	☐	☐	☐
12) Is the casing secure (attempt to move along perpendicular axes)?	☒	☐	☐	☐
13) Is the surface seal void of differential erosion around and under the base?	☒	☐	☐	☐
14) Is the surface seal free of cracks?	☒	☐	☐	☐
15) Is the surface seal slope to prevent ponding in the immediate vicinity of the of the surface seal?	☒	☐	☐	☐
16) Is the monitoring well locked to prevent unauthorized access?	☒	☐	☐	☐
17) Is the cap void of large gaps which would breach security?	☒	☐	☐	☐
18) Is the locking cap free of rust?	☐	☒	☐	☐

Comments: Well could be painted & labeled on outside again.

NOTES: 1) Response box legend:
Y = YES
N = NO (A negative response must be identified as an "A" unless a comment is made that demonstrates compliance)
N/A = Not Applicable
2) Shaded boxes indicate that an issue and appropriate corrective action must be entered into CARS

KENVIRONS INC.,
GROUNDWATER FIELD LOG

Site Name: Green Valley Landfill	Well No. MW-28E	Total Depth (ft) 27.30	Initial Depth to Water (ft.) 9.42	Height of Water Column (ft.) 17.88	Date 10/29	Time 1000	Project No. 2007006
Site Location Greenup Co., KY	AKGWA # 8005-7103	Casing Diameter ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16	Measuring Point (ft. MSL) 677.00	Groundwater Elevation 667.58	Well Volume (gallons) 11.97		Z # 144756

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Overcast ☐ Windy Temp. 60 (F)/ C°)

Time	ET (min)	Depth to Water (ft)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Cont./Pres.	#
1132	0	9.42	200	0	16.51	334	4.20	5.66	—	5.4	GA- 40ml Vials HCL	
1135	3		200	.6	16.34	332	3.53	5.66	—	5.1	G- 40ml Vials HCL	
1138	6		200	1.2	16.35	330	2.68	5.66	—	5.1	P-500 ml HNO_3	1
1141	9	9.92	200	1.8	16.33	329	2.04	5.66	—	5.2	P-500 ml H_2SO_4	1
											P-500 ml Unp.	1
											P-1L Unp.	
											P-1L NaOH	
											P-1L NaOH + Zn A	
											P-120 ml Unp.	
											GA- 250 ml H_2SO_4	2
											GA- 250 ml H_3PO_4	
											GA- 500 ml H_2SO_4	
											GA- 1L Unp.	
											G- 1L Unp.	
											Comments	
For Three (3) Consecutive Readings			Required Purge	Actual Purge	+/- 1 (°C)	+/- 10%	+/- .3 (Mg/L)	+/- .10 SU	+/- 10% mV	+/- 10% unless <10 NTU		

Well Cond.	Pad Cond	Lock Funct.	Bladder Pump	Casing S.S. ☐ Casing PVC ☒	☐ Field Blank Collected Time:
needs painted OK	OK	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☒ Yes ☐ No With: K. Francis (KY CDM)

Sample Time	Depth to Water (ft)	Color	Odor	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Appearance
1145	10.05	None	None	16.33	329	2.04	5.66	—	5.2	Clear

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

Sampler(s) Signature Bill L K III **Date** 10/29/14

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MONITORING WELL INTEGRITY FIELD SURVEY

Facility Name: Green Valley Landfill

Evaluator: BFK III

Evaluation Date: 10/29/14

Well Identification Number MW-28E

AKGWA Number 8005-7103

	Y	N	NA	A
1) Is the well location appropriately shown on the facility permit/and or design drawing?	☒	☐	☐	☐
2) Are the wells in hard to find areas adequately flagged?	☒	☐	☐	☐
3) Is the elevation information correct?	☒	☐	☐	☐
Well Characteristics & Integrity				
4) Is the well ☒Aboveground?☐Flush with the surface?	☒	☐	☐	☐
5) No physical damage to well?	☒	☐	☐	☐
6) Is the well labeled on the inside?	☐	☒	☐	☐
7) Is the well labeled on the outside?	☒	☐	☐	☐
8) Does the well have protective posts (if warranted)?	☒	☐	☐	☐
9) No evidence of ponded water around the well?	☒	☐	☐	☐
10) Do aboveground well have weep holes at the base of the protective cover?	☒	☐	☐	☐
11) Does the area around the well appear to be clean? (i.e., no mounds of waste; no dead animals?	☒	☐	☐	☐
12) Is the casing secure (attempt to move along perpendicular axes)?	☒	☐	☐	☐
13) Is the surface seal void of differential erosion around and under the base?	☒	☐	☐	☐
14) Is the surface seal free of cracks?	☒	☐	☐	☐
15) Is the surface seal slope to prevent ponding in the immediate vicinity of the of the surface seal?	☒	☐	☐	☐
16) Is the monitoring well locked to prevent unauthorized access?	☒	☐	☐	☐
17) Is the cap void of large gaps which would breach security?	☒	☐	☐	☐
18) Is the locking cap free of rust?	☐	☒	☐	☐

Comments: Well needs painted.

NOTES: 1) Response box legend:

Y = YES
N = NO (A negative response must be identified as an "A" unless a comment is made that demonstrates compliance)
N/A = Not Applicable

2) Shaded boxes indicate that an issue and appropriate corrective action must be entered into CARS

KENVIRONS, INC.
452 Versailles Road
Frankfort, KY 40601
502-695-4357
502-695-4363 (fax)

Green Valley Landfill -ALLIED - Greenup Co., KY Project No. 2007007

Sample Point	Z#	Date	Flow (Sampled)		No Flow	Preceeding Precipitation Event Within 24 Hr. Period	
			YES	NO	YES	YES	NO
SW-1A	146799	10/27/14	☒	☐	☐	☐	☒
SW-2	146799	10/27/14	☐	☒	☐	☐	☒
SW-3	146799	10/27/14	☒	☐	☐	☐	☒
SW-4	146799	10/27/14	☒	☐	☐	☐	☒
SW-5	146799	10/27/14	☐	☒	☐	☐	☒
SW-6	146799	10/27/14	☐	☒	☐	☐	☒

Notes:

TECHNICIAN Bill F. Knarr, III DATE 10/27/14

KENVIRONS, INC.
POND / SURFACE WATER LOG

FACILITY	GREEN VALLEY	PROJECT NO.	2011033
LOCATION	GREENUP CO, KY	DATE	10/27/14
SAMPLE ID	SW-1A	SAMPLER(S)	BFK III / BTB / BFK
WEATHER	P. Cloudy 70°	Z#	1467799

CALIBRATION DATA

PH	4.0		7.0		10.0	
CONDUCTIVITY (uS)					TEMP (° C)	

FIELD DATA

SAMPLE DATA			
COLOR	Light Tan	pH (S. U.)	6.94
ODOR	None	TEMP (° C)	15.38
APPEARANCE	Cloudy	CONDUCTIVITY (uS)	1937
TIME	1250	FLOW (GPM)	15

NUMBER AND TYPE OF CONTAINERS (1)1LP Unp (1)500ml P H_2SO_4 (1)500ml P HNO_3 (1)500ml P Unp

☐ ANNUAL ☐ SEMI-ANNUAL ☒ QUARTERLY ☐ MONTHLY ☐ OTHER

SPLIT SAMPLE ☐ YES ☒ NO IF YES, WITH WHOM _____

COMMENTS _____

SAMPLER(S) SIGNATURE Bill E. K JM DATE 10/27/14

KENVIRONS, INC.
POND / SURFACE WATER LOG

FACILITY	GREEN VALLEY	**PROJECT NO.**	2011033
LOCATION	GREENUP CO, KY	**DATE**	10/27/14
SAMPLE ID	SW-2	**SAMPLER(S)**	BFK III / BTB / BFK
WEATHER	P.Cloudy 70°	**Z#**	146799

CALIBRATION DATA

PH	**4.0**		**7.0**		**10.0**	
CONDUCTIVITY (uS)					**TEMP (° C)**	

FIELD DATA

SAMPLE DATA			
COLOR		**pH (S. U.)**	
ODOR		**TEMP (° C)**	
APPEARANCE		**CONDUCTIVITY (uS)**	
TIME	1055	**FLOW (GPM)**	No Flow

NUMBER AND TYPE OF CONTAINERS (1)1L P Unp (1)500ml P H_2SO_4 (1)500ml P HNO_3 (1)500ml P Unp

☐ **ANNUAL** ☐ **SEMI-ANNUAL** ☒ **QUARTERLY** ☐ **MONTHLY** ☐ **OTHER**

SPLIT SAMPLE ☐ **YES** ☒ **NO** **IF YES, WITH WHOM** _____

COMMENTS _____

SAMPLER(S) SIGNATURE BTB P. K III **DATE** 10/27/14

KENVIRONS, INC.
POND / SURFACE WATER LOG

FACILITY	GREEN VALLEY	PROJECT NO.	2011033
LOCATION	GREENUP CO, KY	DATE	10/27/14
SAMPLE ID	SW-3	SAMPLER(S)	BFK III / BTB / BFK
WEATHER	Sunny 65°	Z#	1460799

CALIBRATION DATA

PH	4.0		7.0		10.0	
CONDUCTIVITY (uS)					TEMP (° C)	

FIELD DATA

SAMPLE DATA			
COLOR	None	pH (S. U.)	7.24
ODOR	None	TEMP (° C)	12.53
APPEARANCE	clear	CONDUCTIVITY (uS)	987
TIME	1155	FLOW (GPM)	20

NUMBER AND TYPE OF CONTAINERS (1)1Lp Unp (1)500ml P H_2SO_4 (1)500ml P HNO_3 (1)500ml P Unp

☐ ANNUAL ☐ SEMI-ANNUAL ☒ QUARTERLY ☐ MONTHLY ☐ OTHER

SPLIT SAMPLE ☐ YES ☒ NO IF YES, WITH WHOM _____

COMMENTS _____

SAMPLER(S) SIGNATURE B.O.F. K=III DATE 10/27/14

KENVIRONS, INC.
POND / SURFACE WATER LOG

FACILITY	GREEN VALLEY	**PROJECT NO.**	2011033
LOCATION	GREENUP CO, KY	**DATE**	10/27/14
SAMPLE ID	SW-4	**SAMPLER(S)**	BFK III / BTB/BFK
WEATHER	Overcast 70°	**Z#**	146799

CALIBRATION DATA

PH	**4.0**		**7.0**		**10.0**	
CONDUCTIVITY (uS)					**TEMP (° C)**	

FIELD DATA

SAMPLE DATA			
COLOR	None	**pH (S. U.)**	7.23
ODOR	Slight	**TEMP (° C)**	12.24
APPEARANCE	Clear	**CONDUCTIVITY (uS)**	1205
TIME	1215	**FLOW (GPM)**	15

NUMBER AND TYPE OF CONTAINERS (1) 1 LP Unp (1) 500ml P H_2SO_4 (1) 500ml P HNO_3 (1) 500ml P Unp

☐ **ANNUAL** ☐ **SEMI-ANNUAL** ☒ **QUARTERLY** ☐ **MONTHLY** ☐ **OTHER**

SPLIT SAMPLE ☐ **YES** ☒ **NO** **IF YES, WITH WHOM** _____

COMMENTS _____

SAMPLER(S) SIGNATURE Bill E. K III **DATE** 10/27/14

KENVIRONS, INC.
POND / SURFACE WATER LOG

FACILITY	GREEN VALLEY	**PROJECT NO.**	2011033
LOCATION	GREENUP CO, KY	**DATE**	10/27/14
SAMPLE ID	SW-5	**SAMPLER(S)**	BFK III/BTB/BFK
WEATHER	P. Cloudy 70°	**Z#**	146799

CALIBRATION DATA

PH	**4.0**		**7.0**		**10.0**	
CONDUCTIVITY (uS)					**TEMP (° C)**	

FIELD DATA

SAMPLE DATA			
COLOR		**pH (S. U.)**	
ODOR		**TEMP (° C)**	
APPEARANCE		**CONDUCTIVITY (uS)**	
TIME	1230	**FLOW (GPM)**	No Flow

NUMBER AND TYPE OF CONTAINERS (1)1LP Unp (1)500ml P H_2SO_4 (1)500ml P HNO_3 (1)500 ml P Unp

☐ **ANNUAL** ☐ **SEMI-ANNUAL** ☒ **QUARTERLY** ☐ **MONTHLY** ☐ **OTHER**

SPLIT SAMPLE ☐ **YES** ☒ **NO** **IF YES, WITH WHOM** _____

COMMENTS _____

SAMPLER(S) SIGNATURE Bob F. Kemp **DATE** 10/27/14

KENVIRONS INC.,
GROUNDWATER FIELD LOG

Site Name: Green Valley Landfill	Well No. MW-28C	Total Depth (ft) 12.90	Initial Depth to Water (ft.) 4.40	Height of Water Column (ft.) 8.50	Date 10/29	Time 1005	Project No. 2007006
Site Location Greenup Co., KY	AKGWA # 8005 - 7101	Casing Diameter ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16	Measuring Point (ft. MSL) 674.40	Groundwater Elevation 670.00	Well Volume (gallons) 5.69		Z # 1447516

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☒ Overcast ☐ Windy Temp. 50 (F°) C°)

Time	ET (min)	Depth to Water (ft)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Cont./Pres.	#
1019	0	4.40	200	0	14.64	595	1.68	4.58	—	11.4	GA- 40ml Vials HCL	
1022	3		200	.6	14.72	595	1.40	4.58	—	8.6	G- 40ml Vials HCL	
1025	6		200	1.2	14.80	594	1.44	4.57	—	6.8	P-500 ml HNO_3	1
1028	9	5.14	200	1.8	15.03	594	1.08	4.57	—	6.1	P-500 ml H_2SO_4	1
											P-500 ml Unp.	1
											P-1L Unp.	
											P-1L NaOH	
											P-1L NaOH + Zn A	
											P-120 ml Unp.	
											GA- 250 ml H_2SO_4	2
											GA- 250 ml H_3PO_4	
											GA- 500 ml H_2SO_4	
											GA- 1L Unp.	
											G- 1L Unp.	
											Comments	
For Three (3) Consecutive Readings			Required Purge	Actual Purge	+/- 1 (°C)	+/- 10%	+/- .3 (Mg/L)	+/- .10 SU	+/- 10% mV	+/- 10% unless <10 NTU		

Well Cond.	Pad Cond	Lock Funct.	Bladder Pump	Casing S.S. ☐ Casing PVC ☒	☐ Field Blank Collected Time:
Weeds removed OK	OK	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☒ Yes ☐ No With: Kevin Francis (Ky. EPA)

Sample Time	Depth to Water (ft)	Color	Odor	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Appearance
1030	5.13	None	slight	15.03	594	1.08	4.57	—	6.1	clear

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

Sampler(s) Signature Bill O'Leary **Date** 10/29/14

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MONITORING WELL INTEGRITY FIELD SURVEY

Facility Name: Green Valley Landfill
Evaluator: BEK III
Evaluation Date: 10/29/14
Well Identification Number MW-28C
AKGWA Number 8005-7101

	Y	N	NA	A
1) Is the well location appropriately shown on the facility permit/and or design drawing?	☒	☐	☐	☐
2) Are the wells in hard to find areas adequately flagged?	☒	☐	☐	☐
3) Is the elevation information correct?	☒	☐	☐	☐
Well Characteristics & Integrity				
4) Is the well ☒Aboveground?☐Flush with the surface?	☒	☐	☐	☐
5) No physical damage to well?	☒	☐	☐	☐
6) Is the well labeled on the inside?	☐	☒	☐	☐
7) Is the well labeled on the outside?	☒	☐	☐	☐
8) Does the well have protective posts (if warranted)?	☒	☐	☐	☐
9) No evidence of ponded water around the well?	☒	☐	☐	☐
10) Do aboveground well have weep holes at the base of the protective cover?	☒	☐	☐	☐
11) Does the area around the well appear to be clean? (i.e., no mounds of waste; no dead animals?	☒	☐	☐	☐
12) Is the casing secure (attempt to move along perpendicular axes)?	☒	☐	☐	☐
13) Is the surface seal void of differential erosion around and under the base?	☒	☐	☐	☐
14) Is the surface seal free of cracks?	☒	☐	☐	☐
15) Is the surface seal slope to prevent ponding in the immediate vicinity of the of the surface seal?	☒	☐	☐	☐
16) Is the monitoring well locked to prevent unauthorized access?	☒	☐	☐	☐
17) Is the cap void of large gaps which would breach security?	☒	☐	☐	☐
18) Is the locking cap free of rust?	☐	☒	☐	☐

Comments: Well needs painted.

NOTES: 1) Response box legend:
Y = YES
N = NO (A negative response must be identified as an "A" unless a comment is made that demonstrates compliance)
N/A = Not Applicable
2) Shaded boxes indicate that an issue and appropriate corrective action must be entered into CARS

KENVIRONS INC.,
GROUNDWATER FIELD LOG

Site Name: Green Valley Landfill	Well No. MW-28D	Total Depth (ft) 16.30	Initial Depth to Water (ft.) 5.05	Height of Water Column (ft.) 11.25	Date 10/29	Time 1003	Project No. 2007006
Site Location Greenup Co., KY	AKGWA # 8005 - 7102	Casing Diameter ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16	Measuring Point (ft. MSL) 675.20	Groundwater Elevation 670.15	Well Volume (gallons) 7.53		Z # 1447560

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☐ Overcast ☐ Windy Temp._____ (F° / C°)

Time	ET (min)	Depth to Water (ft)	Purge Rate ml/min	Volume Purged (L)	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Cont./Pres.	#
1057	0	5.05	200	0	16.22	731	6.32	5.02	—	46.4	GA- 40ml Vials HCL	
1100	3		200	.6	16.06	742	4.44	5.05	—	41.9	G- 40ml Vials HCL	
1103	6		200	1.2	16.11	760	2.86	5.11	—	26.0	P-500 ml HNO_3	1
1106	9	5.54	200	1.8	16.17	766	1.48	5.14	—	16.6	P-500 ml H_2SO_4	1
											P-500 ml Unp.	1
											P-1L Unp.	
											P-1L NaOH	
											P-1L NaOH + Zn A	
											P-120 ml Unp.	
											GA- 250 ml H_2SO_4	2
											GA- 250 ml H_3PO_4	
											GA- 500 ml H_2SO_4	
											GA- 1L Unp.	
											G- 1L Unp.	
											Comments	
For Three (3) Consecutive Readings			Required Purge	Actual Purge	+/- 1 (°C)	+/- 10%	+/- .3 (Mg/L)	+/- .10 SU	+/- 10% mV	+/- 10% unless <10 NTU		

Well Cond.	Pad Cond	Lock Funct.	Bladder Pump	Casing S.S. ☐ Casing PVC ☒	☐ Field Blank Collected Time:
needs paint & OK	OK	☒ Yes ☐ No	☒ Yes ☐ No	Filtered: ☐ Yes ☒ No	Split Sample ☒ Yes ☐ No With: Kevin Francis (Ky. EPA)

Sample Time	Depth to Water (ft)	Color	Odor	Temp (°C)	Sp. Cond (µS or mS)	DO (mg/L)	pH (SU)	eH/ORP (mV)	Turbidity (ntu)	Appearance
1110	6.01	None	None	16.17	7660	1.48	5.14	—	16.6	Clear

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

Sampler(s) Signature Bill L KS TM **Date** 10/29/14

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MONITORING WELL INTEGRITY FIELD SURVEY

Facility Name: Green Valley Landfill

Evaluator: BFK III

Evaluation Date: 10/29/14

Well Identification Number MW-28D

AKGWA Number 8005-7102

	Y	N	NA	A
1) Is the well location appropriately shown on the facility permit/and or design drawing?	☒	☐	☐	☐
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Well Characteristics & Integrity				
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Comments: Well needs painted.

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KENVIRONS, INC.
POND / SURFACE WATER LOG

FACILITY	GREEN VALLEY	**PROJECT NO.**	2011033
LOCATION	GREENUP CO, KY	**DATE**	10/27/14
SAMPLE ID	SW-6	**SAMPLER(S)**	BFK JF / BTB/BFK
WEATHER	P. Cloudy 70°	**Z#**	146799

CALIBRATION DATA

PH	**4.0**		**7.0**		**10.0**	
CONDUCTIVITY (uS)					**TEMP (° C)**	

FIELD DATA

SAMPLE DATA			
COLOR		**pH (S. U.)**	
ODOR		**TEMP (° C)**	
APPEARANCE		**CONDUCTIVITY (uS)**	
TIME	1105	**FLOW (GPM)**	No Flow

NUMBER AND TYPE OF CONTAINERS (1) 1 Lp Unp (1) 500ml p H_2SO_4 (1) 500ml p HNO_3 (1) 500 ml p Unp

☐ **ANNUAL** ☐ **SEMI-ANNUAL** ☒ **QUARTERLY** ☐ **MONTHLY** ☐ **OTHER**

SPLIT SAMPLE ☐ **YES** ☒ **NO** **IF YES, WITH WHOM** _____

COMMENTS _____

SAMPLER(S) SIGNATURE Bill Q. Kent **DATE** 10/27/14