JETT ENVIRONMENTAL CONSULTING

September 2, 2014

1592

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: Third 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 Third 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
SEP - 5 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

## Third Quarter 2014
## Sampling Event

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

## September 2014

**Prepared by:**

JETT ENVIRONMENTAL CONSULTING

*10 Quiet Brook Court*
*St. Charles, MO 63303*

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Table 2 Background Used in Statistical Reporting


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Appendix C Laboratory Analytical Report and Field Information Logs

As noted in the Second Quarter 2014 Groundwater Statistical Analysis Report (dated June 12, 2014 by Herst & Associates, Inc.), the April 2014 concentrations appeared attributable to turbid conditions and not related to the landfill. Well MW-28C was proposed to be resampled for total and dissolved metals during the subsequent event (July 2014). The total metal resampling results would be utilized to verify the Second Quarter (April) 2014 exceedances. The dissolved metal results would be utilized to supplement the total metal results.

The following table summarizes the Second Quarter (April) 2014 results that initially exceeded statistical limits.

**Original & Resampling Results Compared to Statistical Limits**
**Green Valley Landfill**

| Well | Parameter | Prediction Limit (mg/L) | April 2014 Total Metal Results (mg/L) | July 2014 Total Metal Results (mg/L) | July 2014 Dissolved Metal Results (mg/L) |
|---|---|---|---|---|---|
| MW-28C | Iron, Total | 72 | 160 | 6.2 | <0.02 |
| | Copper, Total | 0.01 | 0.022 | <0.01 | <0.01 |
| | Zinc, Total | 0.082 | 0.099 | 0.066 | 0.074 |

As shown on the table above, total copper, iron, and zinc concentrations at MW-28C were each below the respective statistical limits during the Third Quarter 2014 event. Dissolved copper, iron, and zinc were also below the statistical limits. Therefore, the Second Quarter 2014 exceedances are not considered confirmed exceedances, but rather anomalous results likely attributable to turbid conditions at time of sampling.

According to Kenvirons, wells MW-28C is scheduled to be redeveloped prior to the Fourth Quarter 2014 event in effort to lower suspended sediment and total metal concentrations.

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 July 2014 event.

## 5.0 STATISTICAL RESULTS SUMMARY

During the July 2014 event, no results exceeded a statistical limit.

Continuation of Detection Monitoring is recommended for the site.

# TABLES

| TABLE 1<br>GROUNDWATER MONITORING WELLS<br>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.*

# APPENDICES

## APPENDIX A

## POTENTIOMETRIC SURFACE MAP

## LEGEND

- MW-1 — GROUNDWATER MONITORING WELL
- 610.40 — GROUNDWATER ELEVATION (fmsl)
- 660 — POTENTIOMETRIC SURFACE CONTOUR (fmsl)
- FOOTPRINT
- PROPERTY BOUNDARY
- PERMIT BOUNDARY
- RESERVED EASEMENT
- 250' BUFFER

Water levels collected by Kenvirons, Inc. on July 8, 2014.

Groundwater elevation calculations available in Appendix B.

Base map courtesy of Kenvirons, Inc.

Aerial topography of landfill area dated December 12, 2012 provided by Cooper Aerial Surveys Co.

NORTH

0 225 450 900 1800

Scale in Feet
Graphic Scale: 1 inch = 900 feet

MW-1
610.40

MW-1B
611.65

MW-1A
614.37

620

640

660

RESERVED EASEMENT

MW-3
624.30

250' BUFFER ZONE

MW-28E
667.05

MW-28D
668.97

MW-28C
668.85

PHASE I

PHASE II & III

PERMIT BOUNDARY

GREEN VALLEY LANDFILL
GENERAL PARTNERSHIP
PROPERTY BOUNDARY

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# Third 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 | 7.40 | 610.40 |
| MW-1A | 618.60 | 4.23 | 614.37 |
| MW-1B | 618.70 | 7.05 | 611.65 |
| MW-3 | 630.80 | 6.50 | 624.30 |
| MW-28C | 674.40 | 5.55 | 668.85 |
| MW-28D | 675.20 | 6.23 | 668.97 |
| MW-28E | 677.00 | 9.95 | 667.05 |

*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 7/8/14.*

**Groundwater Flow Velocity Calculations**
**Green Valley Landfill, Kentucky**
**Third 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 x $10^2$ 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 Third Quarter 2014 potentiometric surface map from well MW-28C to well MW-1.*

*Gradient(i) = Change in Groundwater Elevation along Flow Path*
*i: From MW-28C (668.85 fmsl) to MW-1 (610.40 fmsl)/ Distance = 58.45 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 8/18/2014, 8:41 AM

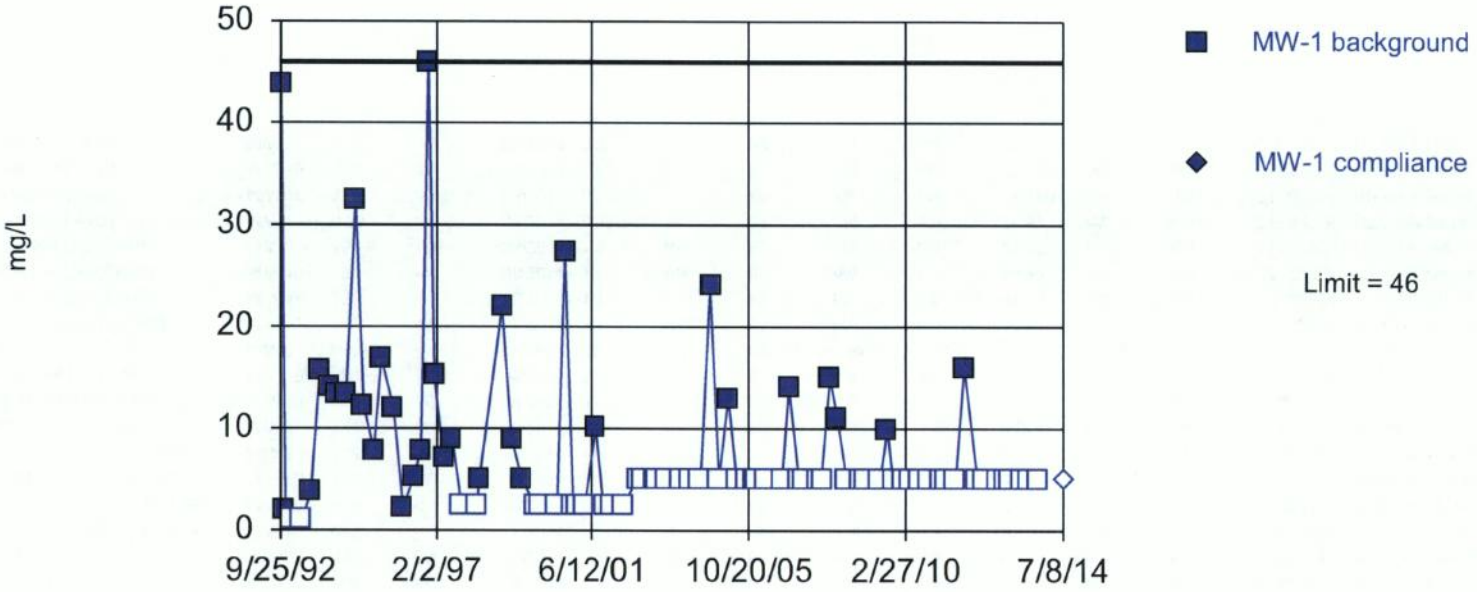
| Constituent | Well | Upper Lim. | Lower Lim. | Date | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs | ND Adj. | Transform | Alpha | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand [COD] (mg/L) | MW-1 | 46 | n/a | 7/8/2014 | 5ND | No | 84 | n/a | 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 | 7/8/2014 | 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 | 7/8/2014 | 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 | 7/8/2014 | 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 | 7/8/2014 | 1.2 | 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 | 4 | n/a | 7/8/2014 | 3.3 | No | 85 | 10.16 | 2.663 | 0 | None | x^2 | 0.000418 | Param Intra 1 of 2 |
| Chloride (mg/L) | MW-1B | 52 | n/a | 7/8/2014 | 34 | 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 | 7/8/2014 | 2.2 | No | 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 | 7/8/2014 | 0.13 | 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 | 9.6 | n/a | 7/8/2014 | 1.9 | No | 85 | 0.7703 | 0.7023 | 0 | None | ln(x) | 0.000418 | Param Intra 1 of 2 |
| Iron Total (mg/L) | MW-1B | 11 | n/a | 7/8/2014 | 0.028 | No | 85 | n/a | n/a | 4.706 | n/a | n/a | 0.0002694 | NP Intra (normality) 1 of 2 |
| Iron Total (mg/L) | MW-3 | 58 | n/a | 7/8/2014 | 11 | 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 | 8.4 | 4.6 | 7/8/2014 | 5.38 | No | 84 | 6.5 | 0.8894 | 0 | None | No | 0.000209 | Param Intra 1 of 2 |
| pH [Field] (su) | MW-1A | 8 | 6.2 | 7/8/2014 | 6.87 | No | 84 | 1.92 | 0.03908 | 0 | None | x^(1/3) | 0.000209 | Param Intra 1 of 2 |
| pH [Field] (su) | MW-1B | 9.8 | 6.2 | 7/8/2014 | 7.31 | No | 85 | n/a | n/a | 0 | n/a | n/a | 0.0005389 | NP Intra (normality) 1 of 2 |
| pH [Field] (su) | MW-3 | 8.2 | 4.5 | 7/8/2014 | 6.13 | No | 81 | 1.806 | 0.138 | 0 | None | ln(x) | 0.000209 | Param Intra 1 of 2 |
| Sodium Total (mg/L) | MW-1 | 4.6 | n/a | 7/8/2014 | 1.4 | No | 82 | 0.703 | 0.3848 | 0 | None | ln(x) | 0.000418 | Param Intra 1 of 2 |
| Sodium Total (mg/L) | MW-1A | 360 | n/a | 7/8/2014 | 20 | 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 | 7/8/2014 | 130 | 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 | 7/8/2014 | 3.1 | 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 | 940 | n/a | 7/8/2014 | 70 | No | 84 | n/a | n/a | 0 | n/a | n/a | 0.0002756 | NP Intra (normality) 1 of 2 |
| Specific Conductance [Field] (umhos/cm) | MW-1A | 440 | n/a | 7/8/2014 | 391 | No | 82 | 120248 | 36097 | 0 | None | x^2 | 0.000418 | Param Intra 1 of 2 |
| Specific Conductance [Field] (umhos/cm) | MW-1B | 770 | n/a | 7/8/2014 | 692 | No | 83 | 318256 | 127304 | 0 | None | x^2 | 0.000418 | Param Intra 1 of 2 |
| Specific Conductance [Field] (umhos/cm) | MW-3 | 460 | n/a | 7/8/2014 | 117 | No | 82 | 5.006 | 0.5279 | 0 | None | ln(x) | 0.000418 | Param Intra 1 of 2 |
| Total Dissolved Solids [TDS] (mg/L) | MW-1 | 120 | n/a | 7/8/2014 | 53 | No | 83 | 6.981 | 1.883 | 3.614 | None | sqrt(x) | 0.000418 | Param Intra 1 of 2 |
| Total Dissolved Solids [TDS] (mg/L) | MW-1A | 410 | n/a | 7/8/2014 | 230 | 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 | 7/8/2014 | 360 | 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 | 340 | n/a | 7/8/2014 | 70 | No | 82 | 4.647 | 0.5563 | 0 | None | ln(x) | 0.000418 | Param Intra 1 of 2 |
| Total Organic Carbon [TOC] (mg/L) | MW-1 | 10 | n/a | 7/8/2014 | 1.3 | 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 | 7/8/2014 | 1.1 | 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 | 7/8/2014 | 1.4 | 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 | 7/8/2014 | 1.8 | 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 | 7/8/2014 | 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 | 7/8/2014 | 0.005ND | 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 | 7/8/2014 | 0.022 | No | 85 | n/a | n/a | 60 | n/a | n/a | 0.0002694 | NP Intra (NDs) 1 of 2 |
| Total Organic Halides (mg/L) | MW-3 | 0.37 | n/a | 7/8/2014 | 0.005ND | No | 82 | n/a | n/a | 67.07 | n/a | n/a | 0.000288 | NP Intra (NDs) 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 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.

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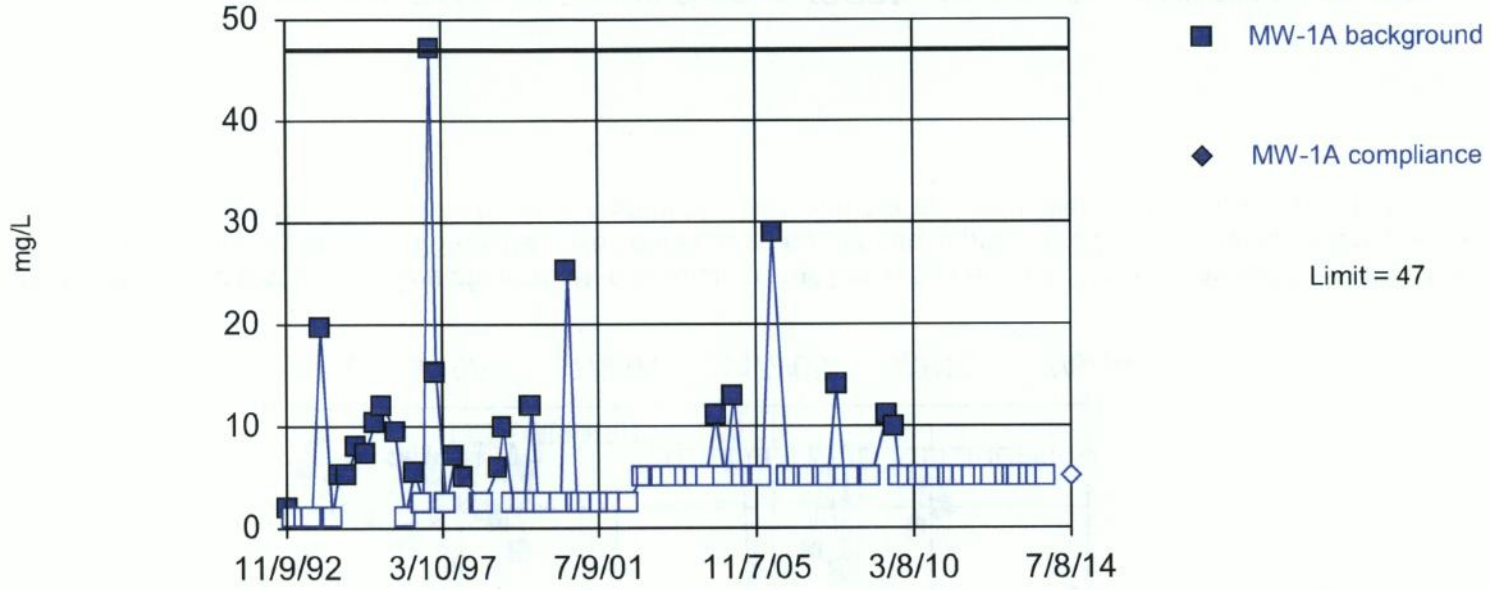
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Hollow symbols indicate censored values.

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.

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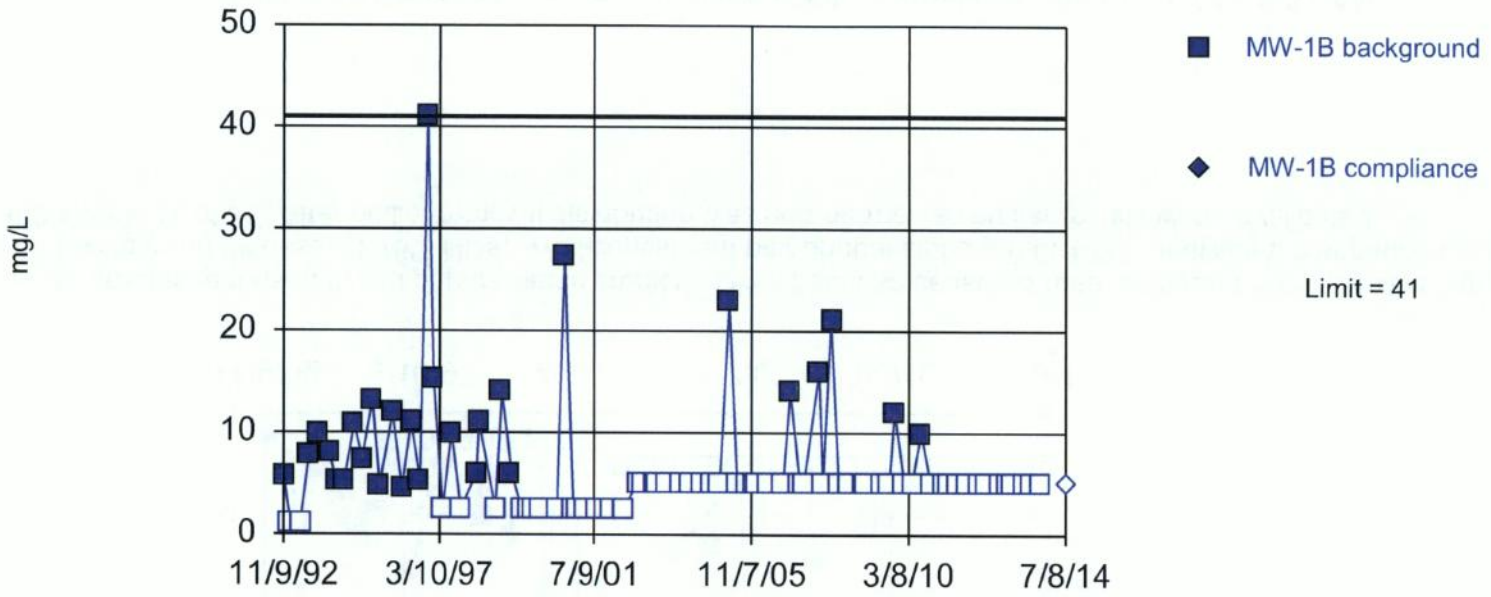
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Hollow symbols indicate censored values.

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.

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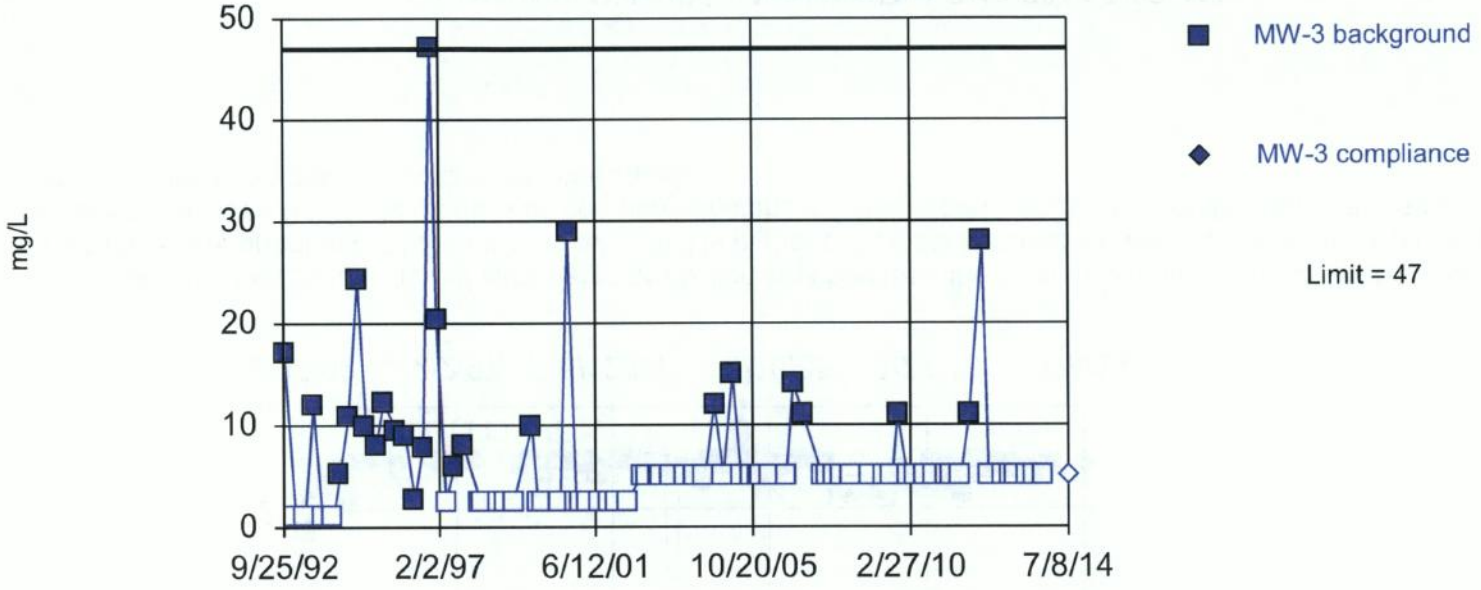
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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 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.

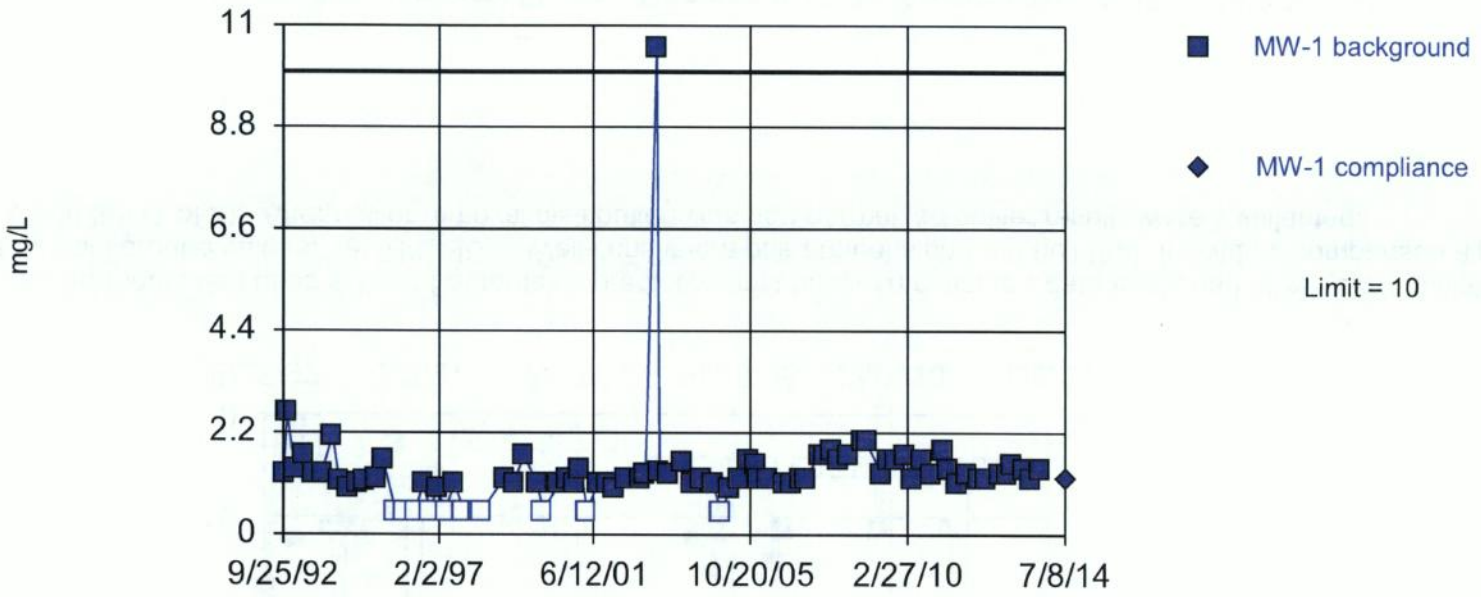
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Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

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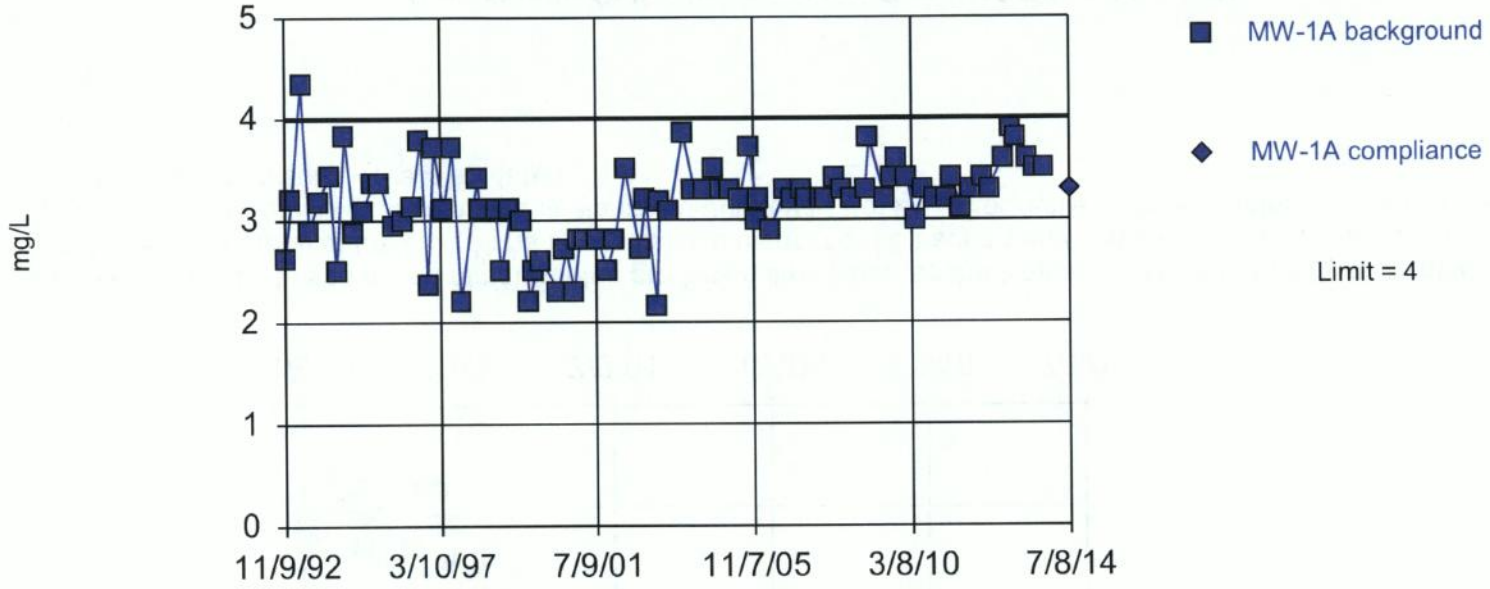
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on square transformation): Mean=10.16, Std. Dev.=2.663, n=85. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.971, critical = 0.961. Kappa = 2.12 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

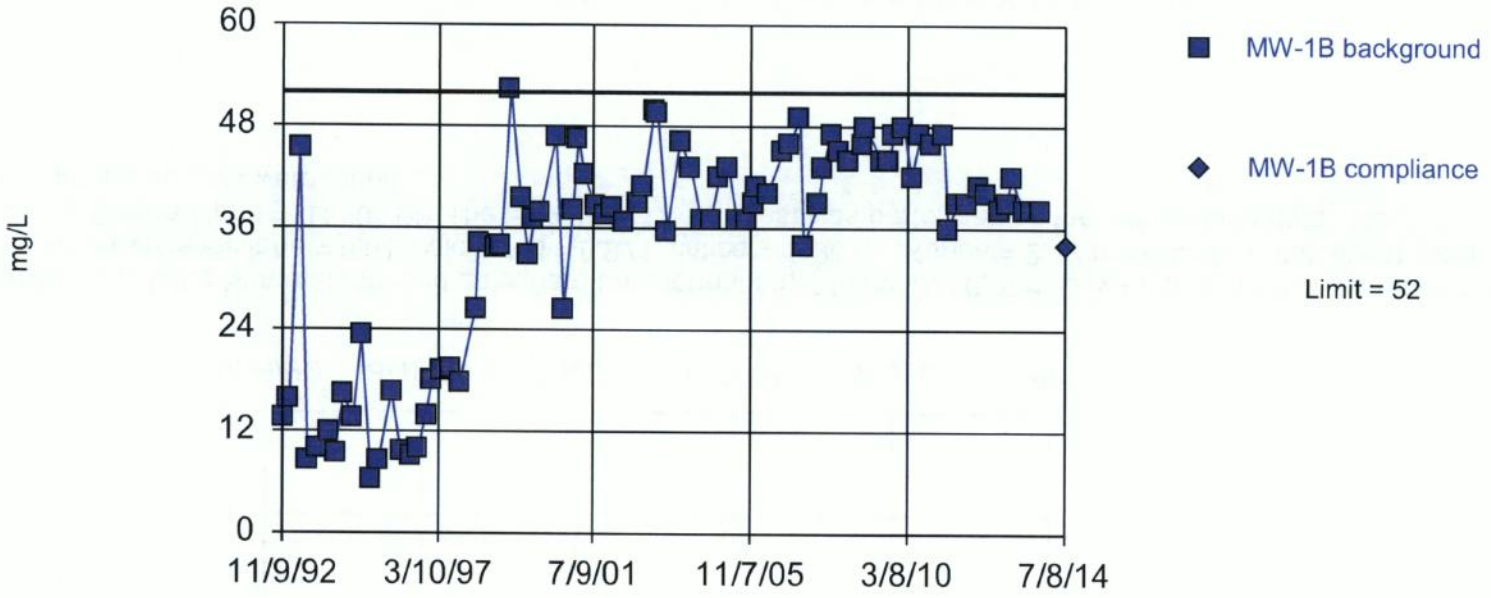
Constituent: Chloride Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

Constituent: Chloride Analysis Run 8/18/2014 8:37 AM

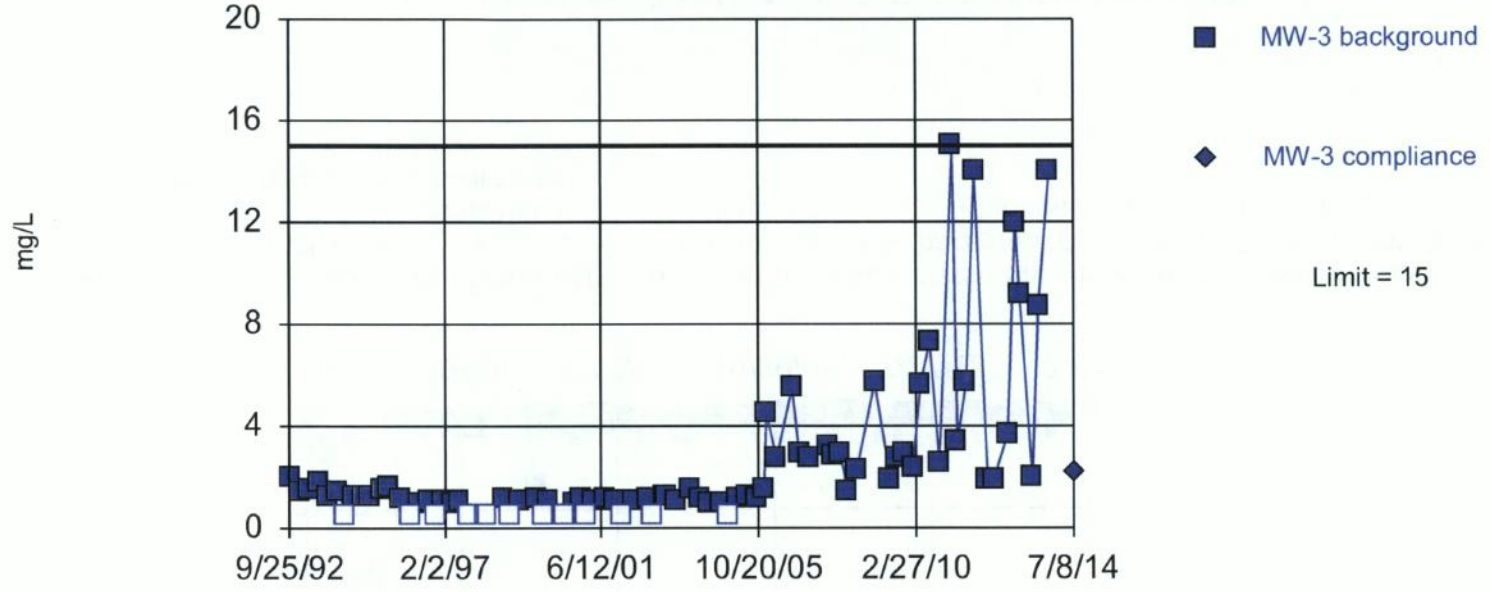
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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 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.

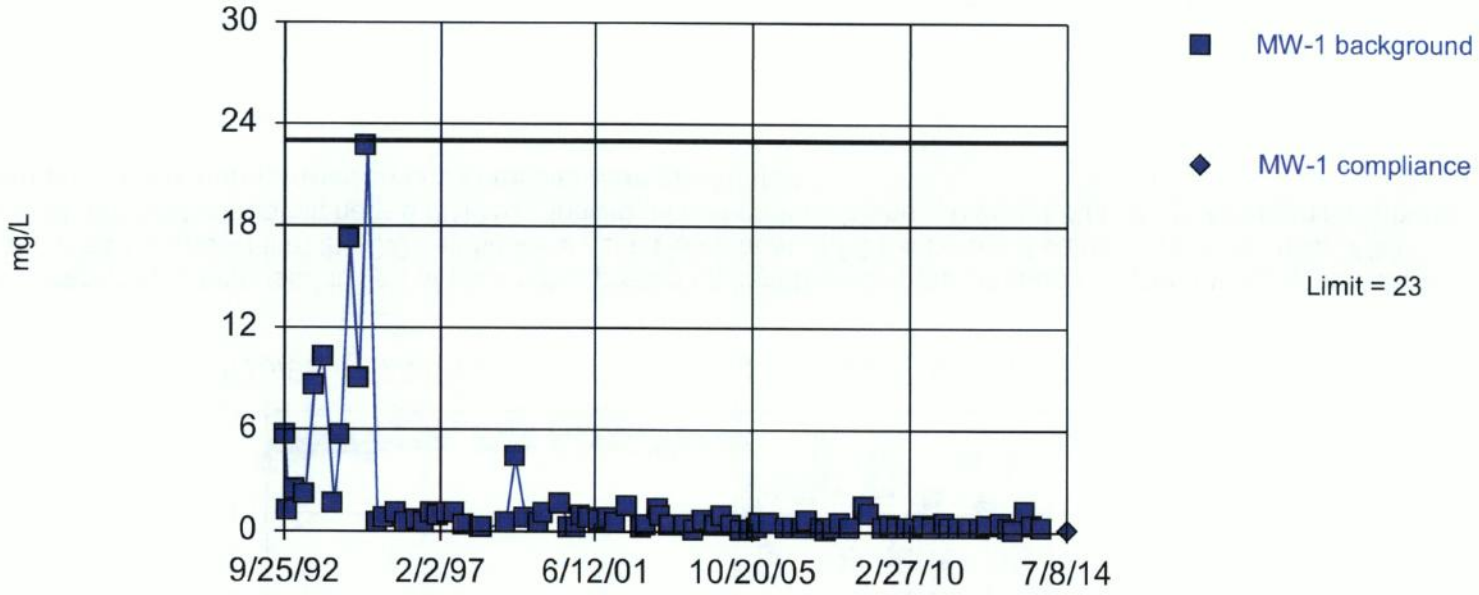
Constituent: Chloride Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

Constituent: Iron Total Analysis Run 8/18/2014 8:37 AM

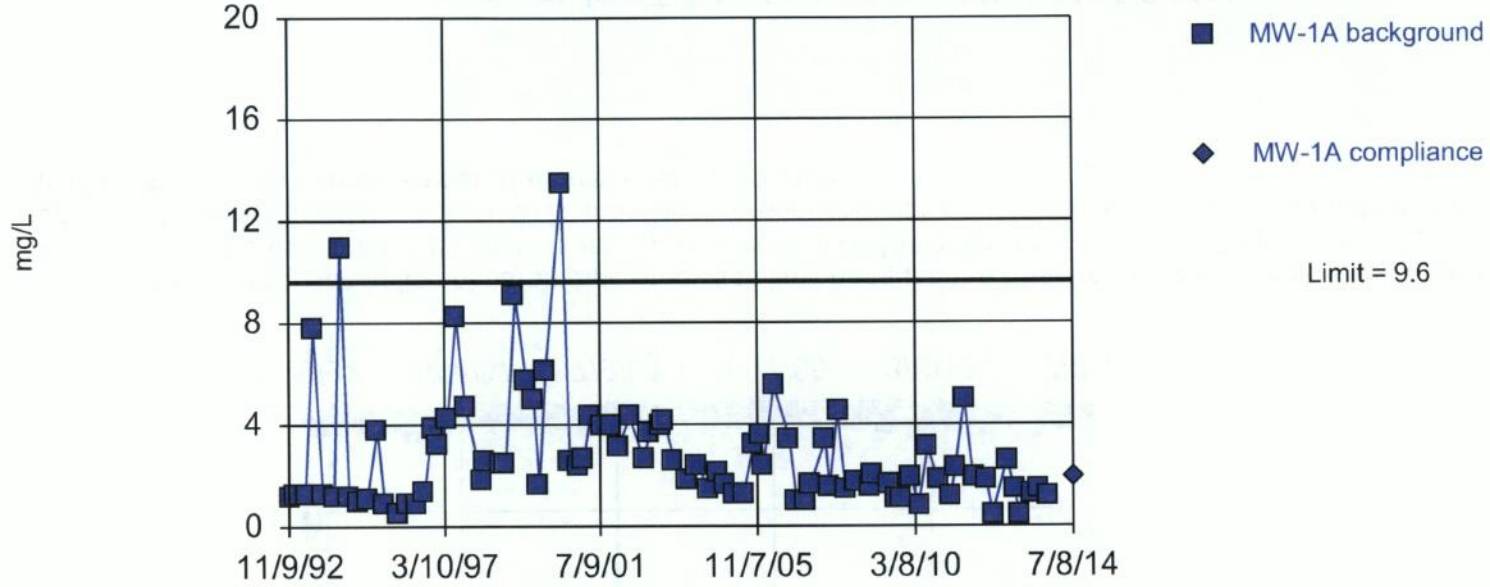
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.986, critical = 0.961. Kappa = 2.12 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

Constituent: Iron Total Analysis Run 8/18/2014 8:37 AM

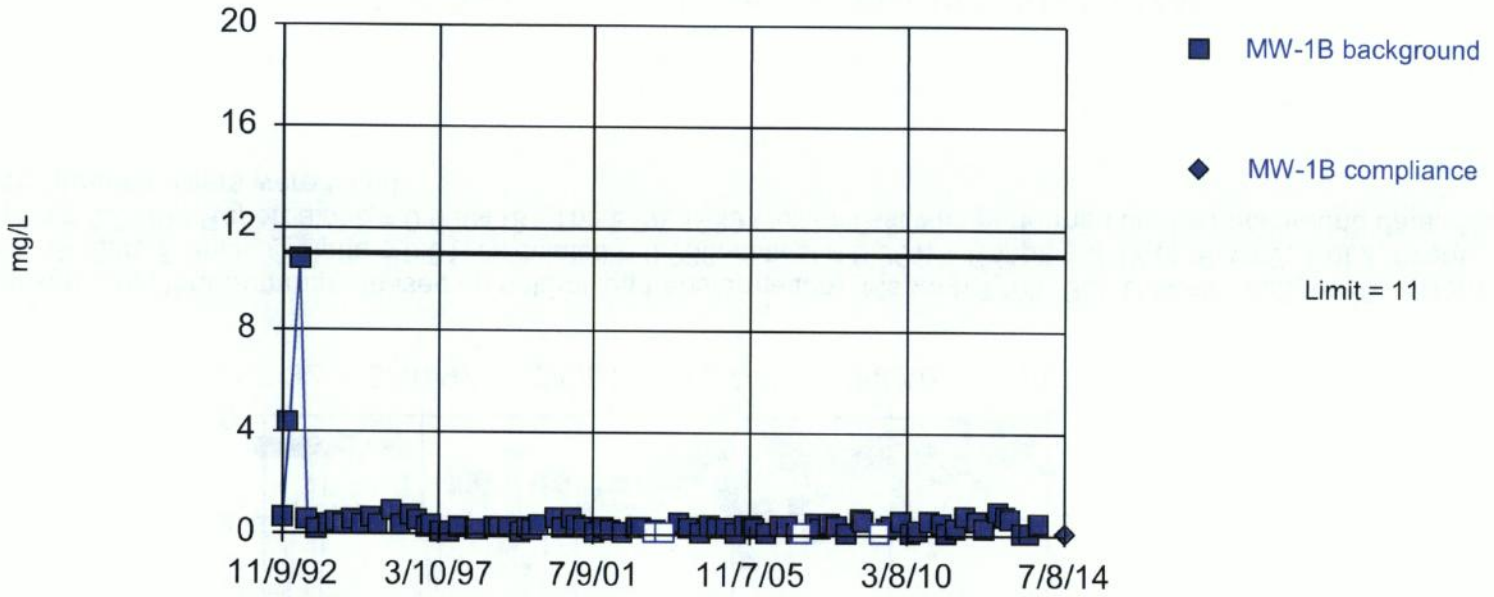
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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.

Constituent: Iron Total Analysis Run 8/18/2014 8:37 AM

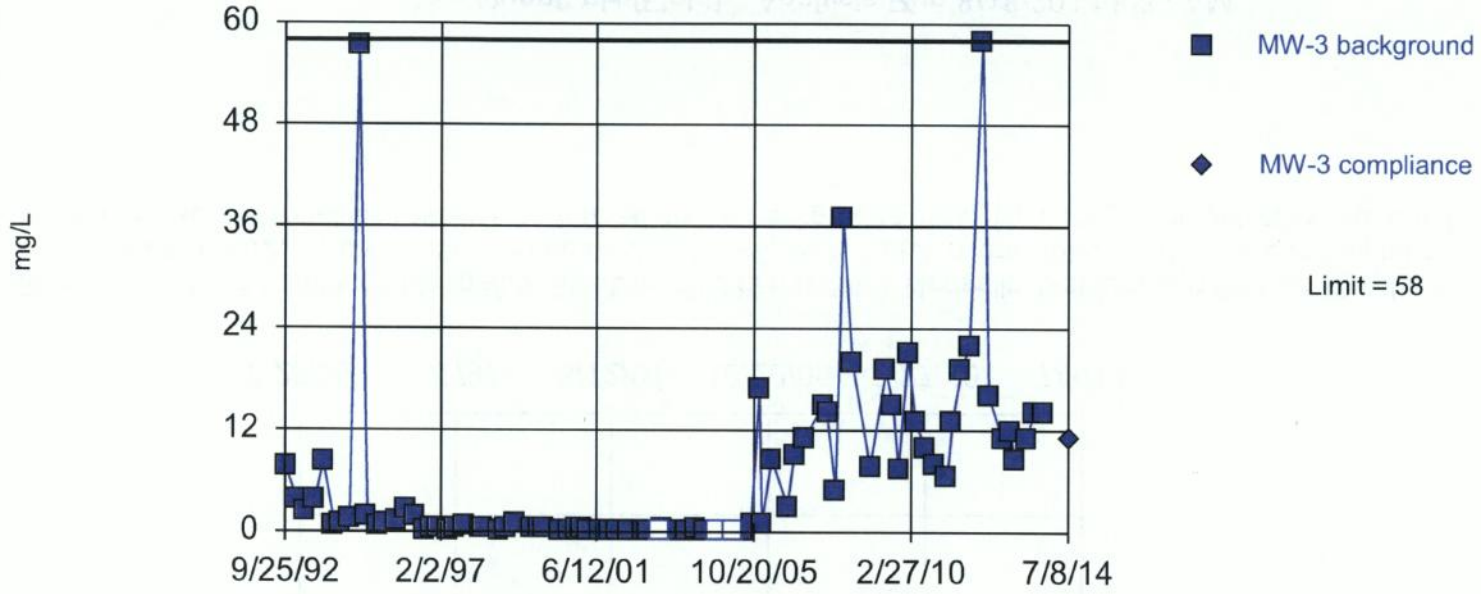
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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.

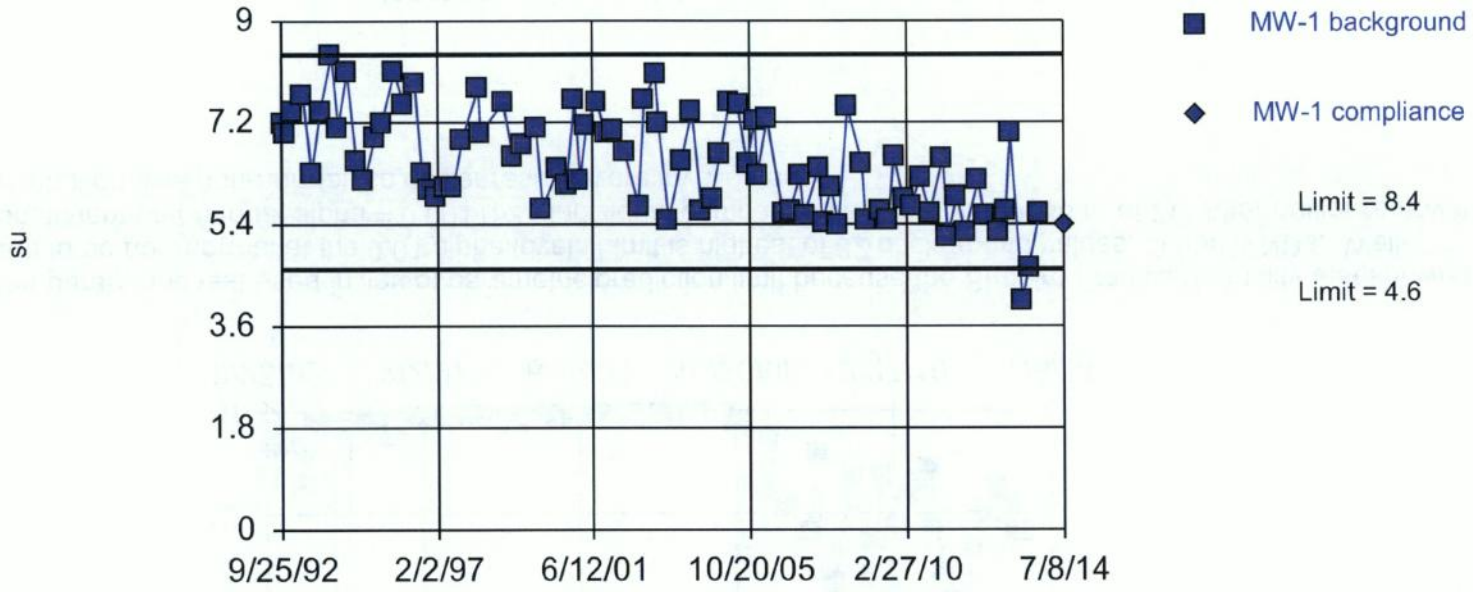
Constituent: Iron Total Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limits

# Prediction Limit

## Intrawell Parametric




Background Data Summary: Mean=6.5, Std. Dev.=0.8894, n=84. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9812, critical = 0.96. Kappa = 2.121 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. Rosner's Outlier Test was performed on the background data. No background outliers were found.

Constituent: pH [Field] Analysis Run 8/18/2014 8:37 AM

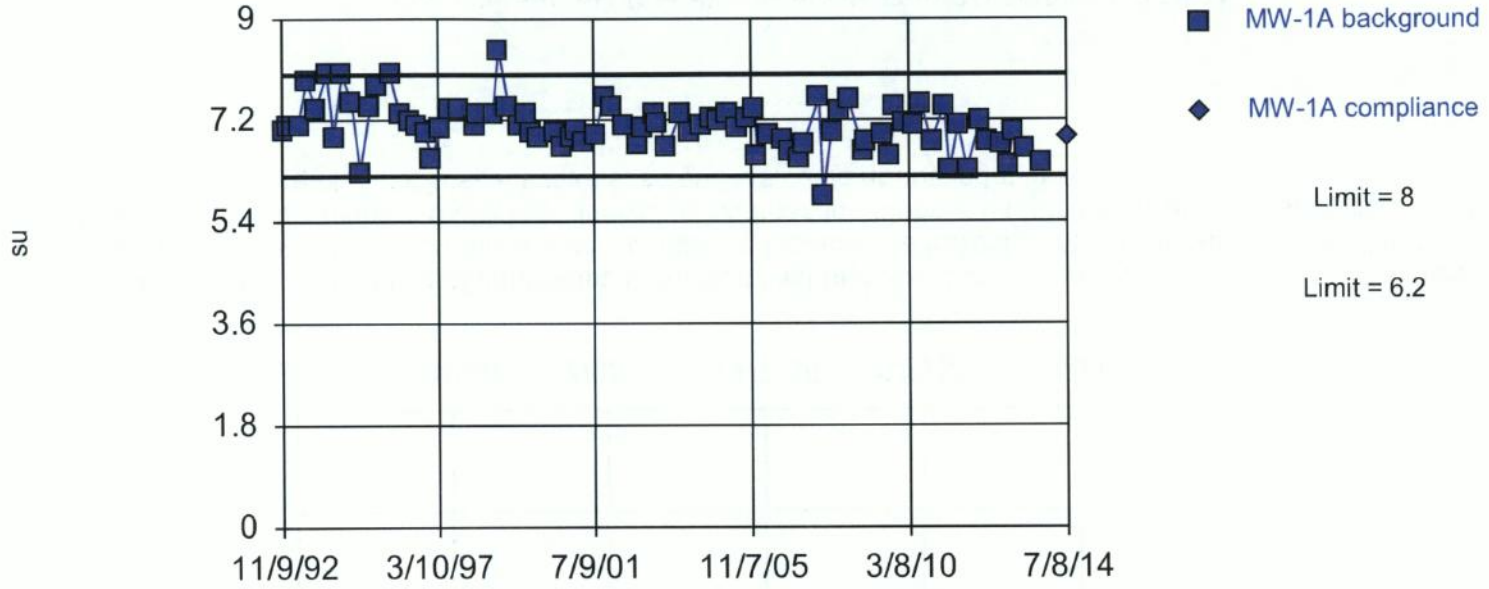
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limits

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on cube root transformation): Mean=1.92, Std. Dev.=0.03908, n=84. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9748, critical = 0.96. Kappa = 2.121 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. Rosner's Outlier Test was performed on the background data. One background outlier was removed: 5.53 (7/17/2013).

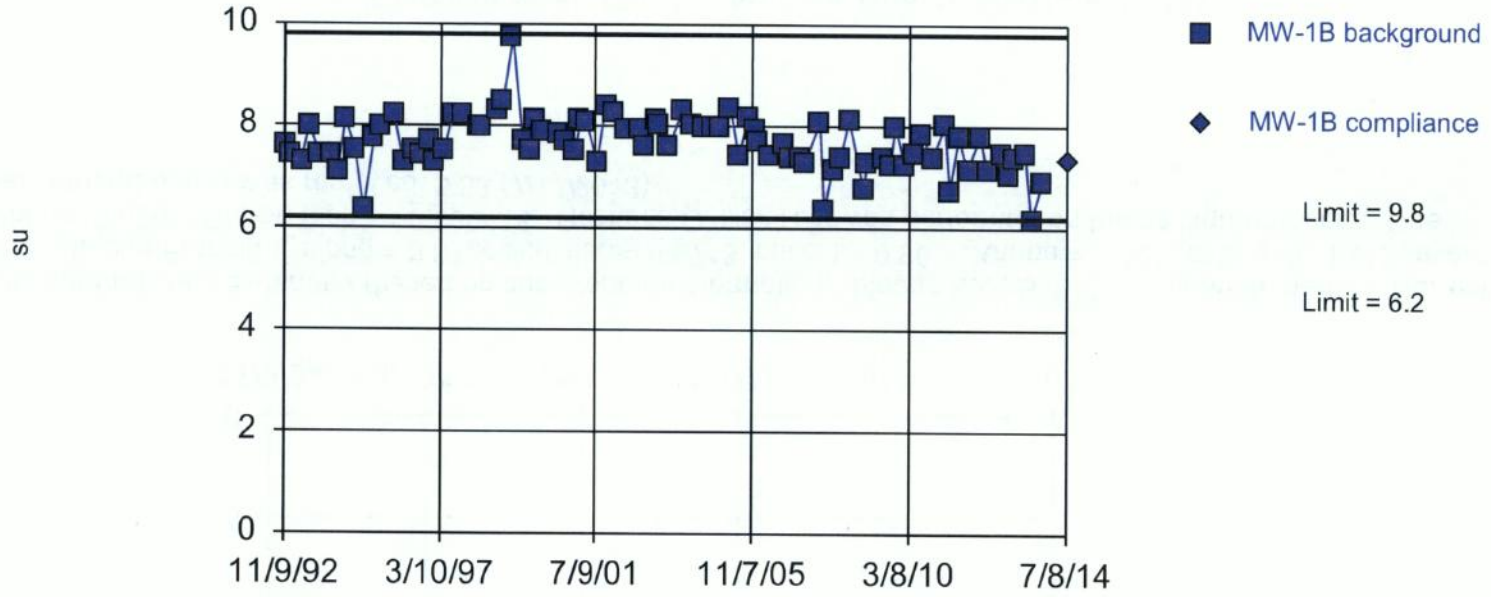
Constituent: pH [Field] Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limits

# 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. Limits are highest and lowest of 85 background values. Well-constituent pair annual alpha = 0.002155. Individual comparison alpha = 0.0005389 (1 of 2). Distribution was found to be non-normal after removal of suspect values, so outliers could not be indentified.

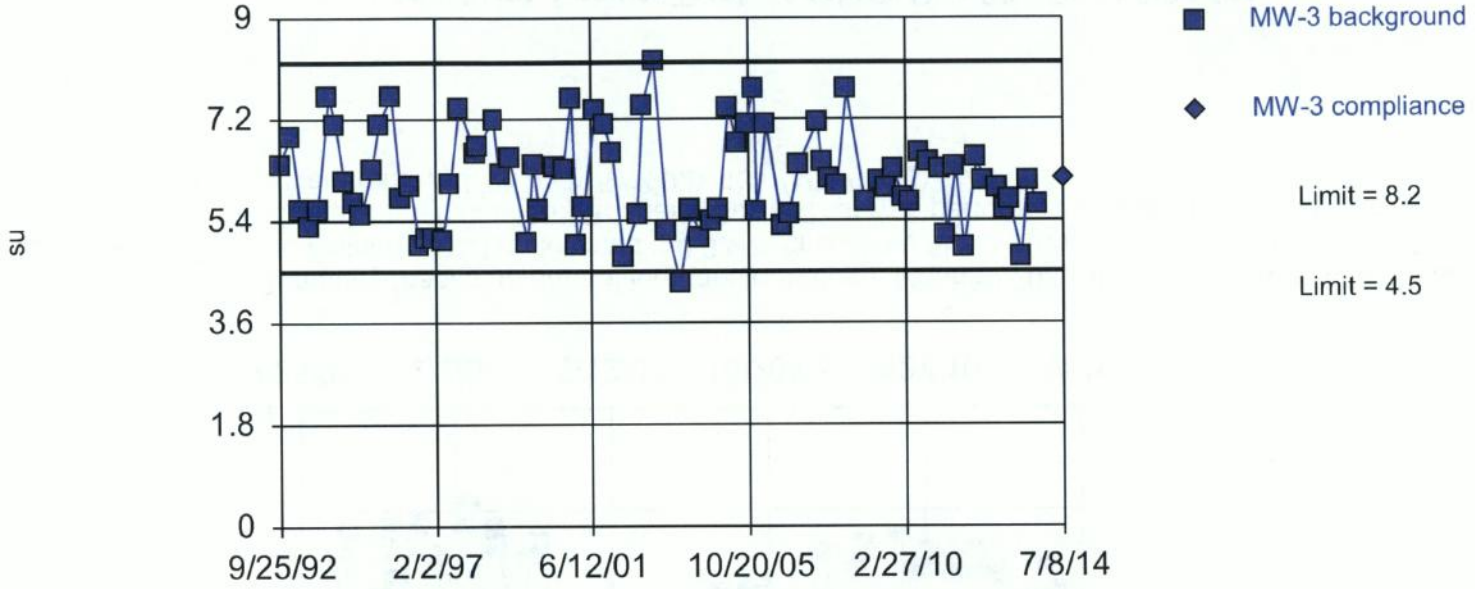
Constituent: pH [Field] Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limits

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on natural log transformation): Mean=1.806, Std. Dev.=0.138, n=81. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9896, critical = 0.958. Kappa = 2.124 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. The EPA 1989 Outlier Test was performed on the background data. No background outliers were found.

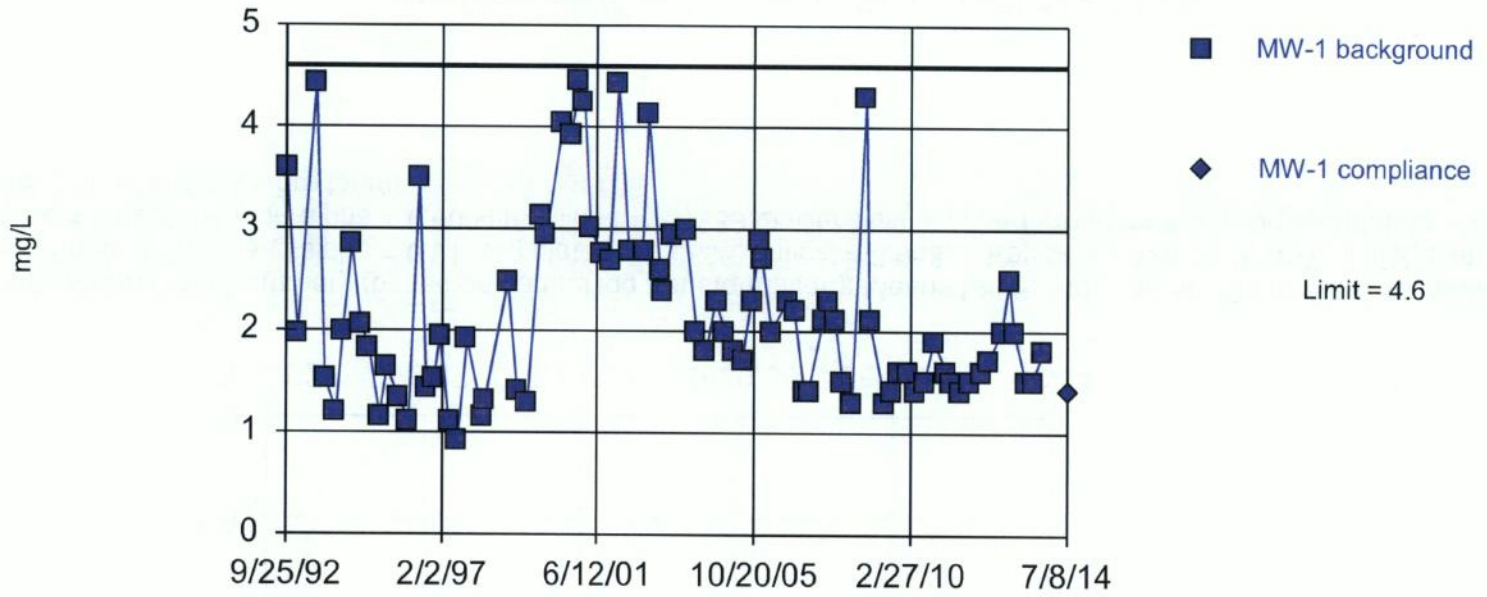
Constituent: pH [Field] Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on natural log transformation): Mean=0.703, Std. Dev.=0.3848, n=82. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9718, critical = 0.959. Kappa = 2.123 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. 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 8/18/2014 8:37 AM

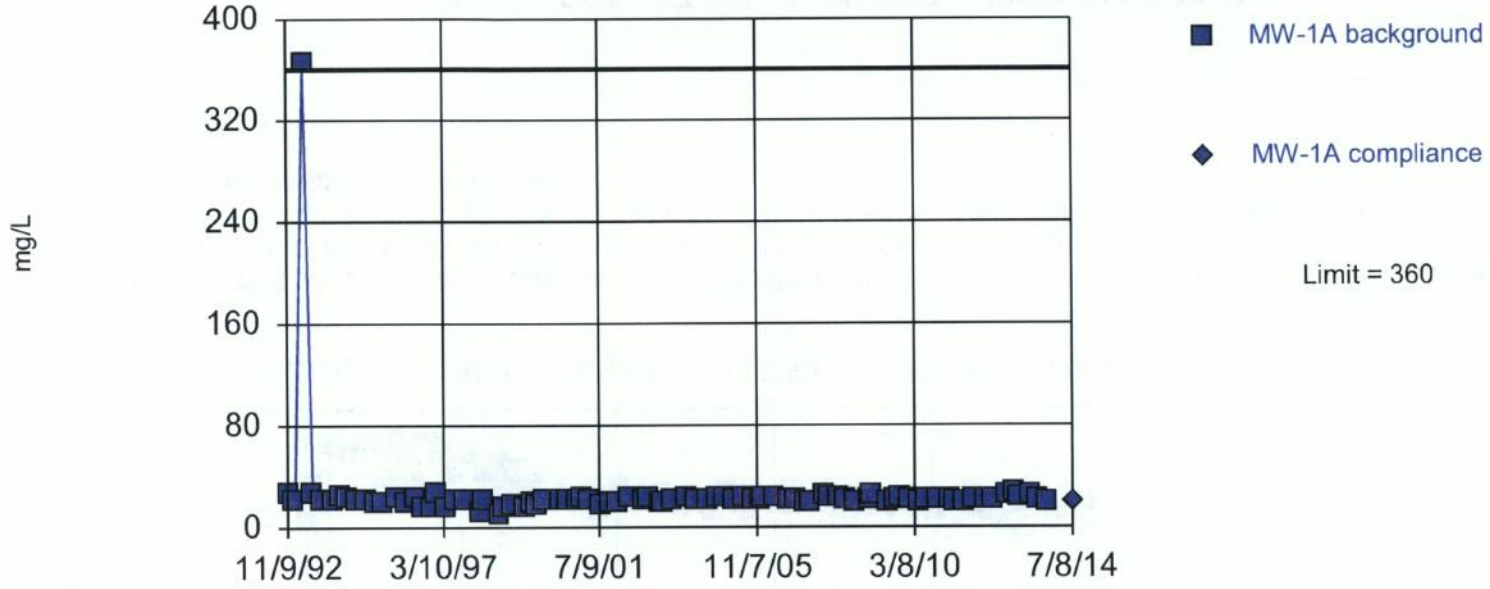
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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). Distribution was found to be non-normal after removal of suspect values, so outliers could not be indentified.

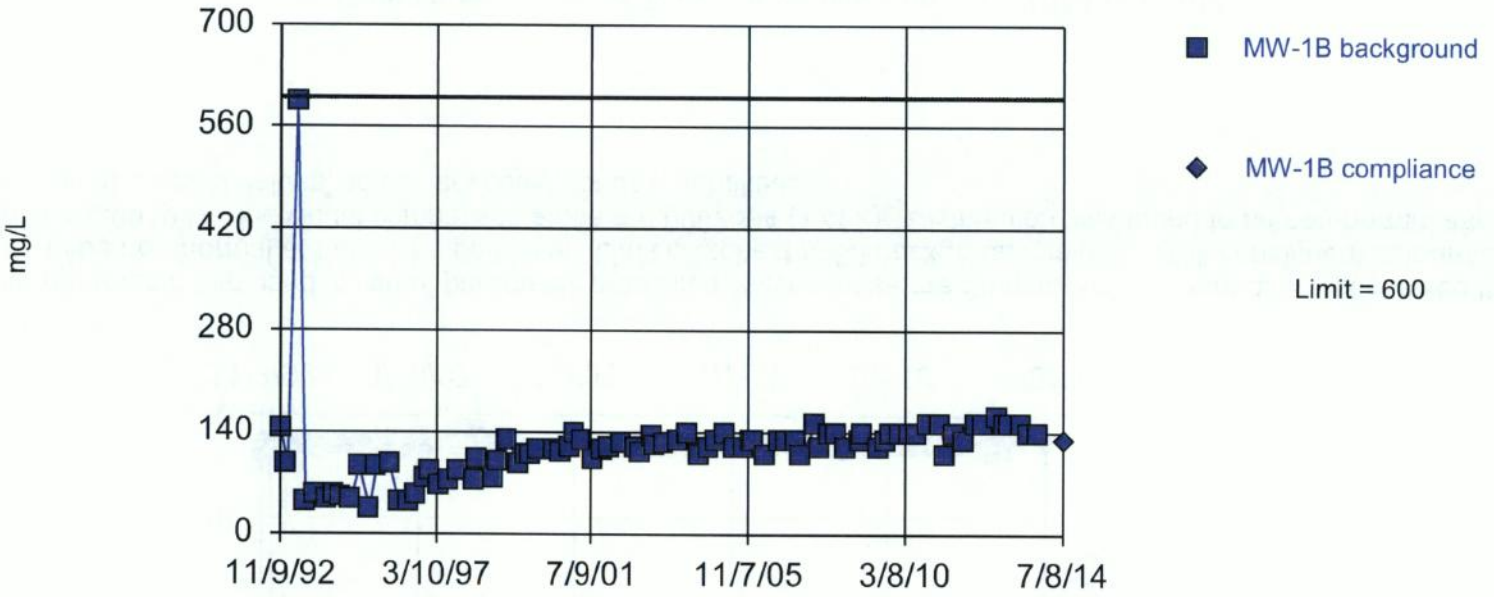
Constituent: Sodium Total Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

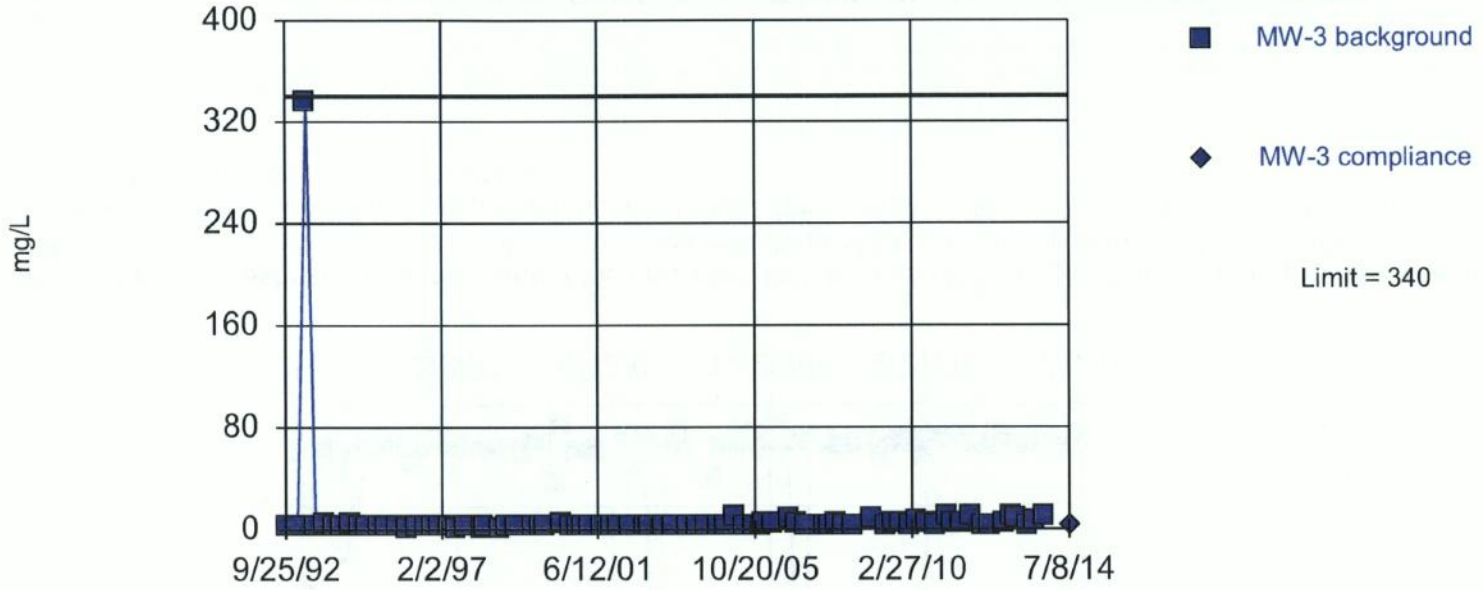
Constituent: Sodium Total Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

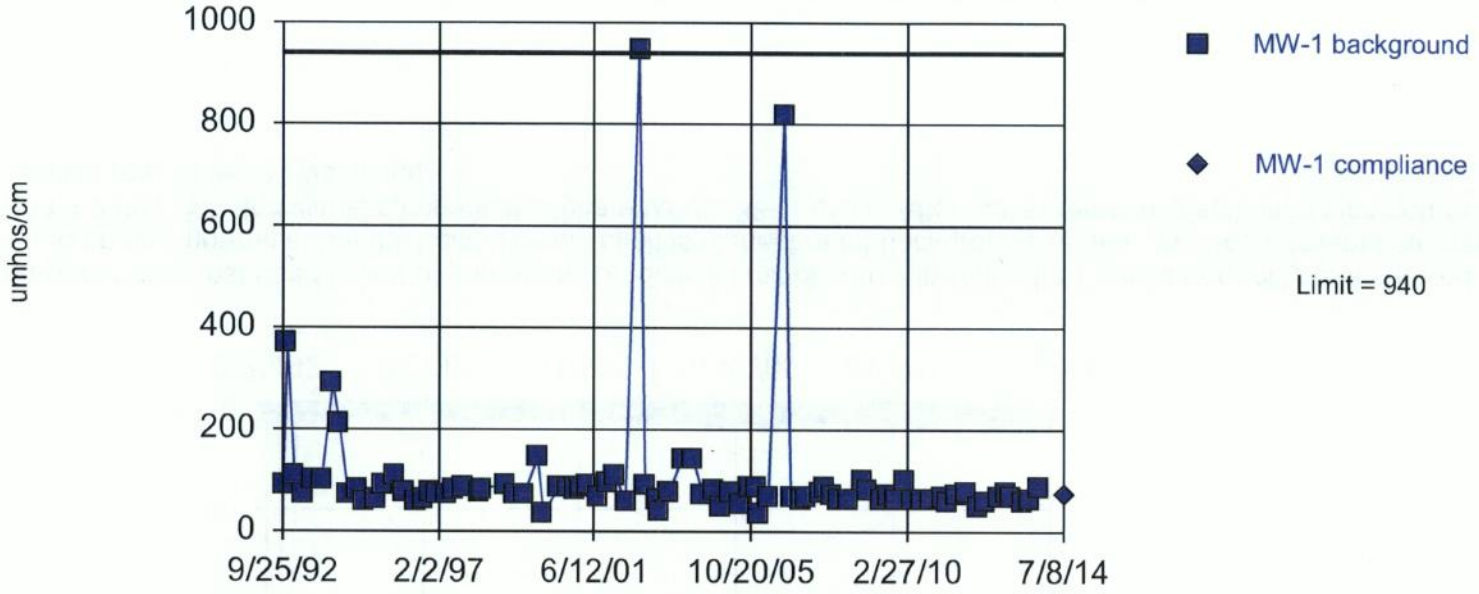
Constituent: Sodium Total Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

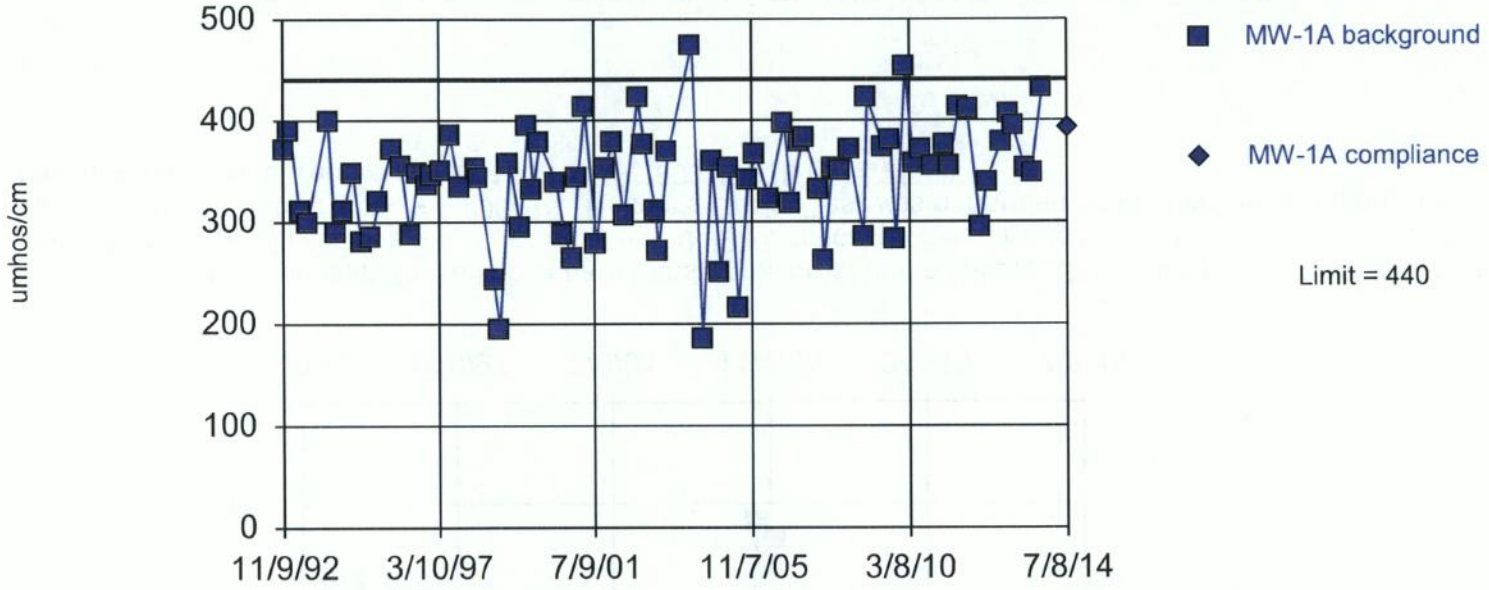
Constituent: Specific Conductance [Field] Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on square transformation): Mean=120248, Std. Dev.=36097, n=82. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9855, critical = 0.959. Kappa = 2.123 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. 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).

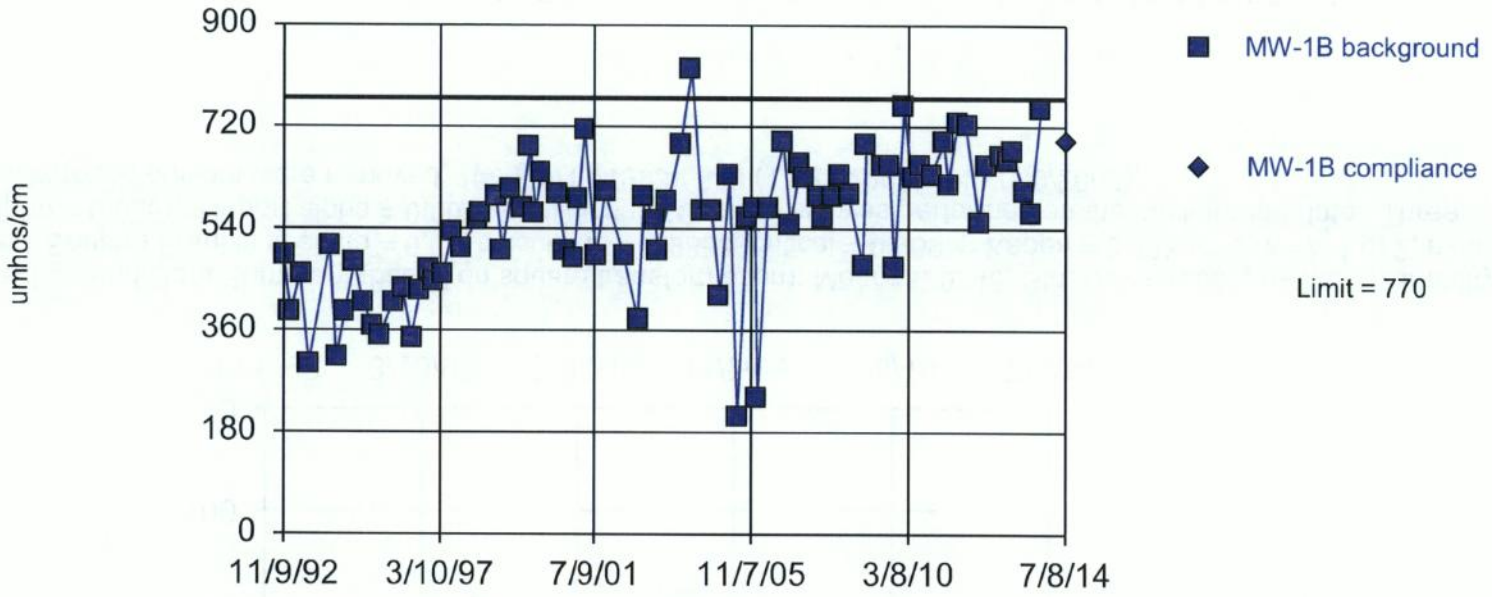
Constituent: Specific Conductance [Field] Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on square transformation): Mean=318256, Std. Dev.=127304, n=83. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9926, critical = 0.96. Kappa = 2.122 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. 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 8/18/2014 8:37 AM

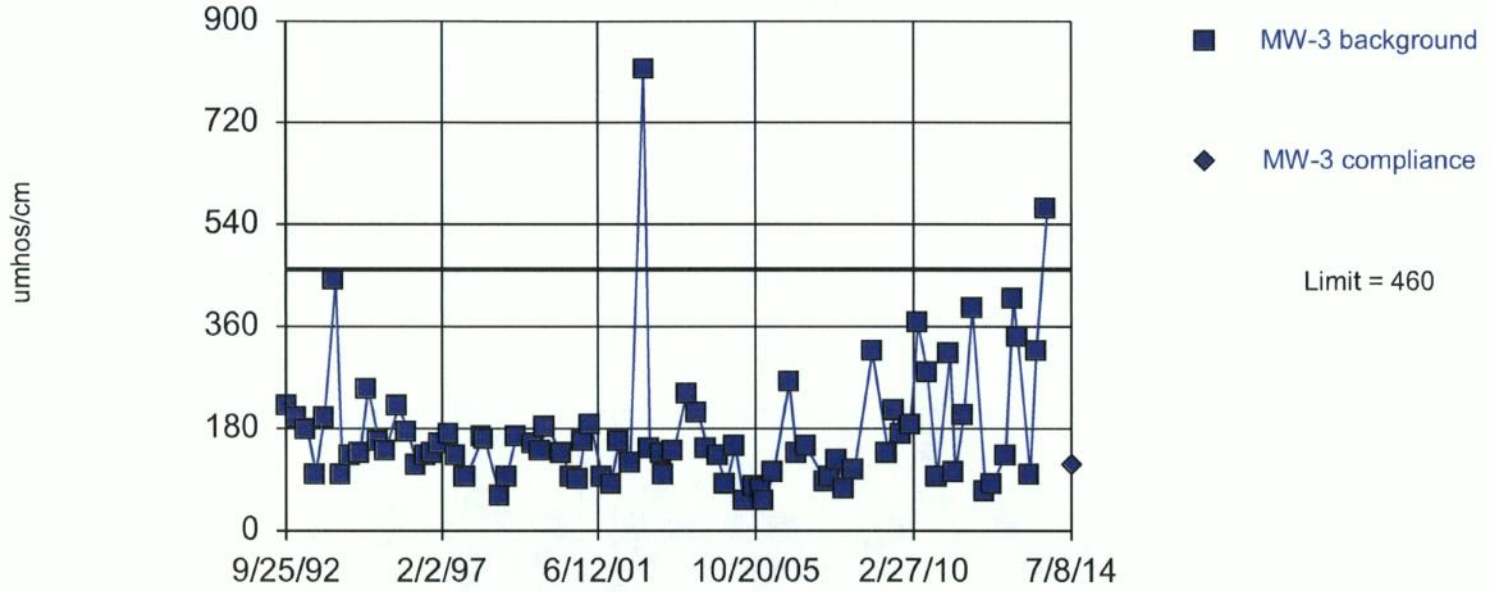
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on natural log transformation): Mean=5.006, Std. Dev.=0.5279, n=82. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9676, critical = 0.959. Kappa = 2.123 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. Rosner's Outlier Test was performed on the background data. No background outliers were found.

Constituent: Specific Conductance [Field] Analysis Run 8/18/2014 8:37 AM

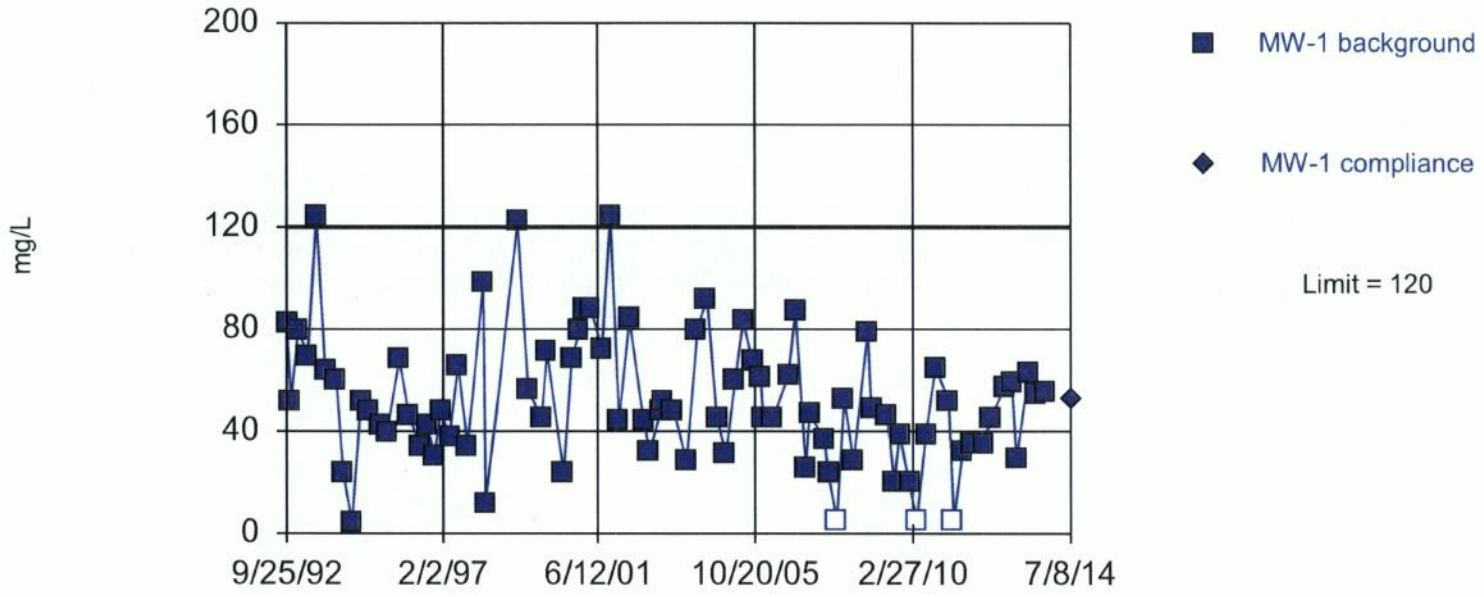
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Hollow symbols indicate censored values.

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on square root transformation): Mean=6.981, Std. Dev.=1.883, n=83, 3.614% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9688, critical = 0.96. Kappa = 2.122 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. 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 8/18/2014 8:37 AM

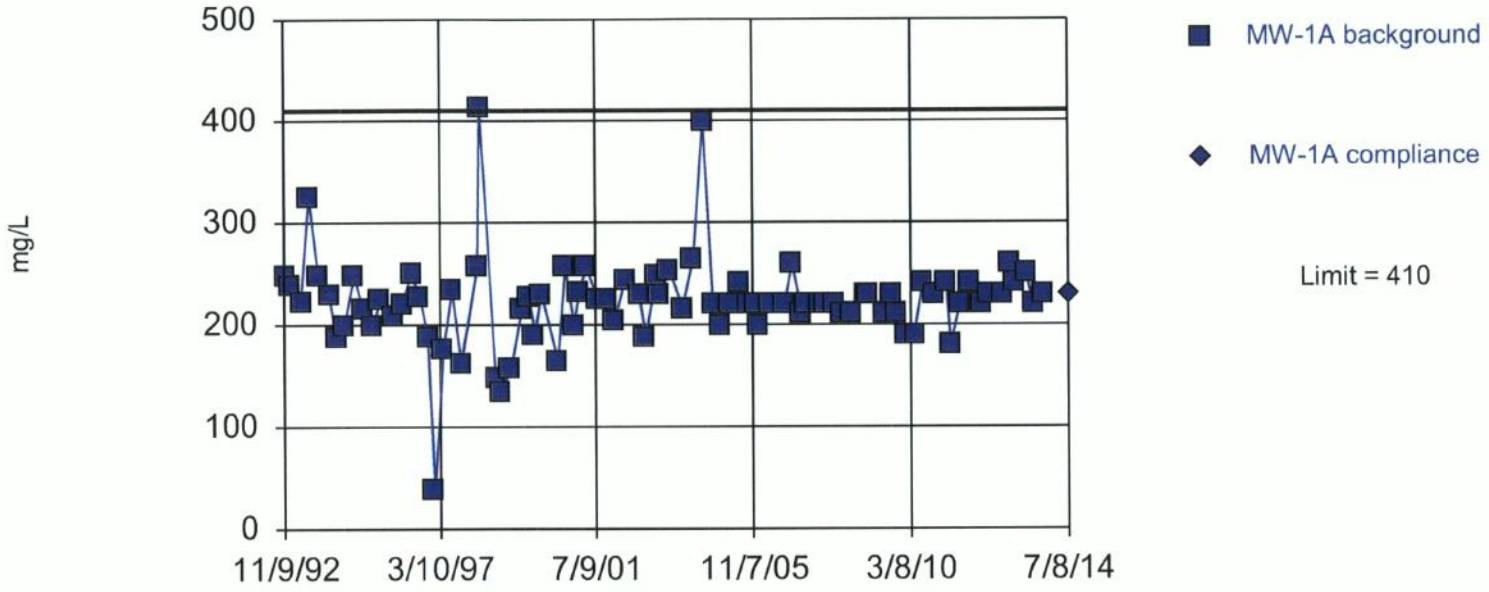
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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.

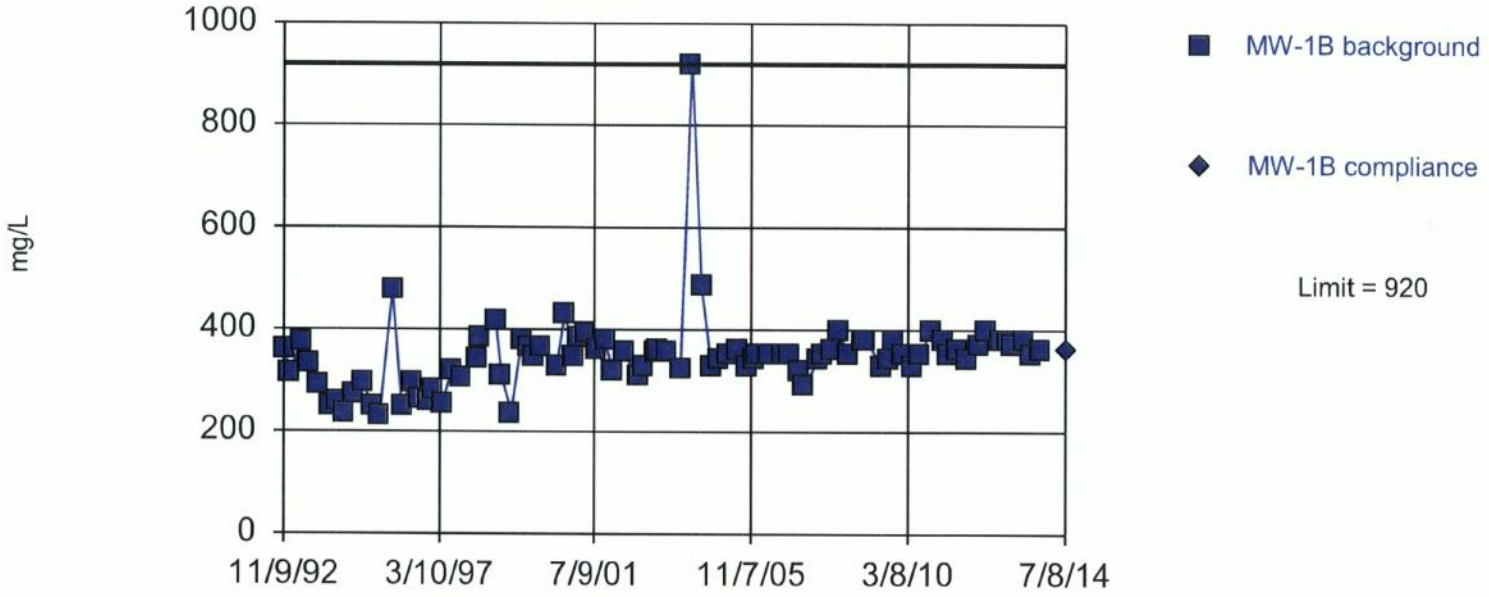
Constituent: Total Dissolved Solids [TDS] Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

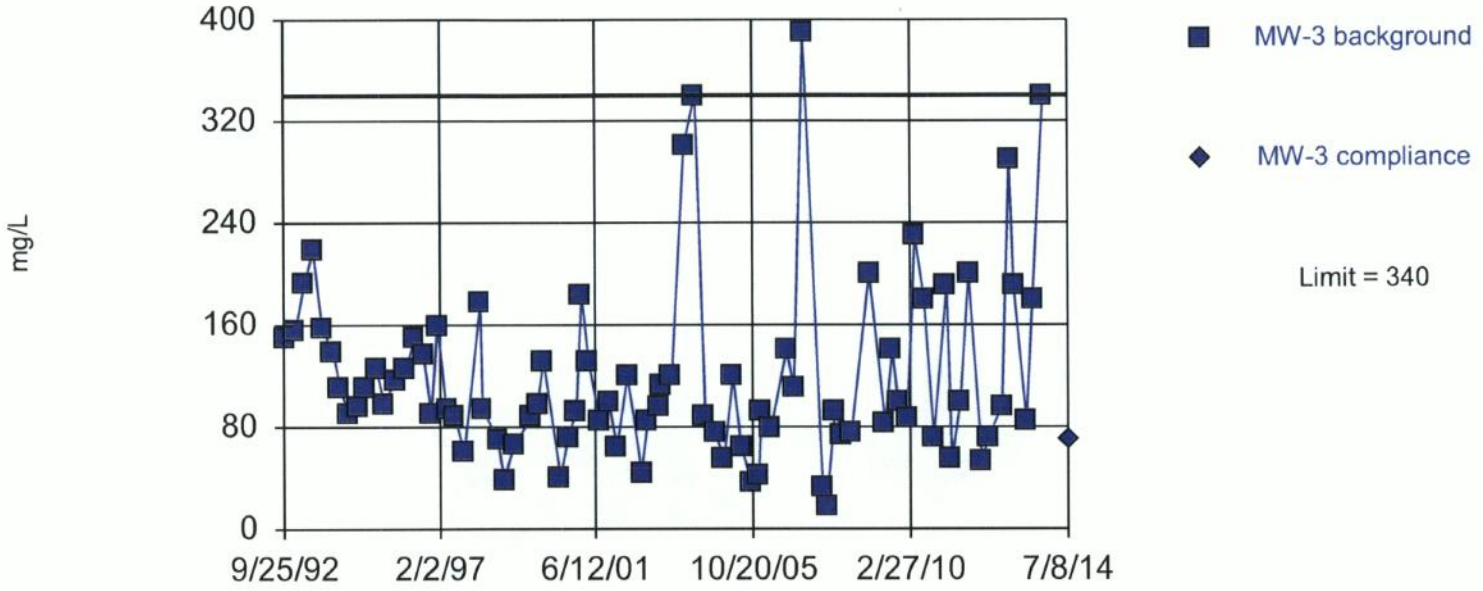
Constituent: Total Dissolved Solids [TDS] Analysis Run 8/18/2014 8:37 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on natural log transformation): Mean=4.647, Std. Dev.=0.5563, n=82. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9784, critical = 0.959. Kappa = 2.123 (c=9, w=7, 1 of 2, event alpha = 0.026). Report alpha = 0.000418. Rosner's Outlier Test was performed on the background data. No background outliers were found.

Constituent: Total Dissolved Solids [TDS] Analysis Run 8/18/2014 8:37 AM

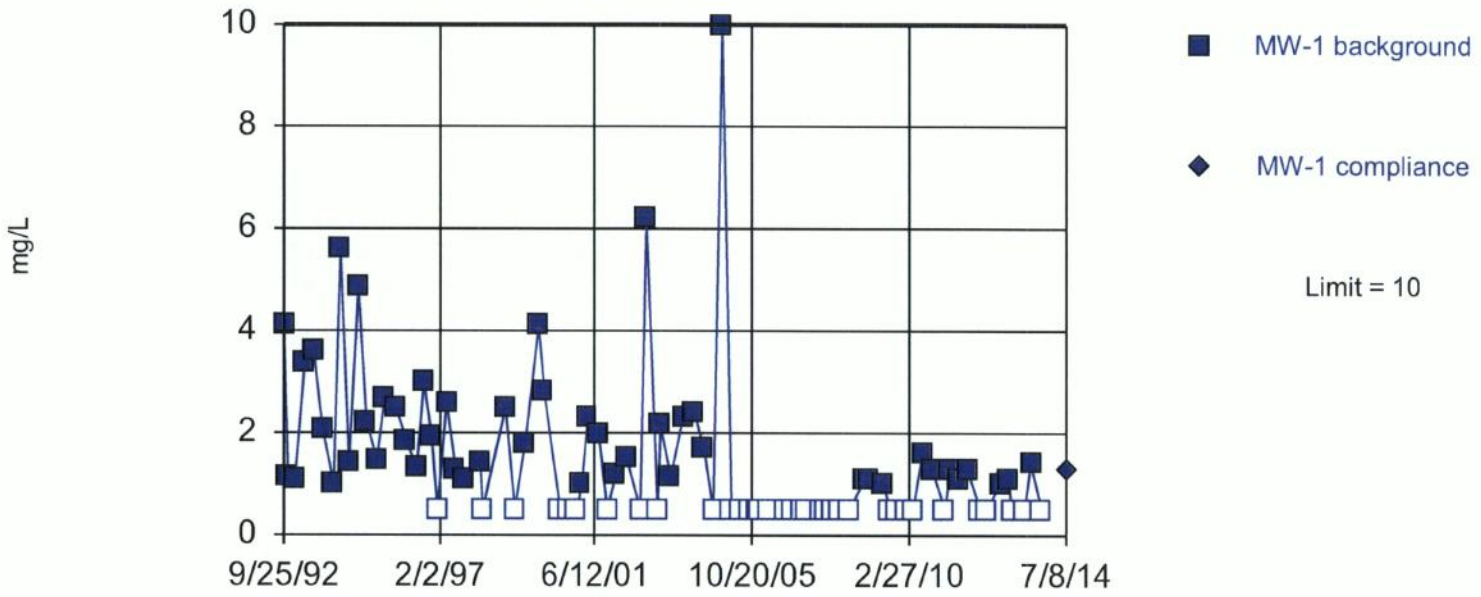
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

Constituent: Total Organic Carbon [TOC] Analysis Run 8/18/2014 8:37 AM

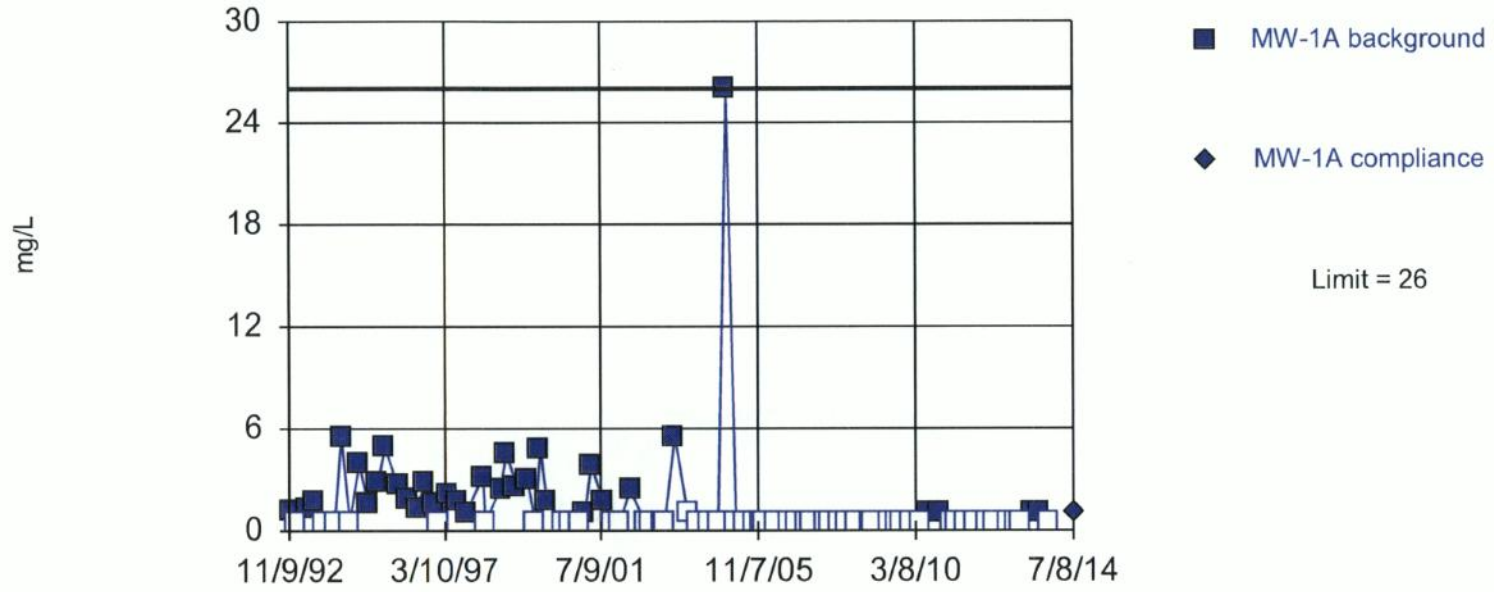
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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. 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.

Constituent: Total Organic Carbon [TOC] Analysis Run 8/18/2014 8:37 AM

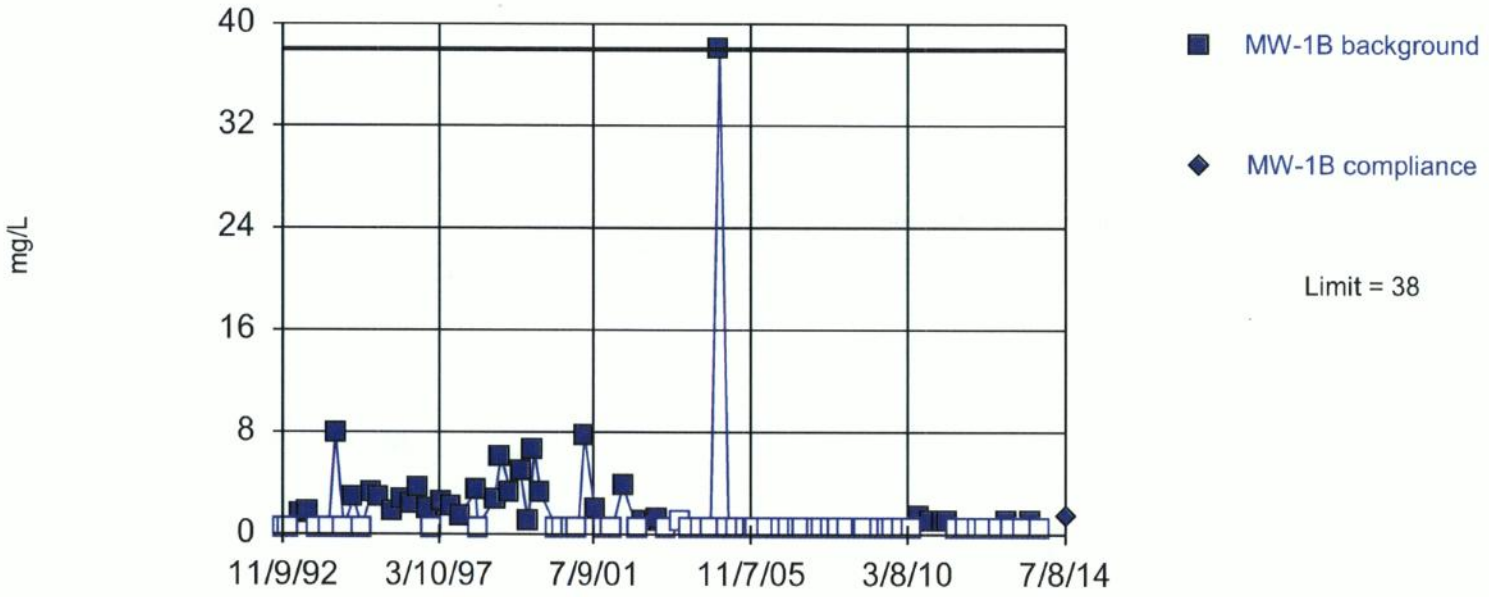
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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.

Constituent: Total Organic Carbon [TOC] Analysis Run 8/18/2014 8:37 AM

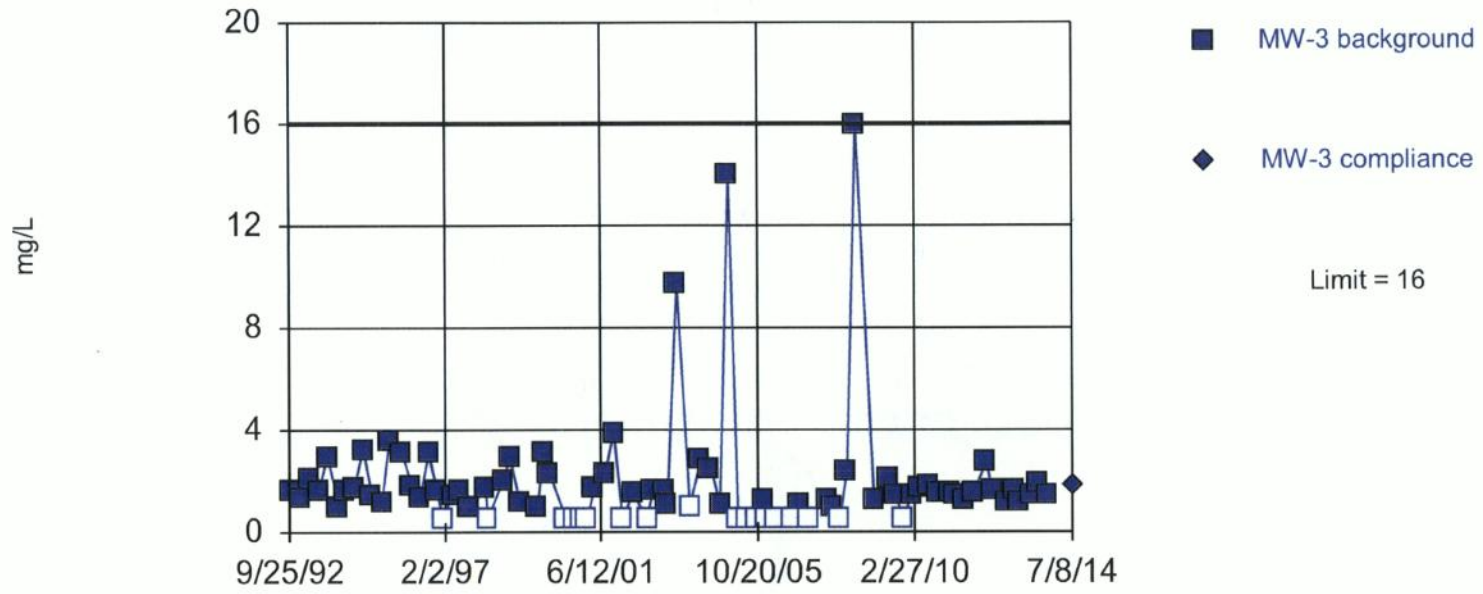
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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.

Constituent: Total Organic Carbon [TOC] Analysis Run 8/18/2014 8:37 AM

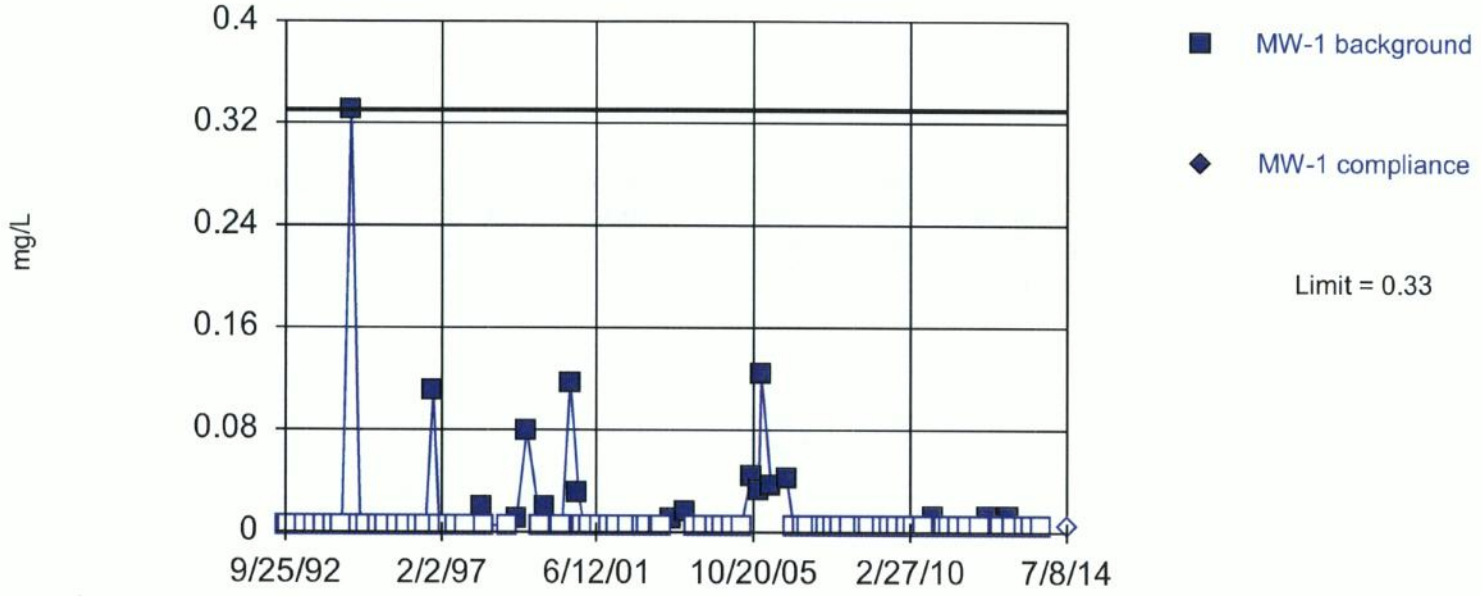
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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.

Constituent: Total Organic Halides Analysis Run 8/18/2014 8:37 AM

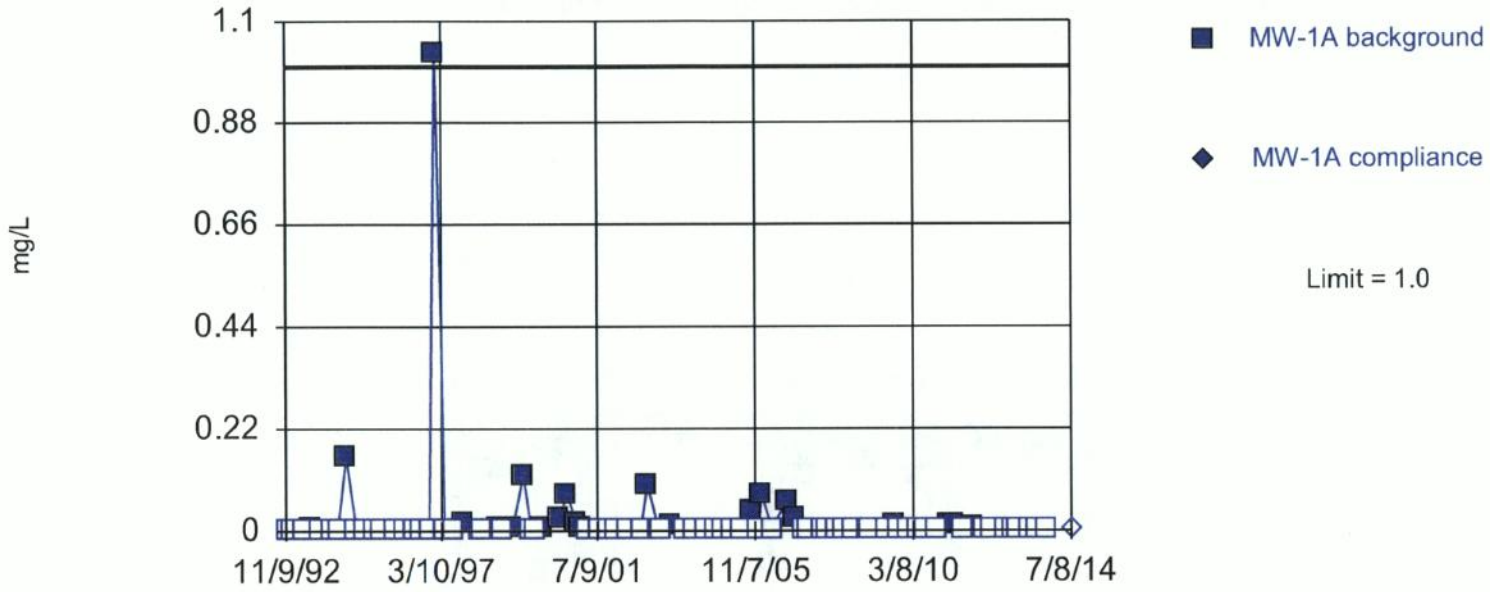
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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. 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.

Constituent: Total Organic Halides Analysis Run 8/18/2014 8:37 AM

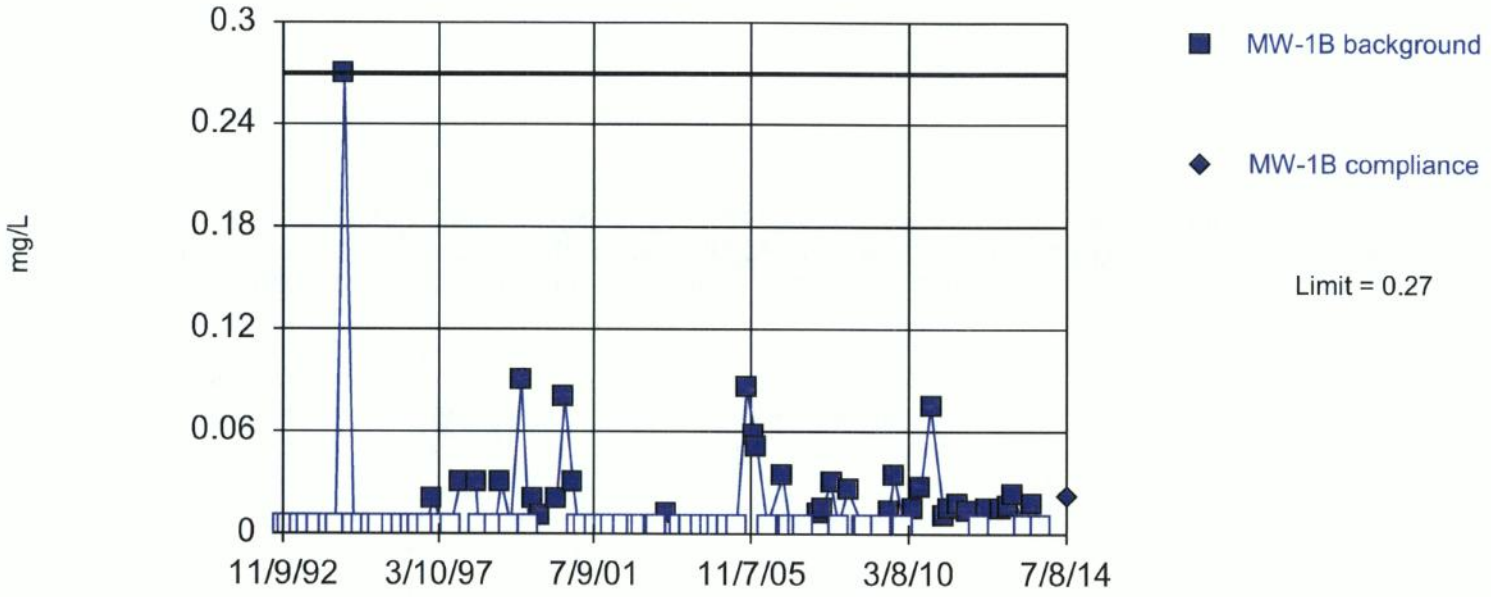
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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. 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.

Constituent: Total Organic Halides Analysis Run 8/18/2014 8:37 AM

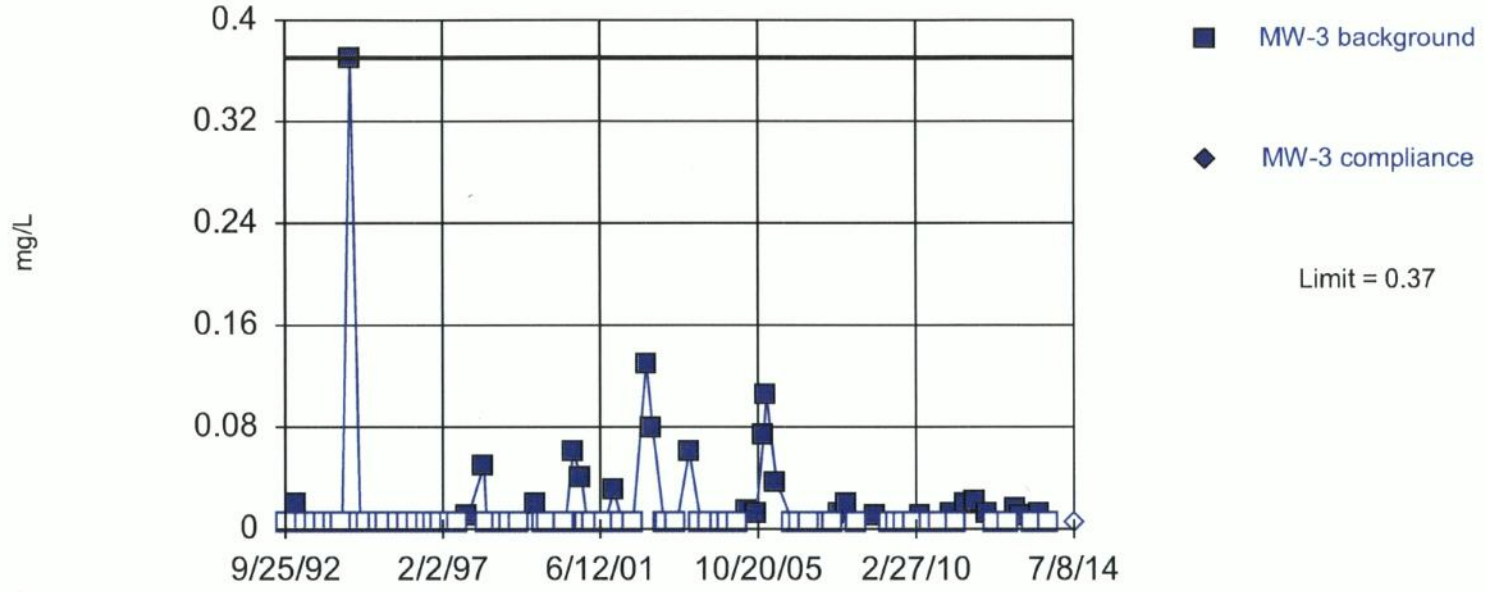
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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.

Constituent: Total Organic Halides Analysis Run 8/18/2014 8:37 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 8/18/2014, 9:20 AM

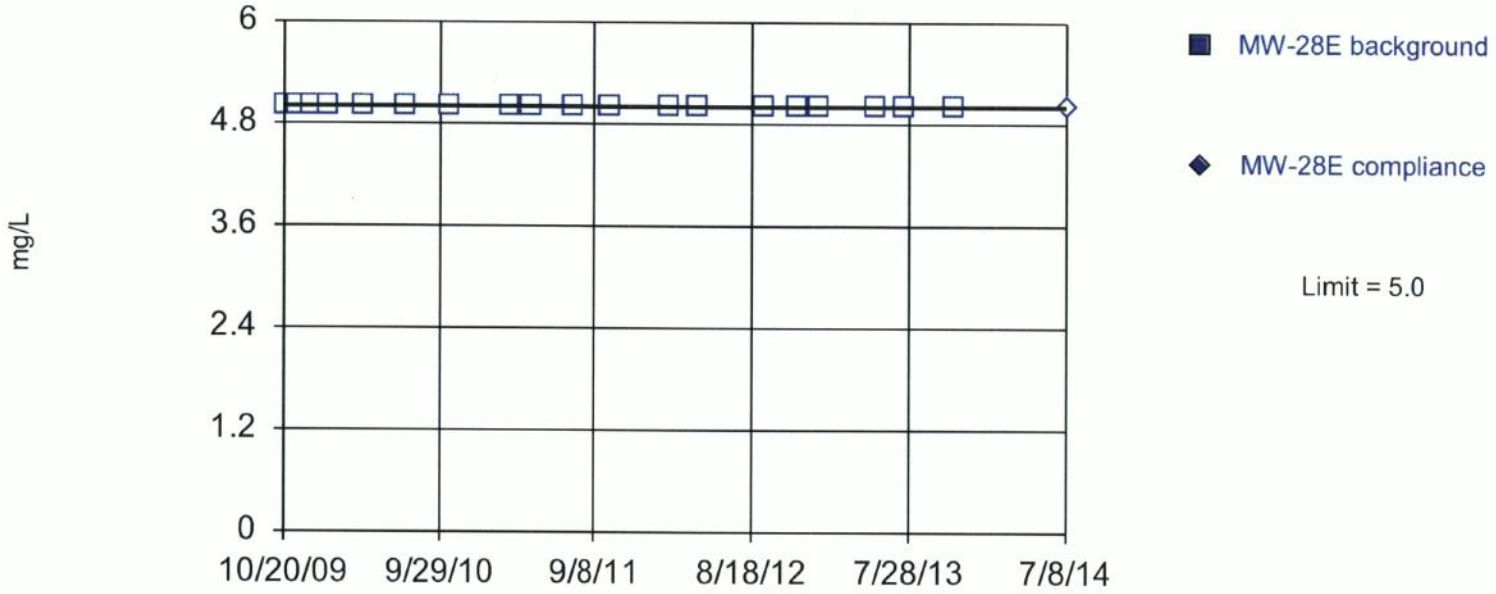
| Constituent | Well | Upper Lim | Lower Lim | Date | Observ. | Sig. | Bg N | Bg Mean | Std. Dev. | %NDs | ND Adj. | Transform | Alpha | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chemical Oxygen Demand [COD] (mg/L) | MW-28C | 27 | n/a | 7/8/2014 | 5ND | No | 19 | n/a | n/a | 73.68 | n/a | n/a | 0.004738 | NP Intra (NDs) 1 of 2 |
| Chemical Oxygen Demand [COD] (mg/L) | MW-28D | 12 | n/a | 7/8/2014 | 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-28E | 5.0 | n/a | 7/8/2014 | 5ND | No | 19 | n/a | n/a | 100 | n/a | n/a | 0.004738 | NP Intra (NDs) 1 of 2 |
| Chloride (mg/L) | MW-28C | 39 | n/a | 7/8/2014 | 21 | No | 19 | 2.507 | 0.4018 | 0 | None | x^(1/3) | 0.0009751 | Param Intra 1 of 2 |
| Chloride (mg/L) | MW-28D | 23 | n/a | 7/8/2014 | 22 | No | 19 | n/a | n/a | 0 | n/a | n/a | 0.004738 | NP Intra (normality) 1 of 2 |
| Chloride (mg/L) | MW-28E | 2.4 | n/a | 7/8/2014 | 1.6 | No | 19 | 8.769 | 2.198 | 0 | None | x^3 | 0.0009751 | Param Intra 1 of 2 |
| Iron Total (mg/L) | MW-28C | 72 | n/a | 7/8/2014 | 6.2 | No | 19 | n/a | n/a | 0 | n/a | n/a | 0.004738 | NP Intra (normality) 1 of 2 |
| Iron Total (mg/L) | MW-28D | 160 | n/a | 7/8/2014 | 15 | No | 19 | 0.9493 | 1.847 | 0 | None | ln(x) | 0.0009751 | Param Intra 1 of 2 |
| Iron Total (mg/L) | MW-28E | 1.7 | n/a | 7/8/2014 | 0.09 | No | 19 | -1.962 | 1.111 | 5.263 | None | ln(x) | 0.0009751 | Param Intra 1 of 2 |
| pH [Field] (su) | MW-28C | 6.5 | 3.9 | 7/8/2014 | 5.22 | No | 19 | 167.2 | 48.45 | 0 | None | x^3 | 0.0004875 | Param Intra 1 of 2 |
| pH [Field] (su) | MW-28D | 6.7 | 4.4 | 7/8/2014 | 5.83 | No | 19 | 195.1 | 48.09 | 0 | None | x^3 | 0.0004875 | Param Intra 1 of 2 |
| pH [Field] (su) | MW-28E | 7 | 6 | 7/8/2014 | 6.29 | No | 16 | 1.866 | 0.03519 | 0 | None | ln(x) | 0.0004875 | Param Intra 1 of 2 |
| Sodium Total (mg/L) | MW-28C | 28 | n/a | 7/8/2014 | 15 | No | 19 | 16.86 | 4.952 | 0 | None | No | 0.0009751 | Param Intra 1 of 2 |
| Sodium Total (mg/L) | MW-28D | 38 | n/a | 7/8/2014 | 29 | No | 19 | 722.6 | 316.8 | 0 | None | x^2 | 0.0009751 | Param Intra 1 of 2 |
| Sodium Total (mg/L) | MW-28E | 21 | n/a | 7/8/2014 | 11 | No | 19 | 247.1 | 96.1 | 0 | None | x^2 | 0.0009751 | Param Intra 1 of 2 |
| Specific Conductance [Field] (umhos/cm) | MW-28C | 810 | n/a | 7/8/2014 | 575 | No | 19 | 536.5 | 124.3 | 0 | None | No | 0.0009751 | Param Intra 1 of 2 |
| Specific Conductance [Field] (umhos/cm) | MW-28D | 790 | n/a | 7/8/2014 | 713 | No | 19 | 334002 | 126564 | 0 | None | x^2 | 0.0009751 | Param Intra 1 of 2 |
| Specific Conductance [Field] (umhos/cm) | MW-28E | 410 | n/a | 7/8/2014 | 316 | No | 18 | 5.799 | 0.09481 | 0 | None | ln(x) | 0.0009751 | Param Intra 1 of 2 |
| Total Dissolved Solids [TDS] (mg/L) | MW-28C | 520 | n/a | 7/8/2014 | 360 | No | 19 | 360.5 | 71.53 | 0 | None | No | 0.0009751 | Param Intra 1 of 2 |
| Total Dissolved Solids [TDS] (mg/L) | MW-28D | 460 | n/a | 7/8/2014 | 460 | No | 19 | 3.7e15 | 2.4e15 | 0 | None | x^6 | 0.0009751 | Param Intra 1 of 2 |
| Total Dissolved Solids [TDS] (mg/L) | MW-28E | 240 | n/a | 7/8/2014 | 200 | No | 18 | 6646389 | 2842487 | 0 | None | x^3 | 0.0009751 | Param Intra 1 of 2 |
| Total Organic Carbon [TOC] (mg/L) | MW-28C | 2.8 | n/a | 7/8/2014 | 2.2 | No | 17 | 0.6108 | 0.1771 | 0 | None | ln(x) | 0.0009751 | Param Intra 1 of 2 |
| Total Organic Carbon [TOC] (mg/L) | MW-28D | 2.1 | n/a | 7/8/2014 | 2.1 | No | 19 | 0.4476 | 0.1376 | 0 | None | ln(x) | 0.0009751 | Param Intra 1 of 2 |
| Total Organic Carbon [TOC] (mg/L) | MW-28E | 1.6 | n/a | 7/8/2014 | 1.4 | No | 19 | 1.11 | 0.228 | 21.05 | Kaplan-Meier | No | 0.0009751 | Param Intra 1 of 2 |
| Total Organic Halides (mg/L) | MW-28C | 0.055 | n/a | 7/8/2014 | 0.021 | No | 19 | 0.2636 | 0.05244 | 10.53 | None | x^(1/3) | 0.0009751 | Param Intra 1 of 2 |
| Total Organic Halides (mg/L) | MW-28D | 0.034 | n/a | 7/8/2014 | 0.011 | 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-28E | 0.034 | n/a | 7/8/2014 | 0.005ND | No | 19 | n/a | n/a | 73.68 | n/a | n/a | 0.004738 | NP Intra (NDs) 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.

Constituent: Chemical Oxygen Demand [COD] Analysis Run 8/18/2014 9:16 AM

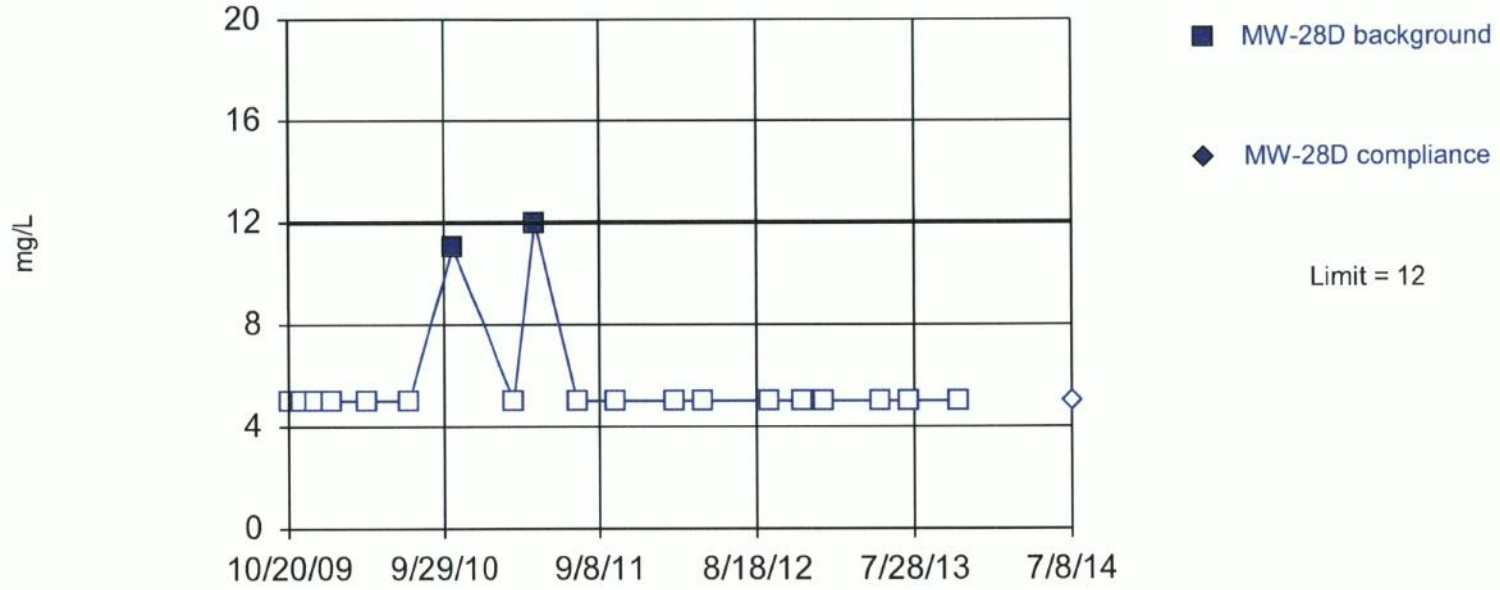
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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.

Constituent: Chemical Oxygen Demand [COD] Analysis Run 8/18/2014 9:16 AM

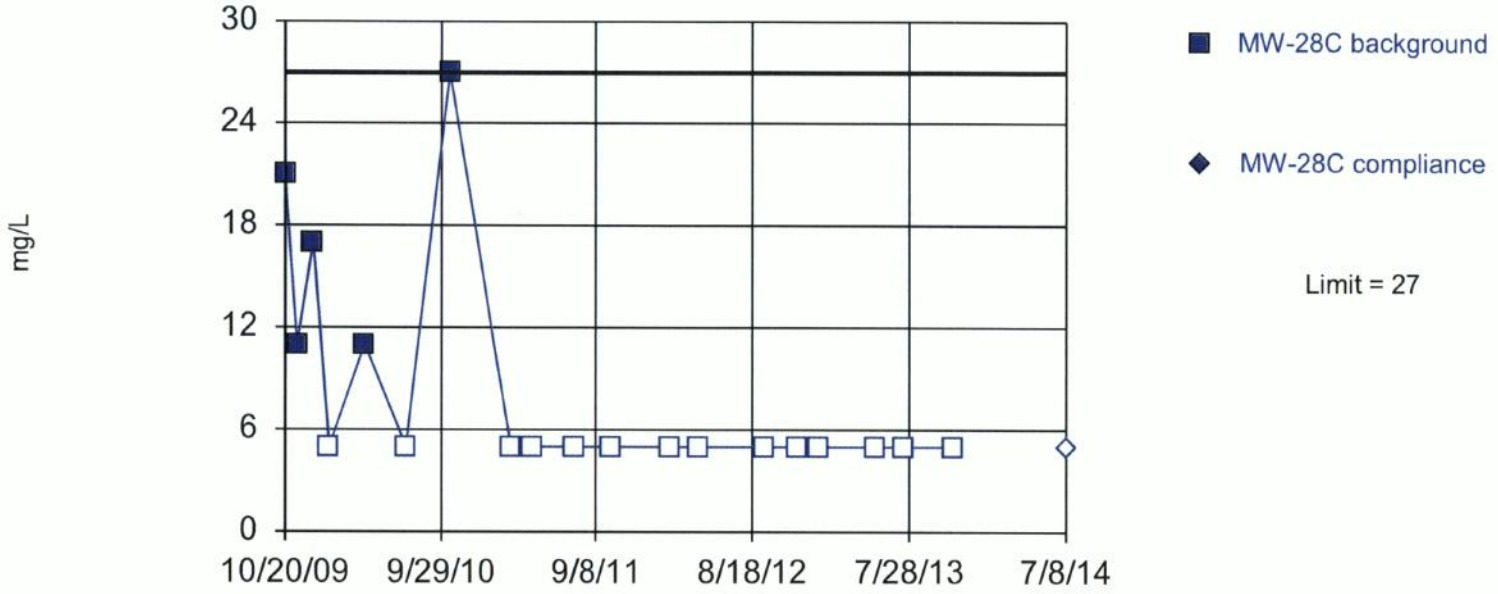
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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.

Constituent: Chemical Oxygen Demand [COD] Analysis Run 8/18/2014 9:16 AM

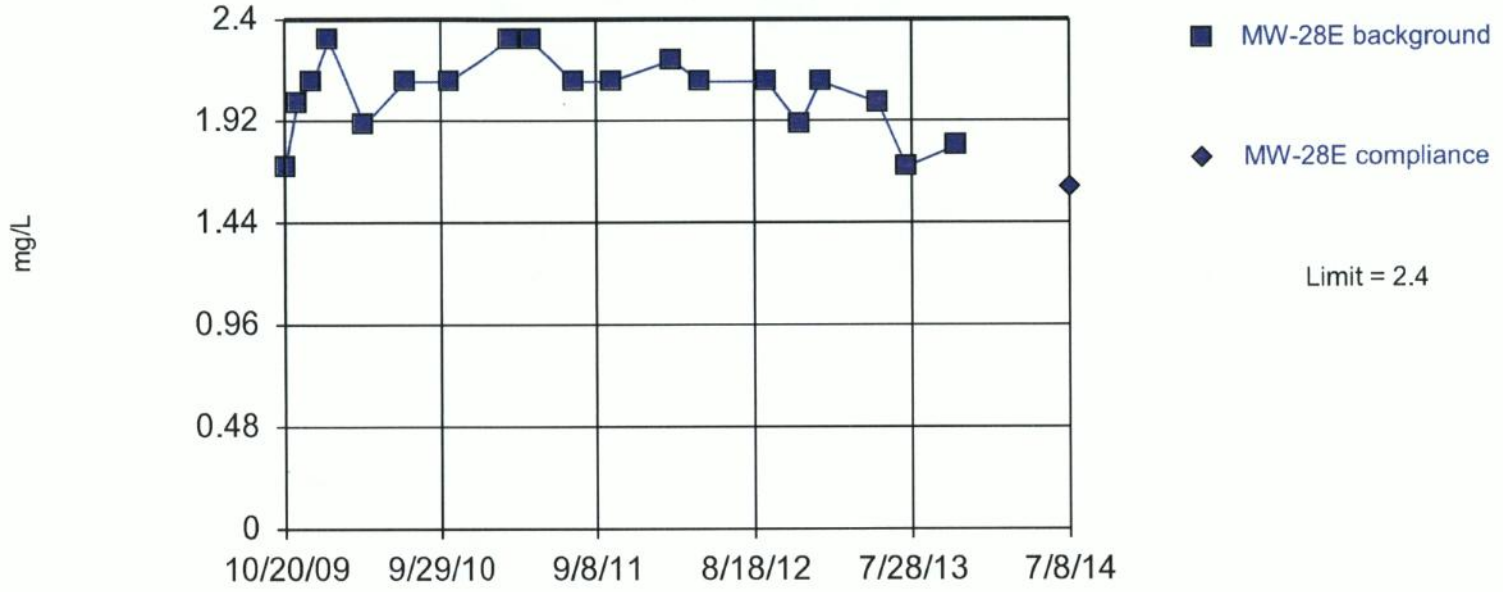
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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. 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.

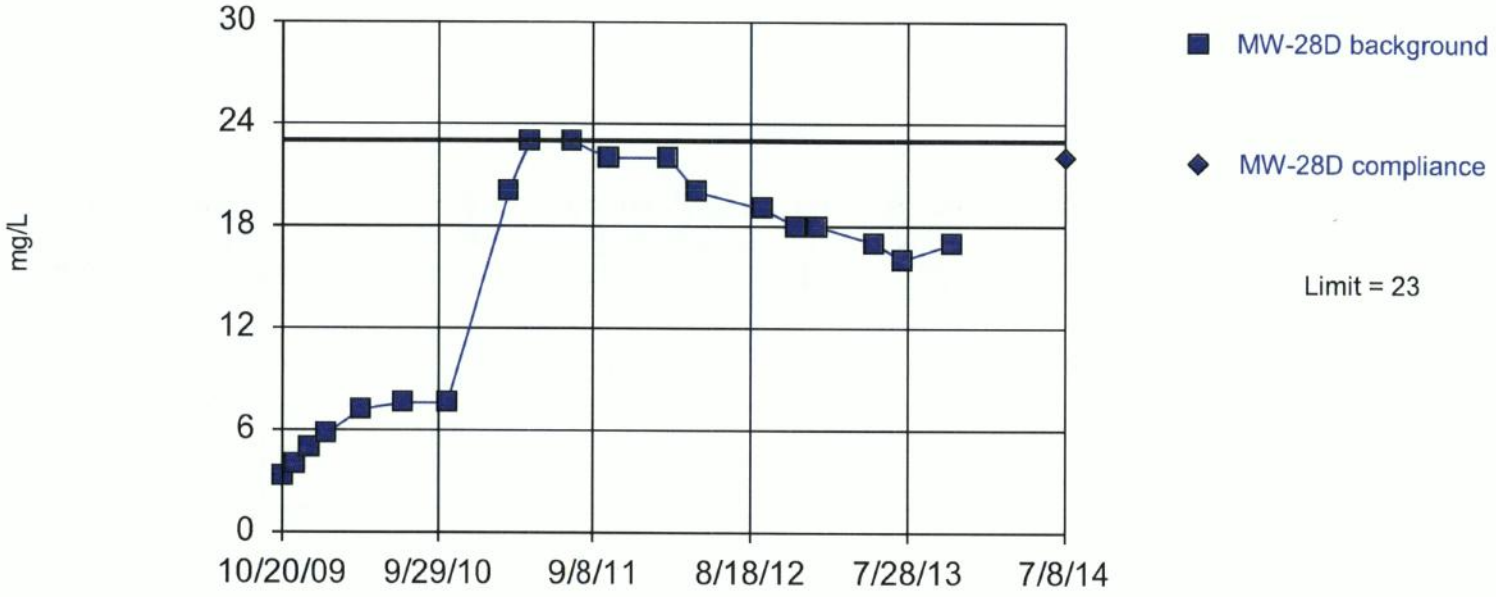
Constituent: Chloride Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

Constituent: Chloride Analysis Run 8/18/2014 9:16 AM

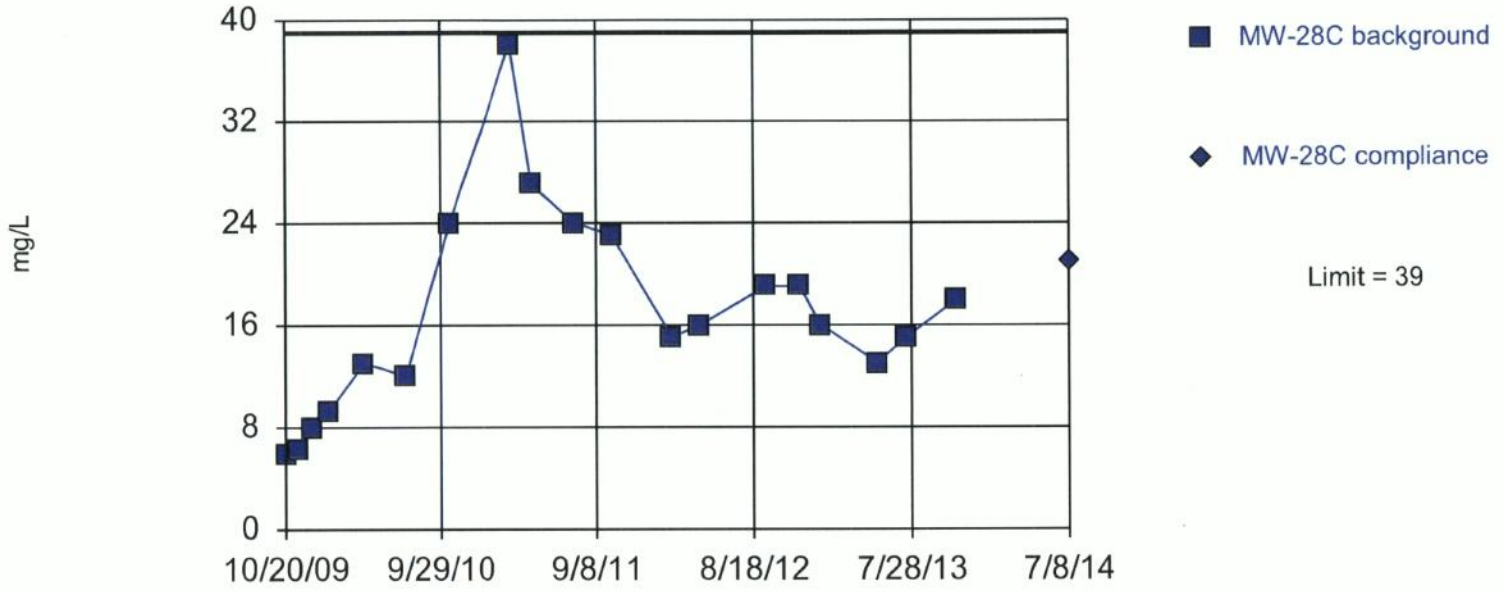
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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. 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 8/18/2014 9:16 AM

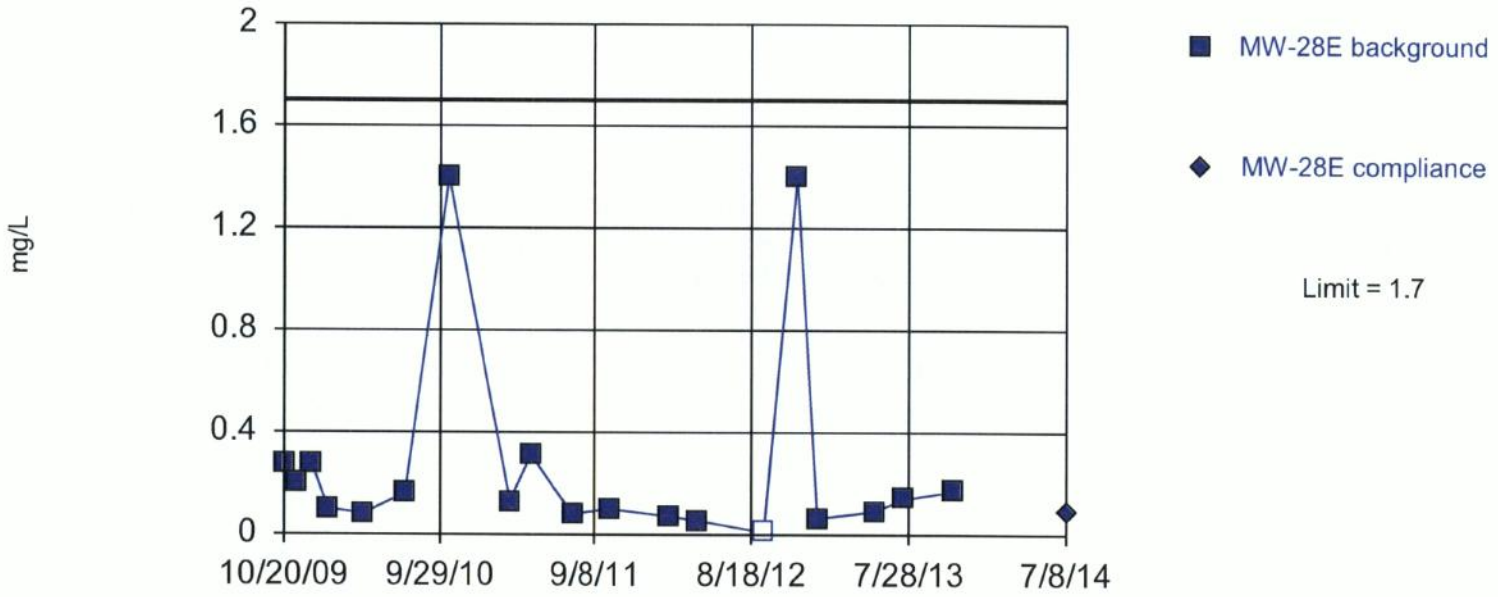
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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. 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 8/18/2014 9:16 AM

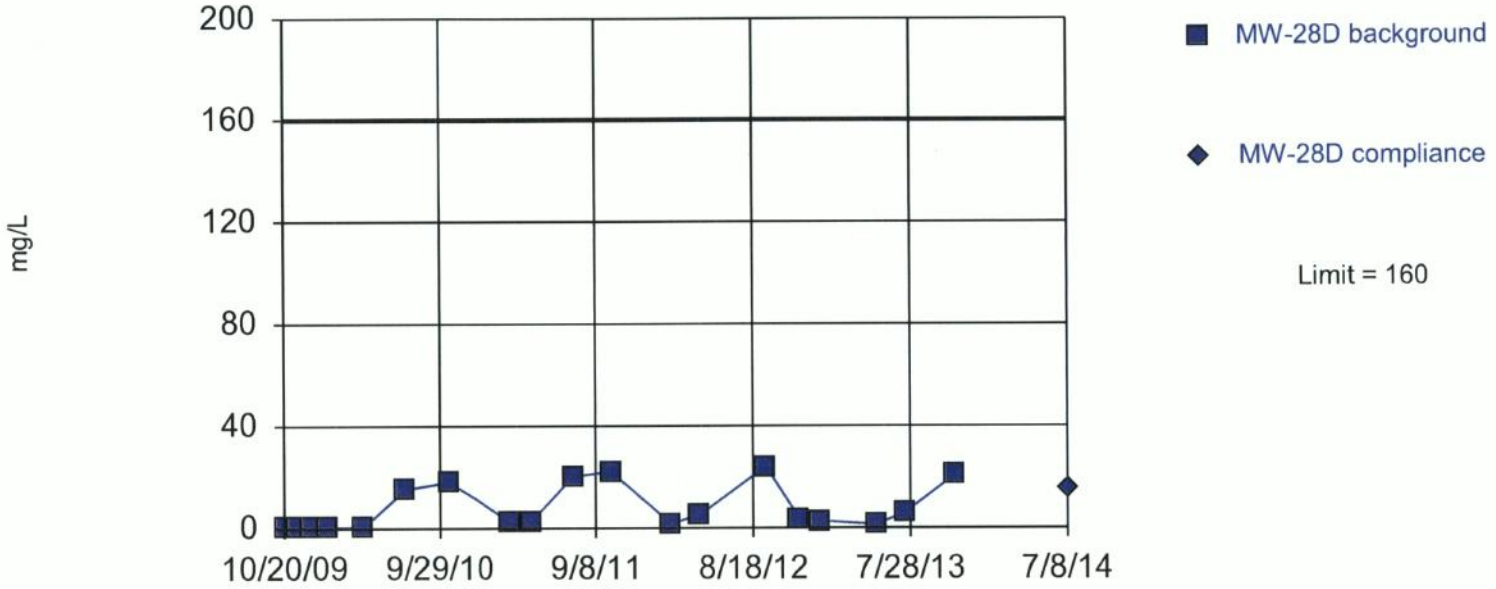
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on natural log transformation): Mean=0.9493, Std. Dev.=1.847, n=19. 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.

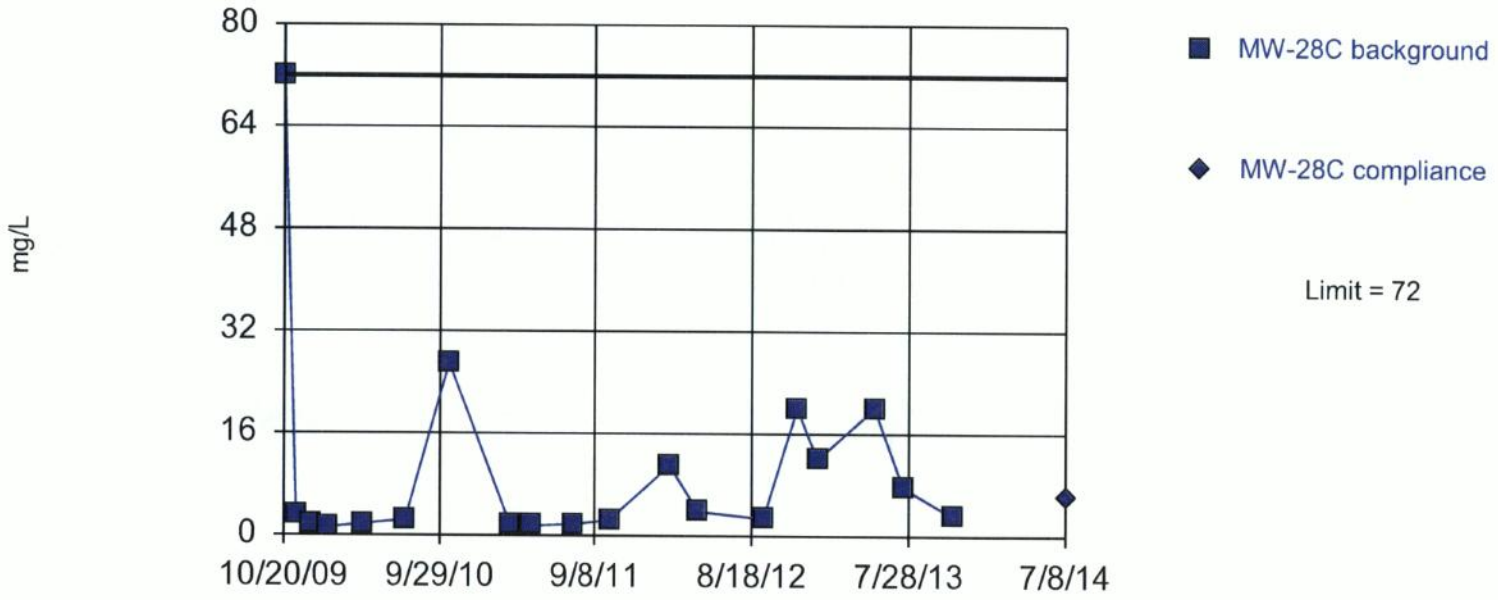
Constituent: Iron Total Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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.

Constituent: Iron Total Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limits

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on natural log transformation): Mean=1.866, Std. Dev.=0.03519, n=16. 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).

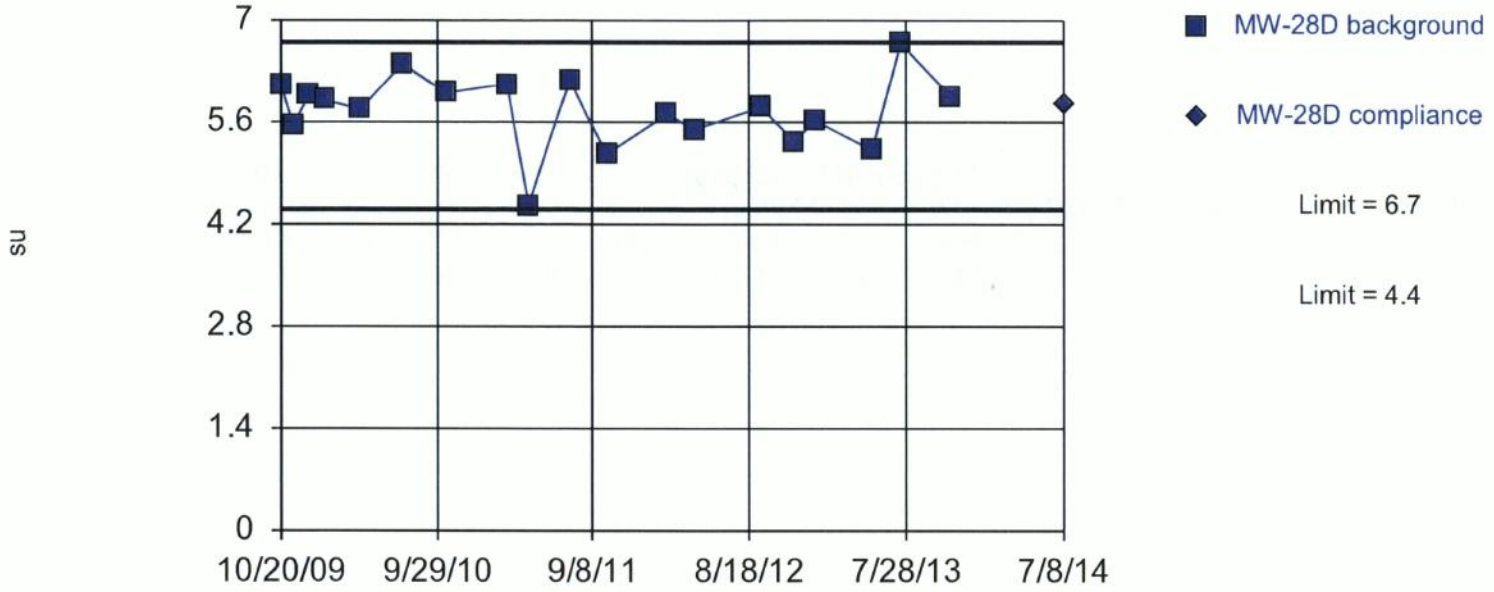
Constituent: pH [Field] Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limits

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on cube transformation): Mean=195.1, Std. Dev.=48.09, n=19. 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 8/18/2014 9:16 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=167.2, Std. Dev.=48.45, n=19. 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 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on square transformation): Mean=247.1, Std. Dev.=96.1, n=19. 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 8/18/2014 9:16 AM

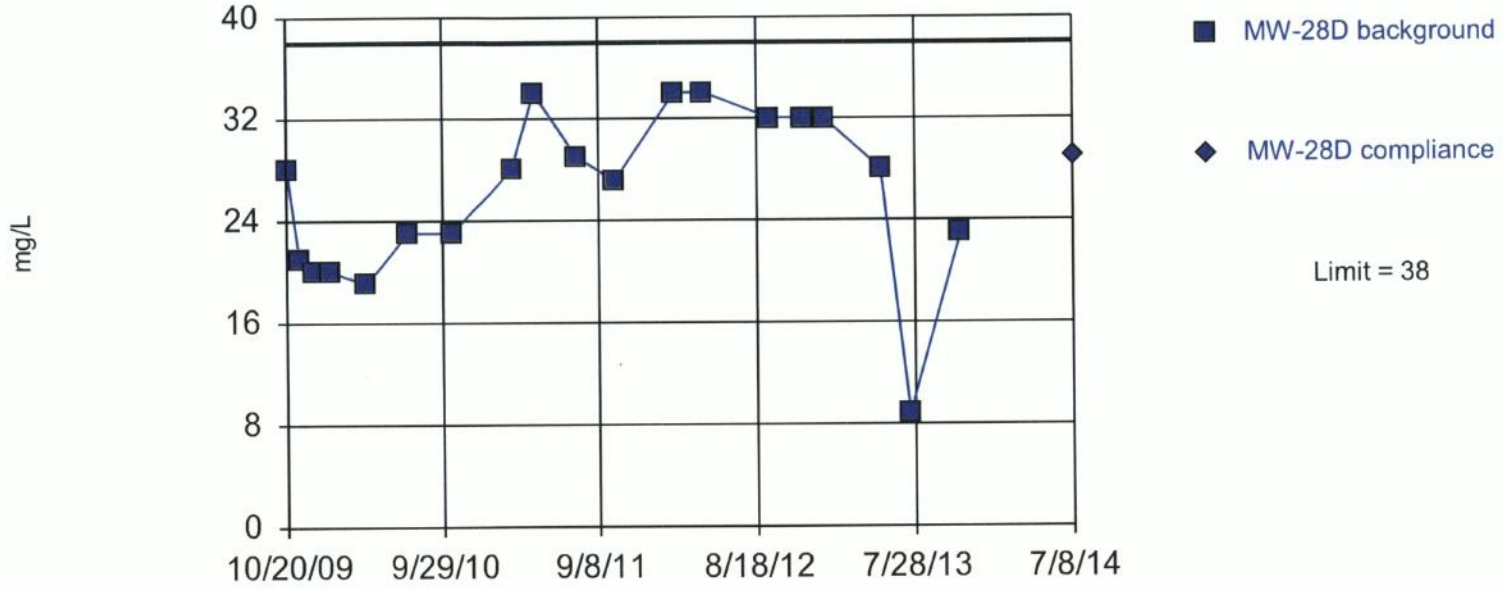
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on square transformation): Mean=722.6, Std. Dev.=316.8, n=19. 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.

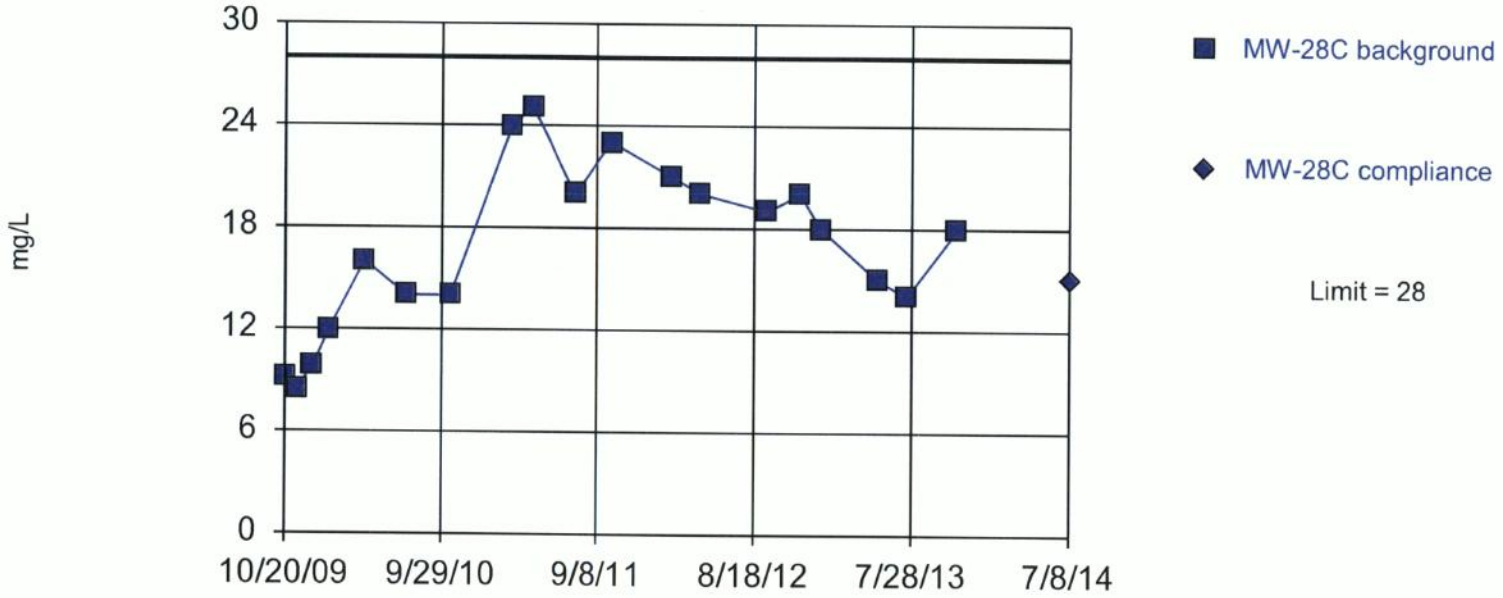
Constituent: Sodium Total Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary: Mean=16.86, Std. Dev.=4.952, n=19. 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 8/18/2014 9:16 AM

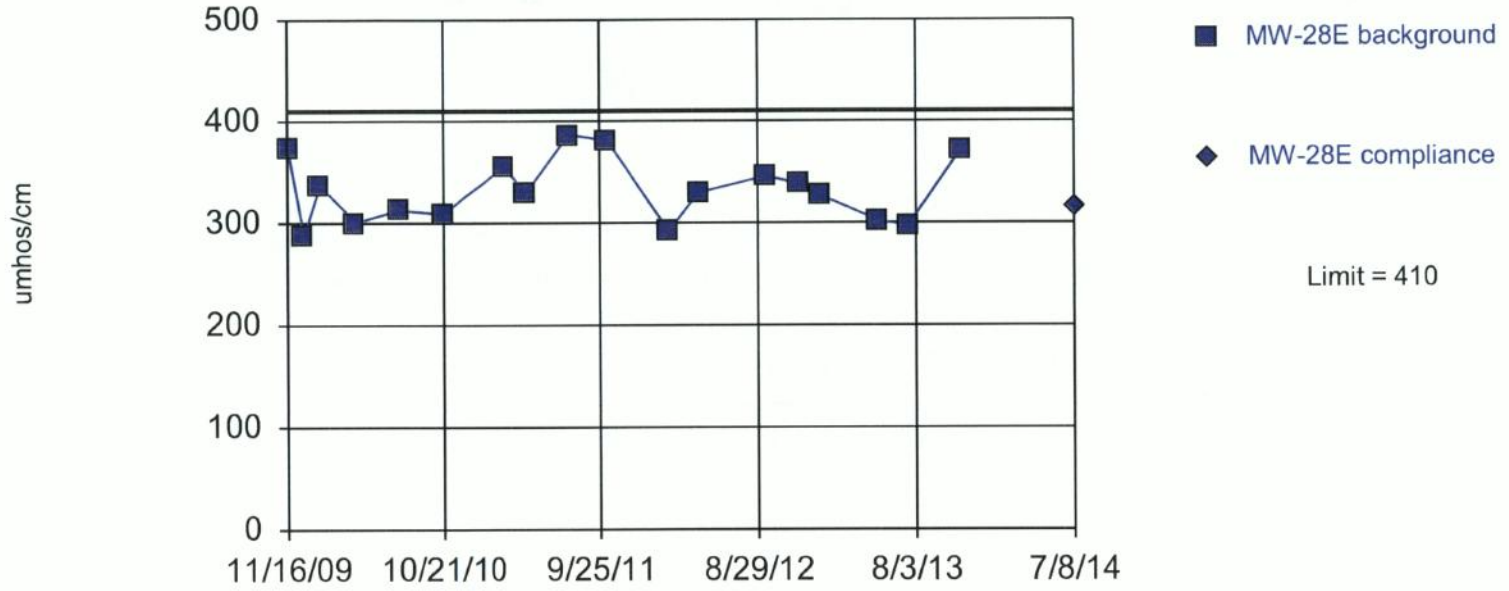
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on natural log transformation): Mean=5.799, Std. Dev.=0.09481, n=18. 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).

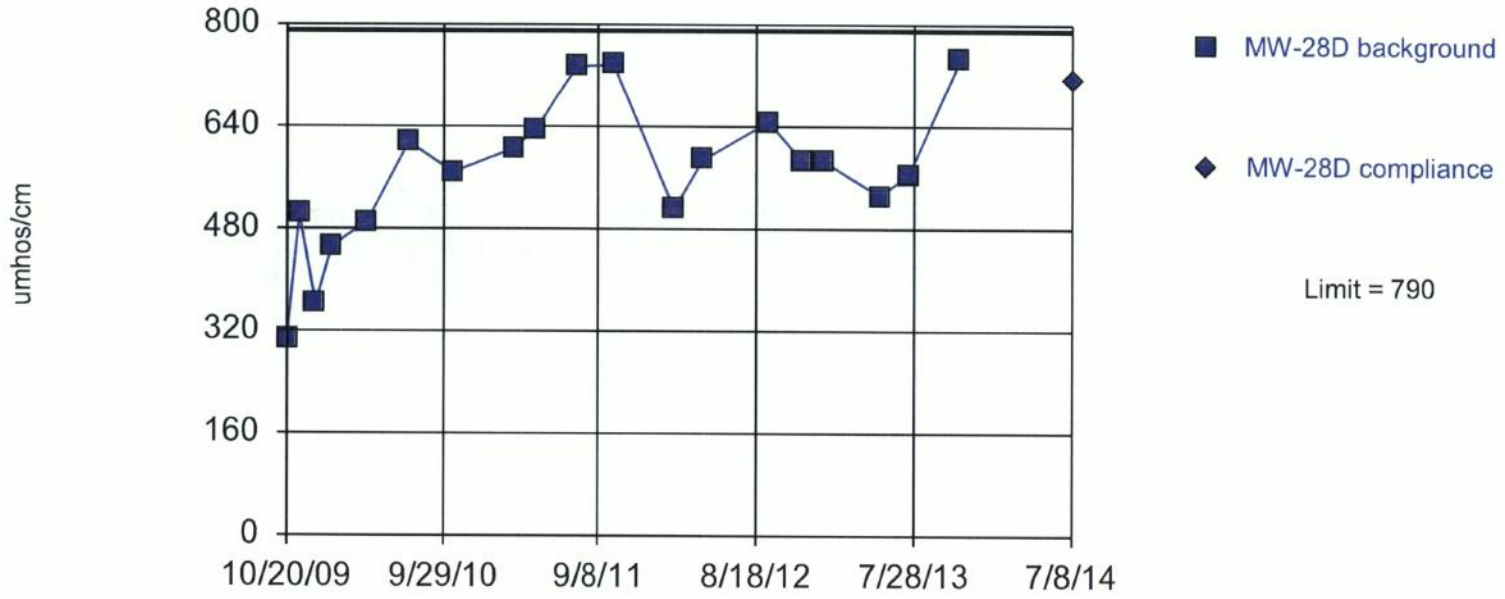
Constituent: Specific Conductance [Field] Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on square transformation): Mean=334002, Std. Dev.=126564, n=19. 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 8/18/2014 9:16 AM

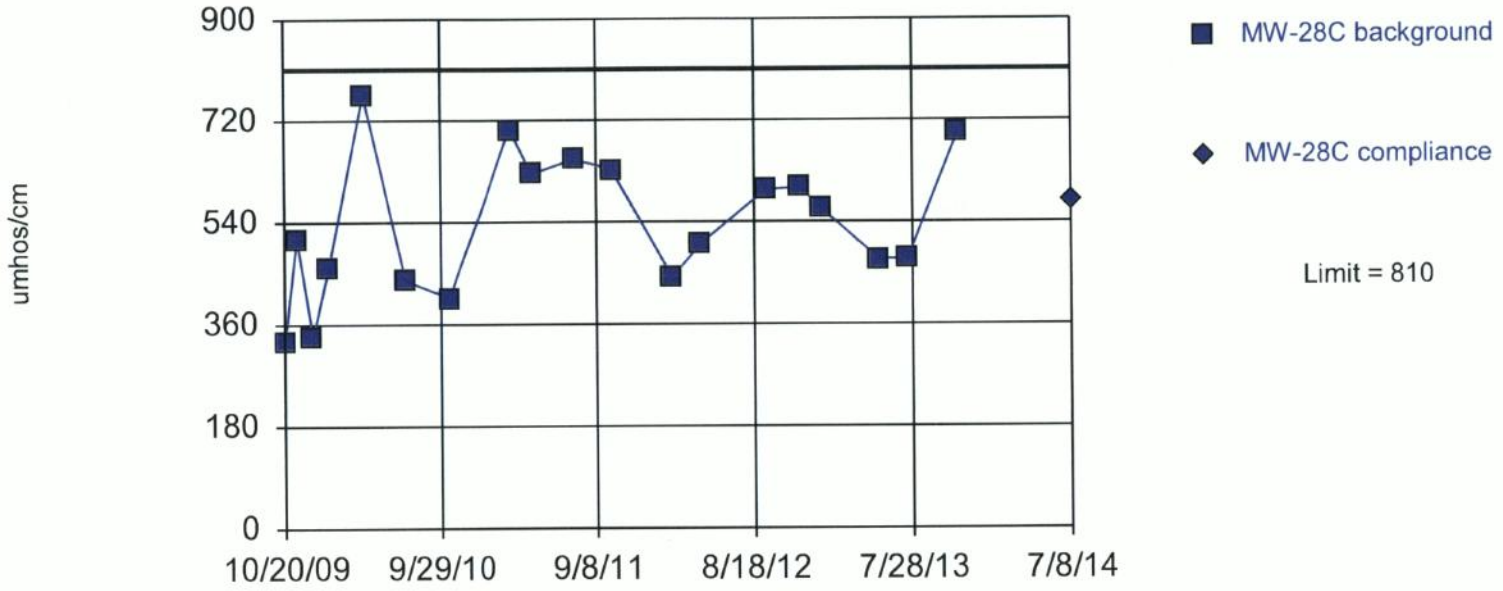
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary: Mean=536.5, Std. Dev.=124.3, n=19. 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.

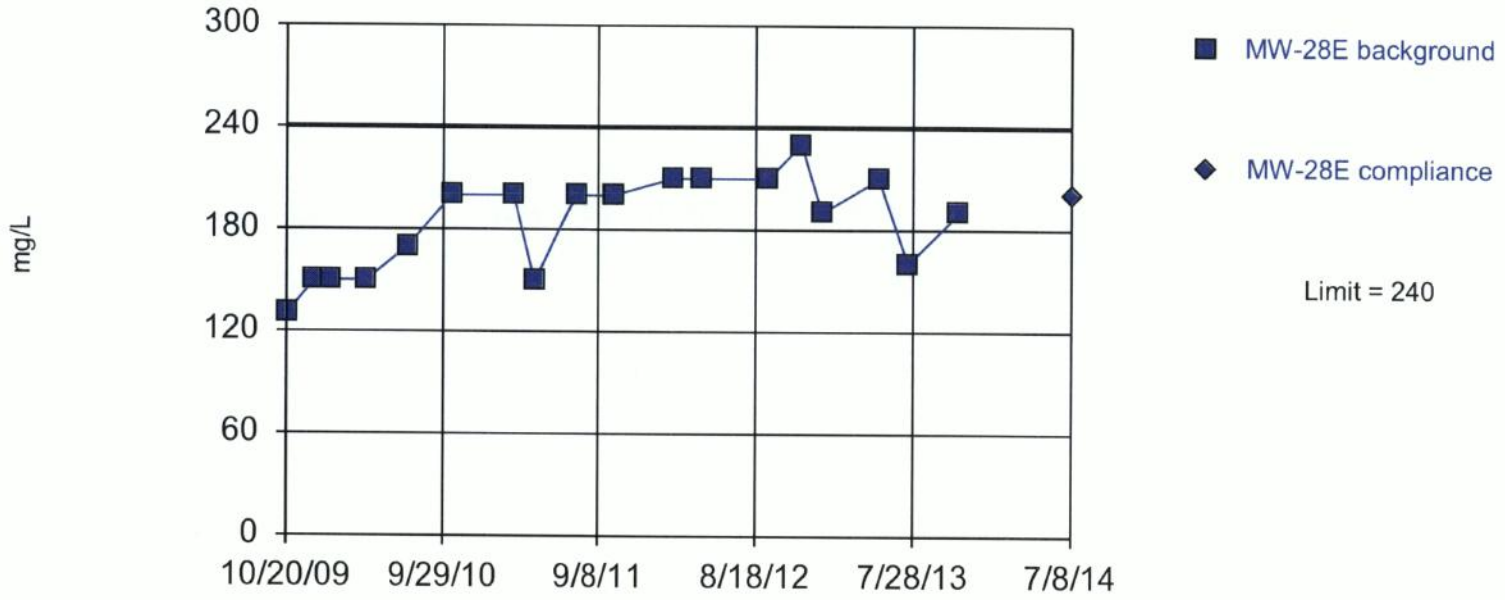
Constituent: Specific Conductance [Field] Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on cube transformation): Mean=6646389, Std. Dev.=2842487, n=18. 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 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on x^6 transformation): Mean=3.7e15, Std. Dev.=2.4e15, n=19. 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.

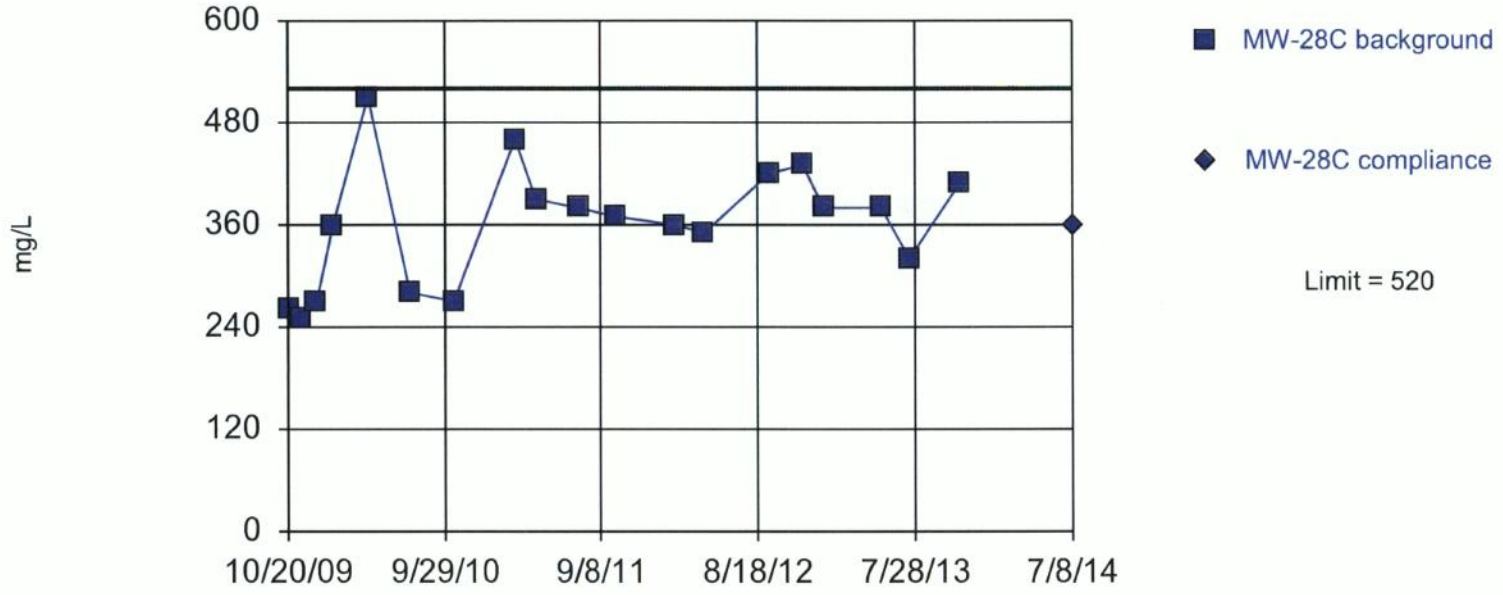
Constituent: Total Dissolved Solids [TDS] Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary: Mean=360.5, Std. Dev.=71.53, n=19. 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 8/18/2014 9:16 AM

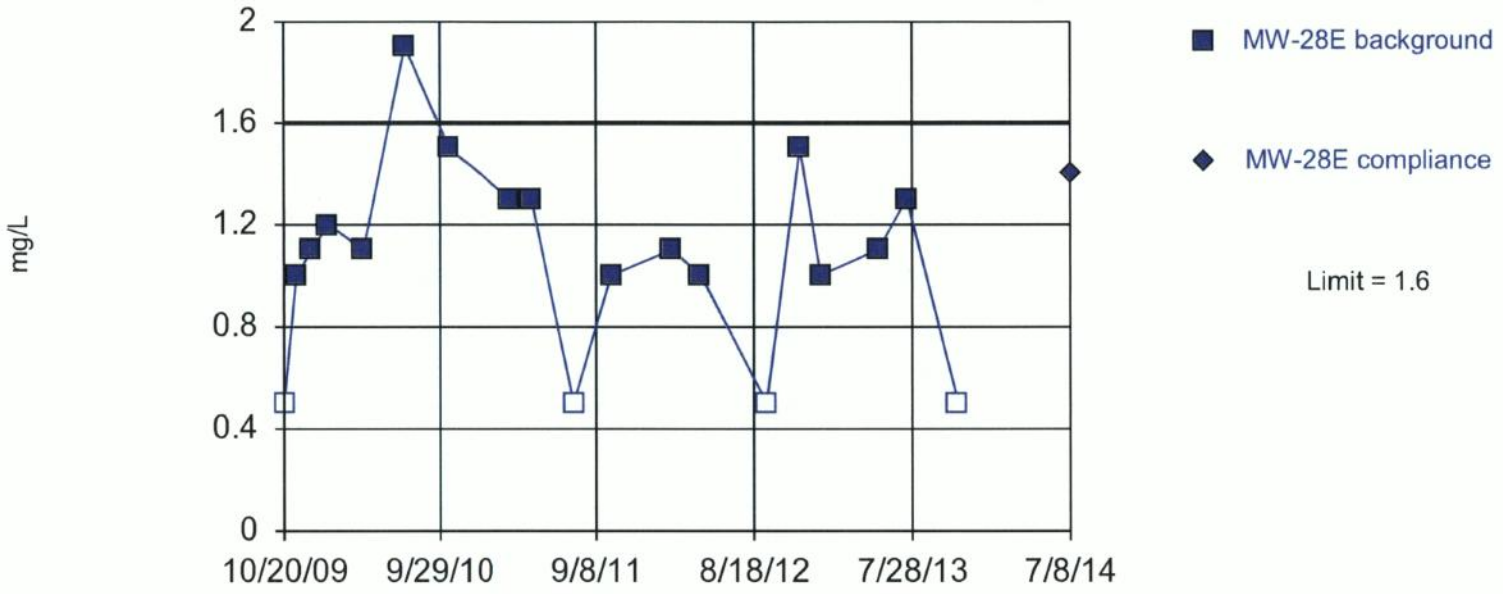
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Hollow symbols indicate censored values.

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (after Kaplan-Meier Adjustment): Mean=1.11, Std. Dev.=0.228, n=19, 21.05% NDs. 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.

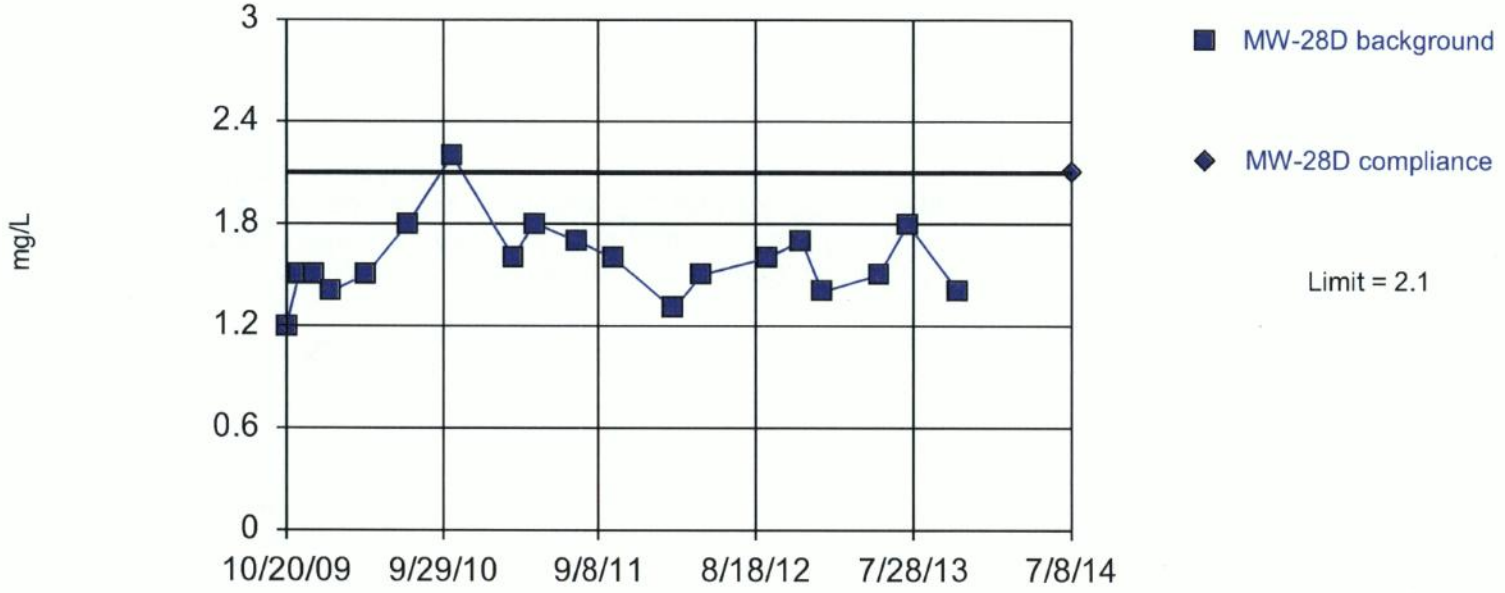
Constituent: Total Organic Carbon [TOC] Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on natural log transformation): Mean=0.4476, Std. Dev.=0.1376, n=19. 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 8/18/2014 9:16 AM

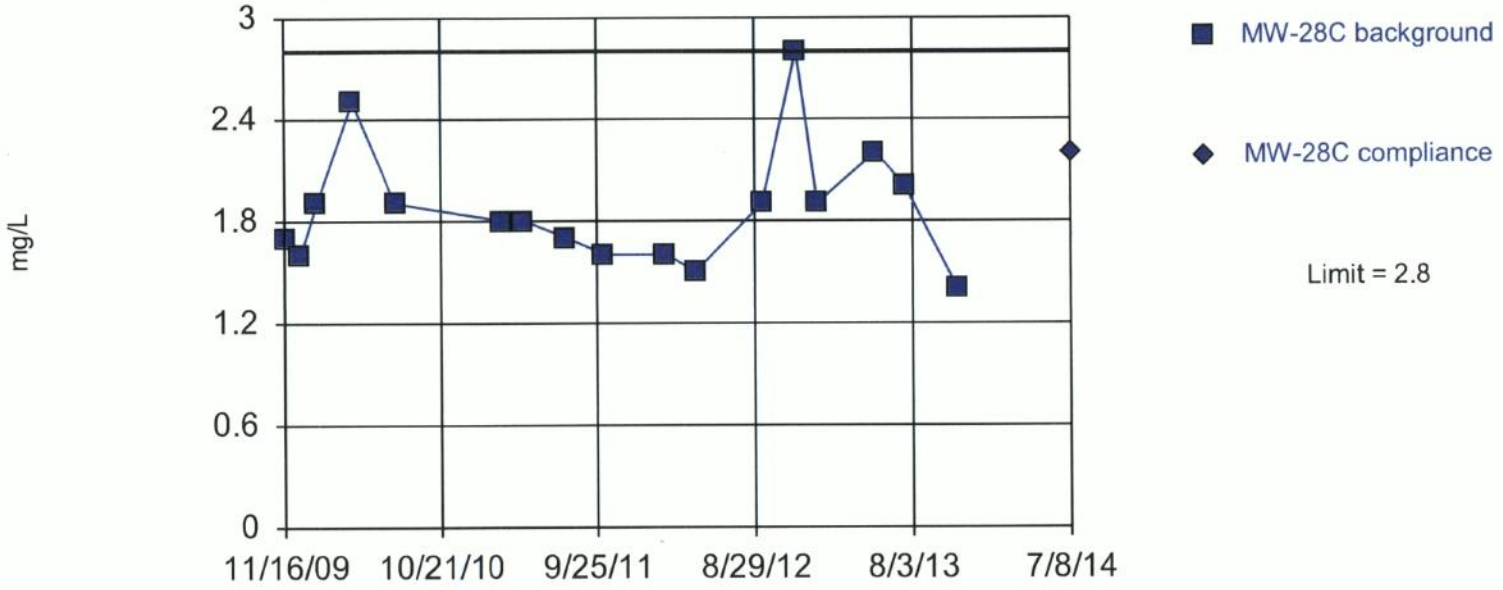
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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Within Limit

# Prediction Limit

## Intrawell Parametric




Background Data Summary (based on natural log transformation): Mean=0.6108, Std. Dev.=0.1771, n=17. 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 8/18/2014 9:16 AM

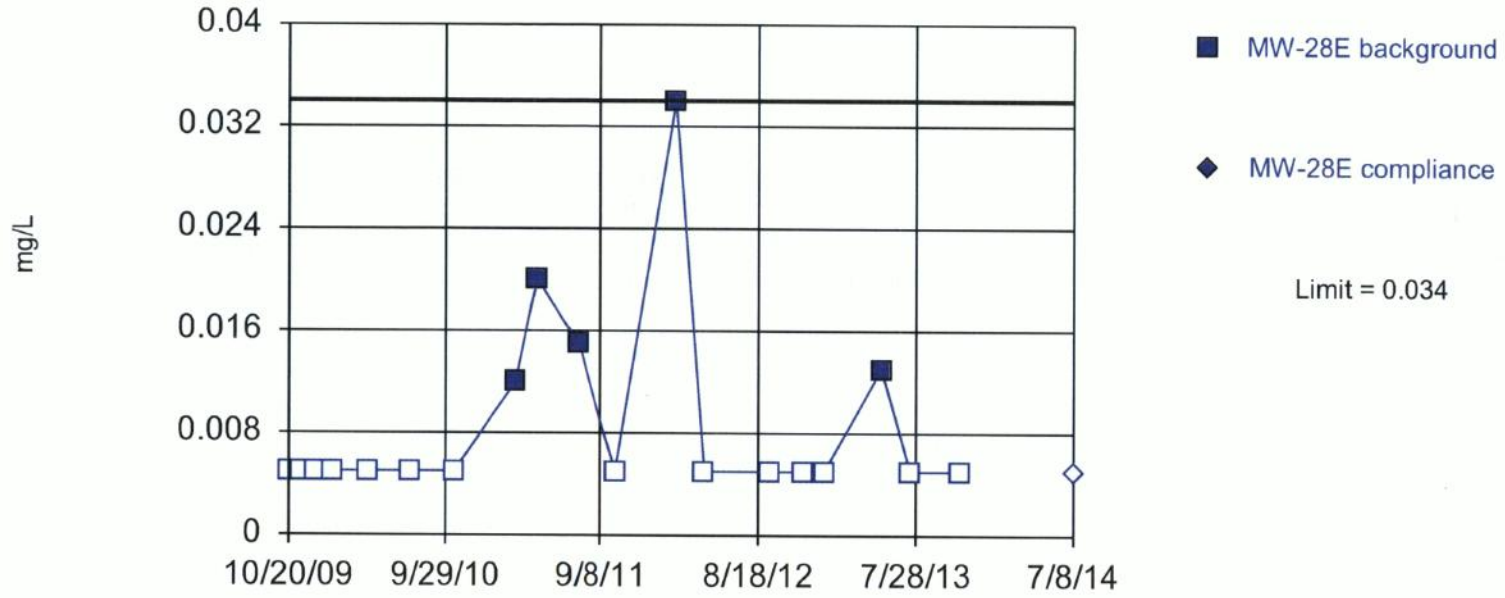
Facility: Green Valley Client: RSI Data File: GREENVALLEY

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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.

Constituent: Total Organic Halides Analysis Run 8/18/2014 9:16 AM

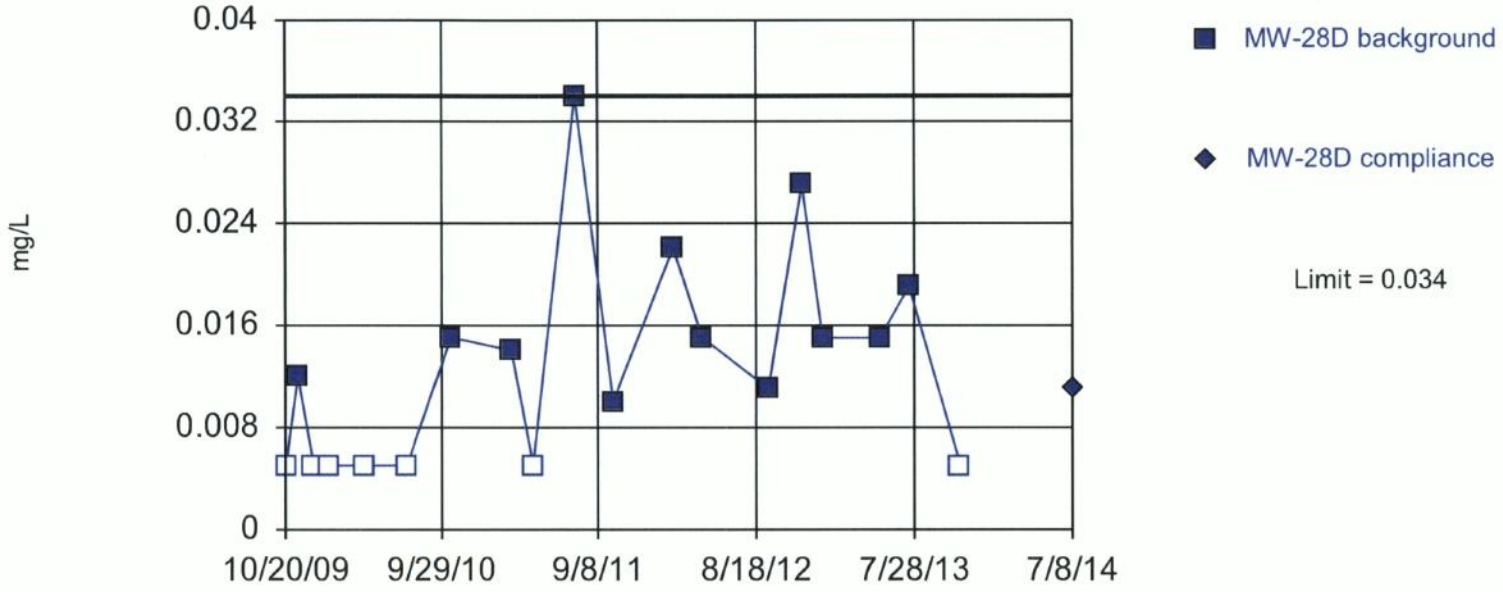
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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.

Constituent: Total Organic Halides Analysis Run 8/18/2014 9:16 AM

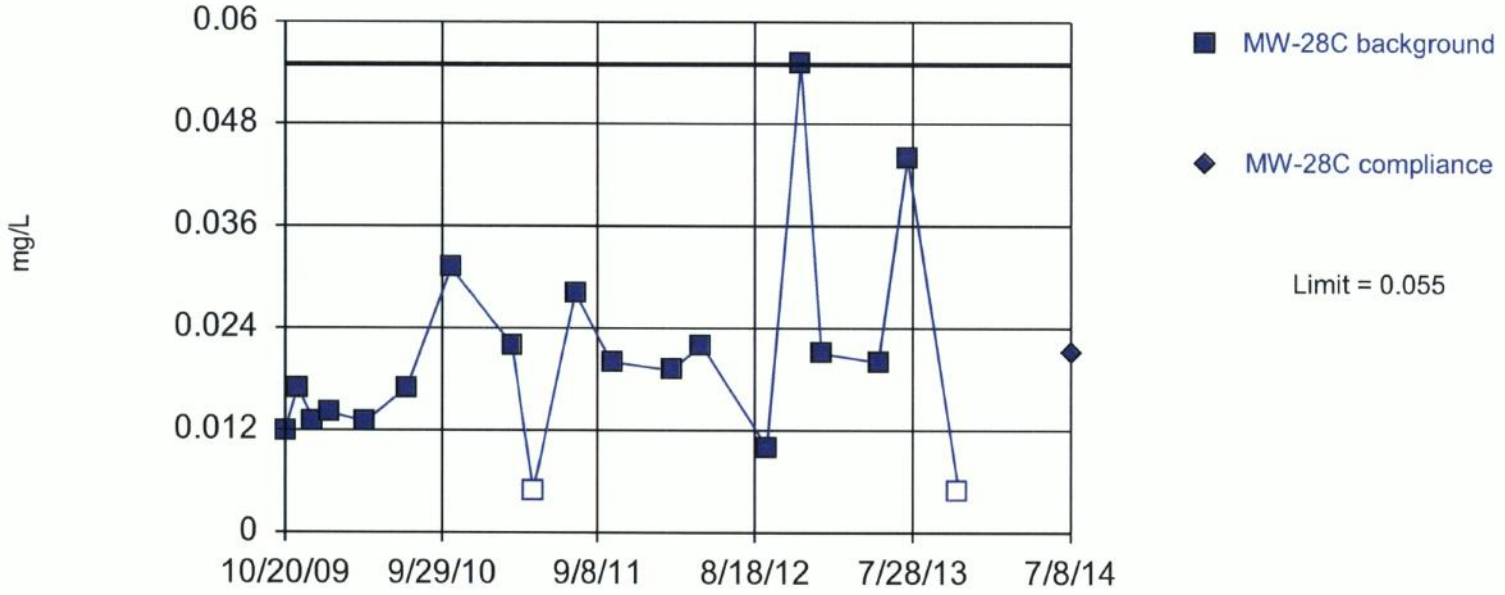
Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 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. 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.

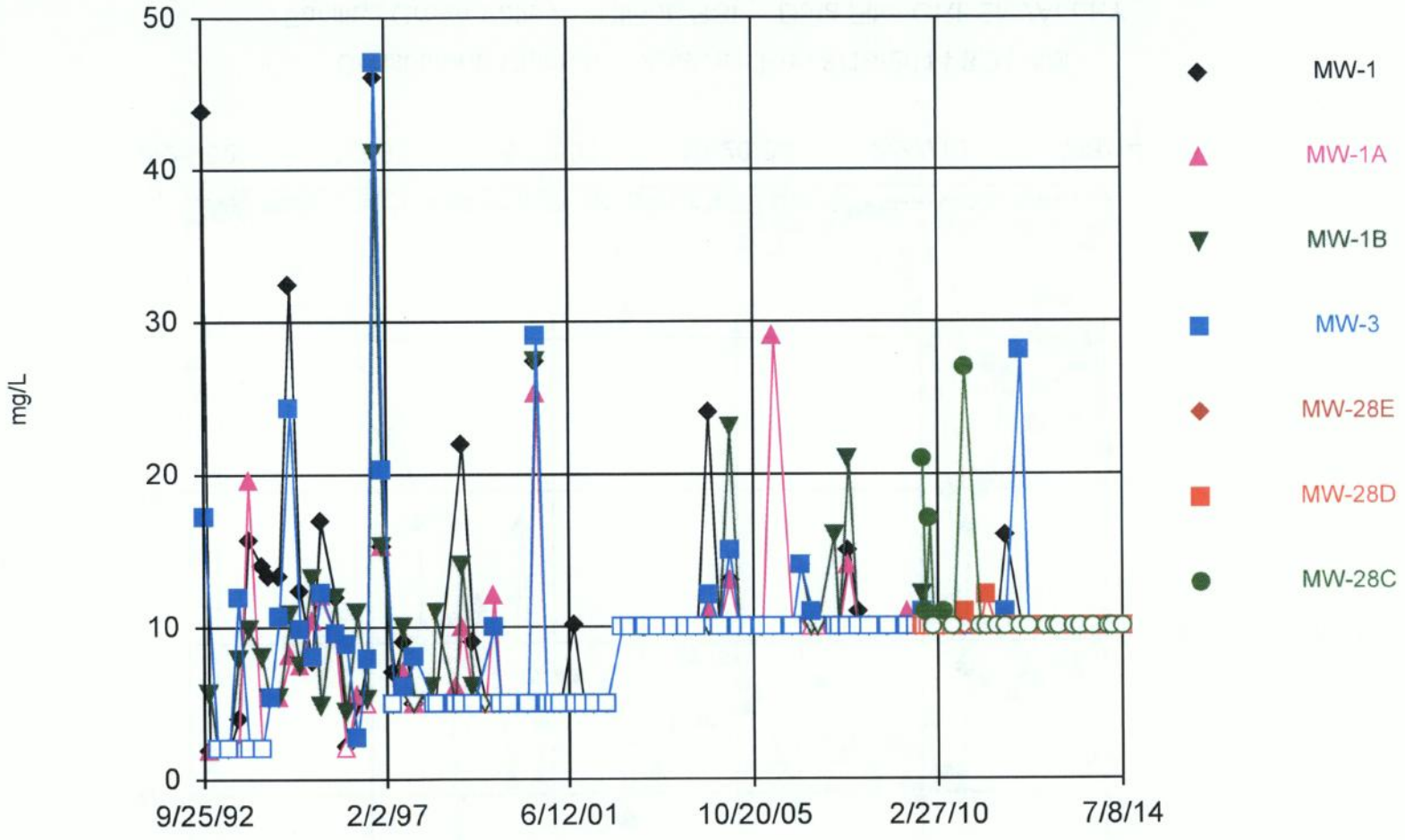
Constituent: Total Organic Halides Analysis Run 8/18/2014 9:16 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

# TIME SERIES PLOTS & DATA

Sanitas™ v.9.4.38 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

# Time Series

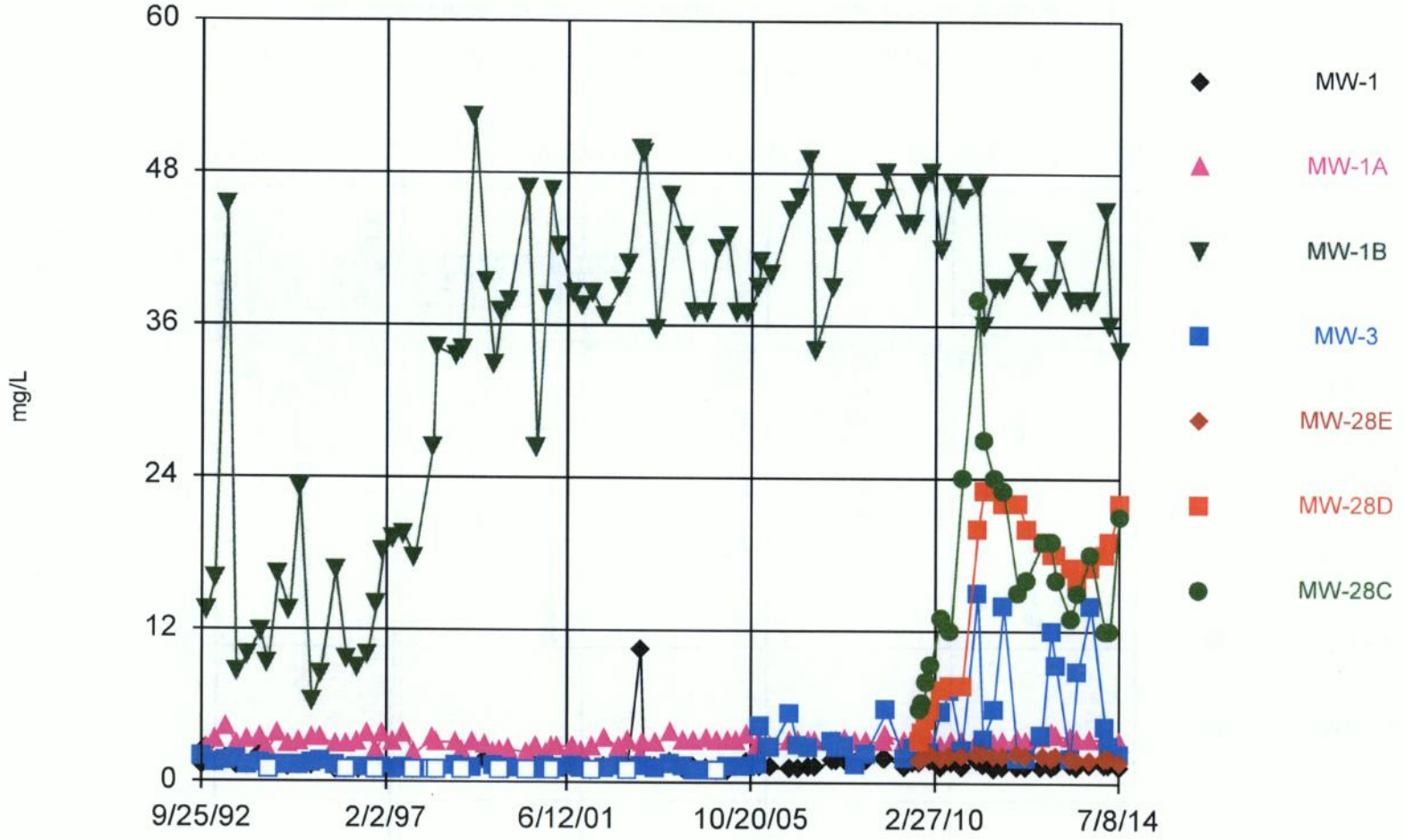



Constituent: Chemical Oxygen Demand [COD] Analysis Run 8/18/2014 8:31 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

# Time Series

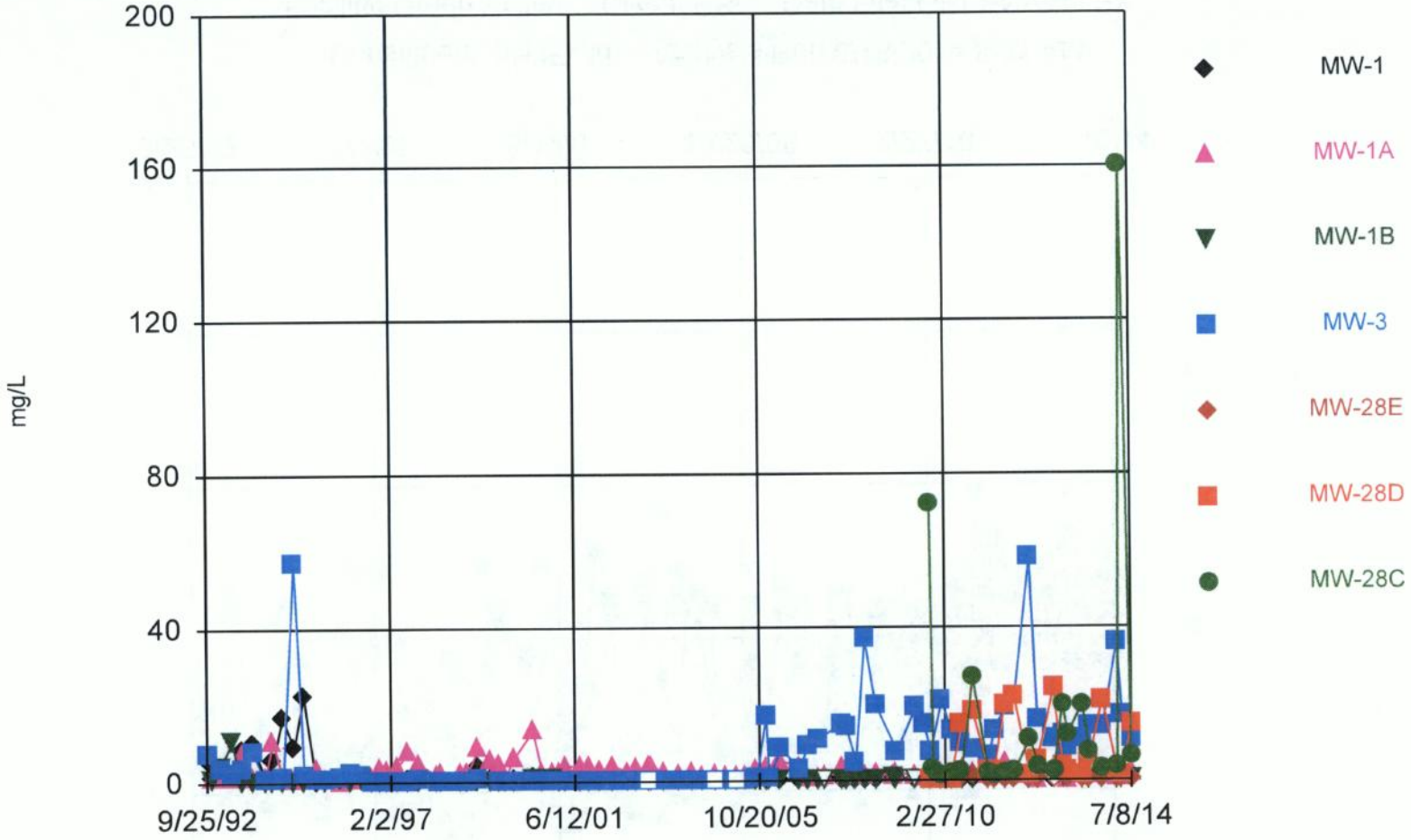



Constituent: Chloride Analysis Run 8/18/2014 8:31 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

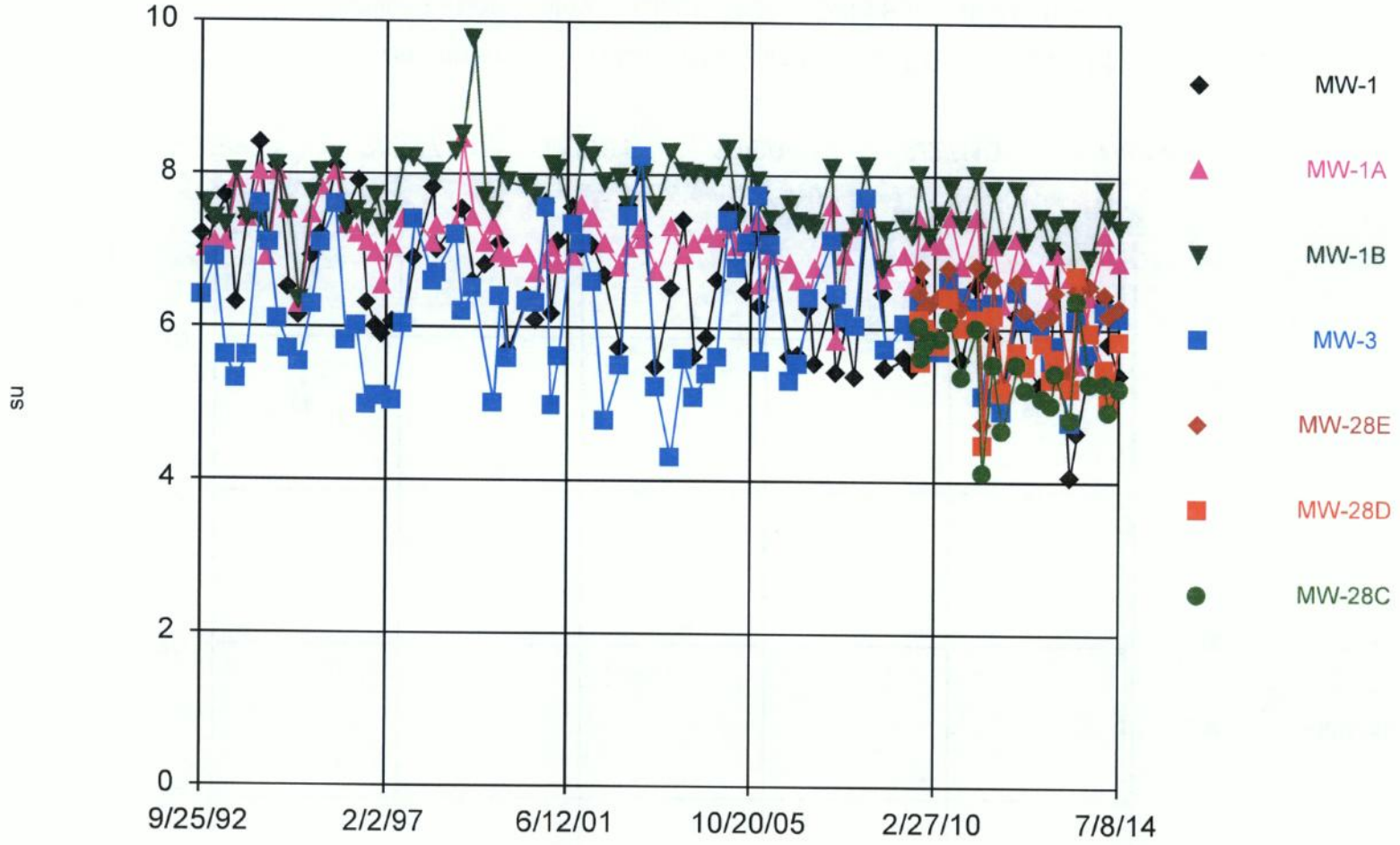
# Time Series




Constituent: Iron Total Analysis Run 8/18/2014 8:31 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

# Time Series

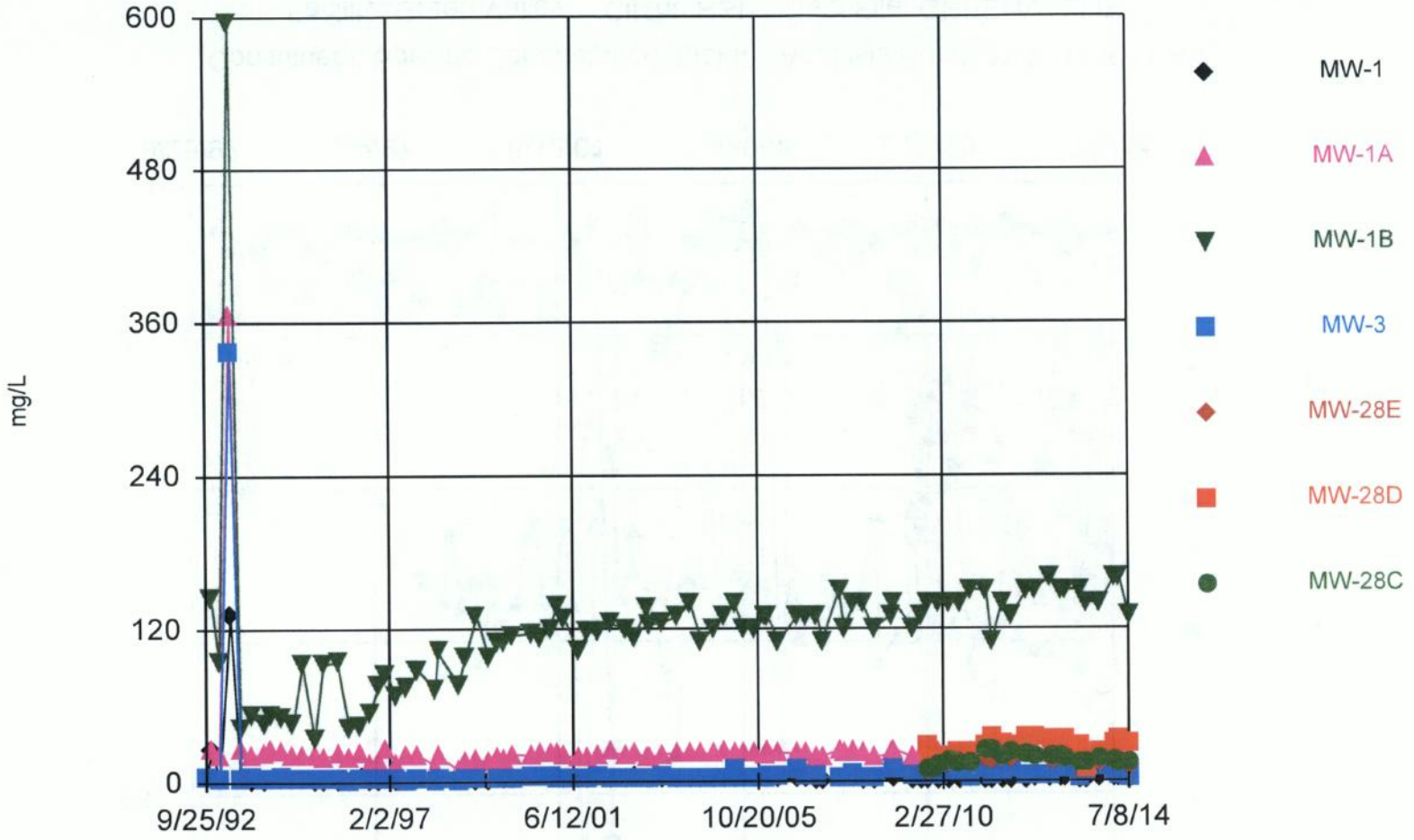



Constituent: pH [Field] Analysis Run 8/18/2014 8:31 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 Sanitas software licensed to Jett Environmental Consulting. UG

# Time Series

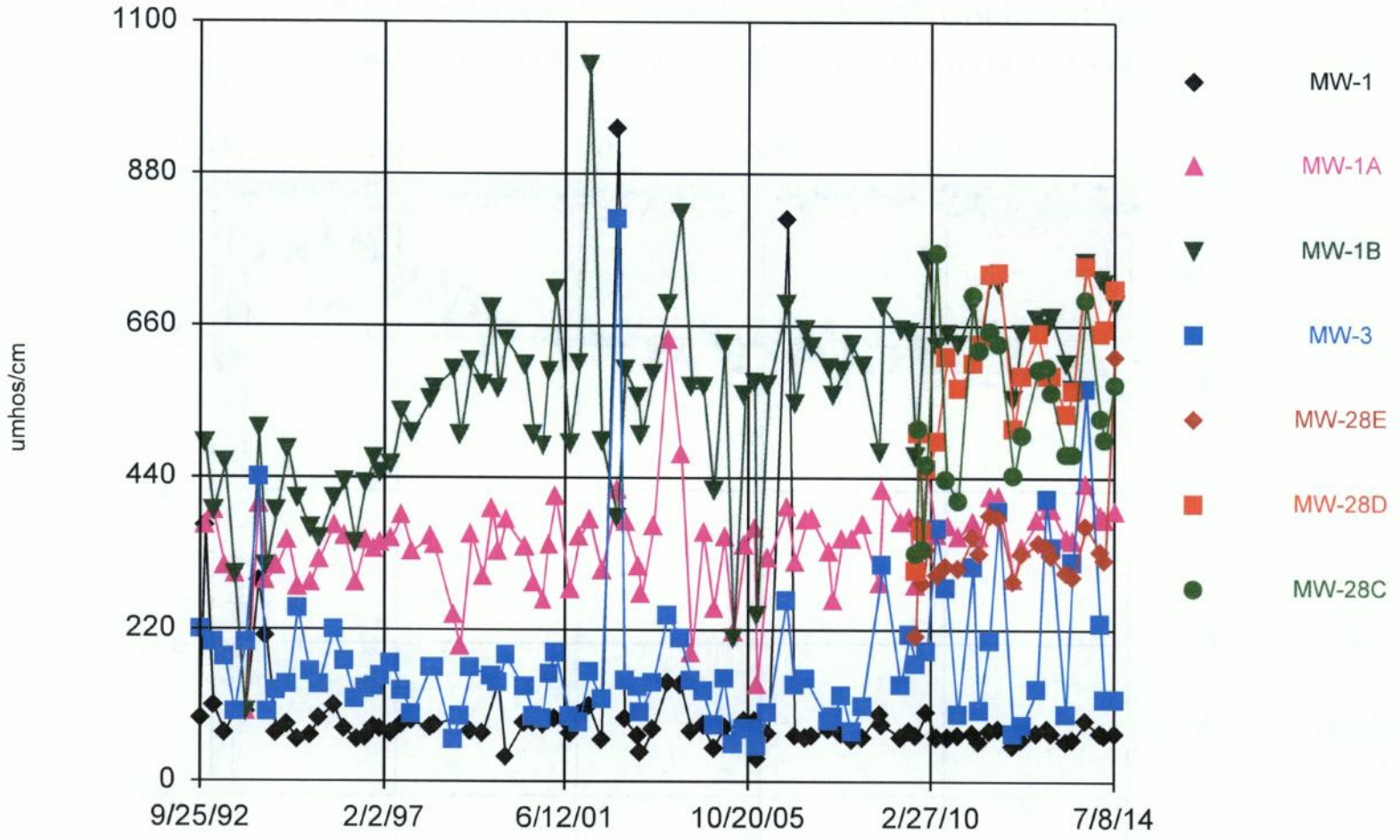



Constituent: Sodium Total Analysis Run 8/18/2014 8:31 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 Sanitas software licensed to Jett Environmental Consulting. UG

# Time Series

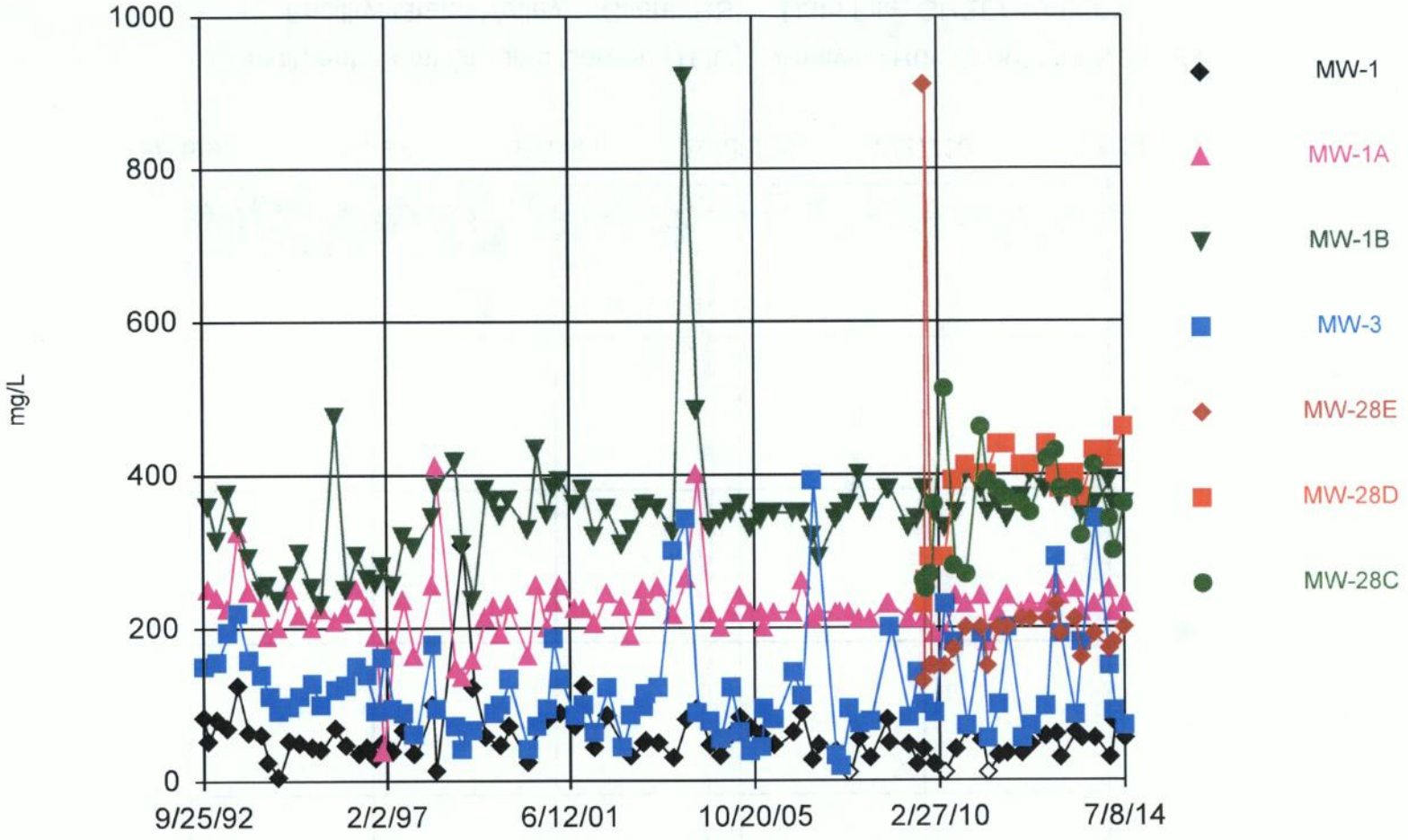



Constituent: Specific Conductance [Field] Analysis Run 8/18/2014 8:31 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

# Time Series

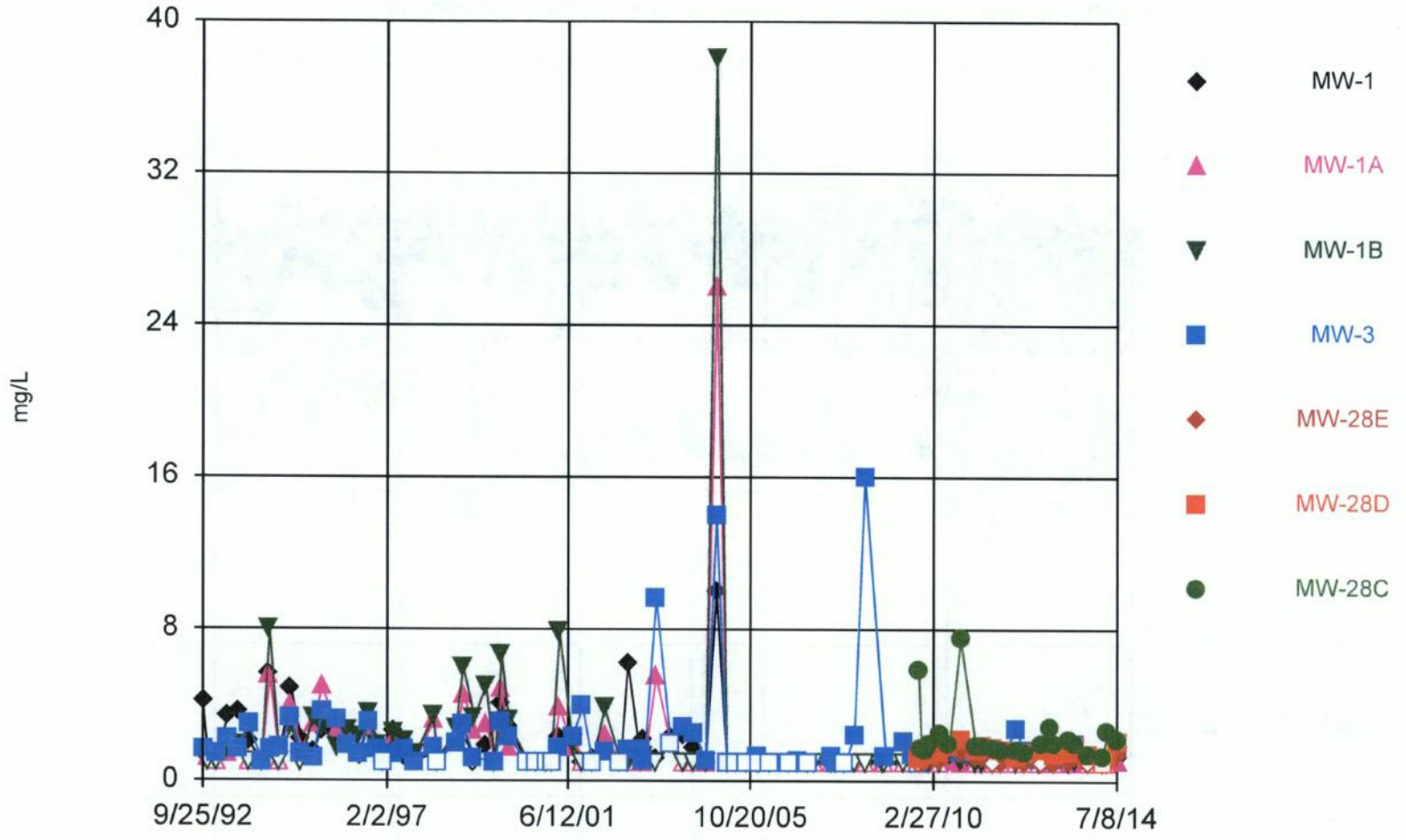



Constituent: Total Dissolved Solids [TDS] Analysis Run 8/18/2014 8:31 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

# Time Series

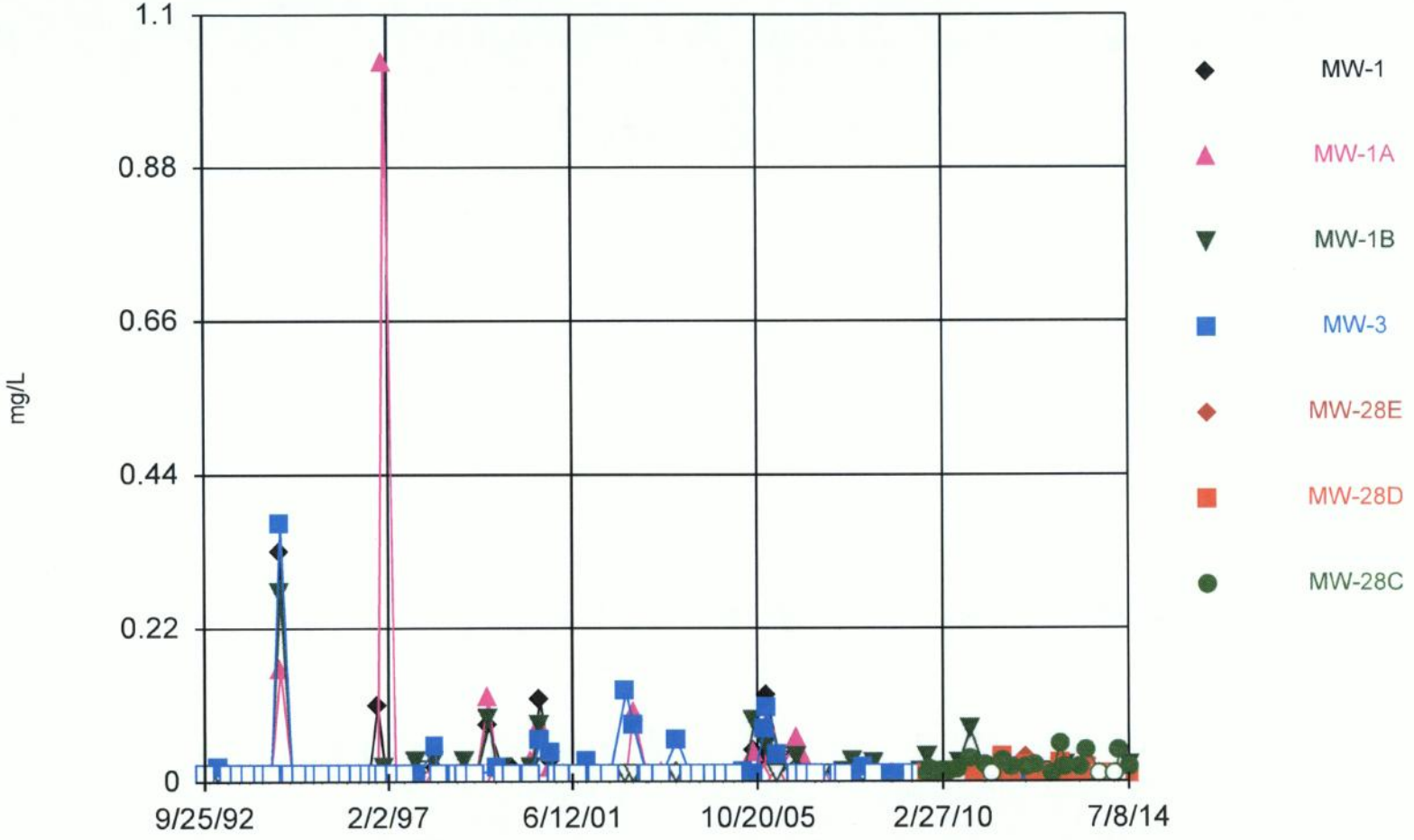



Constituent: Total Organic Carbon [TOC] Analysis Run 8/18/2014 8:31 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

Sanitas™ v.9.4.38 Sanitas software licensed to Jett Environmental Consulting. UG
Hollow symbols indicate censored values.

# Time Series




Constituent: Total Organic Halides Analysis Run 8/18/2014 8:31 AM

Facility: Green Valley Client: RSI Data File: GREENVALLEY

# Time Series

Constituent: Chemical Oxygen Demand [COD] (mg/L) Analysis Run 8/18/2014 8:32 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 8/18/2014 8:32 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 8/18/2014 8:32 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 |

# Time Series

Constituent: Chloride (mg/L) Analysis Run 8/18/2014 8:32 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 8/18/2014 8:32 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 8/18/2014 8:32 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 |

# Time Series

Constituent: Iron Total (mg/L) Analysis Run 8/18/2014 8:32 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 8/18/2014 8:32 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 8/18/2014 8:32 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 |

# Time Series

Constituent: pH [Field] (su) Analysis Run 8/18/2014 8:32 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 8/18/2014 8:32 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 8/18/2014 8:32 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 |

# Time Series

Constituent: Sodium Total (mg/L) Analysis Run 8/18/2014 8:32 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 8/18/2014 8:32 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 8/18/2014 8:32 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 |

# Time Series

Constituent: Specific Conductance [Field] (umhos/cm) Analysis Run 8/18/2014 8:32 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 8/18/2014 8:32 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 8/18/2014 8:32 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 | 613 | 713 | 575 |

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 8/18/2014 8:32 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 8/18/2014 8:32 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 8/18/2014 8:32 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 |

# Time Series

Constituent: Total Organic Carbon [TOC] (mg/L) Analysis Run 8/18/2014 8:32 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 8/18/2014 8:32 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 8/18/2014 8:32 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 |

# Time Series

Constituent: Total Organic Halides (mg/L) Analysis Run 8/18/2014 8:32 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 8/18/2014 8:32 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 8/18/2014 8:32 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 |

# APPENDIX C

# LABORATORY ANALYTICAL REPORT
# &
# FIELD INFORMATION LOGS

Pace Analytical®

Pace Analytical Services, Inc.

# Quality Assurance Report # 66554


**Pace Analytical Services, INC.**
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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


NELAP ACCREDITED TNI LABORATORY

Pace Analytical®

Pace Analytical Services, Inc.

## Sample Summary

**COC ID# : KENVIRONS**

**COC Doc # : 01106070**

| Date/Time Sampled | Date Complete | LabSampleID | Client SampleID |
|---|---|---|---|
| 07/08/2014 06:55:00 | 07/30/2014 | AA22707 | MW-28C |
| 07/08/2014 07:25:00 | 07/30/2014 | AA22708 | MW-28D |
| 07/08/2014 07:55:00 | 07/30/2014 | AA22709 | MW-28E |
| 07/08/2014 09:00:00 | 07/30/2014 | AA22710 | MW-3 |
| 07/08/2014 10:25:00 | 07/30/2014 | AA22711 | MW-1 |
| 07/08/2014 11:05:00 | 07/30/2014 | AA22712 | MW-1A |
| 07/08/2014 11:40:00 | 07/30/2014 | AA22713 | MW-1B |
| 07/08/2014 10:48:00 | 07/30/2014 | AA22714 | FB |

**COC Doc # : 01106072**

| Date/Time Sampled | Date Complete | LabSampleID | Client SampleID |
|---|---|---|---|
| 07/08/2014 09:45:00 | 07/30/2014 | AA22715 | SW-1 |
| 07/08/2014 09:15:00 | 07/30/2014 | AA22716 | SW-3 |
| 07/08/2014 08:15:00 | 07/30/2014 | AA22717 | SW-4 |

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# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22707 |
| | Completed<br>19-AUG-14 | PO Number<br>4063197 |
| | Printed<br>25-AUG-14 | Sampled<br>08-JUL-14 06:55 |

| Report To | Bill To |
|---|---|
| BILL CHLEBOWY<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8005-7101

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 09-JUL-14 22:40 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 21 | 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: 22-JUL-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: C. ANYANWUTAKU | Analysis Date: 11-JUL-14 14:30 | Test: G402.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| DISSOLVED SOLIDS | 360 | 10 | mg/L |

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 11-JUL-14 13:54 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 2.2 | 1.0 | mg/L |

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

Analyst: K. KAMARA | Analysis Date: 15-JUL-14 09:00 | Instrument: PREP | Test: P129.4.0

**Sample ID: AA22707 MW-28C**

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

**COPPER ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:07 Instrument: ICP Test: M112.3.0

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

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| COPPER | BDL | 0.010 | mg/L |

**IRON ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:07 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 | 6.2 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:07 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 |

**ZINC ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:07 Instrument: ICP Test: M139.3.0

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

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ZINC | 0.066 | 0.020 | mg/L |

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

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 24-JUL-14 Instrument: TOX Test: O404.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC HALOGEN (TOX) | 0.021 | 0.010 | mg/L |

**GROUNDWATER MONITORING WELL DATA SAS**

Analysis Date: 08-JUL-14 06:55 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ELEVATION OF GROUNDWATER SURFACE | 668.85 | | Feet/MSL |
| ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL) | 674.40 | | Feet/MSL |
| DEPTH TO WATER (FT. BELOW MEASURING POINT) | 5.55 | | ft |

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

Analysis Date: 08-JUL-14 06:55 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 5.22 | 0.1 | Std. Units |

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**Sample ID: AA22707 MW-28C**

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** NELAC:Y

Analysis Date: 08-JUL-14 06:55 Instrument: FIELD Test: G604.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 575 | 1.0 | umHOS/cm |

**FIELD TEMPERATURE SM2550 B 2000** NELAC:N

Analysis Date: 08-JUL-14 06:55 Instrument: FIELD Test: G603.1.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 16.40 | | Degrees C |

**0.45 MICRON PORE DIAMETER MEMBRANE FILTRATION EPA 200.0**

Analyst: J. KRAMER Analysis Date: 18-AUG-14 20:35 Instrument: PREP Test: P110.5.0

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

**COPPER ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 19-AUG-14 01:29 Instrument: ICP Test: M112.3.1

Prep: 0.45 MICRON PORE DIAMETER MEMBRANE FILTRATION EPA 200.0 P110.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| COPPER | BDL | 0.010 | mg/L |

**IRON ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 19-AUG-14 01:29 Instrument: ICP Test: M115.3.1

Prep: 0.45 MICRON PORE DIAMETER MEMBRANE FILTRATION EPA 200.0 P110.5.0

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

**ZINC ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 19-AUG-14 01:29 Instrument: ICP Test: M139.3.1

Prep: 0.45 MICRON PORE DIAMETER MEMBRANE FILTRATION EPA 200.0 P110.5.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ZINC | 0.074 | 0.020 | mg/L |

**Sample Comments**

AMENDED REPORT - CBB - 18-AUG-14 : Testing added

BDL Below Detection Limit

Sample was received on ice at temperature .2 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:

Pace Analytical®
Pace Analytical Services, Inc.

**Sample ID: AA22707 MW-28C**

**Sample Comments**

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

Approved by: CHRISTOPHER BOYLE 20-AUG-14

Pace Analytical®
Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22708 |
| | Completed<br>30-JUL-14 | PO Number<br>4063197 |
| | Printed<br>30-JUL-14 | Sampled<br>08-JUL-14 07:25 |

| Report To | Bill To |
|---|---|
| BILL CHLEBOWY<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8005-7102

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 09-JUL-14 22:57 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 22 | 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: 22-JUL-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: C. ANYANWUTAKU | Analysis Date: 11-JUL-14 14:30 | Test: G402.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| DISSOLVED SOLIDS | 460 | 10 | mg/L |

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 11-JUL-14 13:54 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 2.1 | 1.0 | mg/L |

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

Analyst: K. KAMARA | Analysis Date: 15-JUL-14 09:00 | Instrument: PREP | Test: P129.4.0

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**Sample ID: AA22708 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: 16-JUL-14 09:34 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 | 15 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:34 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 | 29 | 0.10 | mg/L |

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

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 24-JUL-14 Instrument: TOX Test: O404.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC HALOGEN (TOX) | 0.011 | 0.010 | mg/L |

**GROUNDWATER MONITORING WELL DATA SAS**

Analysis Date: 08-JUL-14 07:25 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ELEVATION OF GROUNDWATER SURFACE | 668.97 | | Feet/MSL |
| ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL) | 675.20 | | Feet/MSL |
| DEPTH TO WATER (FT. BELOW MEASURING POINT) | 6.23 | | ft |

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

Analysis Date: 08-JUL-14 07:25 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 5.83 | 0.1 | Std. Units |

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** NELAC:Y

Analysis Date: 08-JUL-14 07:25 Instrument: FIELD Test: G604.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 713 | 1.0 | umHOS/cm |

**FIELD TEMPERATURE SM2550 B 2000** NELAC:N

Analysis Date: 08-JUL-14 07:25 Instrument: FIELD Test: G603.1.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 15.65 | | Degrees C |

**Sample Comments**

BDL Below Detection Limit

Pace Analytical®
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**Sample ID: AA22708 MW-28D**

**Sample Comments**

Sample was received on ice at temperature .2 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 29-JUL-14



Package # 66554

Pace Analytical®
Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22709 |
| | Completed<br>30-JUL-14 | PO Number<br>4063197 |
| | Printed<br>18-AUG-14 | Sampled<br>08-JUL-14 07:55 |

| Report To | Bill To |
|---|---|
| BILL CHLEBOWY<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8005-7103

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 11-JUL-14 21:09 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 1.6 | 1.0 | mg/L |

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

Analyst: B. LEDFORD | Analysis Date: 22-JUL-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: C. ANYANWUTAKU | Analysis Date: 11-JUL-14 14:30 | Test: G402.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| DISSOLVED SOLIDS | 200 | 10 | mg/L |

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 11-JUL-14 13:54 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 1.4 | 1.0 | mg/L |

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

Analyst: K. KAMARA | Analysis Date: 15-JUL-14 09:00 | Instrument: PREP | Test: P129.4.0

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

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**Sample ID: AA22709 MW-28E**

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| FINAL VOLUME | 50 | | mL |

**IRON ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:37 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 | 0.090 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:37 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: 24-JUL-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: 08-JUL-14 07:55 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ELEVATION OF GROUNDWATER SURFACE | 667.05 | | Feet/MSL |
| ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL) | 677.00 | | Feet/MSL |
| DEPTH TO WATER (FT. BELOW MEASURING POINT) | 9.95 | | ft |

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

Analysis Date: 08-JUL-14 07:55 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 6.29 | 0.1 | Std. Units |

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** NELAC:Y

Analysis Date: 08-JUL-14 07:55 Instrument: FIELD Test: G604.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 316 | 1.0 | umHOS/cm |

**FIELD TEMPERATURE SM2550 B 2000** NELAC:N

Analysis Date: 08-JUL-14 07:55 Instrument: FIELD Test: G603.1.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 15.84 | | Degrees C |

**Sample Comments**

AMENDED REPORT - CBB - 18-AUG-14 : Conductivity amended to match COC.

BDL Below Detection Limit

Pace Analytical®
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**Sample ID: AA22709 MW-28E**

**Sample Comments**

Sample was received on ice at temperature .2 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 29-JUL-14

Pace Analytical®
Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22710 |
| | Completed<br>30-JUL-14 | PO Number<br>4063197 |
| | Printed<br>30-JUL-14 | Sampled<br>08-JUL-14 09:00 |

| Report To | Bill To |
|---|---|
| BILL CHLEBOWY<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8000-8085

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 11-JUL-14 22:01 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 2.2 | 1.0 | mg/L |

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

Analyst: B. LEDFORD | Analysis Date: 22-JUL-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: C. ANYANWUTAKU | Analysis Date: 11-JUL-14 14:30 | Test: G402.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| DISSOLVED SOLIDS | 70 | 10 | mg/L |

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 11-JUL-14 13:54 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 1.8 | 1.0 | mg/L |

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

Analyst: K. KAMARA | Analysis Date: 15-JUL-14 09:00 | Instrument: PREP | Test: P129.4.0

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

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**Sample ID: AA22710 MW-3**

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| FINAL VOLUME | 50 | | mL |

**IRON ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:41 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 | 11 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:41 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 | 3.1 | 0.10 | mg/L |

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

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 24-JUL-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: 08-JUL-14 09:00 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ELEVATION OF GROUNDWATER SURFACE | 624.30 | | Feet/MSL |
| ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL) | 630.80 | | Feet/MSL |
| DEPTH TO WATER (FT. BELOW MEASURING POINT) | 6.50 | | ft |

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

Analysis Date: 08-JUL-14 09:00 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 6.13 | 0.1 | Std. Units |

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** NELAC:Y

Analysis Date: 08-JUL-14 09:00 Instrument: FIELD Test: G604.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 117 | 1.0 | umHOS/cm |

**FIELD TEMPERATURE SM2550 B 2000** NELAC:N

Analysis Date: 08-JUL-14 09:00 Instrument: FIELD Test: G603.1.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 15.73 | | Degrees C |

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature .2 C.

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**Sample ID: AA22710 MW-3**

**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 29-JUL-14

Pace Analytical®
Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22711 |
| | Completed<br>30-JUL-14 | PO Number<br>4063197 |
| | Printed<br>30-JUL-14 | Sampled<br>08-JUL-14 10:25 |

| Report To | Bill To |
|---|---|
| BILL CHLEBOWY<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8000-8086

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 11-JUL-14 22:18 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 1.2 | 1.0 | mg/L |

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

Analyst: B. LEDFORD | Analysis Date: 22-JUL-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: C. ANYANWUTAKU | Analysis Date: 11-JUL-14 14:30 | Test: G402.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| DISSOLVED SOLIDS | 53 | 10 | mg/L |

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 11-JUL-14 13:54 | 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: 15-JUL-14 09:00 | Instrument: PREP | Test: P129.4.0

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

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**Sample ID: AA22711 MW-1**

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| FINAL VOLUME | 50 | | mL |

**IRON ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:44 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 | 0.13 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:44 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 | 1.4 | 0.10 | mg/L |

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

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 24-JUL-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: 08-JUL-14 10:25 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ELEVATION OF GROUNDWATER SURFACE | 610.40 | | Feet/MSL |
| ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL) | 617.80 | | Feet/MSL |
| DEPTH TO WATER (FT. BELOW MEASURING POINT) | 7.40 | | ft |

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

Analysis Date: 08-JUL-14 10:25 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 5.38 | 0.1 | Std. Units |

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** NELAC:Y

Analysis Date: 08-JUL-14 10:25 Instrument: FIELD Test: G604.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 70 | 1.0 | umHOS/cm |

**FIELD TEMPERATURE SM2550 B 2000** NELAC:N

Analysis Date: 08-JUL-14 10:25 Instrument: FIELD Test: G603.1.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 15.74 | | Degrees C |

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature .2 C.

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**Sample ID: AA22711 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 29-JUL-14

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Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22712 |
| | Completed<br>30-JUL-14 | PO Number<br>4063197 |
| | Printed<br>30-JUL-14 | Sampled<br>08-JUL-14 11:05 |

| Report To | Bill To |
|---|---|
| BILL CHLEBOWY<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8000-2931

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 10-JUL-14 01:50 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 3.3 | 0.25 | mg/L |

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

Analyst: B. LEDFORD | Analysis Date: 22-JUL-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: C. ANYANWUTAKU | Analysis Date: 11-JUL-14 14:30 | Test: G402.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| DISSOLVED SOLIDS | 230 | 10 | mg/L |

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 11-JUL-14 13:54 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 1.1 | 1.0 | mg/L |

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

Analyst: K. KAMARA | Analysis Date: 15-JUL-14 09:00 | Instrument: PREP | Test: P129.4.0

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

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**Sample ID: AA22712 MW-1A**

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| FINAL VOLUME | 50 | | mL |

**IRON ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:48 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 | 1.9 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:48 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 | 20 | 0.10 | mg/L |

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

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 24-JUL-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: 08-JUL-14 11:05 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ELEVATION OF GROUNDWATER SURFACE | 614.37 | | Feet/MSL |
| ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL) | 618.60 | | Feet/MSL |
| DEPTH TO WATER (FT. BELOW MEASURING POINT) | 4.23 | | ft |

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

Analysis Date: 08-JUL-14 11:05 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 6.87 | 0.1 | Std. Units |

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** NELAC:Y

Analysis Date: 08-JUL-14 11:05 Instrument: FIELD Test: G604.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 391 | 1.0 | umHOS/cm |

**FIELD TEMPERATURE SM2550 B 2000** NELAC:N

Analysis Date: 08-JUL-14 11:05 Instrument: FIELD Test: G603.1.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 15.45 | | Degrees C |

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature .2 C.

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**Sample ID: AA22712 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 29-JUL-14

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Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22713 |
| | **Completed**<br>30-JUL-14 | **PO Number**<br>4063197 |
| | **Printed**<br>30-JUL-14 | **Sampled**<br>08-JUL-14 11:40 |

| Report To | Bill To |
|---|---|
| BILL CHLEBOWY<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: 8000-2932

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 10-JUL-14 02:07 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 34 | 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: 22-JUL-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: C. ANYANWUTAKU | Analysis Date: 11-JUL-14 14:30 | Test: G402.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| DISSOLVED SOLIDS | 360 | 10 | mg/L |

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 11-JUL-14 13:54 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 1.4 | 1.0 | mg/L |

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

Analyst: K. KAMARA | Analysis Date: 15-JUL-14 09:00 | Instrument: PREP | Test: P129.4.0

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Pace Analytical Services, Inc.

**Sample ID: AA22713 MW-1B**

| 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: 16-JUL-14 09:51 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 | 0.028 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 16-JUL-14 09:51 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 | 130 | 0.10 | mg/L |

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

Vendor: KEYSTONE LABORATORIES, INC. Analysis Date: 24-JUL-14 Instrument: TOX Test: O404.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC HALOGEN (TOX) | 0.022 | 0.010 | mg/L |

**GROUNDWATER MONITORING WELL DATA SAS**

Analysis Date: 08-JUL-14 11:40 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| ELEVATION OF GROUNDWATER SURFACE | 618.70 | | Feet/MSL |
| ELEVATION OF MEASURING PT (TOP OF CASING FT. MSL) | 611.65 | | Feet/MSL |
| DEPTH TO WATER (FT. BELOW MEASURING POINT) | 7.05 | | ft |

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

Analysis Date: 08-JUL-14 11:40 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 7.31 | 0.1 | Std. Units |

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** NELAC:Y

Analysis Date: 08-JUL-14 11:40 Instrument: FIELD Test: G604.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 692 | 1.0 | umHOS/cm |

**FIELD TEMPERATURE SM2550 B 2000** NELAC:N

Analysis Date: 08-JUL-14 11:40 Instrument: FIELD Test: G603.1.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 14.94 | | Degrees C |

**Sample Comments**

BDL Below Detection Limit

Pace Analytical®
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**Sample ID: AA22713 MW-1B**

**Sample Comments**

Sample was received on ice at temperature .2 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 29-JUL-14

Pace Analytical®
Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22714 |
| | Completed<br>30-JUL-14 | PO Number<br>4063197 |
| | Printed<br>30-JUL-14 | Sampled<br>08-JUL-14 10:48 |

| Report To | Bill To |
|---|---|
| BILL CHLEBOWY<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS)
LOCATION: GREEN VALLEY LANDFILL
AKGWA #: N/A

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 11-JUL-14 20:52 | 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: 22-JUL-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: C. ANYANWUTAKU | Analysis Date: 11-JUL-14 14:30 | 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: 22-JUL-14 09:45 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 1.2 | 1.0 | mg/L |

Duplicate analysis confirms result.

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

Analyst: K. KAMARA | Analysis Date: 16-JUL-14 09:00 | Instrument: PREP | Test: P129.4.0

Pace Analytical®
Pace Analytical Services, Inc.

**Sample ID: AA22714 FB**

| 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: 17-JUL-14 04:45 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: 17-JUL-14 04:45 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: 24-JUL-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 .2 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 29-JUL-14



Package # 66554

Pace Analytical®
Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22715 |
| | **Completed**<br>30-JUL-14 | **PO Number**<br>4063197 |
| | **Printed**<br>30-JUL-14 | **Sampled**<br>08-JUL-14 09:45 |

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

**Sample Description**

CLIENT ID: SW-1
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 10497 - KY-ALLIED-GREEN VALLEY LANDFILL
PROJECT NAME: SURFACE WATER - GREEN VALLEY LANDFILL
DATA PACKAGE #: 66554
DESCRIPTION: SURFACE WATERS - QUARTERLY
SITE: GREEN VALLEY LANDFILL

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 09-JUL-14 22:01 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 54 | 2.5 | mg/L |

1:10 Dilution.

**SULFATE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 11-JUL-14 18:50 | Instrument: IC | Test: G310.7.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| SULFATE | 690 | 6.3 | mg/L |

1:25 Dilution.

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 14-JUL-14 13:50 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 5.3 | 1.0 | mg/L |

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

Analyst: B. LEDFORD | Analysis Date: 22-JUL-14 11:30 | Test: G301.1.0

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

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**Sample ID: AA22715 SW-1**

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

Analyst: C. ANYANWUTAKU Analysis Date: 14-JUL-14 13:00 Test: G403.8.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| SUSPENDED SOLIDS | 2 | 1 | mg/L |

**TOTAL DISSOLVED SOLIDS SM2540 C 1997** NELAC:Y

Analyst: C. ANYANWUTAKU Analysis Date: 11-JUL-14 14:30 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: 11-JUL-14 16:45 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: 14-JUL-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: 15-JUL-14 11:32 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 | 0.99 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 15-JUL-14 11:32 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 | 51 | 0.10 | mg/L |

**GROUNDWATER MONITORING WELL DATA SAS**

Analysis Date: 08-JUL-14 09:45 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| FLOW RATE (CMF) | 1 | | Gal/Min |

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

Analysis Date: 08-JUL-14 09:45 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 7.76 | 0.1 | Std. Units |

Pace Analytical®
Pace Analytical Services, Inc.

**Sample ID: AA22715 SW-1**

| **FIELD SPECIFIC CONDUCTANCE SW846-9050A** | | | NELAC:Y |
|---|---|---|---|
| | Analysis Date: 08-JUL-14 09:45 | Instrument: FIELD | Test: G604.0.0 |

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 1769 | 1.0 | umHOS/cm |

| **FIELD TEMPERATURE SM2550 B 2000** | | | NELAC:N |
|---|---|---|---|
| | Analysis Date: 08-JUL-14 09:45 | Instrument: FIELD | Test: G603.1.0 |

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 21.56 | | Degrees C |

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature .2 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 24-JUL-14



Package # 66554

Pace Analytical®
Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22716 |
| | **Completed**<br>30-JUL-14 | **PO Number**<br>4063197 |
| | **Printed**<br>30-JUL-14 | **Sampled**<br>08-JUL-14 09:15 |

| Report To | Bill To |
|---|---|
| DANIEL DEBORDE<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: SURFACE WATERS - QUARTERLY
SITE: GREEN VALLEY LANDFILL

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 09-JUL-14 22:18 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 9.1 | 0.25 | mg/L |

**SULFATE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 09-JUL-14 22:36 | Instrument: IC | Test: G310.7.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| SULFATE | 550 | 6.3 | mg/L |

1:25 Dilution.

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 14-JUL-14 13:50 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 3.1 | 1.0 | mg/L |

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

Analyst: B. LEDFORD | Analysis Date: 22-JUL-14 11:30 | 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: 14-JUL-14 13:00 | Test: G403.8.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|

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**Sample ID: AA22716 SW-3**

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

**TOTAL DISSOLVED SOLIDS SM2540 C 1997** NELAC:Y

Analyst: C. ANYANWUTAKU Analysis Date: 11-JUL-14 14:30 Test: G402.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| DISSOLVED SOLIDS | 920 | 10 | mg/L |

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

Analyst: C. ANYANWUTAKU Analysis Date: 11-JUL-14 16:45 Test: G401.6.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| SOLIDS | 950 | 10 | mg/L |

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

Analyst: K. KAMARA Analysis Date: 14-JUL-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: 15-JUL-14 12:13 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 | 0.16 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 15-JUL-14 12:13 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 | 12 | 0.10 | mg/L |

**GROUNDWATER MONITORING WELL DATA SAS**

Analysis Date: 08-JUL-14 09:15 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| FLOW RATE (CMF) | 2 | | Gal/Min |

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

Analysis Date: 08-JUL-14 09:15 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 6.71 | 0.1 | Std. Units |

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** NELAC:Y

Analysis Date: 08-JUL-14 09:15 Instrument: FIELD Test: G604.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|

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**Sample ID: AA22716 SW-3**

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 1189 | 1.0 | umHOS/cm |

**FIELD TEMPERATURE SM2550 B 2000** NELAC:N

Analysis Date: 08-JUL-14 09:15 Instrument: FIELD Test: G603.1.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 21.72 | | Degrees C |

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature .2 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 24-JUL-14



Package # 66554

Pace Analytical®
Pace Analytical Services, Inc.

# CERTIFICATE OF ANALYSIS

| Service Location | Received | Lab ID |
|---|---|---|
| PACE ANALYTICAL SERVICES, INC.<br>7901 W. MORRIS ST.<br>INDIANAPOLIS, IN 46231<br>(317)243-8304 | 09-JUL-14 | AA22717 |
| | **Completed**<br>30-JUL-14 | **PO Number**<br>4063197 |
| | **Printed**<br>30-JUL-14 | **Sampled**<br>08-JUL-14 08:15 |

| Report To | Bill To |
|---|---|
| DANIEL DEBORDE<br>GREEN VALLEY LANDFILL<br>PO BOX 9<br>RUSH, KY 41168 | ALLIED WASTE SYSTEMS<br>258 North Fork Road<br>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 #: 66554
DESCRIPTION: SURFACE WATERS - QUARTERLY
SITE: GREEN VALLEY LANDFILL

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 09-JUL-14 23:28 | Instrument: IC | Test: G310.2.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CHLORIDE | 8.6 | 0.25 | mg/L |

**SULFATE BY ION CHROMATOGRAPHY SW846-9056** NELAC:Y

Analyst: K. VEST | Analysis Date: 11-JUL-14 19:08 | Instrument: IC | Test: G310.7.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| SULFATE | 590 | 6.3 | mg/L |

1:25 Dilution.

**TOTAL ORGANIC CARBON SW846-9060A** NELAC:Y

Analyst: D. DICKERSON | Analysis Date: 14-JUL-14 13:50 | Instrument: TOC | Test: O401.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TOTAL ORGANIC CARBON (TOC) | 3.3 | 1.0 | mg/L |

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

Analyst: B. LEDFORD | Analysis Date: 22-JUL-14 11:30 | 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: 14-JUL-14 13:00 | Test: G403.8.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|

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**Sample ID: AA22717 SW-4**

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

**TOTAL DISSOLVED SOLIDS SM2540 C 1997** NELAC:Y

Analyst: C. ANYANWUTAKU Analysis Date: 11-JUL-14 14:30 Test: G402.9.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| DISSOLVED SOLIDS | 1000 | 10 | mg/L |

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

Analyst: C. ANYANWUTAKU Analysis Date: 11-JUL-14 16:45 Test: G401.6.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| SOLIDS | 1100 | 10 | mg/L |

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

Analyst: K. KAMARA Analysis Date: 14-JUL-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: 15-JUL-14 12:16 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 | 0.46 | 0.020 | mg/L |

**SODIUM ICP SW846-6010B** NELAC:Y

Analyst: J. KRAMER Analysis Date: 15-JUL-14 12:16 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 | 12 | 0.10 | mg/L |

**GROUNDWATER MONITORING WELL DATA SAS**

Analysis Date: 08-JUL-14 08:15 Instrument: FIELD Test: G600.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| FLOW RATE (CMF) | 3 | | Gal/Min |

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

Analysis Date: 08-JUL-14 08:15 Instrument: FIELD Test: G607.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| PH | 7.06 | 0.1 | Std. Units |

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** NELAC:Y

Analysis Date: 08-JUL-14 08:15 Instrument: FIELD Test: G604.0.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|

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Pace Analytical Services, Inc.

**Sample ID: AA22717 SW-4**

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| CONDUCTIVITY | 1272 | 1.0 | umHOS/cm |

**FIELD TEMPERATURE SM2550 B 2000** NELAC:N

Analysis Date: 08-JUL-14 08:15 Instrument: FIELD Test: G603.1.0

| Parameter | Result | Det. Limit | Units |
|---|---|---|---|
| TEMPERATURE | 21.41 | | Degrees C |

**Sample Comments**

BDL Below Detection Limit

Sample was received on ice at temperature .2 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 24-JUL-14



Package # 66554

Package # 66554

01106070

# 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 GW

Sampled By: BTB

Send Report To: Bill Kraus

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 (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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/8/14 | 0655 AM/PM | | X | MW-28C | GW | 5 | — | — | 5.22 | 575 | 16.40 | 2.97 | 294.1 | 144756 | AA22707 |
| | 0735 AM/PM | | X | MW-28D | | | — | — | 5.83 | 713 | 15.65 | 1.77 | 156.2 | | 708 |
| | 0755 AM/PM | | X | MW-28E | | | — | — | 6.29 | 613 | 15.84 | 3.10 | 214.0 | | 709 |
| | 0900 AM/PM | | X | MW-3 | | | — | — | 6.13 | 117 | 15.73 | 4.06 | 76.2 | | 710 |
| | 1025 AM/PM | | X | MW-1 | | | — | — | 5.38 | 70 | 15.74 | 6.33 | 252.1 | | 711 |
| | 1105 AM/PM | | X | MW-1A | | | — | — | 6.87 | 391 | 15.45 | 3.63 | 227.1 | | 712 |
| | 1140 AM/PM | | X | MW-1B | | | — | — | 7.31 | 692 | 14.94 | 2.99 | 215.3 | | 713 |
| | 1048 AM/PM | | X | FB | | | — | — | — | — | — | — | — | | 714 |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |

Relinquished by: (Signature) BTB Date/Time 7/8/14, 1600 — Received by: (Signature)

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

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

Received for Lab by: (Signature) Date 7/9/14 Time 1005 — 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

# Sample Receiving Check Sheet

COC ID: 01160570

| | 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 | | 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 | | | | | | | | | | | | | | |
| Line 10 on COC | | | | | | | | | | | | | | |
| Line 11 on COC | | | | | | | | | | | | | | |
| Line 12 on COC | | | | | | | | | | | | | | |
| 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:

01106072

# 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: 291033
Client: Green Valley SW
Sampled By: BTB

Send Report To: Bill Knarr
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 (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. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/8/14 | 0945 AM/PM | | X | SW-1 | SW | 4 | 1 | — | 7.76 | 1769 | 21.56 | — | — | 146799 | AA22715 |
| ↓ | 0915 AM/PM | | X | ~~SW-2~~ SW-3 | ↓ | ↓ | 2 | — | 6.71 | 1189 | 21.72 | — | — | ↓ | ↓ 716 |
| ↓ | 0815 AM/PM | | X | SW-4 | ↓ | ↓ | 3 | — | 7.06 | 1272 | 21.41 | — | — | ↓ | ↓ 717 |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |
| | AM/PM | | | | | | | | | | | | | | |

| Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
|---|---|---|
| B.T.B. | 7/8/14, 1600 | |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
| | | |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) |
| | | |
| Received for Lab by: (Signature) | Date 7/9/14 Time 1005 | 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

# Sample Receiving Check Sheet

COC ID: 07060072

| | 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 | | | 2 | | | | | | | | | | |
| Line 2 on COC | 2 | | | 2 | | | | | | | | | | |
| Line 3 on COC | 2 | | | 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 12 on COC | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | |
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| Line 22 on COC | | | | | | | | | | | | | | |
| Line 23 on COC | | | | | | | | | | | | | | |
| Line 24 on COC | | | | | | | | | | | | | | |
| Line 25 on COC | | | | | | | | | | | | | | |

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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

## 66554

**30-JUL-14**

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

| Sample ID | Client ID | Date/Time Sampled | Date Received | Date Released |
|---|---|---|---|---|
| AA22707 | MW-28C | 08-Jul-14 06:55 | 09-Jul-14 | 29-Jul-2014 |
| | DESCRIPTION : | GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS) | | |
| | LOCATION : | GREEN VALLEY LANDFILL | | |
| | AKGWA # : | 8005-7101 | | |
| AA22708 | MW-28D | 08-Jul-14 07:25 | 09-Jul-14 | 29-Jul-2014 |
| | DESCRIPTION : | GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS) | | |
| | LOCATION : | GREEN VALLEY LANDFILL | | |
| | AKGWA # : | 8005-7102 | | |
| AA22709 | MW-28E | 08-Jul-14 07:55 | 09-Jul-14 | 29-Jul-2014 |
| | DESCRIPTION : | GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS) | | |
| | LOCATION : | GREEN VALLEY LANDFILL | | |
| | AKGWA # : | 8005-7103 | | |
| AA22710 | MW-3 | 08-Jul-14 09:00 | 09-Jul-14 | 29-Jul-2014 |
| | DESCRIPTION : | GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS) | | |
| | LOCATION : | GREEN VALLEY LANDFILL | | |
| | AKGWA # : | 8000-8085 | | |
| AA22711 | MW-1 | 08-Jul-14 10:25 | 09-Jul-14 | 29-Jul-2014 |
| | DESCRIPTION : | GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS) | | |
| | LOCATION : | GREEN VALLEY LANDFILL | | |
| | AKGWA # : | 8000-8086 | | |
| AA22712 | MW-1A | 08-Jul-14 11:05 | 09-Jul-14 | 29-Jul-2014 |
| | DESCRIPTION : | GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS) | | |
| | LOCATION : | GREEN VALLEY LANDFILL | | |
| | AKGWA # : | 8000-2931 | | |
| AA22713 | MW-1B | 08-Jul-14 11:40 | 09-Jul-14 | 29-Jul-2014 |
| | DESCRIPTION : | GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS) | | |
| | LOCATION : | GREEN VALLEY LANDFILL | | |
| | AKGWA # : | 8000-2932 | | |
| AA22714 | FB | 08-Jul-14 10:48 | 09-Jul-14 | 29-Jul-2014 |
| | DESCRIPTION : | GROUNDWATER WELLS (1ST,3RD & 4TH QUARTERS) | | |
| | LOCATION : | GREEN VALLEY LANDFILL | | |
| | AKGWA # : | N/A | | |
| AA22715 | SW-1 | 08-Jul-14 09:45 | 09-Jul-14 | 24-Jul-2014 |
| | DESCRIPTION : | SURFACE WATERS - QUARTERLY | | |
| | SITE : | GREEN VALLEY LANDFILL | | |
| AA22716 | SW-3 | 08-Jul-14 09:15 | 09-Jul-14 | 24-Jul-2014 |
| | DESCRIPTION : | SURFACE WATERS - QUARTERLY | | |
| | SITE : | GREEN VALLEY LANDFILL | | |

Pace Analytical®

Pace Analytical Services, Inc.

# Quality Assurance Report

## 66554

**30-JUL-14**

| Sample ID | Client ID | Date/Time Sampled | Date Received | Date Released |
|---|---|---|---|---|
| AA22717 | SW-4 | 08-Jul-14 08:15 | 09-Jul-14 | 24-Jul-2014 |
| | DESCRIPTION : | SURFACE WATERS - QUARTERLY | | |
| | SITE : | GREEN VALLEY LANDFILL | | |

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Pace Analytical Services, Inc.

Quality Assurance Report **66554**

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

R628431 Analyst: B LEDFORD Run Date: 22-Jul-14
Analytical Reviewer: P SPENCE Review Date: 22-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2844157 | | CHEMICAL OXYGEN DEMAND | | | BDL | 10 | mg/L | | |
| CDL01 | Q2844158 | | CHEMICAL OXYGEN DEMAND | 10.0 | | | 5.27 | mg/L | 52.7 | |
| ICV01 | Q2844159 | | CHEMICAL OXYGEN DEMAND | 100 | | | 94.6 | mg/L | 94.6 | |
| CCV | Q2844160 | | CHEMICAL OXYGEN DEMAND | 100 | | | 97.1 | mg/L | 97.1 | |
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2844163 | | CHEMICAL OXYGEN DEMAND | 100 | | | 95.0 | mg/L | 95.0 | |
| BLA01 | Q2844164 | | CHEMICAL OXYGEN DEMAND | | | BDL | 10 | mg/L | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2844165 | AA22711 | CHEMICAL OXYGEN DEMAND | 0 | 50.0 | | 49.1 | mg/L | 98.2 | |
| DPS01 | Q2844166 | AA22711 | CHEMICAL OXYGEN DEMAND | 0 | 50.0 | | 49.8 | mg/L | 99.6 | 1.4 |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22714 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| ICV01 | Q2844167 | | CHEMICAL OXYGEN DEMAND | 100 | | | 92.9 | mg/L | 92.9 | |
| CCV | Q2844168 | | CHEMICAL OXYGEN DEMAND | 100 | | | 98.7 | mg/L | 98.7 | |
| BLA01 | Q2844169 | | CHEMICAL OXYGEN DEMAND | | | BDL | 10 | mg/L | | |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2844172 | | CHEMICAL OXYGEN DEMAND | 100 | | | 94.9 | mg/L | 94.9 | |
| BLA01 | Q2844173 | | CHEMICAL OXYGEN DEMAND | | | BDL | 10 | mg/L | | |
| ICV01 | Q2844174 | | CHEMICAL OXYGEN DEMAND | 100 | | | 95.5 | mg/L | 95.5 | |

## CHLORIDE BY ION CHROMATOGRAPHY SW846-9056 G310.2

R627999 Analyst: K VEST Run Date: 09-Jul-14 Instrument: IC
Analytical Reviewer: E WERNZ Review Date: 10-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LFB01H | Q2840314 | | CHLORIDE | 12.5 | | | 12.1 | mg/L | 96.8 | |
| SPI01 | Q2840328 | AA22647 | CHLORIDE | 1150 | 125 | | 1260 | mg/L | 88.0 | |
| DPS01 | Q2840329 | AA22647 | CHLORIDE | 1150 | 125 | | 1260 | mg/L | 88.0 | 0 |
| CCVL | Q2840330 | | CHLORIDE | 1.25 | | | 1.26 | mg/L | 100.8 | |
| CCVH | Q2840331 | | CHLORIDE | 5.00 | | | 4.68 | mg/L | 93.6 | |
| BLA01 | Q2840332 | | CHLORIDE | | | BDL | 0.05 | mg/L | | |
| LFB01L | Q2840333 | | CHLORIDE | 1.25 | | | 1.22 | mg/L | 97.6 | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCVL | Q2840338 | | CHLORIDE | 1.25 | | | 1.22 | mg/L | 97.6 | |
| CCVH | Q2840339 | | CHLORIDE | 5.00 | | | 4.67 | mg/L | 93.4 | |
| BLA01 | Q2840340 | | CHLORIDE | | | BDL | 0.05 | mg/L | | |
| LFB01L | Q2840346 | | CHLORIDE | 1.25 | | | 1.21 | mg/L | 96.8 | |

Q2840328 1:100 Dilution.

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Pace Analytical Services, Inc.

Quality Assurance Report **66554**

**CHLORIDE BY ION CHROMATOGRAPHY SW846-9056** **G310.2**

R627999 Analyst: K VEST Run Date: 09-Jul-14
Analytical Reviewer: E WERNZ Review Date: 10-Jul-14 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| Q2840329 | 1:100 Dilution. | | | | | | | | | |

R628002 Analyst: K VEST Run Date: 09-Jul-14 Instrument: IC
Analytical Reviewer: E WERNZ Review Date: 10-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCVL | Q2840348 | | CHLORIDE | 1.25 | | | 1.23 | mg/L | 98.4 | |
| LFB01H | Q2840350 | | CHLORIDE | 12.5 | | | 11.9 | mg/L | 95.2 | |
| LFB01L | Q2840351 | | CHLORIDE | 1.25 | | | 1.21 | mg/L | 96.8 | |
| CCVH | Q2840354 | | CHLORIDE | 5.00 | | | 4.69 | mg/L | 93.8 | |
| BLA01 | Q2840355 | | CHLORIDE | | | BDL | 0.05 | mg/L | | |
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCVH | Q2840358 | | CHLORIDE | 5.00 | | | 4.68 | mg/L | 93.6 | |
| BLA01 | Q2840359 | | CHLORIDE | | | BDL | 0.05 | mg/L | | |
| LFB01L | Q2840360 | | CHLORIDE | 1.25 | | | 1.21 | mg/L | 96.8 | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2840361 | AA22713 | CHLORIDE | 30.5 | 6.25 | | 36.0 | mg/L | 88.0 | |
| DPS01 | Q2840362 | AA22713 | CHLORIDE | 30.5 | 6.25 | | 36.0 | mg/L | 88.0 | 0 |
| CCVH | Q2840363 | | CHLORIDE | 5.00 | | | 4.68 | mg/L | 93.6 | |
| BLA01 | Q2840364 | | CHLORIDE | | | BDL | 0.05 | mg/L | | |
| LFB01L | Q2840365 | | CHLORIDE | 1.25 | | | 1.21 | mg/L | 96.8 | |
| Q2840361 | 1:5 Dilution. | | | | | | | | | |
| Q2840362 | 1:5 Dilution. | | | | | | | | | |

R628135 Analyst: K VEST Run Date: 11-Jul-14 Instrument: IC
Analytical Reviewer: R DALAL Review Date: 14-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LFB01H | Q2841543 | | CHLORIDE | 12.5 | | | 12.0 | mg/L | 96.0 | |
| LFB01L | Q2841544 | | CHLORIDE | 1.25 | | | 1.21 | mg/L | 96.8 | |
| CCVL | Q2841547 | | CHLORIDE | 1.25 | | | 1.22 | mg/L | 97.6 | |
| CCVH | Q2841548 | | CHLORIDE | 5.00 | | | 4.65 | mg/L | 93.0 | |
| BLA01 | Q2841549 | | CHLORIDE | | | BDL | 0.05 | mg/L | | |
| SAMPLE | AA22714 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2841550 | AA22709 | CHLORIDE | 1.43 | 1.25 | | 2.61 | mg/L | 94.4 | |
| DPS01 | Q2841551 | AA22709 | CHLORIDE | 1.43 | 1.25 | | 2.59 | mg/L | 92.8 | 1.7 |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCVL | Q2841554 | | CHLORIDE | 1.25 | | | 1.24 | mg/L | 99.2 | |
| CCVH | Q2841555 | | CHLORIDE | 5.00 | | | 4.67 | mg/L | 93.4 | |
| BLA01 | Q2841556 | | CHLORIDE | | | BDL | 0.05 | mg/L | | |
| LFB01L | Q2841557 | | CHLORIDE | 1.25 | | | 1.23 | mg/L | 98.4 | |

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Quality Assurance Report 66554

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

R628331 Analyst: Run Date: 08-Jul-14 Instrument: FIELD
Analytical Reviewer: Review Date: 18-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

**FIELD SPECIFIC CONDUCTANCE SW846-9050A** G604.0

R628331 Analyst: Run Date: 08-Jul-14 Instrument: FIELD
Analytical Reviewer: Review Date: 18-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

**FIELD TEMPERATURE SM2550 B 2000** G603.1

R628331 Analyst: Run Date: 08-Jul-14 Instrument: FIELD
Analytical Reviewer: Review Date: 18-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

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Pace Analytical Services, Inc.

Quality Assurance Report 66554

**GROUNDWATER MONITORING WELL DATA SAS** G600.0

R628331 Analyst:
Analytical Reviewer:
Run Date: 08-Jul-14 Instrument: FIELD
Review Date: 18-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

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

R628087 Analyst: K KAMARA
Prep Reviewer: S ENDERSEN
Run Date: 14-Jul-14 Instrument: PREP
Review Date: 14-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2841234 | | Analytical Run: R628153 | | | | | | | |
| LCS | Q2841235 | | Analytical Run: R628153 | | | | | | | |
| DUP02 | Q2841236 | | Analytical Run: R628153 | | | | | | | |
| SPI02 | Q2841237 | | Analytical Run: R628153 | | | | | | | |
| SAMPLE | AA22715 | Rep: 0 | Analytical Run: R628153 | | | | | | | |
| SAMPLE | AA22716 | Rep: 0 | Analytical Run: R628153 | | | | | | | |
| SAMPLE | AA22717 | Rep: 0 | Analytical Run: R628153 | | | | | | | |

R628153 Analyst: J KRAMER
Analytical Reviewer: S ENDERSEN
Run Date: 14-Jul-14 Instrument: ICP
Review Date: 15-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2841692 | | IRON | 1 | | | 1.02 | mg/L | 102.0 | |
| CDL01 | Q2841682 | | IRON | 0.02 | | | 0.0207 | mg/L | 103.5 | |
| ICS-A | Q2841685 | | IRON | 200 | | | 184 | mg/L | 92.0 | |
| ICS-AB | Q2841731 | | IRON | 250 | | | 243 | mg/L | 97.2 | |
| CCV | Q2841726 | | IRON | 5.00 | | | 5.16 | mg/L | 103.2 | |
| BLA01 | Q2841722 | | IRON | | | < | 0.00800 | mg/L | | |
| BLA02 | Q2841234 | | IRON | | | < | 0.00800 | mg/L | | |
| LCS | Q2841235 | | IRON | 1 | | | 1.10 | mg/L | 110.0 | |
| SER01 | Q2841729 | AA22715 | IRON | 0.992 | | | 1.02 | mg/L | | 2.8 |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| DUP02 | Q2841236 | AA22715 | IRON | 0.992 | | | 0.921 | mg/L | | 7.4 |
| SPI02 | Q2841237 | AA22715 | IRON | 0.992 | 1.00 | | 2.00 | mg/L | 100.8 | |
| CCV | Q2841727 | | IRON | 5.00 | | | 5.19 | mg/L | 103.8 | |
| BLA01 | Q2841723 | | IRON | | | < | 0.00800 | mg/L | | |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2841790 | | IRON | 5.00 | | | 5.20 | mg/L | 104.0 | |
| BLA01 | Q2841787 | | IRON | | | < | 0.00800 | mg/L | | |
| SER01 | Q2841793 | AA22380 | IRON | 0.550 | | | 0.561 | mg/L | | 2.0 |

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# Quality Assurance Report 66554

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

R628153 Analyst: J KRAMER Run Date: 14-Jul-14
Analytical Reviewer: S ENDERSEN Review Date: 15-Jul-14 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CDL01 | Q2841840 | | IRON | 0.02 | | | 0.0222 | mg/L | 111.0 | |
| ICS-A | Q2841841 | | IRON | 200 | | | 195 | mg/L | 97.5 | |
| ICS-AB | Q2841836 | | IRON | 200 | | | 196 | mg/L | 98.0 | |

Q2841729 1:5 Dilution.
Q2841729 There was possible matrix interference for K
Q2841729 as indicated by the serial dilution results.
Q2841793 1:5 Dilution.
Q2841793 There was possible matrix interference for K and Na
Q2841793 as indicated by the serial dilution results.

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

R628142 Analyst: K KAMARA Run Date: 15-Jul-14 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 15-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2841589 | | Analytical Run: R628212 | | | | | | | |
| LCS | Q2841590 | | Analytical Run: R628212 | | | | | | | |
| DUP02 | Q2841591 | | Analytical Run: R628212 | | | | | | | |
| SPI02 | Q2841592 | | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22707 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22708 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22709 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22710 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22711 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22712 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22713 | Rep: 0 | Analytical Run: R628212 | | | | | | | |

R628204 Analyst: K KAMARA Run Date: 16-Jul-14 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 16-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2842028 | | Analytical Run: R628253 | | | | | | | |
| LCS | Q2842029 | | Analytical Run: R628253 | | | | | | | |
| DUP02 | Q2842030 | | Analytical Run: R628253 | | | | | | | |
| SPI02 | Q2842031 | | Analytical Run: R628253 | | | | | | | |
| SAMPLE | AA22714 | Rep: 0 | Analytical Run: R628253 | | | | | | | |

Q2842031 Suspected matrix interference for this parameter. The matrix spike results were
Q2842031 outside control limit criteria. Results for this sample are estimated. (Na)

R628212 Analyst: J KRAMER Run Date: 15-Jul-14 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 16-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2842077 | | IRON | 1 | | | 1.01 | mg/L | 101.0 | |
| CDL01 | Q2842113 | | IRON | 0.02 | | | 0.0201 | mg/L | 100.5 | |
| ICS-A | Q2842116 | | IRON | 200 | | | 178 | mg/L | 89.0 | |
| ICS-AB | Q2842094 | | IRON | 200 | | | 180 | mg/L | 90.0 | |

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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**

R628212 Analyst: J KRAMER Run Date: 15-Jul-14
Analytical Reviewer: S ENDERSEN Review Date: 16-Jul-14 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CCV | Q2842106 | | IRON | 5.00 | | | 4.69 | mg/L | 93.8 | |
| BLA01 | Q2842089 | | IRON | | | < | 0.00800 | mg/L | | |
| BLA02 | Q2841589 | | IRON | | | < | 0.00800 | mg/L | | |
| LCS | Q2841590 | | IRON | 1 | | | 0.863 | mg/L | 86.3 | |
| SER01 | Q2842121 | AA22707 | IRON | 6.24 | | | 6.14 | mg/L | | 1.6 |
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| DUP02 | Q2841591 | AA22707 | IRON | 6.24 | | | 6.58 | mg/L | | 5.3 |
| SPI02 | Q2841592 | AA22707 | IRON | 6.24 | 1.00 | NQR | 6.98 | mg/L | | |
| CCV | Q2842107 | | IRON | 5.00 | | | 4.73 | mg/L | 94.6 | |
| BLA01 | Q2842090 | | IRON | | | < | 0.00800 | mg/L | | |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2842108 | | IRON | 5.00 | | | 4.71 | mg/L | 94.2 | |
| BLA01 | Q2842091 | | IRON | | | < | 0.00800 | mg/L | | |
| SER01 | Q2842122 | AA22742 | IRON | 0.117 | | CNA | 0.111 | mg/L | | |
| CDL01 | Q2842294 | | IRON | 0.02 | | | 0.0192 | mg/L | 96.0 | |
| ICS-A | Q2842295 | | IRON | 200 | | | 175 | mg/L | 87.5 | |
| ICS-AB | Q2842286 | | IRON | 200 | | | 172 | mg/L | 86.0 | |

Q2842121 1:5 Dilution.
Q2842121 There was possible matrix interference for K and Na
Q2842121 as indicated by the serial dilution results.
Q2842122 1:5 Dilution.
Q2842122 There was possible matrix interference for K and Na
Q2842122 as indicated by the serial dilution results.

R628253 Analyst: J KRAMER Run Date: 16-Jul-14 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 17-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2842506 | | IRON | 1 | | | 1.03 | mg/L | 103.0 | |
| CDL01 | Q2842547 | | IRON | 0.02 | | | 0.0205 | mg/L | 102.5 | |
| ICS-A | Q2842548 | | IRON | 200 | | | 185 | mg/L | 92.5 | |
| ICS-AB | Q2842523 | | IRON | 200 | | | 186 | mg/L | 93.0 | |
| BLA02 | Q2842028 | | IRON | | | < | 0.00800 | mg/L | | |
| LCS | Q2842029 | | IRON | 1 | | | 1.01 | mg/L | 101.0 | |
| SER01 | Q2842551 | AA22746 | IRON | 0.141 | | CNA | 0.146 | mg/L | | |
| DUP02 | Q2842030 | AA22746 | IRON | 0.141 | | | 0.129 | mg/L | | 8.9 |
| SPI02 | Q2842031 | AA22746 | IRON | 0.141 | 1.00 | | 1.17 | mg/L | 102.9 | |
| CCV | Q2842534 | | IRON | 5.00 | | | 4.80 | mg/L | 96.0 | |
| BLA01 | Q2842514 | | IRON | | | < | 0.00800 | mg/L | | |
| SAMPLE | AA22714 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2842535 | | IRON | 5.00 | | | 4.85 | mg/L | 97.0 | |
| BLA01 | Q2842515 | | IRON | | | < | 0.00800 | mg/L | | |

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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**

R628253 Analyst: J KRAMER Run Date: 16-Jul-14
Analytical Reviewer: S ENDERSEN Review Date: 17-Jul-14 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SER01 | Q2842552 | AA22753 | IRON | 0.349 | | CNA | 0.363 | mg/L | | |
| CDL01 | Q2842594 | | IRON | 0.02 | | | 0.0223 | mg/L | 111.5 | |
| ICS-A | Q2842595 | | IRON | 200 | | | 190 | mg/L | 95.0 | |
| ICS-AB | Q2842589 | | IRON | 200 | | | 191 | mg/L | 95.5 | |

Q2842031 Suspected matrix interference for this parameter. The matrix spike results were
Q2842031 outside control limit criteria. Results for this sample are estimated. (Na)
Q2842551 1:5 Dilution.
Q2842551 There was possible matrix interference for K and Na
Q2842551 as indicated by the serial dilution results.
Q2842552 1:5 Dilution.
Q2842552 There was possible matrix interference for K
Q2842552 as indicated by the serial dilution results.

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

R628087 Analyst: K KAMARA Run Date: 14-Jul-14 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 14-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2841234 | | Analytical Run: R628153 | | | | | | | |
| LCS | Q2841235 | | Analytical Run: R628153 | | | | | | | |
| DUP02 | Q2841236 | | Analytical Run: R628153 | | | | | | | |
| SPI02 | Q2841237 | | Analytical Run: R628153 | | | | | | | |
| SAMPLE | AA22715 | Rep: 0 | Analytical Run: R628153 | | | | | | | |
| SAMPLE | AA22716 | Rep: 0 | Analytical Run: R628153 | | | | | | | |
| SAMPLE | AA22717 | Rep: 0 | Analytical Run: R628153 | | | | | | | |

R628153 Analyst: J KRAMER Run Date: 14-Jul-14 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 15-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2841692 | | SODIUM | 20 | | | 19.9 | mg/L | 99.5 | |
| CDL01 | Q2841682 | | SODIUM | 0.1 | | | 0.0804 | mg/L | 80.4 | |
| ICS-AB | Q2841731 | | SODIUM | 50 | | | 49.7 | mg/L | 99.4 | |
| CCV | Q2841726 | | SODIUM | 50 | | | 53.4 | mg/L | 106.8 | |
| BLA01 | Q2841722 | | SODIUM | | | < | 0.0400 | mg/L | | |
| BLA02 | Q2841234 | | SODIUM | | | < | 0.0400 | mg/L | | |
| LCS | Q2841235 | | SODIUM | 100 | | | 98.9 | mg/L | 98.9 | |
| SER01 | Q2841729 | AA22715 | SODIUM | 51.5 | | | 46.7 | mg/L | | 9.8 |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| DUP02 | Q2841236 | AA22715 | SODIUM | 51.5 | | | 48.1 | mg/L | | 6.8 |
| SPI02 | Q2841237 | AA22715 | SODIUM | 51.5 | 100 | | 147 | mg/L | 95.5 | |
| CCV | Q2841727 | | SODIUM | 50 | | | 53.6 | mg/L | 107.2 | |
| BLA01 | Q2841723 | | SODIUM | | | < | 0.0400 | mg/L | | |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2841790 | | SODIUM | 50 | | | 53.6 | mg/L | 107.2 | |
| BLA01 | Q2841787 | | SODIUM | | | < | 0.0400 | mg/L | | |

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# Quality Assurance Report

**66554**

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

R628153 Analyst: J KRAMER Run Date: 14-Jul-14
Analytical Reviewer: S ENDERSEN Review Date: 15-Jul-14 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SER01 | Q2841793 | AA22380 | SODIUM | 15.3 | | | 13.7 | mg/L | | 11.0 |
| CDL01 | Q2841840 | | SODIUM | 0.1 | | | 0.0844 | mg/L | 84.4 | |

Q2841729 1:5 Dilution.
Q2841729 There was possible matrix interference for K
Q2841729 as indicated by the serial dilution results.
Q2841793 1:5 Dilution.
Q2841793 There was possible matrix interference for K and Na
Q2841793 as indicated by the serial dilution results.

**SODIUM ICP SW846-6010B** **M131.3**
**Prep : ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8**

R628142 Analyst: K KAMARA Run Date: 15-Jul-14 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 15-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2841589 | | Analytical Run: R628212 | | | | | | | |
| LCS | Q2841590 | | Analytical Run: R628212 | | | | | | | |
| DUP02 | Q2841591 | | Analytical Run: R628212 | | | | | | | |
| SPI02 | Q2841592 | | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22707 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22708 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22709 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22710 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22711 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22712 | Rep: 0 | Analytical Run: R628212 | | | | | | | |
| SAMPLE | AA22713 | Rep: 0 | Analytical Run: R628212 | | | | | | | |

R628204 Analyst: K KAMARA Run Date: 16-Jul-14 Instrument: PREP
Prep Reviewer: S ENDERSEN Review Date: 16-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA02 | Q2842028 | | Analytical Run: R628253 | | | | | | | |
| LCS | Q2842029 | | Analytical Run: R628253 | | | | | | | |
| DUP02 | Q2842030 | | Analytical Run: R628253 | | | | | | | |
| SPI02 | Q2842031 | | Analytical Run: R628253 | | | | | | | |
| SAMPLE | AA22714 | Rep: 0 | Analytical Run: R628253 | | | | | | | |

Q2842031 Suspected matrix interference for this parameter. The matrix spike results were
Q2842031 outside control limit criteria. Results for this sample are estimated. (Na)

R628212 Analyst: J KRAMER Run Date: 15-Jul-14 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 16-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2842077 | | SODIUM | 20 | | | 19.8 | mg/L | 99.0 | |
| CDL01 | Q2842113 | | SODIUM | 0.1 | | | 0.0793 | mg/L | 79.3 | |
| CCV | Q2842106 | | SODIUM | 50 | | | 52.1 | mg/L | 104.2 | |
| BLA01 | Q2842089 | | SODIUM | | | < | 0.0400 | mg/L | | |
| BLA02 | Q2841589 | | SODIUM | | | < | 0.0400 | mg/L | | |

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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**

R628212 Analyst: J KRAMER Run Date: 15-Jul-14
Analytical Reviewer: S ENDERSEN Review Date: 16-Jul-14 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS | Q2841590 | | SODIUM | 100 | | | 115 | mg/L | 115.0 | |
| SER01 | Q2842121 | AA22707 | SODIUM | 15.3 | | | 13.2 | mg/L | | 14.7 |
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| DUP02 | Q2841591 | AA22707 | SODIUM | 15.3 | | | 16.2 | mg/L | | 5.7 |
| SPI02 | Q2841592 | AA22707 | SODIUM | 15.3 | 100 | | 114 | mg/L | 98.7 | |
| CCV | Q2842107 | | SODIUM | 50 | | | 51.9 | mg/L | 103.8 | |
| BLA01 | Q2842090 | | SODIUM | | | < | 0.0400 | mg/L | | |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2842108 | | SODIUM | 50 | | | 51.3 | mg/L | 102.6 | |
| BLA01 | Q2842091 | | SODIUM | | | < | 0.0400 | mg/L | | |
| SER01 | Q2842122 | AA22742 | SODIUM | 276 | | | 242 | mg/L | | 13.1 |
| CDL01 | Q2842294 | | SODIUM | 0.1 | | | 0.0782 | mg/L | 78.2 | |

Q2842121 1:5 Dilution.
Q2842121 There was possible matrix interference for K and Na
Q2842121 as indicated by the serial dilution results.
Q2842122 1:5 Dilution.
Q2842122 There was possible matrix interference for K and Na
Q2842122 as indicated by the serial dilution results.

R628253 Analyst: J KRAMER Run Date: 16-Jul-14 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 17-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| ICV01 | Q2842506 | | SODIUM | 20 | | | 20.5 | mg/L | 102.5 | |
| CDL01 | Q2842547 | | SODIUM | 0.1 | | | 0.0858 | mg/L | 85.8 | |
| BLA02 | Q2842028 | | SODIUM | | | < | 0.0400 | mg/L | | |
| LCS | Q2842029 | | SODIUM | 100 | | | 103 | mg/L | 103.0 | |
| SER01 | Q2842551 | AA22746 | SODIUM | 354 | | | 308 | mg/L | | 13.9 |
| DUP02 | Q2842030 | AA22746 | SODIUM | 354 | | | 341 | mg/L | | 3.7 |
| SPI02 | Q2842031 | AA22746 | SODIUM | 354 | 100 | | 487 | mg/L | 133.0 | |
| CCV | Q2842534 | | SODIUM | 50 | | | 51.6 | mg/L | 103.2 | |
| BLA01 | Q2842514 | | SODIUM | | | < | 0.0400 | mg/L | | |
| SAMPLE | AA22714 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCV | Q2842535 | | SODIUM | 50 | | | 52.2 | mg/L | 104.4 | |
| BLA01 | Q2842515 | | SODIUM | | | < | 0.0400 | mg/L | | |
| SER01 | Q2842552 | AA22753 | SODIUM | 281 | | | 255 | mg/L | | 9.7 |
| CDL01 | Q2842594 | | SODIUM | 0.1 | | | 0.0802 | mg/L | 80.2 | |

Q2842031 Suspected matrix interference for this parameter. The matrix spike results were
Q2842031 outside control limit criteria. Results for this sample are estimated. (Na)
Q2842551 1:5 Dilution.
Q2842551 There was possible matrix interference for K and Na
Q2842551 as indicated by the serial dilution results.

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Quality Assurance Report **66554**

**SODIUM ICP SW846-6010B** **M131.3**
**Prep : ICP ACID DIGESTION OF AQUEOUS SAMPLES, TOTAL RECOVERABLE EPA 200.2 REV. 2.8**

R628253 Analyst: J KRAMER Run Date: 16-Jul-14
Analytical Reviewer: S ENDERSEN Review Date: 17-Jul-14 Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| Q2842552 | 1:5 Dilution. | | | | | | | | | |
| Q2842552 | There was possible matrix interference for K | | | | | | | | | |
| Q2842552 | as indicated by the serial dilution results. | | | | | | | | | |

**SULFATE BY ION CHROMATOGRAPHY SW846-9056** **G310.7**

R627999 Analyst: K VEST Run Date: 09-Jul-14 Instrument: IC
Analytical Reviewer: E WERNZ Review Date: 10-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| LFB01H | Q2840314 | | SULFATE | 25.0 | | | 24.4 | mg/L | 97.6 | |
| CCVL | Q2840330 | | SULFATE | 2.50 | | | 2.56 | mg/L | 102.4 | |
| CCVH | Q2840331 | | SULFATE | 10.0 | | | 9.46 | mg/L | 94.6 | |
| BLA01 | Q2840332 | | SULFATE | | | BDL | 0.05 | mg/L | | |
| LFB01L | Q2840333 | | SULFATE | 2.50 | | | 2.44 | mg/L | 97.6 | |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2840334 | AA22716 | SULFATE | 495 | 62.5 | | 547 | mg/L | 83.2 | |
| DPS01 | Q2840335 | AA22716 | SULFATE | 495 | 62.5 | | 547 | mg/L | 83.2 | 0 |
| CCVL | Q2840338 | | SULFATE | 2.50 | | | 2.48 | mg/L | 99.2 | |
| CCVH | Q2840339 | | SULFATE | 10.0 | | | 9.45 | mg/L | 94.5 | |
| BLA01 | Q2840340 | | SULFATE | | | BDL | 0.05 | mg/L | | |
| Q2840334 | 1:25 Dilution. | | | | | | | | | |
| Q2840335 | 1:25 Dilution. | | | | | | | | | |

R628135 Analyst: K VEST Run Date: 11-Jul-14 Instrument: IC
Analytical Reviewer: R DALAL Review Date: 14-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2841540 | | SULFATE | | | BDL | 0.05 | mg/L | | |
| CCVL | Q2841541 | | SULFATE | 2.50 | | | 2.52 | mg/L | 100.8 | |
| CCVH | Q2841542 | | SULFATE | 10.0 | | | 9.44 | mg/L | 94.4 | |
| LFB01H | Q2841543 | | SULFATE | 25.0 | | | 24.1 | mg/L | 96.4 | |
| LFB01L | Q2841544 | | SULFATE | 2.50 | | | 2.45 | mg/L | 98.0 | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2841545 | AA22717 | SULFATE | 535 | 62.5 | | 600 | mg/L | 104.0 | |
| DPS01 | Q2841546 | AA22717 | SULFATE | 535 | 62.5 | | 596 | mg/L | 97.6 | 6.3 |
| CCVL | Q2841547 | | SULFATE | 2.50 | | | 2.45 | mg/L | 98.0 | |
| CCVH | Q2841548 | | SULFATE | 10.0 | | | 9.39 | mg/L | 93.9 | |
| BLA01 | Q2841549 | | SULFATE | | | BDL | 0.05 | mg/L | | |
| LFB01L | Q2841557 | | SULFATE | 2.50 | | | 2.54 | mg/L | 101.6 | |
| Q2841545 | 1:25 Dilution. | | | | | | | | | |
| Q2841546 | 1:25 Dilution. | | | | | | | | | |

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# Quality Assurance Report 66554

## TOTAL DISSOLVED SOLIDS SM2540 C 1997 G402.9

R628064 Analyst: C ANYANWUTAKU Run Date: 11-Jul-14
Analytical Reviewer: P SPENCE Review Date: 16-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2840945 | | DISSOLVED SOLIDS | | | BDL | 10 | mg/L | | |
| LFB01 | Q2840947 | | DISSOLVED SOLIDS | 500 | | | 465 | mg/L | 93.0 | |
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2840948 | AA22707 | DISSOLVED SOLIDS | 182 | 250 | | 431 | mg/L | 99.6 | |
| DPS01 | Q2840949 | AA22707 | DISSOLVED SOLIDS | 182 | 250 | | 433 | mg/L | 100.4 | 0.8 |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22714 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| DUP01 | Q2840950 | AA22715 | DISSOLVED SOLIDS | 1370 | | | 1390 | mg/L | | 1.4 |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| LFB01 | Q2840951 | | DISSOLVED SOLIDS | 500 | | | 492 | mg/L | 98.4 | |
| BLA01 | Q2840952 | | DISSOLVED SOLIDS | | | BDL | 10 | mg/L | | |
| Q2840947 | Training | | | | | | | | | |

## TOTAL ORGANIC CARBON SW846-9060A O401.0

R628096 Analyst: D DICKERSON Run Date: 11-Jul-14 Instrument: TOC
Analytical Reviewer: P SPENCE Review Date: 15-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CDL01 | Q2841249 | | TOTAL ORGANIC CARBON (TOC) | 1.00 | | | 1.04 | mg/L | 104.0 | |
| ICV01 | Q2841250 | | TOTAL ORGANIC CARBON (TOC) | 12.5 | | | 12.8 | mg/L | 102.4 | |
| ICV01 | Q2841255 | | TOTAL ORGANIC CARBON (TOC) | 12.5 | | | 11.8 | mg/L | 94.4 | |
| CCVL | Q2841264 | | TOTAL ORGANIC CARBON (TOC) | 5.00 | | | 4.70 | mg/L | 94.0 | |
| CCVH | Q2841268 | | TOTAL ORGANIC CARBON (TOC) | 15.0 | | | 13.8 | mg/L | 92.0 | |
| BLA01 | Q2841269 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 1.0 | mg/L | | |
| ICV01 | Q2841270 | | TOTAL ORGANIC CARBON (TOC) | 12.5 | | | 11.4 | mg/L | 91.2 | |
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2841271 | AA22707 | TOTAL ORGANIC CARBON (TOC) | 2.13 | 12.5 | | 13.3 | mg/L | 89.4 | |
| DPS01 | Q2841272 | AA22707 | TOTAL ORGANIC CARBON (TOC) | 2.13 | 12.5 | | 13.2 | mg/L | 88.6 | 0.9 |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCVL | Q2841273 | | TOTAL ORGANIC CARBON (TOC) | 5.00 | | | 4.51 | mg/L | 90.2 | |
| BLA01 | Q2841274 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 1.0 | mg/L | | |

R628227 Analyst: D DICKERSON Run Date: 14-Jul-14 Instrument: TOC
Analytical Reviewer: P SPENCE Review Date: 18-Jul-14

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2842296 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 1.0 | mg/L | | |

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# Quality Assurance Report

**66554**

## TOTAL ORGANIC CARBON SW846-9060A

**O401.0**

R628227 Analytical — Analyst: D DICKERSON — Reviewer: P SPENCE — Run Date: 14-Jul-14 — Review Date: 18-Jul-14

Continued

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| CDL01 | Q2842297 | | TOTAL ORGANIC CARBON (TOC) | 1.00 | | | 0.885 | mg/L | 88.5 | |
| ICV01 | Q2842298 | | TOTAL ORGANIC CARBON (TOC) | 12.5 | | | 12.1 | mg/L | 96.8 | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2842299 | AA22715 | TOTAL ORGANIC CARBON (TOC) | 5.24 | 12.5 | | 16.8 | mg/L | 92.5 | |
| DPS01 | Q2842300 | AA22715 | TOTAL ORGANIC CARBON (TOC) | 5.24 | 12.5 | | 17.0 | mg/L | 94.1 | 1.7 |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCVL | Q2842301 | | TOTAL ORGANIC CARBON (TOC) | 5.00 | | | 4.77 | mg/L | 95.4 | |
| BLA01 | Q2842302 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 1.0 | mg/L | | |
| CCVH | Q2842305 | | TOTAL ORGANIC CARBON (TOC) | 15.0 | | | 13.9 | mg/L | 92.7 | |
| ICV01 | Q2842307 | | TOTAL ORGANIC CARBON (TOC) | 12.5 | | | 11.8 | mg/L | 94.4 | |
| ICV01 | Q2842324 | | TOTAL ORGANIC CARBON (TOC) | 12.5 | | | 12.3 | mg/L | 98.4 | |

R628501 Analytical — Analyst: D DICKERSON — Reviewer: P SPENCE — Run Date: 22-Jul-14 — Review Date: 24-Jul-14 — Instrument: TOC

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2844718 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 0.5 | mg/L | | |
| CDL01 | Q2844719 | | TOTAL ORGANIC CARBON (TOC) | 1.00 | | | 1.02 | mg/L | 102.0 | |
| ICV01 | Q2844720 | | TOTAL ORGANIC CARBON (TOC) | 12.5 | | | 12.4 | mg/L | 99.2 | |
| SPI01 | Q2844721 | AA22725 | TOTAL ORGANIC CARBON (TOC) | 0.792 | 125 | | 127 | mg/L | 101.0 | |
| DPS01 | Q2844722 | AA22725 | TOTAL ORGANIC CARBON (TOC) | 0.792 | 125 | | 118 | mg/L | 93.8 | 7.4 |
| SAMPLE | AA22714 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| CCVL | Q2844727 | | TOTAL ORGANIC CARBON (TOC) | 5.00 | | | 4.88 | mg/L | 97.6 | |
| BLA01 | Q2844728 | | TOTAL ORGANIC CARBON (TOC) | | | BDL | 0.5 | mg/L | | |

Q2844721 1:10 Dilution.
Q2844722 1:10 Dilution.

## TOTAL ORGANIC HALIDES (TOX) SW846-9020B

**O404.0**

R627998 Analytical — Analyst: KEYSTONE LABORATORIES, INC. — Reviewer: — Run Date: 24-Jul-14 — Review Date: 24-Jul-14 — Instrument: TOX

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | AA22714 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22713 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22712 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22711 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22710 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22709 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22708 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22707 | | See Certificate of Analysis, Rep: 0 | | | | | | | |

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# Quality Assurance Report 66554

## TOTAL SOLIDS DRIED AT 103-105 DEGREES C SM2540 B 1997 G401.6

R628094 Analyst: C ANYANWUTAKU Run Date: 11-Jul-14
Analytical Reviewer: P SPENCE Review Date: 15-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2841211 | | SOLIDS | | | BDL | 10 | mg/L | | |
| LFB01 | Q2841214 | | SOLIDS | 500 | | | 568 | mg/L | 113.6 | |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SPI01 | Q2841215 | AA22715 | SOLIDS | 743 | 250 | | 950 | mg/L | 82.8 | |
| DPS01 | Q2841216 | AA22715 | SOLIDS | 743 | 250 | | 946 | mg/L | 81.2 | 2.0 |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| DUP01 | Q2841239 | AA22811 | SOLIDS | 5930 | | | 5900 | mg/L | | 0.5 |
| LFB01 | Q2841240 | | SOLIDS | 500 | | | 482 | mg/L | 96.4 | |
| BLA01 | Q2841241 | | SOLIDS | | | BDL | 10 | mg/L | | |

Q2841214 training

## TOTAL SUSPENDED SOLIDS DRIED AT 103-105 DEGREES C SM2540 D 19TH ED G403.8

R628130 Analyst: C ANYANWUTAKU Run Date: 14-Jul-14
Analytical Reviewer: P SPENCE Review Date: 15-Jul-14

| QC Type | Lab ID | Source | Parameter | True / Sample | Spike Value | RQL | Observed | Units | Rec | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| BLA01 | Q2841520 | | SUSPENDED SOLIDS | | | BDL | 1 | mg/L | | |
| LFB01 | Q2841521 | | SUSPENDED SOLIDS | 112 | | | 109 | mg/L | 97.3 | |
| SPI01 | Q2841522 | AA22673 | SUSPENDED SOLIDS | 1 | 56 | | 57 | mg/L | 100.0 | |
| DPS01 | Q2841523 | AA22673 | SUSPENDED SOLIDS | 1 | 56 | | 53 | mg/L | 92.8 | 7.5 |
| SAMPLE | AA22715 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| DUP01 | Q2841524 | AA22715 | SUSPENDED SOLIDS | 2 | | | 2 | mg/L | | 0 |
| SAMPLE | AA22716 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| SAMPLE | AA22717 | | See Certificate of Analysis, Rep: 0 | | | | | | | |
| LFB01 | Q2841525 | | SUSPENDED SOLIDS | 112 | | | 92 | mg/L | 82.1 | |
| BLA01 | Q2841527 | | SUSPENDED SOLIDS | | | BDL | 1 | mg/L | | |

Q2841522 Sample fails precision (RPD is outside) control limits. Results for this sample
Q2841522 are estimated.
Q2841523 Sample fails precision (RPD is outside) control limits. Results for this sample
Q2841523 are estimated.

| RQL | Result Qualifier Definition |
|---|---|
| < | Less Than |
| BDL | Below Detection Limit |
| CNA | RPD Calculation Not Applicable, < DL |
| NQR | No QC Result. High Sample Concentration. |

| 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 |

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Quality Assurance Report **66554**

*Pace Analytical Services, Inc.*

| QC Type | Definition |
|---|---|
| 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.

July 28 2014

Chris Boyle
Pace Analytical-Indianapolis
7901 West Morris Street
Indianapolis, IN 46231

RE: Subcontract Analyses
R627998

Enclosed are the results of analyses for samples received by the laboratory on 07/11/14 01:15. 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 |
|---|---|---|---|---|
| AA22714 FB | 1G40913-01 | Water | 07/08/14 10:48 | 07/11/14 01:15 |
| AA22713 MW-1B | 1G40913-02 | Water | 07/08/14 11:40 | 07/11/14 01:15 |
| AA22712 MW-1A | 1G40913-03 | Water | 07/08/14 11:05 | 07/11/14 01:15 |
| AA22711 MW-1 | 1G40913-04 | Water | 07/08/14 10:25 | 07/11/14 01:15 |
| AA22710 MW-3 | 1G40913-05 | Water | 07/08/14 09:00 | 07/11/14 01:15 |
| AA22709 MW-28E | 1G40913-06 | Water | 07/08/14 07:55 | 07/11/14 01:15 |
| AA22708 MW-28D | 1G40913-07 | Water | 07/08/14 07:25 | 07/11/14 01:15 |
| AA22707 MW-28C | 1G40913-08 | Water | 07/08/14 06:55 | 07/11/14 01:15 |

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

Package # 66554

Keystone LABORATORIES, INC.

Pace Analytical-Indianapolis
7901 West Morris Street
Indianapolis, IN 46231

Project: Subcontract Analyses
Project Number: R627998
Project Manager: Chris Boyle

Reported
07/28/14 11:23

Pace Analytical®
Pace Analytical Services, Inc.

## Pace Analytical Services, Inc

7901 West Morris Street - Indianapolis, IN 46231
www.pacelabs.com (800) 827-4374

1640913 HES-14995

Sample Transfer PO# : _____ R# : R627998

| Send To : | Report to: | C. BOYLE |
|---|---|---|
| JODI KING<br>KEYSTONE LABORATORIES, INC.<br>600 EAST 17TH ST. SOUTH<br>NEWTON IA 50208<br>641/792-8451 | Pace Analytical Services, Inc<br>7901 West Morris Street<br>Indianapolis, IN 46231<br>phone: (317) 390-3187<br>fax: (317) 486-5095 | **QC Summary Required**<br>**Email Results To :**<br>**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 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AA22714 | FB | Z144756 | 7/8/2014 | 10:48:00 | Water | N | | | | | 01 |
| | # Reps 1 | Method SW846-9020B | | | | | TOX | 0.010 | MG/L | | |
| | Task | | | | | | | | | | |
| AA22713 | MW-1B | Z144756 | 7/8/2014 | 11:40:00 | Water | N | | | | | 02 |
| | # Reps 1 | Method SW846-9020B | | | | | TOX | 0.010 | MG/L | | |
| | Task | | | | | | | | | | |
| AA22712 | MW-1A | Z144756 | 7/8/2014 | 11:05:00 | Water | N | | | | | 03 |
| | # Reps 1 | Method SW846-9020B | | | | | TOX | 0.010 | MG/L | | |
| | Task | | | | | | | | | | |
| AA22711 | MW-1 | Z144756 | 7/8/2014 | 10:25:00 | Water | N | | | | | 04 |
| | # Reps 1 | Method SW846-9020B | | | | | TOX | 0.010 | MG/L | | |
| | Task | | | | | | | | | | |
| AA22710 | MW-3 | Z144756 | 7/8/2014 | 09:00:00 | Water | N | | | | | 05 |
| | # Reps 1 | Method SW846-9020B | | | | | TOX | 0.010 | MG/L | | |
| | Task | | | | | | | | | | |
| AA22709 | MW-28E | Z144756 | 7/8/2014 | 07:55:00 | Water | N | | | | | 06 |
| | # Reps 1 | Method SW846-9020B | | | | | TOX | 0.010 | MG/L | | |
| | Task | | | | | | | | | | |
| AA22708 | MW-28D | Z144756 | 7/8/2014 | 07:25:00 | Water | N | | | | | 07 |
| | # Reps 1 | Method SW846-9020B | | | | | TOX | 0.010 | MG/L | | |
| | Task | | | | | | | | | | |

| Relinquished by : (Signature) | Date/Time | Received by : (Signature) |
|---|---|---|
| | 7/10/14 / | |
| Relinquished by : (Signature) | Date/Time | Received by : (Signature) |
| | / | |
| Received for Lab by : (Signature) | Date/Time | Temp: ROI |
| | 7/11/14 11:15 | 1.9 c Yes / No |

| 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 | Preservative Type |
|---|---|
| A = 1000 mL Plastic | 1 = Unpreserved/None |
| B = 500 mL Plastic | 2 = HNO3 |
| C =1000 mL Glass | 3 = H2SO4 |
| D = 500 mL Glass | 4 = HCl |
| E = 250 mL Glass | 5 = Na2S2O3 |
| F = 40 mL Vial | 6 = NaOH |
| G = 125 mL Plastic | 7 = NaOH/ZnOAC |

Container/Preservative

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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Package # 66554

Keystone LABORATORIES, INC.

NELAP ACCREDITED TNI LABORATORY

MEMBER ACIL

| | | |
|---|---|---|
| Pace Analytical-Indianapolis<br>7901 West Morris Street<br>Indianapolis, IN 46231 | Project: Subcontract Analyses<br>Project Number: R627998<br>Project Manager: Chris Boyle | Reported<br>07/28/14 11:23 |

Pace Analytical®

Pace Analytical Services, Inc.

Pace Analytical Services, Inc
7901 West Morris Street - Indianapolis, IN 46231
www.pacelabs.com (800) 827-4374

HES-14995

Sample Transfer PO#: _____ R#: R627998

| SampleID | ClientID | Z Sample | Date Sampled | Time Sampled | Mx | Spike this Sample? | Param | Limit | Units | DueDate |
|---|---|---|---|---|---|---|---|---|---|---|
| AA22707 | MW-28C | Z144756 | 7/8/2014 | 06:55:00 | Water | N | TOX | 0.010 | MG/L | |
| | # Reps 1 | Method SW846-9020B | | | | | | | | |

Task

1 C409/3

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

Page# 2 Last Page

| | Date/Time | Received by (Signature) |
|---|---|---|
| Relinquished by (Signature) | 7/8/14 | |
| Relinquished by (Signature) | / | Received by (Signature) |
| Received for Lab by (Signature) | / | Temp: 1.9 C ROI (Yes) / No |



Phone 641-792-8451

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Newton, IA 50208

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**AA22714 FB**

**1G40913-01 (Water)**

**Date Sampled:7/8/2014 10:48:00AM**

| 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 | 1XG0913 | 07/24/14 | 07/24/14 17:27 | EPA 9020 | |



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**AA22713 MW-1B**

**1G40913-02 (Water)**

**Date Sampled:7/8/2014 11:40:00AM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Keystone Laboratories, Inc. - Newton** | | | | | | | | | |
| **Determination of Conventional Chemistry Parameters** | | | | | | | | | |
| **Total Organic Halogens (TOX)** | **0.022** | 0.010 | mg/L | 1 | 1XG0913 | 07/24/14 | 07/24/14 17:27 | EPA 9020 | |

*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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**AA22712 MW-1A**

**1G40913-03 (Water)**

**Date Sampled:7/8/2014 11:05:00AM**

| 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 | 1XG0913 | 07/24/14 | 07/24/14 17:27 | EPA 9020 | |

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**AA22711 MW-1**

**1G40913-04 (Water)**

**Date Sampled:7/8/2014 10:25:00AM**

| 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 | 1XG0913 | 07/24/14 | 07/24/14 17:27 | EPA 9020 | |

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**AA22710 MW-3**

**1G40913-05 (Water)**

**Date Sampled:7/8/2014 9:00:00AM**

| 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 | 1XG0913 | 07/24/14 | 07/24/14 17:27 | EPA 9020 | |

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**AA22709 MW-28E**

**1G40913-06 (Water)**

**Date Sampled:7/8/2014 7:55:00AM**

| 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 | 1XG0913 | 07/24/14 | 07/24/14 17:27 | EPA 9020 | |

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**AA22708 MW-28D**

**1G40913-07 (Water)**

**Date Sampled:7/8/2014 7:25:00AM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Keystone Laboratories, Inc. - Newton** | | | | | | | | | |
| **Determination of Conventional Chemistry Parameters** | | | | | | | | | |
| **Total Organic Halogens (TOX)** | **0.011** | 0.010 | mg/L | 1 | 1XG0913 | 07/24/14 | 07/24/14 17:27 | EPA 9020 | |



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**AA22707 MW-28C**

**1G40913-08 (Water)**

**Date Sampled:7/8/2014 6:55:00AM**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Keystone Laboratories, Inc. - Newton** | | | | | | | | | |
| **Determination of Conventional Chemistry Parameters** | | | | | | | | | |
| **Total Organic Halogens (TOX)** | **0.021** | 0.010 | mg/L | 1 | 1XG0913 | 07/24/14 | 07/24/14 17:27 | EPA 9020 | |



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## 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 1XG0913 - TOX/TX/EOX** | | | | | | | | | | |
| **Blank (1XG0913-BLK1)** | | | | Prepared & Analyzed: 07/24/14 | | | | | | |
| Total Organic Halogens (TOX) | ND | 0.010 | mg/L | | | | | | | |
| **LCS (1XG0913-BS1)** | | | | Prepared & Analyzed: 07/24/14 | | | | | | |
| Total Organic Halogens (TOX) | 0.0934 | 0.010 | mg/L | 0.0949060 | | 98.4 | 80-120 | | | |
| **Matrix Spike (1XG0913-MS1)** | | Source: 1G40913-01 | | Prepared & Analyzed: 07/24/14 | | | | | | |
| Total Organic Halogens (TOX) | 0.0966 | 0.010 | mg/L | 0.0949060 | ND | 102 | 65-136 | | | |
| **Matrix Spike Dup (1XG0913-MSD1)** | | Source: 1G40913-01 | | Prepared & Analyzed: 07/24/14 | | | | | | |
| Total Organic Halogens (TOX) | 0.0987 | 0.010 | mg/L | 0.0949060 | ND | 104 | 65-136 | 2.17 | 20 | |
| **Reference (1XG0913-SRM1)** | | | | Prepared & Analyzed: 07/24/14 | | | | | | |
| Total Organic Halogens (TOX) | 0.0994 | 0.010 | mg/L | 0.0953376 | | 104 | 0-200 | | | |
| **Reference (1XG0913-SRM2)** | | | | Prepared & Analyzed: 07/24/14 | | | | | | |
| Total Organic Halogens (TOX) | 0.0944 | 0.010 | mg/L | 0.0953376 | | 99.1 | 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 | 10/30/2014 |
| MO-KC | Missouri Department of Natural Resources | 140 | 04/30/2014 |
| 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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## 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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Sue Thompson

Sue Thompson

Project Manager II



Phone 641-792-8451

600 East 17th Street South
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# GREEN VALLEY LANDFILL
## GROUNDWATER ELEVATION DATA
## 2007006

| Well | Top of Casing | AKGWA # | Total Depth of Well | Depth to Water | Groundwater Elevation | Date | Time |
|---|---|---|---|---|---|---|---|
| MW-1 | 617.80 | 8000-8086 | 14.80 | 7.40 | 610.40 | 7/8/14 | 1013 |
| MW-1A | 618.60 | 8000-2931 | 41.00 | 4.23 | 614.37 | | 1040 |
| MW-1B | 618.70 | 8000-2932 | 61.00 | 7.05 | 618.70 | | 1115 |
| MW-3 | 630.80 | 8000-8085 | 14.10 | 6.50 | 624.30 | | 0838 |
| MW-28C | 674.40 | 8005-7101 | 12.90 | 5.55 | 668.85 | | 0630 |
| MW-28D | 675.20 | 8005-7102 | 16.30 | 6.23 | 668.97 | | 0705 |
| MW-28E | 677.00 | 8005-7103 | 27.30 | 9.95 | 667.05 | | 0738 |

TECHNICIAN BTB DATE 7/8/14 QUARTER 3rd

F:\WORK IN PROGRESS\BTB\SAMPLING FORMS\GREEN VALLEY\GROUNDWATER 2007006\GREEN VALLEY WATER LEVEL.doc

# KENVIRONS, INC.

## Well / Spring Field Reading Log

Facility: Green Valley LF

Date: 7/8/14 Sampler(s) BTB

| Well / Spring No. | | pH | Conductivity | Temp | DO | ORP | Turbidity |
|---|---|---|---|---|---|---|---|
| Well No. | 1 | 5.38 | 70 | 15.76 | 6.33 | 252.1 | — |
| Well No. | 1A | 6.87 | 391 | 15.45 | 3.63 | 227.1 | — |
| Well No. | 1B | 7.31 | 692 | 14.94 | 2.99 | 215.3 | — |
| Well No. | 3 | 6.13 | 117 | 15.73 | 4.06 | 76.2 | — |
| Well No. | 28C | 5.22 | 575 | 16.40 | 2.97 | 294.1 | — |
| Well No. | 28D | 5.83 | 713 | 15.65 | 1.77 | 156.2 | — |
| Well No. | 28E | 6.29 | 316 | 15.84 | 3.10 | 214.0 | — |
| 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: BTB Date: 7/8/14

# 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-1 | 14.80 | 7.40 | 7.4 | 7/9/14 | 1013 | 2007006 |

| Site Location | AKGWA # | Casing Diameter | Measuring Point (ft. MSL) | Groundwater Elevation | Well Volume (gallons) | Z # |
|---|---|---|---|---|---|---|
| Greenup Co., KY | 8000-8086 | ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16 | 617.80 | 610.40 | 4.96 | 144756 |

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Overcast ☐ Windy Temp. 76 (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. | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1014 | 0 | | 200 | 0 | 15.03 | 78 | 8.26 | 5.25 | 247.4 | — | GA- 40ml Vials HCL | |
| 1017 | 3 | 8.02 | 200 | 0.6 | 15.33 | 74 | 6.52 | 5.35 | 249.6 | — | G- 40ml Vials HCL | |
| 1020 | 6 | 8.13 | 200 | 1.2 | 15.57 | 72 | 6.41 | 5.38 | 252.1 | — | P-500 ml $HNO_3$ | |
| 1023 | 9 | 8.26 | 200 | 1.8 | 15.76 | 70 | 6.33 | 5.38 | 252.1 | — | P-500 ml $H_2SO_4$ | |
| | | | | | | | | | | | P-500 ml Unp. | |
| | | | | | | | | | | | P-1L Unp. | |
| | | | | | | | | | | | P-1L NaOH | |
| | | | | | | | | | | | P-1L NaOH + Zn A | |
| | | | | | | | | | | | P-120 ml Unp. | |
| | | | | | | | | | | | GA- 250 ml $H_2SO_4$ | |
| | | | | | | | | | | | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1025 | 8.49 | None | None | 15.74 | 70 | 6.33 | 5.38 | 252.1 | — | Clear |

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

**Sampler(s) Signature** BTB **Date** 7/9/14

# MONITORING WELL INTEGRITY FIELD SURVEY

**Facility Name:** Green Valley Landfill

**Evaluator:** BTB

**Evaluation Date:** 7/8/14

**Well Identification Number** MW-1

**AKGWA Number** 8000-8886

| | 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:

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-1A | 41.00 | 4.23 | 43.34.77 | 7/8/14 | 1040 | 2007006 |

| Site Location | AKGWA # | Casing Diameter | Measuring Point (ft. MSL) | Groundwater Elevation | Well Volume (gallons) | Z # |
|---|---|---|---|---|---|---|
| Greenup Co., KY | @000-2931 | ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16 | 618.60 | 614.37 | 24.64 | 144756 |

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Overcast ☐ Windy Temp. 80 (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. | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1043 | 0 | | 200 | 0 | 15.87 | 378 | 7.96 | 6.14 | 268.7 | — | GA- 40ml Vials HCL | |
| 1046 | 3 | 4.41 | 200 | 0.6 | 16.36 | 387 | 5.68 | 6.49 | 259.0 | — | G- 40ml Vials HCL | |
| 1049 | 6 | 4.60 | 200 | 1.2 | 15.72 | 390 | 3.91 | 6.67 | 251.2 | — | P-500 ml $HNO_3$ | |
| 1052 | 9 | 4.78 | 200 | 1.8 | 15.67 | 391 | 3.84 | 6.75 | 245.8 | — | P-500 ml $H_2SO_4$ | |
| 1055 | 12 | 4.85 | 200 | 2.4 | 15.62 | 390 | 3.63 | 6.80 | 257.3 | — | P-500 ml Unp. | |
| 1058 | 15 | 4.89 | 200 | 3.0 | 15.62 | 390 | 3.57 | 6.85 | 232.7 | — | P-1L Unp. | |
| 1101 | 18 | 4.93 | 200 | 3.6 | 15.95 | 391 | 3.63 | 6.87 | 227.7 | — | P-1L NaOH | |
| | | | | | | | | | | | P-1L NaOH + Zn A | |
| | | | | | | | | | | | P-120 ml Unp. | |
| | | | | | | | | | | | GA- 250 ml $H_2SO_4$ | |
| | | | | | | | | | | | 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: 1048 |
|---|---|---|---|---|---|
| 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1109 | 5.08 | None | None | 15.45 | 391 | 3.63 | 6.87 | 227.7 | — | Clear |

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

**Sampler(s) Signature** BTB **Date** 7/8/14

# MONITORING WELL INTEGRITY FIELD SURVEY

**Facility Name:** Green Valley Landfill
**Evaluator:** BTTB
**Evaluation Date:** 7/8/14
**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? BTB | ☒ | ☒ | ☐ | ☐ |
| 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:

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-1B | Total Depth (ft) 61.00 | Initial Depth to Water (ft.) 7.05 | Height of Water Column (ft.) 53.95 | Date 7/8/14 | Time 1115 | Project No. 2007006 |
|---|---|---|---|---|---|---|---|
| Site Location Greenup Co., KY | AKGWA # 8000-2932 | Casing Diameter ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16 | Measuring Point (ft. MSL) 618.70 | Groundwater Elevation 611.65 | Well Volume (gallons) 36.15 | | Z # 144756 |

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Overcast ☐ Windy Temp. 85 (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. | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1117 | 0 | | 200 | 0 | 18.14 | 681 | 4.07 | 6.98 | 239.1 | — | GA- 40ml Vials HCL | |
| 1120 | 5 | | 200 | 0.6 | 14.15 | 723 | 3.82 | 6.92 | 231.3 | — | G- 40ml Vials HCL | |
| 1123 | 6 | | 200 | 1.2 | 16.80 | 726 | 3.36 | 6.99 | 224.8 | — | P-500 ml $HNO_3$ | |
| 1126 | 9 | | 200 | 1.8 | 14.90 | 728 | 3.00 | 7.09 | 222.9 (222.4) | — | P-500 ml $H_2SO_4$ | |
| 1129 | 12 | | 200 | 2.4 | 15.07 | 719 | 3.07 | 7.28 | 219.9 | — | P-500 ml Unp. | |
| 1132 | 15 | | 200 | 3.0 | 14.96 | 696 | 3.06 | 7.31 | 216.0 | — | P-1L Unp. | |
| 1135 | 18 | 8.71 | 200 | 3.6 | 14.94 | 692 | 2.99 | 7.31 | 215.3 | — | P-1L NaOH | |
| | | | | | | | | | | | P-1L NaOH + Zn A | |
| | | | | | | | | | | | P-120 ml Unp. | |
| | | | | | | | | | | | GA- 250 ml $H_2SO_4$ | |
| | | | | | | | | | | | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1140 | 9.49 | None | None | 14.94 | 692 | 2.99 | 7.31 | 215.3 | — | Clear |

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

**Sampler(s) Signature** BTB **Date** 7/8/14

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# MONITORING WELL INTEGRITY FIELD SURVEY

**Facility Name:** Green Valley Landfill
**Evaluator:** BTB
**Evaluation Date:** 7/8/14
**Well Identification Number** MW-13
**AKGWA Number** 8000 - 2952

| | 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:

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.) 6.50 | Height of Water Column (ft.) 7.60 | Date 7/8/14 | Time 838 | 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 624.30 | Well Volume (gallons) 5.09 | | Z # 144756 |

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☐ Partly Cloudy ☒ Overcast ☐ Windy Temp. 75 (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. | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 841 | 0 | | 200 | 0 | 14.37 | 131 | 8.75 | 5.82 | 239.1 | — | GA- 40ml Vials HCL | |
| 844 | 3 | 6.78 | 200 | 0.6 | 15.82 | 120 | 8.71 | 6.03 | 139.0 | — | G- 40ml Vials HCL | |
| 847 | 6 | 6.78 | 200 | 1.2 | 15.76 | 119 | 5.21 | 6.06 | 109.9 | — | P-500 ml $HNO_3$ | |
| 850 | 9 | 6.77 | 200 | 1.8 | 15.72 | 118 | 7.18 | 6.08 | 97.3 | — | P-500 ml $H_2SO_4$ | |
| 853 | 12 | 6.74 | 200 | 2.4 | 15.74 | 117 | 7.06 | 6.12 | 86.0 | — | P-500 ml Unp. | |
| 856 | 15 | 6.73 | 200 | 3.0 | 15.73 | 117 | 4.06 | 6.13 | 76.2 | — | P-1L Unp. | |
| | | | | | | | | | | | P-1L NaOH | |
| | | | | | | | | | | | P-1L NaOH + Zn A | |
| | | | | | | | | | | | P-120 ml Unp. | |
| | | | | | | | | | | | GA- 250 ml $H_2SO_4$ | |
| | | | | | | | | | | | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 900 | 6.80 | None | None | 15.73 | 117 | 4.06 | 6.13 | 76.2 | — | Clear |

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

**Sampler(s) Signature** B.T.B **Date** 7/8/14

## MONITORING WELL INTEGRITY FIELD SURVEY

**Facility Name:** Green Valley Landfill
**Evaluator:** TSR
**Evaluation Date:** 7/8/14
**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:

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-28C | Total Depth (ft) 12.90 | Initial Depth to Water (ft.) 5.55 | Height of Water Column (ft.) 7.35 | Date 7/8/14 | Time 0630 | 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 668.85 | Well Volume (gallons) 4.92 | | Z # 144756 |

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Overcast ☐ Windy Temp. 71 (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. | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 634 | 0 | | 100 | 0 | 17.72 | 578 | 9.32 | 5.44 | 288.2 | — | GA- 40ml Vials HCL | |
| 637 | 3 | 5.83 | 100 | 30.1 | 16.86 | 578 | 5.18 | 5.33 | 287.4 | — | G- 40ml Vials HCL | |
| 640 | 6 | 5.89 | 100 | 0.6 | 16.48 | 578 | 3.60 | 5.29 | 287.6 | — | P-500 ml $HNO_3$ | |
| 643 | 9 | 5.96 | 100 | 0.9 | 16.32 | 577 | 3.20 | 5.26 | 292.0 | — | P-500 ml $H_2SO_4$ | |
| 646 | 12 | 6.02 | 100 | 1.2 | 16.36 | 576 | 2.98 | 5.23 | 292.6 | — | P-500 ml Unp. | |
| 649 | 15 | 6.08 | 100 | 1.5 | 16.40 | 575 | 2.97 | 5.22 | 294.1 | — | P-1L Unp. | |
| | | | | | | | | | | | P-1L NaOH | |
| | | | | | | | | | | | P-1L NaOH + Zn A | |
| | | | | | | | | | | | P-120 ml Unp. | |
| | | | | | | | | | | | GA- 250 ml $H_2SO_4$ | |
| | | | | | | | | | | | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0655 | 6.35 | Lt orange | None | 16.40 | 575 | 2.97 | 5.22 | 294.1 | — | Clear |

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

**Sampler(s) Signature** BTB **Date** 7/8/14

# MONITORING WELL INTEGRITY FIELD SURVEY

**Facility Name:** Green Valley Landfill

**Evaluator:** BTB

**Evaluation Date:** 7/8/14

**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:

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) 14.30 | Initial Depth to Water (ft.) 6.23 | Height of Water Column (ft.) 10.07 | Date 7/8/14 | Time 0705 | Project No. 2007006 |
|---|---|---|---|---|---|---|---|
| Site Location Greenup Co., KY | AKGWA # 8005-7162 | Casing Diameter ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16 | Measuring Point (ft. MSL) 675.20 | Groundwater Elevation 668.97 | Well Volume (gallons) 6.74 | | Z # 144756 |

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Overcast ☐ Windy Temp. 73 (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. | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 708 | 0 | | 200 | 0 | 17.98 | 672 | 7.66 | 5.30 | 226.4 | — | GA- 40ml Vials HCL | |
| 711 | 3 | 6.58 | 200 | 0.6 | 15.85 | 705 | 3.75 | 5.64 | 225.8 | — | G- 40ml Vials HCL | |
| 714 | 6 | 6.69 | 200 | 1.2 | 15.53 | 709 | 2.35 | 5.77 | 176.9 | — | P-500 ml $HNO_3$ | |
| 717 | 9 | 6.99 | 200 | 1.8 | 15.50 | 710 | 1.97 | 5.81 | 159.3 | — | P-500 ml $H_2SO_4$ | |
| 720 | 12 | 6.92 | 200 | 2.4 | 15.61 | 712 | 1.77 | 5.83 | 156.3 | — | P-500 ml Unp. | |
| 723 | 15 | 7.00 | 200 | 3.0 | 15.65 | 713 | 1.77 | 5.83 | 156.2 | — | P-1L Unp. | |
| | | | | | | | | | | | P-1L NaOH | |
| | | | | | | | | | | | P-1L NaOH + Zn A | |
| | | | | | | | | | | | P-120 ml Unp. | |
| | | | | | | | | | | | GA- 250 ml $H_2SO_4$ | |
| | | | | | | | | | | | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0725 | 7.30 | None | None | 15.65 | 713 | 1.77 | 5.83 | 156.2 | — | Clear |

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

**Sampler(s) Signature** T.B.T.B. **Date** 7/8/14

## MONITORING WELL INTEGRITY FIELD SURVEY

**Facility Name:** Green Valley Landfill

**Evaluator:** BTB

**Evaluation Date:** 7/8/14

**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? | ☑ | ☐ | ☐ | ☐ |
| 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:

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.) 9.95 | Height of Water Column (ft.) 17.35 | Date 7/8/14 | Time 738 | Project No. 2007006 |
|---|---|---|---|---|---|---|---|
| Site Location Greenup Co., KY | AKGWA # 805-7103 | Casing Diameter ☒ 4" ☐ 2" Conversion fact. 4"- 0.67/2"- 0.16 | Measuring Point (ft. MSL) 677.00 | Groundwater Elevation 677.05 | Well Volume (gallons) 11.62 | | Z # 144756 |

☐ Rain ☐ Sleet/Freezing Rain ☐ Snow ☐ Fog ☐ Clear ☒ Partly Cloudy ☐ Overcast ☐ Windy Temp. 75 (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. | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 740 | 0 | | 200 | 0 | 16.19 | 348 | 4.84 | 6.14 | 164.4 | — | GA- 40ml Vials HCL | |
| 743 | 3 | 10.37 | 200 | 0.6 | 15.77 | 321 | 3.33 | 4.27 | 188.9 | — | G- 40ml Vials HCL | |
| 746 | 6 | 10.42 | 200 | 1.2 | 15.84 | 316 | 3.13 | 4.29 | 205.3 | — | P-500 ml $HNO_3$ | |
| 749 | 9 | 10.88 | 200 | 1.8 | 15.84 | 316 | 3.10 | 4.29 | 214.0 | — | P-500 ml $H_2SO_4$ | |
| | | | | | | | | | | | P-500 ml Unp. | |
| | | | | | | | | | | | P-1L Unp. | |
| | | | | | | | | | | | P-1L NaOH | |
| | | | | | | | | | | | P-1L NaOH + Zn A | |
| | | | | | | | | | | | P-120 ml Unp. | |
| | | | | | | | | | | | GA- 250 ml $H_2SO_4$ | |
| | | | | | | | | | | | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 755 | 10.75 | None | None | 15.84 | 316 | 3.10 | 6.29 | 214.0 | — | Clear |

☐ Annual ☐ Semi-Annual ☒ Quarterly ☐ Monthly ☐ Other ☐ Duplicate Collected Time: DTW:

**Sampler(s) Signature** BTB **Date** 7/8/14

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:** TGB
**Evaluation Date:** 7/8/14
**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:

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