2018 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CCR LANDFILL AND LOWER AQC IMPOUNDMENT
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Presented To:
Kansas City Power & Light Company

SCS ENGINEERS

27217233.18 | January 2019, Revised December 16, 2022

8575 W 110th Street, Suite 100
Overland Park, Kansas 66210
913-681-0030

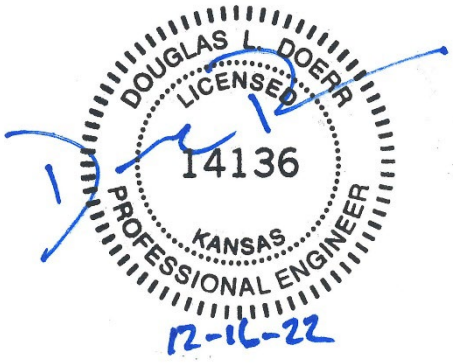
CERTIFICATIONS

I, John R. Rockhold, being a qualified groundwater scientist and Professional Geologist in the State of Kansas, do hereby certify that the 2018 Annual Groundwater Monitoring and Corrective Action Report for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station was prepared by me or under my direct supervision and fulfills the requirements of 40 CFR 257.90(e).

John R. Rockhold, P.G.

SCS Engineers

I, Douglas L. Doerr, being a qualified licensed Professional Engineer in the State of Kansas, do hereby certify that the 2018 Annual Groundwater Monitoring and Corrective Action Report for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station was prepared by me or under my direct supervision and fulfills the requirements of 40 CFR 257.90(e).



Douglas L. Doerr, P.E.

SCS Engineers

Revision Number	Revision Date	Revision Section	Summary of Revisions
0	January 2019	NA	Original
1	December 16, 2022	Addendum 1	Added Addendum 1

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Appendices

1 INTRODUCTION

This 2018 Annual Groundwater Monitoring and Corrective Action Report was prepared to support compliance with the groundwater monitoring requirements of the "Coal Combustion Residuals (CCR) Final Rule" (Rule) published by the United States Environmental Protection Agency (USEPA) in the *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*, dated April 17, 2015 (USEPA, 2015). Specifically, this report was prepared to fulfill the requirements of 40 CFR 257.90 (e). The applicable sections of the Rule are provided below in *italics*, followed by applicable information relative to the 2018 Annual Groundwater Monitoring and Corrective Action Report for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station.

2 § 257.90(E) ANNUAL REPORT REQUIREMENTS

Annual groundwater monitoring and corrective action report. *For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by § 257.105(h)(1). At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:*

2.1 § 257.90(E)(1) SITE MAP

A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

A site map with an aerial image showing the CCR Landfill and Lower AQC Impoundment and all background (or upgradient) and downgradient monitoring wells with identification numbers for the CCR Landfill and Lower AQC Impoundment groundwater monitoring program is provided as **Figure 1** in **Appendix A**.

2.2 § 257.90(E)(2) MONITORING SYSTEM CHANGES

Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

No new monitoring wells were installed and no wells were decommissioned as part of the CCR groundwater monitoring program for the CCR Landfill and Lower AQC Impoundment in 2018.

2.3 § 257.90(E)(3) SUMMARY OF SAMPLING EVENTS

In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

Only detection monitoring was conducted during the reporting period (2018). Samples collected in 2018 were collected and analyzed for Appendix III detection monitoring constituents as indicated in **Appendix B**, **Table 1** (Appendix III Detection Monitoring Results, and **Table 2** (Detection Monitoring Field Measurements). The dates of sample collection, the monitoring program requiring the sample, and the results of the analyses are also provided in these tables. These tables include both the Spring 2018 semiannual detection monitoring data and the Fall 2018 semiannual detection monitoring data.

2.4 § 257.90(E)(4) MONITORING TRANSITION NARRATIVE

A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and

There was no transition between monitoring programs in 2018. Only detection monitoring was conducted in 2018.

2.5 § 257.90(e)(5) OTHER REQUIREMENTS

Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.

A summary of potentially required information and the corresponding section of the Rule is provided in the following sections. In addition, the information, if applicable, is provided.

2.5.1 § 257.90(e) Program Status

Status of Groundwater Monitoring and Corrective Action Program.

The groundwater monitoring and corrective action program is in detection monitoring.

Summary of Key Actions Completed.

a. completion of the statistical evaluation of the initial Fall 2017 semiannual detection monitoring event per the certified statistical method,

b. completion of the 2017 Annual Groundwater Monitoring and Corrective Action Report,

c. completion of a successful alternative source demonstration for the Fall 2017 semiannual detection monitoring event,

d. completion of the Spring 2018 semiannual detection monitoring sampling and analysis event, and subsequent verification sampling per the certified statistical method,

e. completion of the statistical evaluation of the Spring 2018 semiannual detection monitoring

event per the certified statistical method,

f. completion of a successful alternative source demonstration for the Spring 2018 semiannual detection monitoring event, and

g. initiation of the Fall 2018 semiannual detection monitoring sampling and analysis event.

Description of Any Problems Encountered.

No noteworthy problems were encountered.

Discussion of Actions to Resolve the Problems.

Not applicable because no noteworthy problems were encountered.

Projection of Key Activities for the Upcoming Year (2019).

Semiannual Spring and Fall 2019 groundwater sampling and analysis. Completion of verification sampling and analyses and statistical evaluation of Fall 2018 and Spring 2019 detection monitoring data and, if required, alternative source demonstration(s).

2.5.2 § 257.94(d)(3) Demonstration for Alternative Detection Monitoring Frequency

The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority in the annual groundwater monitoring and corrective action report required by § 257.90(e).

Not applicable because no alternative monitoring frequency for detection monitoring and certification was pursued.

2.5.3 § 257.94(e)(2) Detection Monitoring Alternate Source Demonstration

Demonstration that a source other than the CCR unit caused the statistically significant increase (SSI) over background levels for a constituent or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. In addition, certification of the demonstration is to be included in the annual report.

The following reports are included as **Appendix C:**

C.1 CCR Groundwater Monitoring Alternative Source Demonstration Report October 2017 Groundwater Monitoring Event, CCR Landfill and Lower AQC Impoundment, La Cygne Generating Station (April 2018).

C.2. Groundwater Monitoring Alternative Source Demonstration Report May 2018 Groundwater Monitoring Event, CCR Landfill and Lower AQC Impoundment, La Cygne Generating Station (December 2018).

2.5.4 § 257.95(c)(3) Demonstration for Alternative Assessment Monitoring Frequency

The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer or the approval from the Participating State Director or the approval from EPA where EPA is the permitting authority in the annual groundwater monitoring and corrective action report required by § 257.90(e).

Not applicable because there was no assessment monitoring conducted.

2.5.5 § 257.95(d)(3) Assessment Monitoring Concentrations and Groundwater Protection Standards

Include the concentrations of Appendix III and detected Appendix IV constituents from the assessment monitoring, the established background concentrations, and the established groundwater protection standards.

Not applicable because there was no assessment monitoring conducted.

2.5.6 § 257.95(g)(3)(ii) Assessment Monitoring Alternate Source Demonstration

Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions and must be certified to be accurate by a qualified professional engineer. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to this section, and may return to detection monitoring if the constituents in appendices III and IV to this part are at or below background as specified in paragraph (e) of this section. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority.

Not applicable because there was no assessment monitoring conducted.

2.5.7 § 257.96(a) Demonstration for Additional Time for Assessment of Corrective Measures

Within 90 days of finding that any constituent listed in appendix IV to this part has been detected at a statistically significant level exceeding the groundwater protection standard defined under § 257.95(h), or immediately upon detection of a release from a CCR unit, the owner or operator must initiate an assessment of corrective measures to prevent further releases, to remediate any releases

and to restore affected area to original conditions. The assessment of corrective measures must be completed within 90 days, unless the owner or operator demonstrates the need for additional time to complete the assessment of corrective measures due to site-specific conditions or circumstances. The owner or operator must obtain a certification from a qualified professional engineer attesting that the demonstration is accurate. The 90-day deadline to complete the assessment of corrective measures may be extended for no longer than 60 days. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority.

Not applicable because there was no assessment monitoring conducted.

3 GENERAL COMMENTS

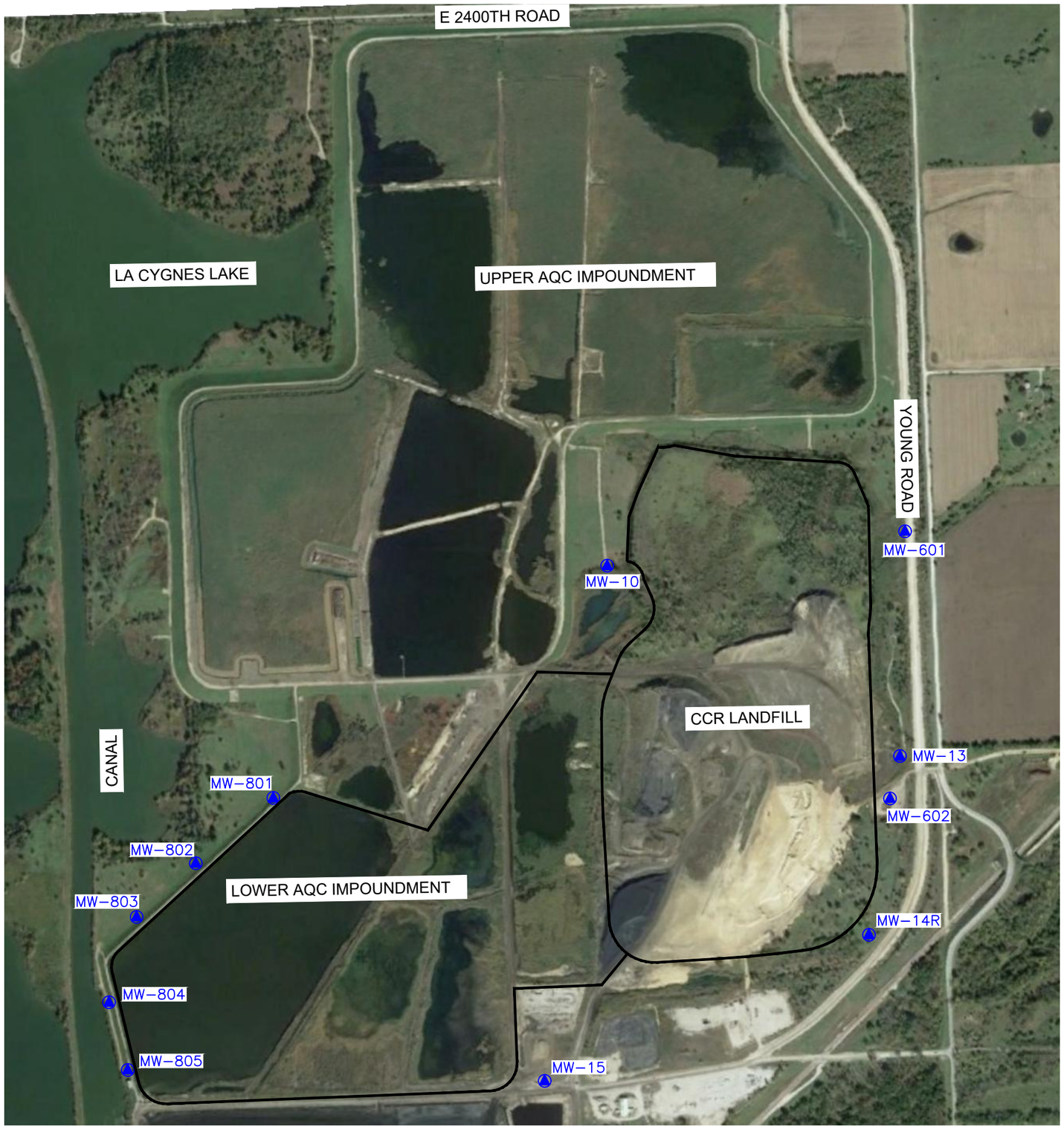
This report has been prepared and reviewed under the direction of a qualified groundwater scientist and qualified professional engineer. The information contained in this report is a reflection of the conditions encountered at the La Cygne Generating Station at the time of fieldwork. This report includes a review and compilation of the required information and does not reflect any variations of the subsurface, which may occur between sampling locations. Actual subsurface conditions may vary and the extent of such variations may not become evident without further investigation.

Conclusions drawn by others from the result of this work should recognize the limitation of the methods used. Please note that SCS Engineers does not warrant the work of regulatory agencies or other third parties supplying information used in the assimilation of this report. This report is prepared in accordance with generally accepted environmental engineering and geological practices, within the constraints of the client's directives. It is intended for the exclusive use of Kansas City Power & Light Company for specific application to the La Cygne Generating Station CCR Landfill and Lower AQC Impoundment. No warranties, express or implied, are intended or made.

APPENDIX A

FIGURES

Figure 1: Site Map



LEGEND

CCR UNIT BOUNDARY
(APPROXIMATE LIMITS OF CCR LANDFILL AND LOWER AQC IMPOUNDMENT)

MW-601 CCR GROUNDWATER MONITORING SYSTEM WELLS

NOTES:

1. KDHE FACILITY PERMIT AND LANDFILL PERMIT BOUNDARIES VARY FROM THAT SHOWN.
2. GOOGLE EARTH IMAGE DATED OCTOBER 2014. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.

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SCALE FEET

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SHEET TITLE
SITE MAP
CCR LANDFILL & LOWER AQC IMPOUNDMENT
CCR GROUNDWATER MONITORING SYSTEM

PROJECT TITLE
2018 CCR GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CLIENT
KANSAS CITY POWER & LIGHT COMPANY
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

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PROJ. NO. 27217233.18
DSN. BY: TGW
DWN. BY: TGW
CHK. BY: JRR
QA/QC BY: JRR
PROJ. MGR: JRR

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FIG 1 -LA CYGNE LF LAQC IMP.DWG

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1/21/19

FIGURE NO.
1

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APPENDIX B

TABLES

Table 1: Appendix III Detection Monitoring Results

Table 2: Detection Monitoring Field Measurements

Table 1
CCR Landfill and Lower AQC Impoundment
Appendix III Detection Monitoring Results
KCP&L La Cygne Generating Station

Well Number	Sample Date	Appendix III Constituents						
		Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	pH (S.U.)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
MW-10	5/23/2018	0.910	54.1	57.9	0.414	7.32	26.7	589
MW-10	11/30/2018	0.914	57.5	55.5	0.300	7.23	17.8	588
MW-13	5/23/2018	0.570	248	14.3	0.227	7.05	1070	1860
MW-13	7/11/2018	*0.533	---	---	*0.181	**7.02	---	---
MW-13	8/16/2018	*0.513	---	---	---	**7.05	---	---
MW-13	11/30/2018	0.698	209	12.8	0.191	6.99	978	1760
MW-14R	5/23/2018	0.682	56.9	5.17	0.287	7.45	54.5	548
MW-14R	11/30/2018	0.812	59.0	5.69	0.231	7.18	65.4	563
MW-15	1/9/2018	---	---	---	---	*7.21	---	---
MW-15	5/23/2018	0.270	105	15.2	0.283	7.10	209	757
MW-15	11/30/2018	0.305	105	12.9	0.206	7.05	191	709
MW-601	1/9/2018	---	---	---	---	*7.41	---	---
MW-601	5/23/2018	1.88	17.6	160	1.73	7.56	<5.00	894
MW-601	7/11/2018	---	---	---	---	*7.43	---	---
MW-601	8/16/2018	---	---	---	---	*7.59	---	---
MW-601	11/30/2018	1.85	17.5	160	1.54	7.58	5.98	924
MW-602	5/23/2018	2.39	22.9	17.6	1.27	7.54	23.9	592
MW-602	11/30/2018	2.32	23.7	16.5	1.09	7.42	24.2	579
MW-801	5/23/2018	2.17	25.6	97.1	1.13	7.42	<5.00	828
MW-801	11/30/2018	2.21	26.8	92.9	0.984	7.34	<5.00	832
MW-802	5/23/2018	2.50	27.5	37.5	1.05	7.34	<5.00	683
MW-802	11/30/2018	2.49	27.8	35.9	0.932	7.38	<5.00	663
MW-803	5/23/2018	2.10	42.9	48.9	0.649	7.46	24.4	606
MW-803	11/30/2018	2.09	44.2	48.7	0.566	7.33	24.5	601
MW-804	5/23/2018	1.72	67.8	30.4	0.501	7.17	21.5	551
MW-804	7/11/2018	*1.67	---	---	*0.449	**7.21	---	---
MW-804	8/16/2018	*1.76	---	---	---	**7.06	---	---
MW-804	11/30/2018	1.75	67.6	32.2	0.378	7.02	19.4	550
MW-805	1/9/2018	---	*439	---	---	**6.76	---	---
MW-805	5/23/2018	0.517	434	424	0.191	6.52	660	1810
MW-805	11/30/2018	0.525	455	471	0.124	6.31	722	2070

* Verification sample obtained per certified statistical method and Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009.

**Extra Sample for Quality Control Validation or per Standard Sampling Procedure

mg/L - miligrams per liter

S.U. - Standard Units

--- Not Sampled

Table 2
CCR Landfill and Lower AQC Impoundment
Detection Monitoring Field Measurements
KCP&L La Cygne Generating Station

Well Number	Sample Date	pH (S.U.)	Specific Conductivity (µS)	Temperature (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	***Water Level (ft btoc)	Groundwater Elevation (ft NGVD)
MW-10	5/23/2018	7.32	1090	22.02	0.00	-141	1.89	3.47	871.48
MW-10	11/30/2018	7.23	1090	12.99	0.00	-134	0.00	3.83	871.12
MW-13	5/23/2018	7.05	2180	22.48	0.00	118	3.49	4.13	873.09
MW-13	7/11/2018	**7.02	2330	18.44	0.00	143	1.99	6.48	870.74
MW-13	8/16/2018	**7.05	2090	21.01	0.00	195	1.16	7.56	869.66
MW-13	11/30/2018	6.99	2280	13.35	0.00	62	0.00	5.98	871.24
MW-14R	5/23/2018	7.45	935	20.30	0.00	110	3.49	11.77	867.06
MW-14R	11/30/2018	7.18	1030	13.02	0.00	-61	0.00	11.75	867.08
MW-15	1/9/2018	*7.21	1014	14.96	0.93	NA	NA	10.27	863.61
MW-15	5/23/2018	7.10	1190	17.55	0.00	174	2.93	10.35	863.53
MW-15	11/30/2018	7.05	1240	14.53	0.00	56	0.00	10.35	863.53
MW-601	1/9/2018	*7.41	1412	15.04	1.27	NA	NA	8.82	870.36
MW-601	5/23/2018	7.56	1640	18.46	0.00	-7	2.11	10.26	868.92
MW-601	7/11/2018	*7.43	1750	16.93	0.00	-38	1.72	11.09	868.09
MW-601	8/16/2018	*7.59	1660	22.45	0.00	-91	0.68	11.90	867.28
MW-601	11/30/2018	7.58	1740	11.95	4.60	-60	0.00	9.95	869.23
MW-602	5/23/2018	7.54	1000	19.24	0.00	-11	1.30	3.76	876.13
MW-602	11/30/2018	7.42	1030	12.83	0.00	-48	0.00	4.39	875.50
MW-801	5/23/2018	7.42	1460	21.79	0.00	-31	0.81	1.65	856.00
MW-801	11/30/2018	7.34	1510	12.09	7.70	-100	0.00	2.18	855.47
MW-802	5/23/2018	7.34	1150	21.75	0.00	-87	0.71	2.33	851.14
MW-802	11/30/2018	7.38	1200	11.57	0.60	-64	0.00	1.40	852.07
MW-803	5/23/2018	7.46	1020	21.86	0.00	75	2.50	11.81	843.19
MW-803	11/30/2018	7.33	1110	12.33	1.60	20	0.00	8.55	846.45
MW-804	5/23/2018	7.17	946	25.72	0.00	82	2.74	11.81	843.39
MW-804	7/11/2018	**7.21	964	26.08	0.00	111	1.06	12.34	842.86
MW-804	8/16/2018	**7.06	969	23.08	0.00	-25	0.38	12.85	842.35
MW-804	11/30/2018	7.02	1010	15.14	0.00	-20	0.26	8.29	846.91
MW-805	1/9/2018	**6.76	2441	16.38	0.91	NA	NA	8.18	846.45
MW-805	5/23/2018	6.52	2890	24.89	0.00	79	2.39	7.12	847.51
MW-805	11/30/2018	6.31	3150	14.09	4.90	80	1.36	6.50	848.13

* Verification sample obtained per certified statistical method and Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009.

**Extra Sample for Quality Control Validation or per Standard Sampling Procedure

S.U. - Standard Units

µS - microsiemens

°C - Degrees Celsius

ft btoc - Feet Below Top of Casing

ft NGVD - National Geodetic Vertical Datum (NAVD 88)

NTU - Nephelometric Turbidity Unit

Appendix C

Alternative Source Demonstrations

C.1 Groundwater Monitoring Alternative Source Demonstration Report October 2017 Groundwater Monitoring Event

C.2. Groundwater Monitoring Alternative Source Demonstration Report May 2018 Groundwater Monitoring Event

C.1 Groundwater Monitoring Alternative Source Demonstration Report October 2017 Groundwater Monitoring Event

CCR GROUNDWATER MONITORING
ALTERNATIVE SOURCE DEMONSTRATION REPORT
OCTOBER 2017 GROUNDWATER MONITORING EVENT

CCR LANDFILL AND LOWER AQC IMPOUNDMENT
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Presented To:

Kansas City Power & Light Company

Presented By:

SCS ENGINEERS
7311 West 130th Street, Suite 100
Overland Park, Kansas 66213
(913) 681-0030

April 2018
File No. 27217233.00

CERTIFICATIONS

I, John R. Rockhold, being a qualified groundwater scientist and licensed Professional Geologist in the State of Kansas, do hereby certify the accuracy of the information in the CCR Groundwater Monitoring Alternative Source Demonstration Report for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station. The Alternative Source Demonstration was prepared by me or under my direct supervision in accordance with generally accepted hydrogeological practices and the local standard of care.

John R. Rockhold, P.G.
SCS Engineers

I, Douglas L. Doerr, being a qualified licensed Professional Engineer in the State of Kansas, do hereby certify the accuracy of the information in the CCR Groundwater Monitoring Alternative Source Demonstration Report for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station. The Alternative Source Demonstration was prepared by me or under my direct supervision in accordance with generally accepted engineering practices and the local standard of care.

Douglas L. Doerr, P.E.
SCS Engineers

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Appendices

1 REGULATORY FRAMEWORK

In accordance with the Coal Combustion Residuals (CCR) Final Rule § 257.94(e)(2), the owner or operator of the CCR unit may demonstrate that a source other than the CCR unit caused the statistically significant increase (SSI) over background levels for a constituent, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The owner or operator must complete the written demonstration within 90 days of detecting a SSI over background levels to include obtaining a certification from a qualified professional engineer verifying the accuracy of the information in the report. If a successful demonstration is completed within the 90-day period, the owner or operator of the CCR unit may continue with a detection monitoring program under § 257.94. If a successful demonstration is not completed within the 90-day period, the owner or operator of the CCR unit must initiate an assessment monitoring program as required under § 257.95. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

2 STATISTICAL RESULTS

Statistical analysis of monitoring data from the groundwater monitoring system for the CCR Landfill and Lower AQC Impoundment at Kansas City Power & Light Company's (KCP&L) La Cygne Generating Station has been completed in substantial compliance with the "Statistical Method Certification by a Qualified Professional Engineer" document dated October 12, 2017. Groundwater samples were collected and analyzed by October 17, 2017. A statistical analysis was conducted to determine whether there is a SSI over background values for each constituent listed in Appendix III to Part 257-Constituents for Detection Monitoring.

If an SSI is preliminarily identified by the prediction limit analysis, verification retesting will be performed in accordance with the certified statistical method and the resampling plan to verify the result is not due to an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Up to two rounds of verification sampling and retesting may be conducted. Verification retesting with a "1 of 2" or "1 of 3" resampling plan is performed by collecting a verification sample(s) and comparing it to the calculated prediction limit. If the resulting concentration of any verification sample is not an SSI, then an SSI has not occurred.

Determinations of SSIs for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station were completed no later than January 15, 2018 and placed into the CCR Operating Record.

The completed statistical evaluation identified one Appendix III constituent pH, below its lower prediction limit in monitoring well MW-601. The prediction limit for pH in monitoring well MW-601 is 7.61 standard units (S.U.). The detection monitoring sample was reported at 7.53 S.U. The first verification sample was collected on January 9, 2018 with a result of 7.41 S.U., which is still below the lower prediction limit. Therefore, in accordance with the Statistical Method Certification, the detection monitoring sample for pH from monitoring well MW-601 exceeds its prediction limit and is a confirmed statistically significant decrease (SSD) below background. An SSD is similar to an SSI in that it indicates a statistically significant difference from background

(i.e., potential impact) when a bracketed (upper and lower) prediction limit is computed such as is done for pH

3 ALTERNATIVE SOURCE DEMONSTRATION

An Alternative Source Demonstration (ASD) is a means to provide supporting lines of evidence that something other than a release from a regulated CCR unit caused an SSI or in this case an SSD. For the above identified SSD for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station, there are multiple lines of supporting evidence to indicate the above SSD was not caused by a release from the CCR Landfill and Lower AQC Impoundment. Select multiple lines of supporting evidence are described as follows.

3.1 UPGRADIENT WELL LOCATION

Figure 1 in **Appendix A** shows a potentiometric surface contour map indicating the direction of groundwater flow at and near the CCR Landfill and Lower AQC Impoundment at the time of sampling. Although the groundwater flow directions indicated are for the October 2017 groundwater monitoring event, the flow directions shown are typical. As seen in the map, monitoring well MW-601 is located upgradient from the CCR Landfill and Lower AQC Impoundment indicating the SSD is not caused by a release from the CCR Landfill and Lower AQC Impoundment. This demonstrates that a source other than the CCR Landfill and Lower AQC Impoundment caused the SSD below background levels for pH, or that the SSD resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

3.2 BOX AND WHISKERS PLOTS

A commonly accepted method to demonstrate and visualize the distribution of data in a given data set is to construct box and whiskers plots. The basic box plotted graphically locates the median, 25th and 75th percentiles of the data set; the "whiskers" extend to the minimum and maximum values of the data set. The range between the ends of a box plot represents the Interquartile Range, which can be used as an estimate of spread or variability. The mean is denoted by a "+".

When comparing multiple wells or well groups, box plots for each well can be lined up on the same axes to roughly compare the variability in each well. This may be used as an exploratory screening for the test of homogeneity of variance across multiple wells.

Although an SSD was only identified in upgradient well MW-601, the box and whiskers plot for pH in MW-601 was compared to box and whisker plots for pH in the other groundwater monitoring system wells for the CCR Landfill and Lower AQC Impoundment. The comparison indicates the pH levels in upgradient well MW-601 are within the range of pH levels in both upgradient and downgradient wells across the site. This demonstrates that a source other than the CCR Landfill and Lower AQC Impoundment caused the SSD below background levels for pH, or that the SSD resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Box and whisker plots are provided in **Appendix B**.

3.3 TIME SERIES PLOTS

Time series plots provide a graphical method to view changes in data at a particular well (monitoring point) or wells over time. Time series plots display the variability in concentration levels over time and can be used to indicate possible outliers or data errors. More than one well can be compared on the same plot to look for differences between wells. Non-detect data is plotted as censored data at one-half of the laboratory reporting limit. Time series plots can also be used to examine the data for trends.

Time series plots for the CCR monitoring system wells indicate pH levels for both upgradient and downgradient wells in the monitoring system. The pH level in well MW-601 is within the range of pH levels in both upgradient and downgradient wells across the site. This demonstrates that a source other than the Landfill or Lower AQC Impoundment caused the SSD below background levels for pH, or that the SSD resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Time series plots are provided in **Appendix C**.

4 CONCLUSION

Our opinion is that a sufficient body of evidence is available and presented above to demonstrate that a source other than the CCR Landfill and Lower AQC Impoundment caused the SSD below background levels, or that the SSD resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Based on the successful ASD, the owner or operator of the CCR Landfill and Lower AQC Impoundment may continue with the detection monitoring program under § 257.94.

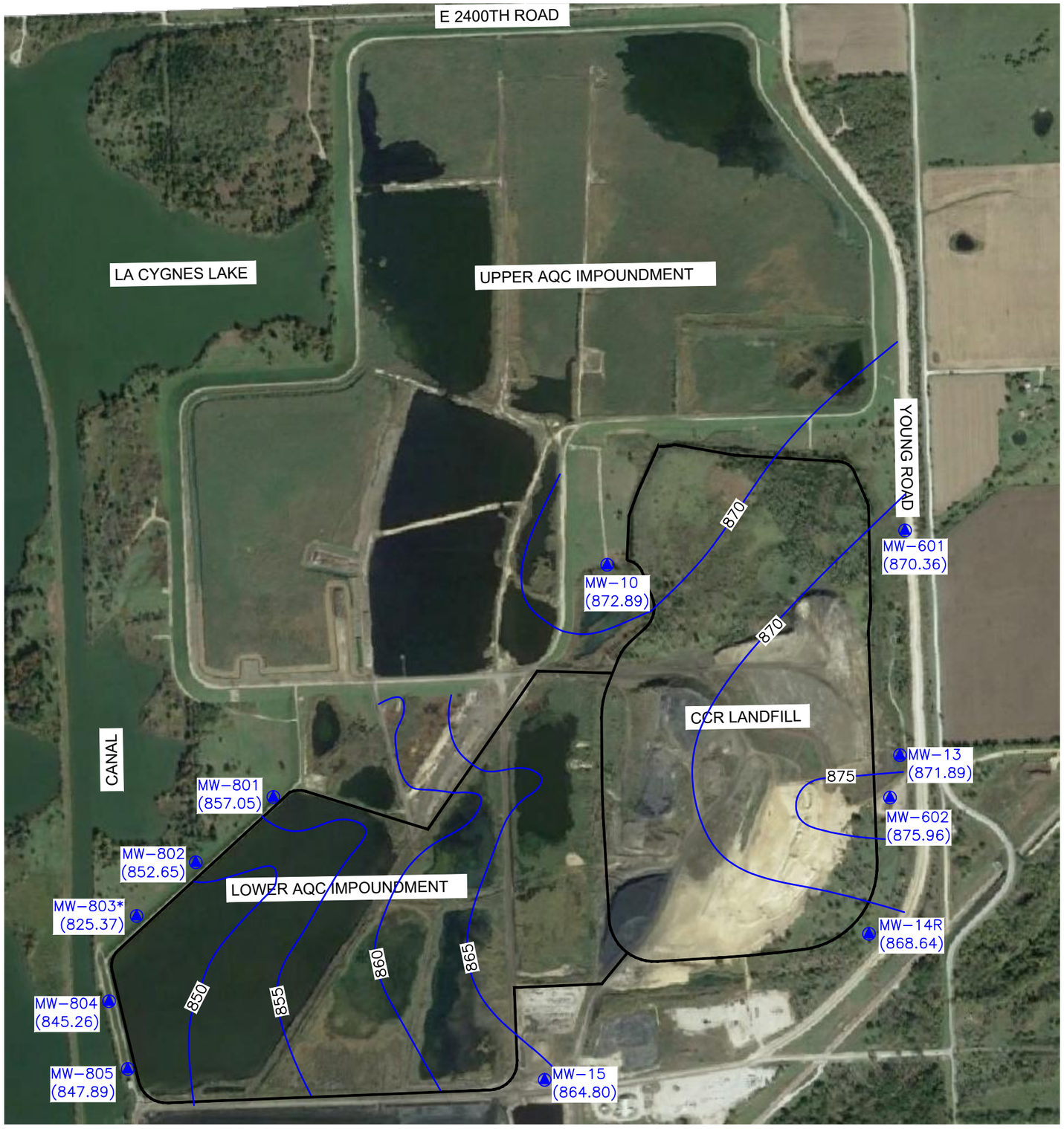
5 GENERAL COMMENTS

This report has been prepared and reviewed under the direction of a qualified groundwater scientist and qualified professional engineer. Please note that SCS Engineers does not warrant the work of regulatory agencies or other third parties supplying information used in the assimilation of this report. This report is prepared in accordance with generally accepted environmental engineering and geological practices, within the constraints of the client's directives. It is intended for the exclusive use of KCP&L for specific application to the La Cygne Generating Station. No warranties, express or implied, are intended or made.

The signature of the certifying registered geologist and professional engineer on this document represents that to the best of his knowledge, information, and belief in the exercise of his professional judgement in accordance with the standard of practice, it is his professional opinion that the aforementioned information is accurate as of the date of such signature. Any opinion or decisions by him are made on the basis of his experience, qualifications, and professional judgement and are not to be construed as warranties or guaranties. In addition, opinions relating to regulatory, environmental, geologic, geochemical and geotechnical conditions interpretations or other estimates are based on available data, and actual conditions may vary from those encountered at the times and locations where data are obtained, despite the use of due care.

Appendix A

Figure 1



LEGEND

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS OF CCR LANDFILL AND LOWER AQC IMPOUNDMENT)
- MW–601 (870.36) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- –875– GROUNDWATER SURFACE ELEVATIONS (REPRESENTATIVE FOR THIS UNIT)
- MW–803* INDICATES WELL NOT USED IN POTENTIOMETRIC SURFACE MAP CREATION

NOTES:

1. KDHE FACILITY PERMIT AND LANDFILL PERMIT BOUNDARIES VARY FROM THAT SHOWN.
2. GOOGLE EARTH IMAGE DATED OCTOBER 2014. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.

800 0 800 1600

SCALE FEET

REV.	DATE	CK. BY
1	–	–
2	–	–
3	–	–
4	–	–
5	–	–
6	–	–

SHEET TITLE
POTENTIOMETRIC SURFACE MAP (OCT 2017)
CCR LANDFILL & LOWER AQC IMPOUNDMENT

PROJECT TITLE
CCR ALTERNATIVE SOURCE DEMONSTRATION

CLIENT
KANSAS CITY POWER & LIGHT COMPANY
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

SCS ENGINEERS
7311 W. 130th St, Ste. 100
Overland Park, Kansas 66213
PH. (913) 681-0030 FAX. (913) 681-0012

PROJ. NO.	DWN. BY:	CHK. BY:	QA/QC BY:	PROJ. MGR
27217233.00	RCW	JRR	JRR	JRR
DSN. BY: RCW				

CADD FILE:
LA CYGNE LF LAQC IMP_CCR ASD_FIG 1.DWG

DATE: 4/16/18

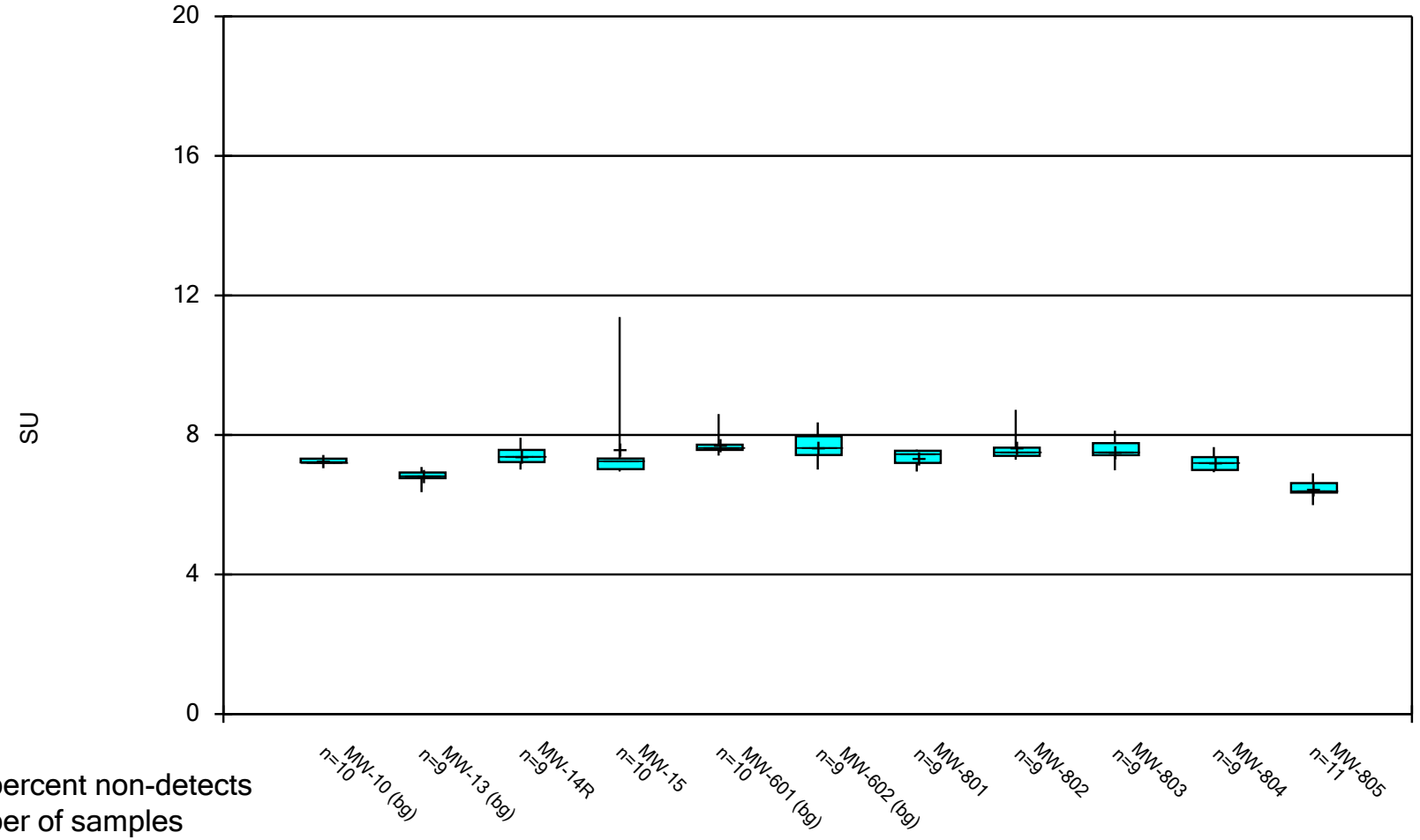
FIGURE NO. 1

N:\KCPL\Projects\Groundwater\DWG\La Cygne\2018\CCR ASD\La Cygne LF LAQC Imp_CCR ASD_Fig 1.dwg Apr 16, 2018 - 9:51am Layout Name: Fig 1 By: 4121rcw

Appendix B

Box and Whiskers Plots

Box & Whiskers Plot



%nds = percent non-detects
n = number of samples
bg = background/upgradinet data

Constituent: pH Analysis Run 3/6/2018 3:36 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

The basic box plot graphically locates the median, 25th and 75th percentiles of the data set; the "whiskers" extend to the minimum and maximum values of the data set. The range between the ends of a box plot represents the Interquartile Range. The mean is denoted by a "+".

Box & Whiskers Plot

Constituent: pH (SU) Analysis Run 3/6/2018 3:36 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10 (bg)	MW-13 (bg)	MW-14R	MW-15	MW-601 (bg)	MW-602 (bg)	MW-801	MW-802	MW-803
6/6/2016	7.33								
6/7/2016							7.47	7.46	
6/8/2016									
6/9/2016		6.88	7.42	7.31	7.66				7.48
6/10/2016						7.01			
8/9/2016				7.23	7.72	7.64	7.48		
8/10/2016								7.52	
8/11/2016	7.26	6.78	7.26						
8/12/2016									7.51
10/11/2016							7.32	7.34	
10/12/2016	7.33			7.28					
10/13/2016		6.95	7.51		7.71	7.34			6.99
12/6/2016							7.14	7.48	7.48
12/7/2016				7.02	7.61				
12/9/2016	7.22		7.42			8.15			
12/13/2016		6.36							
2/6/2017									
2/7/2017				7.28			7.58	7.67	
2/8/2017	7.21				8.6	8.36			8.12
2/9/2017			7.92						
2/10/2017		7.08							
4/5/2017				11.38				8.72	
4/6/2017	7.23	6.86			7.61		7.26		
4/7/2017			7.34			7.51			7.36
6/13/2017								7.6	7.98
6/14/2017				7.34			6.95		
6/15/2017	7.31	6.8	7.19		7.62	7.77			
8/7/2017								7.29	
8/8/2017		6.74							7.52
8/9/2017					7.72		7.51		
8/10/2017	7.29		7.01	7.02		7.56			
10/3/2017				6.95					
10/4/2017	7.23						7.58	7.58	7.55
10/5/2017		6.9	7.63			7.78			
10/6/2017					7.53				
12/12/2017	7.19								
1/9/2018				7.21	7.41				
Median	7.25	6.86	7.42	7.26	7.64	7.64	7.47	7.52	7.51
LowerQ.	7.22	6.76	7.23	7.02	7.57	7.43	7.2	7.4	7.42
UpperQ.	7.32	6.93	7.57	7.33	7.72	7.97	7.55	7.64	7.77
Min	7.19	6.36	7.01	6.95	7.41	7.01	6.95	7.29	6.99
Max	7.33	7.08	7.92	11.4	8.6	8.36	7.58	8.72	8.12
Mean	7.26	6.82	7.41	7.6	7.72	7.68	7.37	7.63	7.55

Box & Whiskers Plot

Constituent: pH (SU) Analysis Run 3/6/2018 3:36 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-805
6/6/2016		
6/7/2016		6.52
6/8/2016	7.13	
6/9/2016		
6/10/2016		
8/9/2016		
8/10/2016	7.32	6.35
8/11/2016		
8/12/2016		
10/11/2016	7.2	6.36
10/12/2016		
10/13/2016		
12/6/2016		6.36
12/7/2016	6.93	
12/9/2016		
12/13/2016		
2/6/2017		6.62
2/7/2017	7.41	
2/8/2017		
2/9/2017		
2/10/2017		
4/5/2017	7.65	6.9
4/6/2017		
4/7/2017		
6/13/2017	7.22	6.43
6/14/2017		
6/15/2017		
8/7/2017		
8/8/2017	7.06	6.49
8/9/2017		
8/10/2017		
10/3/2017		
10/4/2017		
10/5/2017	6.93	5.99
10/6/2017		
12/12/2017		6.35
1/9/2018		6.76
Median	7.2	6.43
LowerQ.	7	6.35
UpperQ.	7.37	6.62
Min	6.93	5.99
Max	7.65	6.9
Mean	7.21	6.47

Box & Whiskers Plot

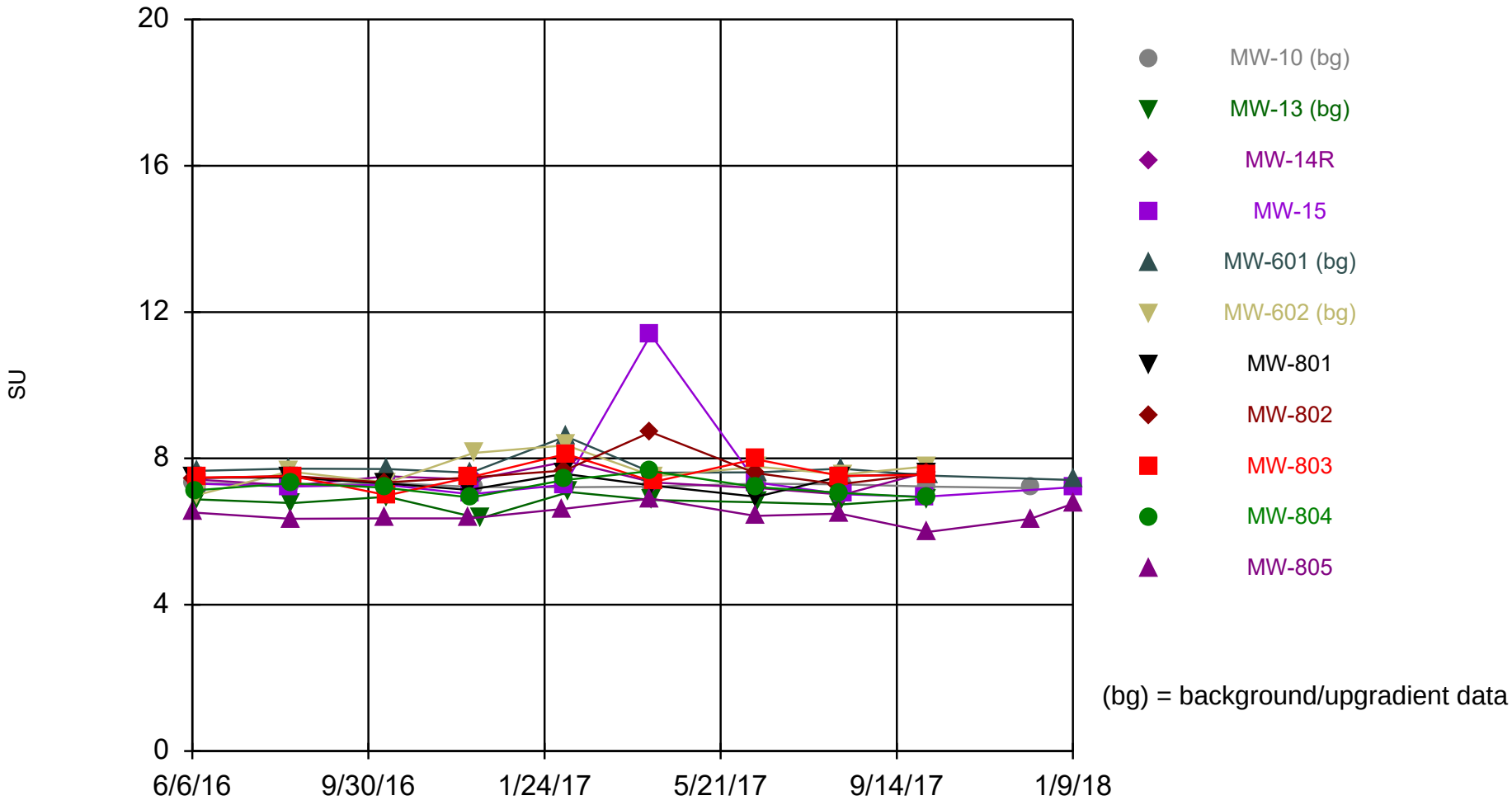
LaCygne Client: SCS Engineers Data: LaC GW Data Printed 3/6/2018, 3:36 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
pH (SU)	MW-10 (bg)	10	7.26	0.0516	0.0163	7.25	7.19	7.33	0
pH (SU)	MW-13 (bg)	9	6.82	0.199	0.0662	6.86	6.36	7.08	0
pH (SU)	MW-14R	9	7.41	0.263	0.0878	7.42	7.01	7.92	0
pH (SU)	MW-15	10	7.6	1.33	0.422	7.26	6.95	11.4	0
pH (SU)	MW-601 (bg)	10	7.72	0.324	0.102	7.64	7.41	8.6	0
pH (SU)	MW-602 (bg)	9	7.68	0.405	0.135	7.64	7.01	8.36	0
pH (SU)	MW-801	9	7.37	0.216	0.072	7.47	6.95	7.58	0
pH (SU)	MW-802	9	7.63	0.427	0.142	7.52	7.29	8.72	0
pH (SU)	MW-803	9	7.55	0.33	0.11	7.51	6.99	8.12	0
pH (SU)	MW-804	9	7.21	0.232	0.0774	7.2	6.93	7.65	0
pH (SU)	MW-805	11	6.47	0.241	0.0726	6.43	5.99	6.9	0

Appendix C

Time Series Plots

Time Series



Constituent: pH Analysis Run 3/6/2018 3:39 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Time Series

Constituent: pH (SU) Analysis Run 3/6/2018 3:40 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10 (bg)	MW-13 (bg)	MW-14R	MW-15	MW-601 (bg)	MW-602 (bg)	MW-801	MW-802	MW-803
6/6/2016	7.33								
6/7/2016							7.47	7.46	
6/8/2016									
6/9/2016		6.88	7.42	7.31	7.66				7.48
6/10/2016						7.01			
8/9/2016				7.23	7.72	7.64	7.48		
8/10/2016								7.52	
8/11/2016	7.26	6.78	7.26						
8/12/2016									7.51
10/11/2016							7.32	7.34	
10/12/2016	7.33			7.28					
10/13/2016		6.95	7.51		7.71	7.34			6.99
12/6/2016							7.14	7.48	7.48
12/7/2016				7.02	7.61				
12/9/2016	7.22		7.42			8.15			
12/13/2016		6.36							
2/6/2017									
2/7/2017				7.28			7.58	7.67	
2/8/2017	7.21				8.6	8.36			8.12
2/9/2017			7.92						
2/10/2017		7.08							
4/5/2017				11.38				8.72	
4/6/2017	7.23	6.86			7.61		7.26		
4/7/2017			7.34			7.51			7.36
6/13/2017								7.6	7.98
6/14/2017				7.34			6.95		
6/15/2017	7.31	6.8	7.19		7.62	7.77			
8/7/2017								7.29	
8/8/2017		6.74							7.52
8/9/2017					7.72		7.51		
8/10/2017	7.29		7.01	7.02		7.56			
10/3/2017				6.95					
10/4/2017	7.23						7.58	7.58	7.55
10/5/2017		6.9	7.63			7.78			
10/6/2017					7.53				
12/12/2017	7.19								
1/9/2018				7.21	7.41				

Time Series

Constituent: pH (SU) Analysis Run 3/6/2018 3:40 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-805
6/6/2016		
6/7/2016		6.52
6/8/2016	7.13	
6/9/2016		
6/10/2016		
8/9/2016		
8/10/2016	7.32	6.35
8/11/2016		
8/12/2016		
10/11/2016	7.2	6.36
10/12/2016		
10/13/2016		
12/6/2016		6.36
12/7/2016	6.93	
12/9/2016		
12/13/2016		
2/6/2017		6.62
2/7/2017	7.41	
2/8/2017		
2/9/2017		
2/10/2017		
4/5/2017	7.65	6.9
4/6/2017		
4/7/2017		
6/13/2017	7.22	6.43
6/14/2017		
6/15/2017		
8/7/2017		
8/8/2017	7.06	6.49
8/9/2017		
8/10/2017		
10/3/2017		
10/4/2017		
10/5/2017	6.93	5.99
10/6/2017		
12/12/2017		6.35
1/9/2018		6.76

C.2. Groundwater Monitoring Alternative Source Demonstration Report May 2018 Groundwater Monitoring Event

CCR GROUNDWATER MONITORING

ALTERNATIVE SOURCE DEMONSTRATION REPORT

MAY 2018 GROUNDWATER MONITORING EVENT

CCR LANDFILL AND LOWER AQC IMPOUNDMENT

LA CYGNE GENERATING STATION

LA CYGNE, KANSAS

Presented To:

Kansas City Power & Light Company

Presented By:

SCS ENGINEERS

8575 West 110th Street, Suite 100

Overland Park, Kansas 66210

(913) 681-0030

December 2018

File No. 27217233.18

CERTIFICATIONS

I, John R. Rockhold, being a qualified groundwater scientist and licensed Professional Geologist in the State of Kansas, do hereby certify the accuracy of the information in the CCR Groundwater Monitoring Alternative Source Demonstration Report for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station. The Alternative Source Demonstration was prepared by me or under my direct supervision in accordance with generally accepted hydrogeological practices and the local standard of care.

John R. Rockhold, P.G.

SCS Engineers

I, Douglas L. Doerr, being a qualified licensed Professional Engineer in the State of Kansas, do hereby certify the accuracy of the information in the CCR Groundwater Monitoring Alternative Source Demonstration Report for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station. The Alternative Source Demonstration was prepared by me or under my direct supervision in accordance with generally accepted engineering practices and the local standard of care.

Douglas L. Doerr, P.E.

SCS Engineers

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Appendices

1 REGULATORY FRAMEWORK

Certain owners or operators of Coal Combustion Residuals (CCR) units are required to complete groundwater monitoring activities to evaluate whether a release from the unit has occurred. Included in the activities is the completion of a statistical analysis of the groundwater quality data as prescribed in § 257.93(h) of the CCR Final Rule. If the initial analysis indicates a statistically significant increase (SSI) over background levels, the owner or operator may perform an alternate source demonstration (ASD). In accordance with § 257.94(e)(2), the owner or operator of the CCR unit may demonstrate that a source other than the CCR unit caused the SSI over background levels for a constituent, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The owner or operator must complete the written demonstration within 90 days of detecting a SSI over background levels to include obtaining a certification from a qualified professional engineer verifying the accuracy of the information in the report. If a successful demonstration is completed within the 90-day period, the owner or operator of the CCR unit may continue with a detection monitoring program under § 257.94. If a successful demonstration is not completed within the 90-day period, the owner or operator of the CCR unit must initiate an assessment monitoring program as required under § 257.95. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

2 STATISTICAL RESULTS

Statistical analysis of monitoring data from the groundwater monitoring system for the CCR Landfill and Lower AQC Impoundment multi-unit groundwater monitoring system at the La Cygne Generating Station has been completed in substantial compliance with the "Statistical Method Certification by A Qualified Professional Engineer" dated October 12, 2017. Detection monitoring groundwater samples were collected on May 23, 2018. Review and validation of the results from the May 2018 Detection Monitoring Event was completed on June 15, 2018, which constitutes completion and finalization of detection monitoring laboratory analyses. A statistical analysis was then conducted to determine whether there was a statistically significant increase (SSI) over background values for each constituent listed in Appendix III to Part 257-Constituents for Detection Monitoring. Two rounds of verification sampling were conducted for certain constituents on July 11, 2018 and August 16, 2018.

If an SSI is preliminarily identified by the prediction limit analysis, verification retesting is performed in accordance with the certified statistical method and the resampling plan to verify the result is not due to an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Up to two rounds of verification sampling and retesting may be conducted. Verification retesting with a "1 of 2" or "1 of 3" resampling plan is performed by collecting a verification sample(s) and comparing it to the calculated prediction limit. If the resulting concentration of any verification sample is not above the prediction limit, then an SSI is not confirmed.

Determinations of SSIs for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station were completed September 12, 2018 and placed into the CCR Operating Record.

The completed statistical evaluation identified Appendix III constituent, boron, above its respective prediction limit in monitoring wells MW-13 and MW-804, and pH below its respective lower prediction limit in monitoring well MW-601.

The prediction limit for boron in upgradient monitoring well MW-13 is 0.491 milligrams per liter (mg/L). The detection monitoring sample was reported at 0.57 mg/L. The first verification re-sample was collected on July 11, 2018 with a result of 0.533 mg/L. The second verification re-sample was collected on August 16, 2018 with a result of 0.513 mg/L.

The prediction limit for boron in monitoring well MW-804 is 1.65 mg/L. The detection monitoring sample was reported at 1.72 mg/L. The first verification re-sample was collected on July 11, 2018 with a result of 1.67 mg/L. The second verification re-sample was collected on August 16, 2018 with a result of 1.76 mg/L.

Therefore, in accordance with the Statistical Method Certification, the detection monitoring sample for boron from monitoring wells MW-13 and MW-804 exceed their respective prediction limits and are confirmed statistically significant increases (SSIs) over background.

The lower prediction limit for pH in upgradient monitoring well MW-601 is 7.61 standard units (S.U.). The detection monitoring sample was reported at 7.56 S.U. The first verification re-sample was collected on July 11, 2018 with a result of 7.43 S.U. The second verification re-sample was collected on August 16, 2018 with a result of 7.59 S.U.

Therefore, in accordance with the Statistical Method Certification, the detection monitoring sample for pH from monitoring wells MW-601 was below its lower prediction limit and is a confirmed statistically significant decrease (SSDs) below background.

Determination: A statistical evaluation was completed for all Appendix III detection monitoring constituents in accordance with the certified statistical method. The statistical evaluation identified two SSIs above the background prediction limit for boron in upgradient monitoring well MW-13 and downgradient monitoring well MW-804. Additionally, the statistical evaluation identified one statistically significant decrease (SSD) below the background lower prediction limit for pH in upgradient monitoring well MW-601.

3 ALTERNATIVE SOURCE DEMONSTRATION

An Alternative Source Demonstration is a means to provide supporting lines of evidence that something other than a release from a regulated CCR unit caused an SSI or in this case for pH, an SSD. For the above identified SSIs and SSD for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station, there are multiple lines of supporting evidence to indicate they are not caused by a release from the CCR Landfill and Lower AQC Impoundment. Select multiple lines of supporting evidence are described as follows.

3.1 UPGRADIENT WELL LOCATION

Figure 1 in **Appendix A** shows a potentiometric surface contour map indicating the direction of groundwater flow at and near the CCR Landfill and Lower AQC Impoundment at the time of sampling. The groundwater flow directions indicated are for the May 2018 groundwater monitoring event and are typical flow directions for this unit. As seen in the map, monitoring wells MW-601 and MW-13 are located upgradient from the CCR Landfill and Lower AQC Impoundment indicating the SSD for pH and the SSI for boron are not caused by a release from the CCR Landfill and Lower AQC Impoundment. This demonstrates that a source other than the CCR Landfill and Lower AQC Impoundment caused the SSD below background levels for pH and the SSI above background levels for boron, or that the

respective SSD and SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

3.2 BOX AND WHISKERS PLOTS

A commonly accepted method to demonstrate and visualize the distribution of data in a given data set is to construct box and whiskers plots. The basic box plotted graphically locates the median, 25th and 75th percentiles of the data set; the "whiskers" extend to the minimum and maximum values of the data set. The range between the ends of a box plot represents the Interquartile Range, which can be used as an estimate of spread or variability. The mean is denoted by a "+".

When comparing multiple wells or well groups, box plots for each well can be lined up on the same axes to roughly compare the variability in each well. This may be used as an exploratory screening for the test of homogeneity of variance across multiple wells.

Box and whiskers plots were prepared for pH and boron for upgradient wells MW-601, MW-602, and MW-13 and downgradient well MW-804. Although the SSD was only identified in upgradient well MW-601, the box and whiskers plot shows that it is well within the overall pH range for upgradient wells (MW-601, MW-602, and MW-13). The comparison indicates the pH levels in upgradient well MW-601 are within the range of pH levels in upgradient wells. This demonstrates that a source other than the CCR Landfill and Lower AQC Impoundment caused the SSD below background levels for pH, or that the SSD resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

An SSI was identified for boron in both upgradient well MW-13 and downgradient well MW-804. However, when plotted along with the other upgradient wells (MW-601 and MW-602), the concentration of boron identified as an SSI in MW-804 is below the concentrations of boron identified in upgradient wells MW-601 and MW-602. The comparison indicates the boron levels in downgradient well MW-804 are within the range of boron concentrations in upgradient wells. This demonstrates that a source other than the CCR Landfill and Lower AQC Impoundment caused the SSI above background levels for boron, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

Box and whiskers plots are provided in **Appendix B**.

3.3 TIME SERIES PLOTS

Time series plots provide a graphical method to view changes in data at a particular well (monitoring point) or wells over time. Time series plots display the variability in concentration levels over time and can be used to indicate possible outliers or data errors. More than one well can be compared on the same plot to look for differences between wells. Non-detect data is plotted as censored data at one-half of the laboratory reporting limit. Time series plots can also be used to examine the data for trends.

Time series plots for the CCR monitoring system upgradient wells MW-13, MW-601, and MW-602 and downgradient well MW-804 indicate boron levels for MW-13 and MW-804 and pH levels for MW-601 are within the range of boron and pH levels in upgradient wells. This demonstrates that a source other than the Landfill or Lower AQC Impoundment caused the boron SSIs and the pH SSD, or that the SSIs

and SSD resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

Time series plots are provided in **Appendix C**.

4 CONCLUSION

Our opinion is that a sufficient body of evidence is available and presented above to demonstrate that a source other than the CCR Landfill and Lower AQC Impoundment caused the SSIs for boron and SSD for pH, or that the SSIs and the SSD resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Based on the successful ASD, the owner or operator of the CCR Landfill and Lower AQC Impoundment may continue with the detection monitoring program under § 257.94.

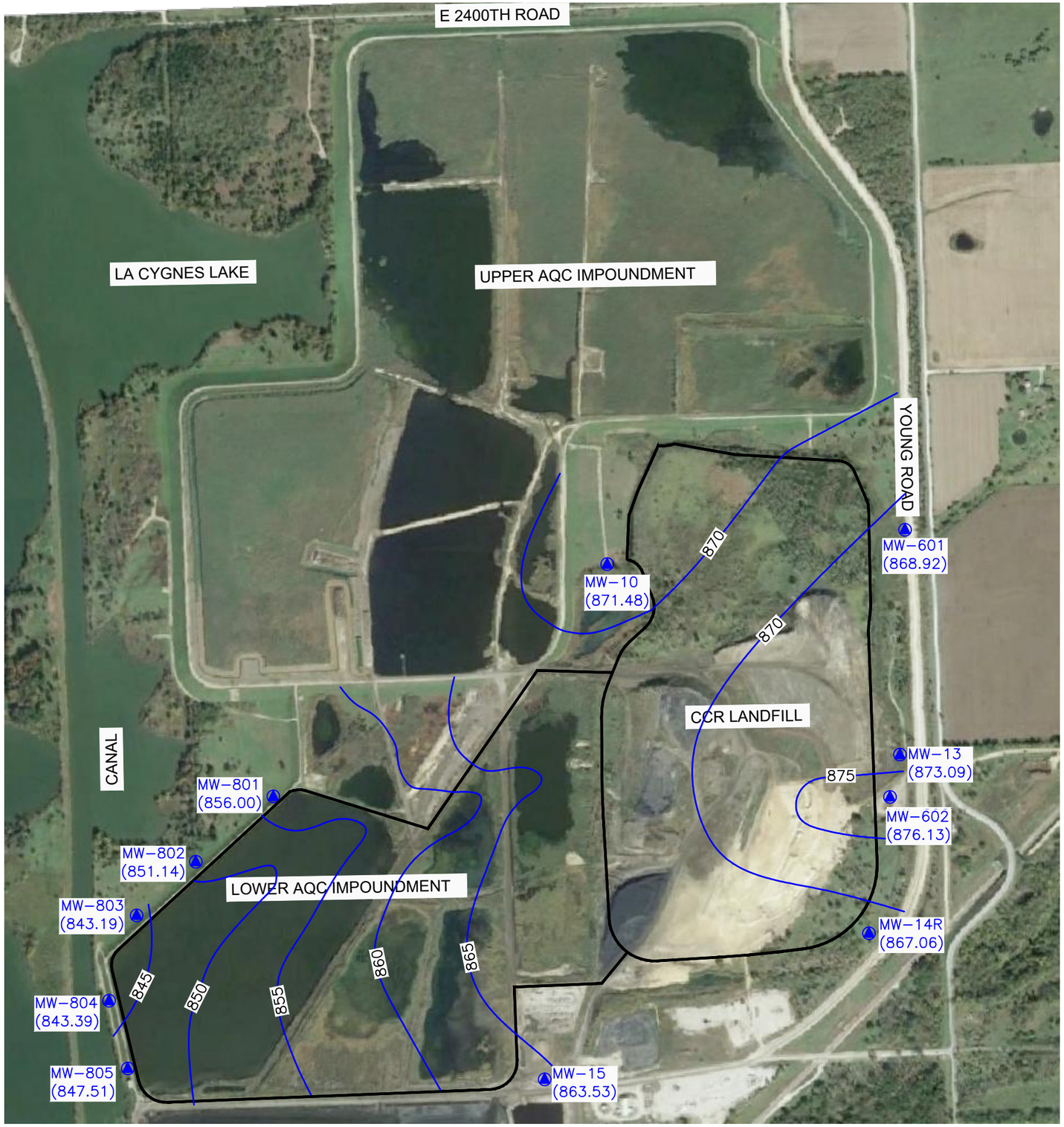
5 GENERAL COMMENTS

This report has been prepared and reviewed under the direction of a qualified groundwater scientist and qualified professional engineer. Please note that SCS Engineers does not warrant the work of regulatory agencies or other third parties supplying information used in the assimilation of this report. This report is prepared in accordance with generally accepted environmental engineering and geological practices, within the constraints of the client's directives. It is intended for the exclusive use of KCP&L for specific application to the La Cygne Generating Station. No warranties, express or implied, are intended or made.

The signature of the certifying registered geologist and professional engineer on this document represents that to the best of their knowledge, information, and belief in the exercise of his professional judgement in accordance with the standard of practice, it is his professional opinion that the aforementioned information is accurate as of the date of such signature. Any opinion or decisions by them are made on the basis of his experience, qualifications, and professional judgement and are not to be construed as warranties or guaranties. In addition, opinions relating to regulatory, environmental, geologic, geochemical and geotechnical conditions interpretations or other estimates are based on available data, and actual conditions may vary from those encountered at the times and locations where data are obtained, despite the use of due care.

Appendix A

Figure 1



LEGEND

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS OF CCR LANDFILL AND LOWER AQC IMPOUNDMENT)
- MW–601 (868.92) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- –875– GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (REPRESENTATIVE FOR THIS UNIT)

NOTES:

1. KDHE FACILITY PERMIT AND LANDFILL PERMIT BOUNDARIES VARY FROM THAT SHOWN.
2. GOOGLE EARTH IMAGE DATED OCTOBER 2014. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.

800 0 800 1600

SCALE FEET

REV.	DATE	CK. BY
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

SHEET TITLE
POTENTIOMETRIC SURFACE MAP (MAY 2018)
CCR LANDFILL & LOWER AQC IMPOUNDMENT

PROJECT TITLE
CCR GROUNDWATER 2018

CLIENT
KANSAS CITY POWER & LIGHT COMPANY
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

SCS ENGINEERS
7311 W. 130th St. Ste. 100
Overland Park, Kansas 66213
PH. (913) 681-0030 FAX. (913) 681-0012

PROJ. NO. 27217233.00
DSN. BY: RCW
CHK. BY: JRR
DSN. BY: RCW
Q/A REW BY: JRR
PROJ. MGR JRR

CADD FILE:
LA CYGNE LF LAQC IMP & UAQC FIG 1_MAY 2018.DWG

DATE: 6/21/18

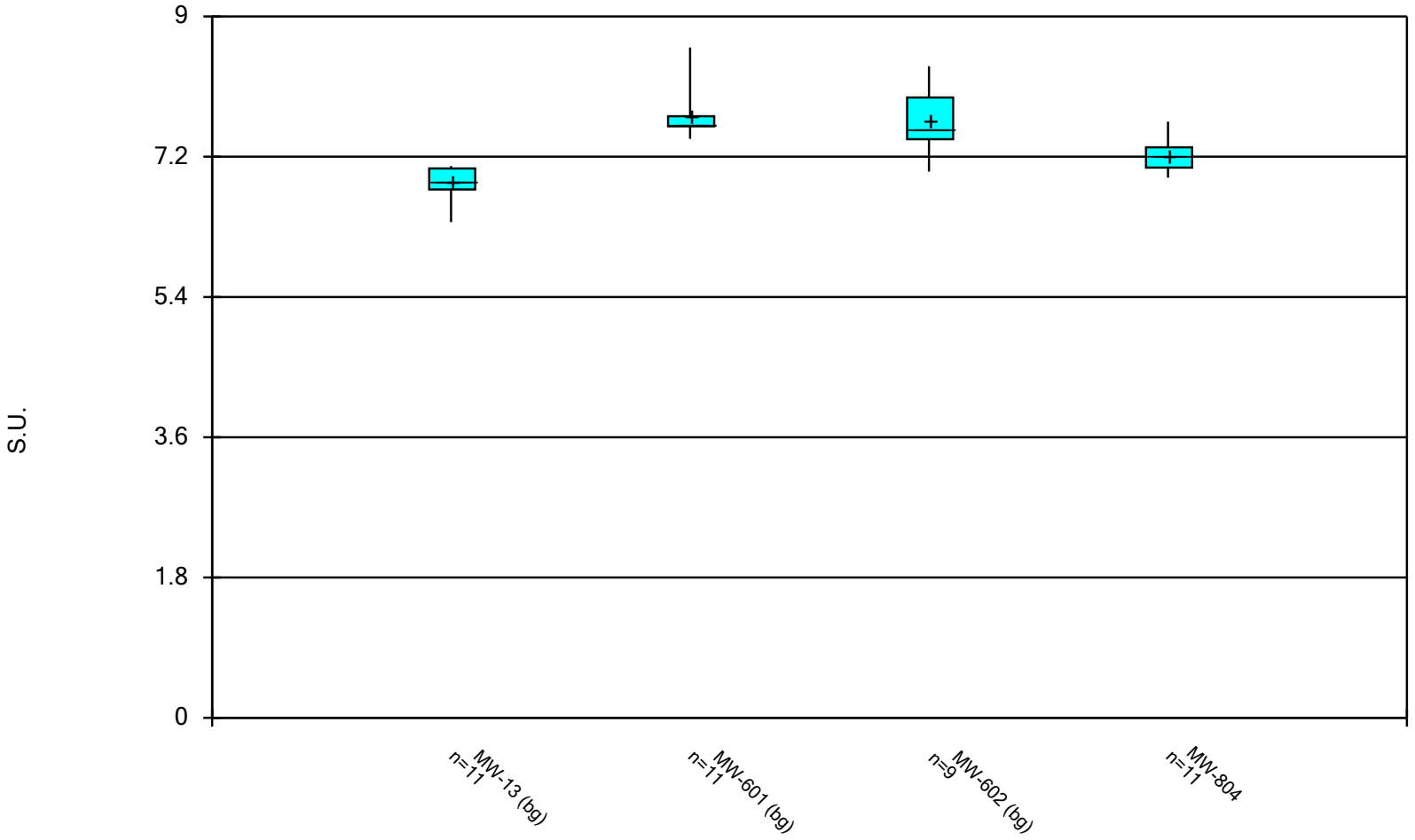
FIGURE NO. 1

N:\KCPL\Projects\Groundwater\DWG\La Cygne\2018\GW\La Cygne LF LAQC Imp & UAQC Fig 1_MAY 2018.dwg Dec 10, 2018 - 12:22pm Layout Name: Fig 1 LAQC By: 4338t_w

Appendix B

Box and Whiskers Plots

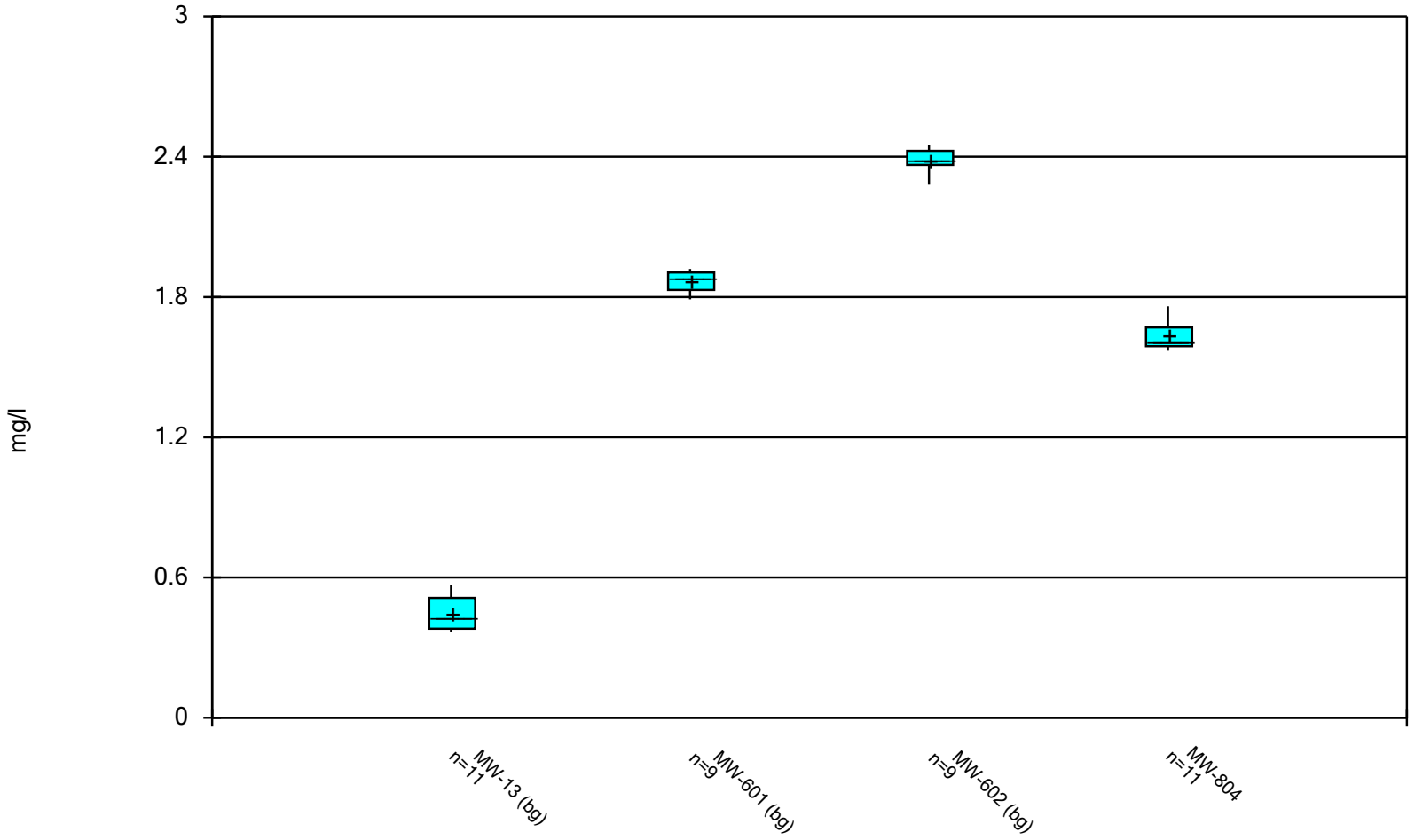
Box & Whiskers Plot



Constituent: pH Analysis Run 9/10/2018 11:29 AM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Box & Whiskers Plot



Constituent: BORON Analysis Run 9/10/2018 11:29 AM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Box & Whiskers Plot

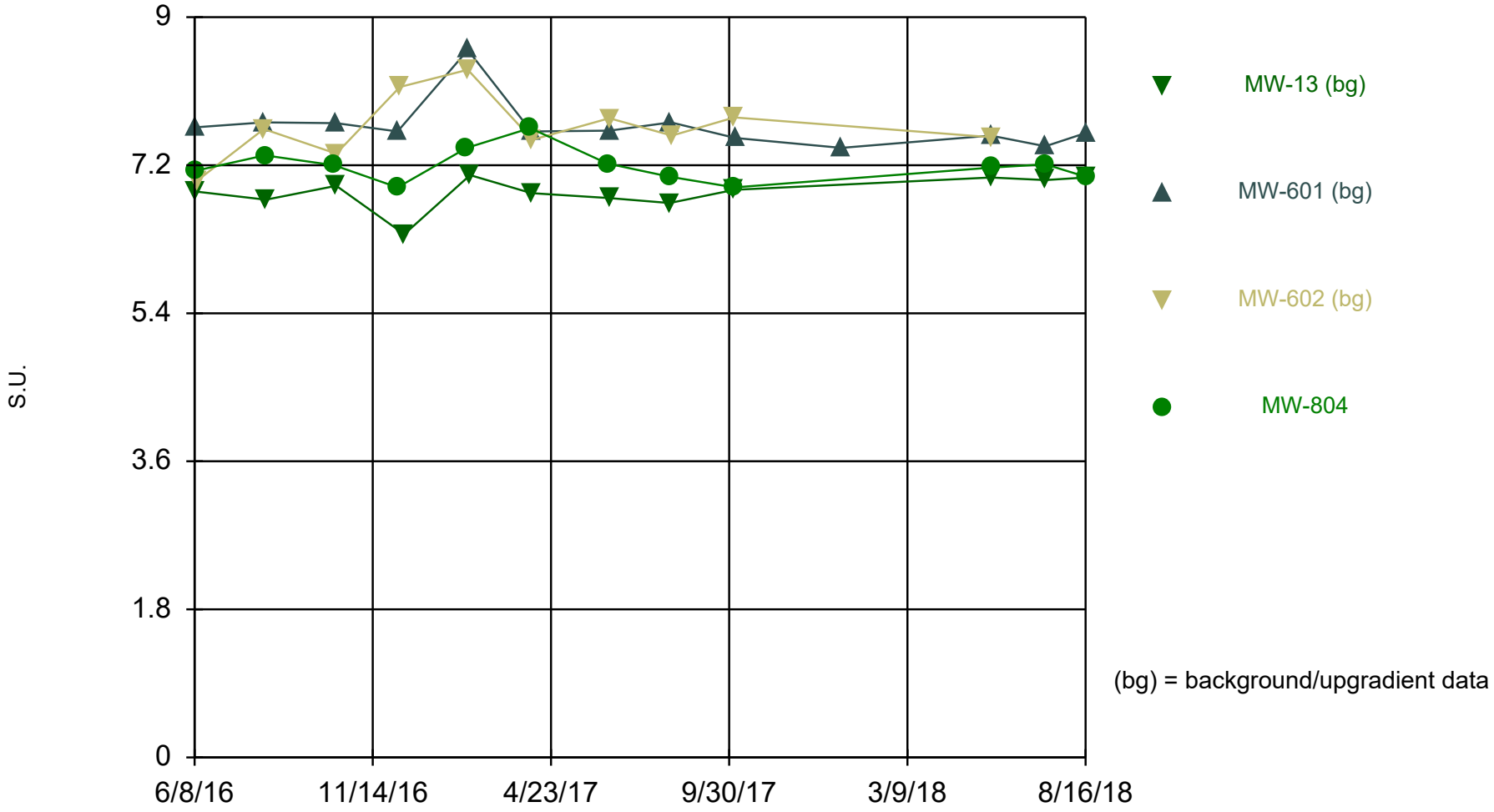
LaCygne Client: SCS Engineers Data: LaC GW Data Printed 9/10/2018, 11:32 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
BORON (mg/l)	MW-13 (bg)	11	0.445	0.07	0.0211	0.422	0.368	0.57	0
BORON (mg/l)	MW-601 (bg)	9	1.87	0.0447	0.0149	1.88	1.79	1.92	0
BORON (mg/l)	MW-602 (bg)	9	2.39	0.0518	0.0173	2.39	2.28	2.45	0
BORON (mg/l)	MW-804	11	1.63	0.0619	0.0187	1.61	1.57	1.76	0
pH (S.U.)	MW-13 (bg)	11	6.87	0.207	0.0624	6.88	6.36	7.08	0
pH (S.U.)	MW-601 (bg)	11	7.71	0.306	0.0924	7.62	7.43	8.6	0
pH (S.U.)	MW-602 (bg)	9	7.65	0.405	0.135	7.56	7.01	8.36	0
pH (S.U.)	MW-804	11	7.21	0.194	0.0585	7.2	6.93	7.65	0

Appendix C

Time Series Plots

Time Series



Constituent: pH Analysis Run 11/12/2018 4:38 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

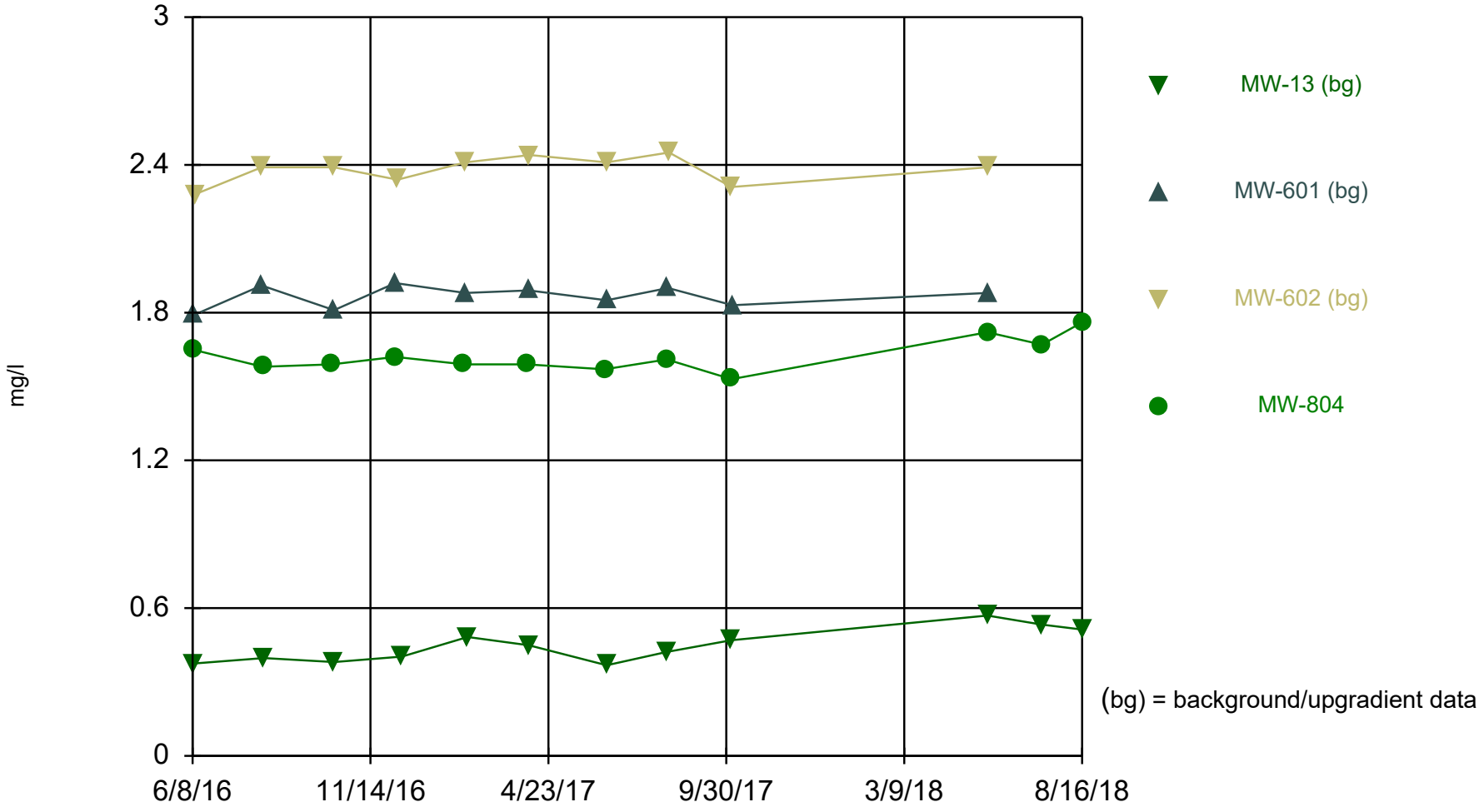
Time Series

Constituent: pH (S.U.) Analysis Run 11/12/2018 4:40 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13 (bg)	MW-601 (bg)	MW-602 (bg)	MW-804
6/8/2016				7.13
6/9/2016	6.88	7.66		
6/10/2016			7.01	
8/9/2016		7.72	7.64	
8/10/2016				7.32
8/11/2016	6.78			
10/11/2016				7.2
10/13/2016	6.95	7.71	7.34	
12/7/2016		7.61		6.93
12/9/2016			8.15	
12/13/2016	6.36			
2/7/2017				7.41
2/8/2017		8.6	8.36	
2/10/2017	7.08			
4/5/2017				7.65
4/6/2017	6.86	7.61		
4/7/2017			7.51	
6/13/2017				7.22
6/15/2017	6.8	7.62	7.77	
8/8/2017	6.74			7.06
8/9/2017		7.72		
8/10/2017			7.56	
10/5/2017	6.9		7.78	6.93
10/6/2017		7.53		
1/9/2018		7.41		
5/23/2018	7.05	7.56	7.54	7.17
7/11/2018	7.02	7.43		7.21
8/16/2018	7.05	7.59		7.06

Time Series



Constituent: BORON Analysis Run 11/12/2018 4:38 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Time Series

Constituent: BORON (mg/l) Analysis Run 11/12/2018 4:40 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13 (bg)	MW-601 (bg)	MW-602 (bg)	MW-804
6/8/2016				1.65
6/9/2016	0.375	1.79		
6/10/2016			2.28	
8/9/2016		1.91	2.39	
8/10/2016				1.58
8/11/2016	0.397			
10/11/2016				1.59
10/13/2016	0.381	1.81	2.39	
12/7/2016		1.92		1.62
12/9/2016			2.34	
12/13/2016	0.403			
2/7/2017				1.59
2/8/2017		1.88	2.41	
2/10/2017	0.483			
4/4/2017				1.59
4/6/2017	0.449	1.89		
4/7/2017			2.44	
6/13/2017				1.57
6/15/2017	0.368	1.85	2.41	
8/8/2017	0.422			1.61
8/9/2017		1.9		
8/10/2017			2.45	
10/5/2017	0.47		2.31	1.53
10/6/2017		1.83		
5/23/2018	0.57	1.88	2.39	1.72
7/11/2018	0.533			1.67
8/16/2018	0.513			1.76

ADDENDUM 1

2018 Annual Groundwater Monitoring and Corrective Action Report Addendum 1

December 16, 2022
File No. 27217233.18

To: Evergy Metro, Inc.
Jared Morrison – Director, Water and Waste Programs

From: SCS Engineers
Douglas L. Doerr, P.E.
John R. Rockhold, P.G.

Subject: 2018 Annual Groundwater Monitoring and Corrective Action Report Addendum 1
Evergy Metro, Inc.
CCR Landfill and Lower AQC Impoundment
La Cygne Generating Station - La Cygne, Kansas

The CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station are subject to the groundwater monitoring and corrective action requirements of the "Coal Combustion Residuals (CCR) Final Rule" (Rule); as described in CFR 40 257.90 through CFR 40 257.98. An Annual Groundwater Monitoring and Corrective Action (GWMCA) Report documenting activities completed in 2018 for the CCR Landfill and Lower AQC Impoundment was completed and placed in the facility's operating record on January 30, 2019, as required by the Rule. The Annual GWMCA report was to fulfill the requirements specified in 40 CFR 257.90(e).

This Addendum has been prepared to supplement the operating record in recognition of comments received by Evergy from the U.S. Environmental Protection Agency (USEPA) on January 11, 2022. In addition to the information listed in 40 CFR 257.90(e), the USEPA indicated in their comments that the GWMCA Report contain the following:

- Results of laboratory analysis of groundwater or other environmental media samples for 40 CFR 257 Appendix III and Appendix IV constituents or other constituents, such as those supporting characterization of site conditions that may ultimately affect a remedy'
- Required statistical analysis performed on laboratory analysis results; and
- Calculated groundwater flow rate and direction.

This information is not specifically referred to in 40 CFR 257.90(e) for inclusion in the GWMCA Reports; however, it is routinely collected, determined and maintained in Evergy's files and is being provided in the attachments to this addendum.

The attachments to this addendum are as follows:

- Attachment 1 – Laboratory Analytical Reports:

  Includes laboratory data packages with supporting information such as case narrative, sample and method summary, analytical results, quality control, and chain-of-custody documentation. The laboratory data packages for the following sampling events are provided:

  - January 2018 – Second verification sampling for the Fall 2017 detection monitoring sampling event.
  - May 2018 – Spring 2018 semiannual detection monitoring sampling event.
  - July 2018 – First verification sampling for the Spring 2018 detection monitoring sampling event.
  - August 2018 - Second verification sampling for the Spring 2018 detection monitoring sampling event.
  - November 2018 - Fall 2018 semiannual detection monitoring sampling event.

- Attachment 2 - Statistical Analyses:

  Includes summary of statistical results, prediction limit plots, prediction limit background data, detection sample results, first and second verification re-sample results (when applicable), extra sample results for pH (collected as part of the approved sampling procedures), input parameters, and a Prediction Limit summary table. Statistical analyses completed in 2018 included the following:

  - Fall 2017 semiannual detection monitoring statistical analyses.
  - Spring 2018 semiannual detection monitoring statistical analyses.

- Attachment 3 - Revised Groundwater Potentiometric Surface Maps:

  Includes revised groundwater potentiometric surface maps with the measured groundwater elevations at each well and the generalized groundwater flow direction and the calculated groundwater flow rate. Maps for the following sampling events are provided:

  - May 2018 - Spring 2018 semiannual detection monitoring sampling event.
  - November 2018 - Fall 2018 semiannual detection monitoring sampling event.

Jared Morrison
December 16, 2022

ATTACHMENT 1

Laboratory Analytical Reports

ATTACHMENT 1-1

January 2018 Sampling Event Laboratory Report

ANALYTICAL REPORT

January 11, 2018

AECOM - Kansas City, MO

Sample Delivery Group:	L962121
Samples Received:	01/10/2018
Project Number:	60482842
Description:	La Cygne Generating Station
Site:	TASK 100
Report To:	Alla Skaskevych 2380 McGee Suite 200 Kansas City, MO 64108

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-902 L962121-01 GW

Collected by: Terry Andrews
Collected date/time: 01/09/18 11:50
Received date/time: 01/10/18 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1061236	1	01/10/18 19:02	01/10/18 19:02	DR

MW-805 L962121-02 GW

Collected by: Terry Andrews
Collected date/time: 01/09/18 12:45
Received date/time: 01/10/18 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020	WG1061246	1	01/10/18 10:53	01/10/18 14:01	JPD

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jeff Carr
Technical Service Representative

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Sulfate	37.9		5.00	1	01/10/2018 19:02	WG1061236

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Calcium	439		1.00	1	01/10/2018 14:01	WG1061246

Method Blank (MB)

(MB) R3278661-1 01/10/18 06:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfate	U		0.0774	5.00

L962121-01 Original Sample (OS) • Duplicate (DUP)

(OS) L962121-01 01/10/18 19:02 • (DUP) R3278661-7 01/10/18 19:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	37.9	37.9	1	0.0427		15

L962047-01 Original Sample (OS) • Duplicate (DUP)

(OS) L962047-01 01/10/18 21:42 • (DUP) R3278661-9 01/10/18 21:56

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	ND	0.674	1	0		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3278661-2 01/10/18 07:14 • (LCSD) R3278661-3 01/10/18 07:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sulfate	40.0	39.8	39.8	99.5	99.4	80-120			0.127	15

L962047-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L962047-01 01/10/18 21:42 • (MS) R3278661-5 01/10/18 13:16 • (MSD) R3278661-6 01/10/18 13:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	50.0	ND	52.2	52.6	103	104	1	80-120			0.814	15

L962121-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L962121-01 01/10/18 19:02 • (MS) R3278661-8 01/10/18 19:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	50.0	37.9	87.3	98.7	1	80-120	

Method Blank (MB)

(MB) R3278574-1 01/10/18 13:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Calcium	U		0.046	1.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3278574-2 01/10/18 13:38 • (LCSD) R3278574-3 01/10/18 13:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Calcium	5.00	4.88	4.89	97.7	97.9	80-120			0.177	20

L961908-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961908-01 01/10/18 13:45 • (MS) R3278574-5 01/10/18 13:53 • (MSD) R3278574-6 01/10/18 13:57

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Calcium	5.00	66.8	72.3	73.0	108	123	1	75-125			1.03	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

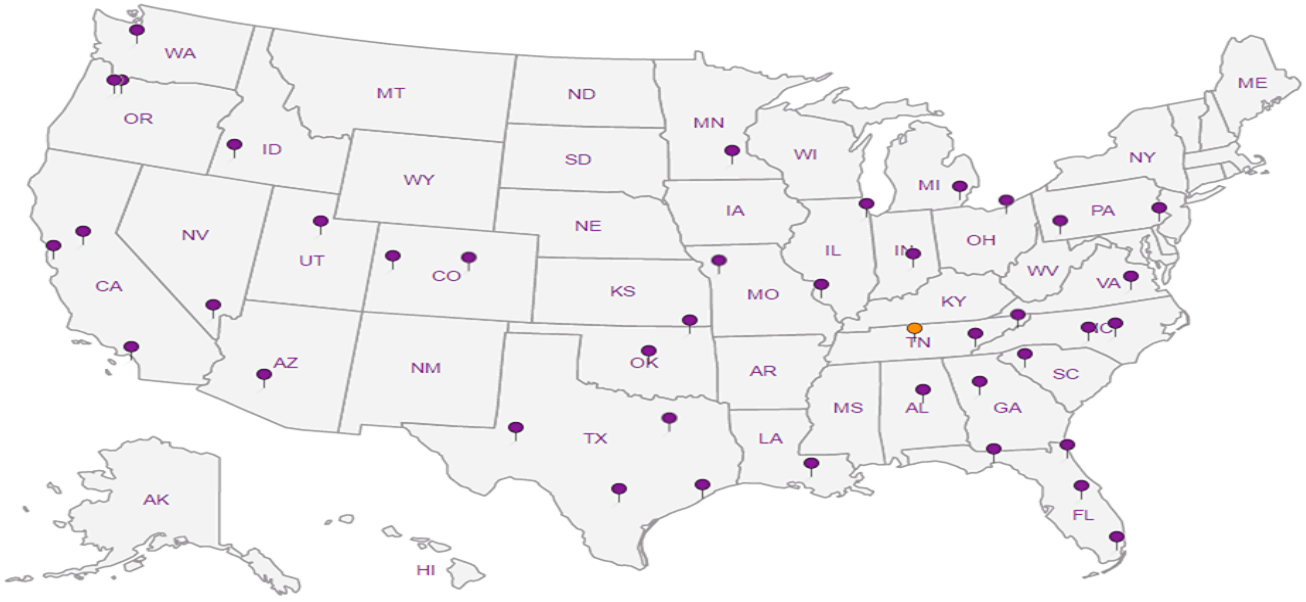
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



AECOM - Kansas City, MO

2380 McGee Suite 200
Kansas City, MO 64108

Billing Information:
Dana Monroe - 1334927
2380 McGee Suite 200
Kansas City, MO 64108

Report to: Alla Skaskevych

Email To: alla.skaskevych@aecom.com; robert.exceen@aecom.com; jay.martin@kcpl.com

Project Description: La Cygne Generating Station

City/State Collected:

Phone: 913-344-1000
Fax: 913-344-1011

Client Project # 60482842

Lab Project # URSKC-LACYGNE

Collected by (print): Terry Andrews

Site/Facility ID # TASK 100

P.O. # PROCESS AS NON-PO

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
✓ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Calcium - 6020 250mlHDPE-HNO3	SULFATE 125mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-902	Grab	GW	—	1/9/18	11:50	1		X		-01
MW-805	"	GW	—	"	12:45	1	X			-02

Chain of Custody Page ___ of ___

ESC

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 962121

H249

Acctnum: URSKC
Template: T130678
Prelogin: P634396
TSR: 206 - Jeff Carr
PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier XSWA

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	1/9/18	13:30	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / (No) HCL / MeoH TBR

Temp: 0.9 °C Bottles Received: 2

Date: 1-10-18 Time: 0915

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

ATTACHMENT 1-2

May 2018 Sampling Event Laboratory Report

ANALYTICAL REPORT

June 04, 2018

SCS Engineers - KS

Sample Delivery Group:	L996935
Samples Received:	05/25/2018
Project Number:	27217233.18
Description:	KCPL - LaCygne Generating Station

Report To: Jason Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

TABLE OF CONTENTS

MW-10 L996935-01 GW

Collected by: Whit Martin | Collected date/time: 05/23/18 11:40 | Received date/time: 05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1116729	1	05/29/18 12:48	05/29/18 13:20	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 04:11	05/31/18 04:11	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 20:56	TRB

MW-13 L996935-02 GW

Collected by: Whit Martin | Collected date/time: 05/23/18 10:40 | Received date/time: 05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1116729	1	05/29/18 12:48	05/29/18 13:20	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 04:27	05/31/18 04:27	MCG
Wet Chemistry by Method 9056A	WG1118331	20	05/31/18 17:42	05/31/18 17:42	MAJ
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 20:59	TRB

MW-14R L996935-03 GW

Collected by: Whit Martin | Collected date/time: 05/23/18 10:00 | Received date/time: 05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 04:57	05/31/18 04:57	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 21:01	TRB

MW-15 L996935-04 GW

Collected by: Whit Martin | Collected date/time: 05/23/18 09:50 | Received date/time: 05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 05:13	05/31/18 05:13	MCG
Wet Chemistry by Method 9056A	WG1118331	5	05/31/18 18:01	05/31/18 18:01	MAJ
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 21:04	TRB

MW-601 L996935-05 GW

Collected by: Whit Martin | Collected date/time: 05/23/18 11:40 | Received date/time: 05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 05:28	05/31/18 05:28	MCG
Wet Chemistry by Method 9056A	WG1116250	5	05/31/18 06:15	05/31/18 06:15	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 21:07	TRB

MW-602 L996935-06 GW

Collected by: Whit Martin | Collected date/time: 05/23/18 10:45 | Received date/time: 05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 06:30	05/31/18 06:30	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 21:09	TRB

MW-801 L996935-07 GW

Collected by	Collected date/time	Received date/time
Whit Martin	05/23/18 12:40	05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 06:45	05/31/18 06:45	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 20:22	TRB

MW-802 L996935-08 GW

Collected by	Collected date/time	Received date/time
Whit Martin	05/23/18 14:00	05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 07:32	05/31/18 07:32	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 21:17	TRB

MW-803 L996935-09 GW

Collected by	Collected date/time	Received date/time
Whit Martin	05/23/18 15:00	05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 07:47	05/31/18 07:47	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 21:20	TRB

MW-804 L996935-10 GW

Collected by	Collected date/time	Received date/time
Whit Martin	05/23/18 14:00	05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 08:02	05/31/18 08:02	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 21:22	TRB

MW-805 L996935-11 GW

Collected by	Collected date/time	Received date/time
Whit Martin	05/23/18 13:15	05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 08:18	05/31/18 08:18	MCG
Wet Chemistry by Method 9056A	WG1116250	10	05/31/18 08:33	05/31/18 08:33	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 21:25	TRB

DUPLICATE 3 L996935-12 GW

Collected by	Collected date/time	Received date/time
Whit Martin	05/23/18 00:00	05/25/18 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1117281	1	05/30/18 14:50	05/30/18 15:22	MMF
Wet Chemistry by Method 9056A	WG1116250	1	05/31/18 09:19	05/31/18 09:19	MCG
Metals (ICP) by Method 6010B	WG1116412	1	05/30/18 11:27	05/30/18 21:28	TRB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jeff Carr
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	589000		10000	1	05/29/2018 13:20	WG1116729

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	57900		1000	1	05/31/2018 04:11	WG1116250
Fluoride	414		100	1	05/31/2018 04:11	WG1116250
Sulfate	26700		5000	1	05/31/2018 04:11	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	910		200	1	05/30/2018 20:56	WG1116412
Calcium	54100		1000	1	05/30/2018 20:56	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1860000		10000	1	05/29/2018 13:20	WG1116729

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	14300		1000	1	05/31/2018 04:27	WG1116250
Fluoride	227		100	1	05/31/2018 04:27	WG1116250
Sulfate	1070000		100000	20	05/31/2018 17:42	WG1118331

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	570		200	1	05/30/2018 20:59	WG1116412
Calcium	248000		1000	1	05/30/2018 20:59	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	548000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	5170		1000	1	05/31/2018 04:57	WG1116250
Fluoride	287		100	1	05/31/2018 04:57	WG1116250
Sulfate	54500		5000	1	05/31/2018 04:57	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	682		200	1	05/30/2018 21:01	WG1116412
Calcium	56900		1000	1	05/30/2018 21:01	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	757000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	15200		1000	1	05/31/2018 05:13	WG1116250
Fluoride	283		100	1	05/31/2018 05:13	WG1116250
Sulfate	209000		25000	5	05/31/2018 18:01	WG1118331

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	270		200	1	05/30/2018 21:04	WG1116412
Calcium	105000		1000	1	05/30/2018 21:04	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	894000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	160000		5000	5	05/31/2018 06:15	WG1116250
Fluoride	1730		100	1	05/31/2018 05:28	WG1116250
Sulfate	ND		5000	1	05/31/2018 05:28	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1880		200	1	05/30/2018 21:07	WG1116412
Calcium	17600		1000	1	05/30/2018 21:07	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	592000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	17600		1000	1	05/31/2018 06:30	WG1116250
Fluoride	1270		100	1	05/31/2018 06:30	WG1116250
Sulfate	23900		5000	1	05/31/2018 06:30	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2390		200	1	05/30/2018 21:09	WG1116412
Calcium	22900		1000	1	05/30/2018 21:09	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	828000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	97100		1000	1	05/31/2018 06:45	WG1116250
Fluoride	1130		100	1	05/31/2018 06:45	WG1116250
Sulfate	ND		5000	1	05/31/2018 06:45	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2170	O1	200	1	05/30/2018 20:22	WG1116412
Calcium	25600	O1	1000	1	05/30/2018 20:22	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	683000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	37500		1000	1	05/31/2018 07:32	WG1116250
Fluoride	1050		100	1	05/31/2018 07:32	WG1116250
Sulfate	ND		5000	1	05/31/2018 07:32	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2500		200	1	05/30/2018 21:17	WG1116412
Calcium	27500		1000	1	05/30/2018 21:17	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	606000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	48900		1000	1	05/31/2018 07:47	WG1116250
Fluoride	649		100	1	05/31/2018 07:47	WG1116250
Sulfate	24400		5000	1	05/31/2018 07:47	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2100		200	1	05/30/2018 21:20	WG1116412
Calcium	42900		1000	1	05/30/2018 21:20	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	551000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	30400		1000	1	05/31/2018 08:02	WG1116250
Fluoride	501		100	1	05/31/2018 08:02	WG1116250
Sulfate	21500		5000	1	05/31/2018 08:02	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1720		200	1	05/30/2018 21:22	WG1116412
Calcium	67800		1000	1	05/30/2018 21:22	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1810000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	424000		10000	10	05/31/2018 08:33	WG1116250
Fluoride	191		100	1	05/31/2018 08:18	WG1116250
Sulfate	660000		50000	10	05/31/2018 08:33	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	517		200	1	05/30/2018 21:25	WG1116412
Calcium	434000		1000	1	05/30/2018 21:25	WG1116412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	754000		10000	1	05/30/2018 15:22	WG1117281

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	97200		1000	1	05/31/2018 09:19	WG1116250
Fluoride	1150		100	1	05/31/2018 09:19	WG1116250
Sulfate	ND		5000	1	05/31/2018 09:19	WG1116250

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2190		200	1	05/30/2018 21:28	WG1116412
Calcium	26200		1000	1	05/30/2018 21:28	WG1116412

Method Blank (MB)

(MB) R3314174-1 05/29/18 13:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		2820	10000

L996791-01 Original Sample (OS) • Duplicate (DUP)

(OS) L996791-01 05/29/18 13:20 • (DUP) R3314174-4 05/29/18 13:20

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2290000	2300000	1	0.437		5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3314174-2 05/29/18 13:20 • (LCSD) R3314174-3 05/29/18 13:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800000	8590000	8610000	97.6	97.8	85.0-115			0.233	5

Method Blank (MB)

(MB) R3314632-1 05/30/18 15:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		2820	10000

L996935-12 Original Sample (OS) • Duplicate (DUP)

(OS) L996935-12 05/30/18 15:22 • (DUP) R3314632-4 05/30/18 15:22

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	754000	784000	1	3.90		5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3314632-2 05/30/18 15:22 • (LCSD) R3314632-3 05/30/18 15:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800000	8560000	8530000	97.3	96.9	85.0-115			0.351	5

Method Blank (MB)

(MB) R3314173-1 05/30/18 23:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	126	J	51.9	1000
Fluoride	U		9.90	100
Sulfate	U		77.4	5000

L996810-02 Original Sample (OS) • Duplicate (DUP)

(OS) L996810-02 05/31/18 00:51 • (DUP) R3314173-4 05/31/18 01:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	50100	50400	1	0.458		15
Fluoride	728	715	1	1.82		15

L996918-05 Original Sample (OS) • Duplicate (DUP)

(OS) L996918-05 05/31/18 03:25 • (DUP) R3314173-5 05/31/18 03:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	24600	24700	1	0.216		15
Sulfate	43300	42800	1	0.991		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3314173-2 05/30/18 23:25 • (LCSD) R3314173-3 05/30/18 23:40

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39200	39200	98.1	98.1	80.0-120			0.00408	15
Fluoride	8000	7840	7840	98.0	98.0	80.0-120			0.0102	15
Sulfate	40000	38500	38500	96.1	96.3	80.0-120			0.204	15

L996918-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L996918-05 05/31/18 03:25 • (MS) R3314173-6 05/31/18 03:56

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	24600	75600	102	1	80.0-120	
Sulfate	50000	43300	85200	83.8	1	80.0-120	

L996935-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L996935-07 05/31/18 06:45 • (MS) R3314173-7 05/31/18 07:01 • (MSD) R3314173-8 05/31/18 07:16

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	97100	144000	142000	94.7	90.0	1	80.0-120	E	E	1.62	15
Fluoride	5000	1130	5910	6020	95.5	97.8	1	80.0-120			1.92	15
Sulfate	50000	ND	48100	49300	92.0	94.3	1	80.0-120			2.35	15

Method Blank (MB)

(MB) R3314570-1 05/31/18 11:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Sulfate	U		77.4	5000

L996949-07 Original Sample (OS) • Duplicate (DUP)

(OS) L996949-07 05/31/18 20:11 • (DUP) R3314570-6 05/31/18 20:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	166000	167000	5	0.316		15

L997865-01 Original Sample (OS) • Duplicate (DUP)

(OS) L997865-01 05/31/18 22:02 • (DUP) R3314570-7 05/31/18 22:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	59100	59200	1	0.233		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3314570-2 05/31/18 12:03 • (LCSD) R3314570-3 05/31/18 12:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Sulfate	40000	39400	37900	98.5	94.8	80.0-120			3.81	15

L997865-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L997865-01 05/31/18 22:02 • (MS) R3314570-8 05/31/18 23:17

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Sulfate	50000	59100	106000	94.5	1	80.0-120	E

Method Blank (MB)

(MB) R3314065-1 05/30/18 20:14

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		12.6	200
Calcium	U		46.3	1000

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3314065-2 05/30/18 20:16 • (LCSD) R3314065-3 05/30/18 20:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Boron	1000	971	976	97.1	97.6	80.0-120			0.481	20
Calcium	10000	10000	10000	100	100	80.0-120			0.480	20

L996935-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L996935-07 05/30/18 20:22 • (MS) R3314065-5 05/30/18 20:27 • (MSD) R3314065-6 05/30/18 20:30

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1000	2170	3150	3150	98.3	98.7	1	75.0-125			0.149	20
Calcium	10000	25600	35000	35300	94.4	97.0	1	75.0-125			0.742	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

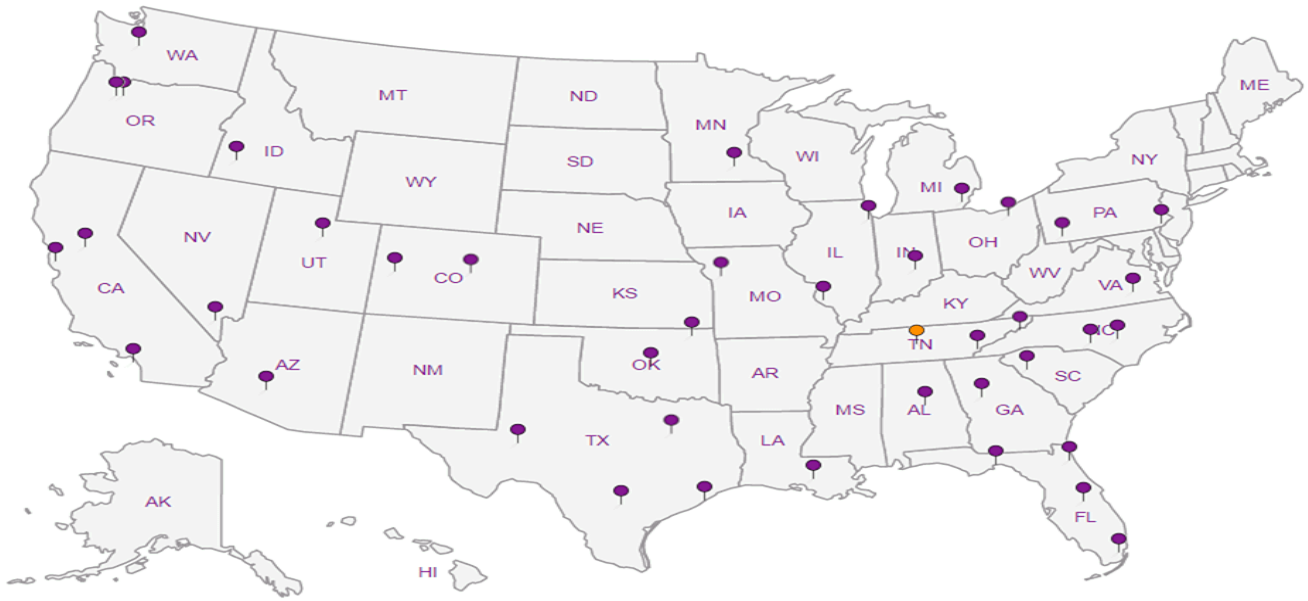
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



SCS Engineers - KS

7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Billing Information:
Accounts Payable
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Pres Chk

Report to: Jason Franks

Email To: jfranks@scsengineers.com; jay.martin@kcpl.com;

Project Description: KCPL - LaCygne Generating Station

City/State Collected: LaCygne, KS

Phone: 913-681-0030
Fax: 913-681-0012

Client Project # 27217233.18

Lab Project # AQUAOPKS-LACYGNE

Collected by (print): Whit Martin

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Std

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions (Cld, F, SO4) 125mlHDPE-NoPres	B, Ca - 6010 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-10	Grab	GW		5/23/18	1140	3	X	X	X		01
MW-13		GW		5/23/18	1040	3	X	X	X		02
MW-14R		GW		5/23/18	1000	3	X	X	X		03
MW-15		GW		5/23/18	0950	3	X	X	X		04
MW-601		GW		5/23/18	1140	3	X	X	X		05
MW-602		GW		5/23/18	1045	3	X	X	X		06
MW-801		GW		5/23/18	1240	3	X	X	X		07
MW-802		GW		5/23/18	1400	3	X	X	X		08
MW-803		GW		5/23/18	1500	3	X	X	X		09
MW-804		GW		5/23/18	1400	3	X	X	X		10

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

ESC
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 946935
M218

Acctnum: AQUAOPKS
Template: T136276
Prelogin: P653905
TSR: 206 - Jeff Carr
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	5/24/18	1415	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.6 °C Bottles Received: 42

Date: 5/25/18 Time: 1005

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

SCS Engineers - KS

7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Report to: Jason Franks

Billing Information:
Accounts Payable
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Pres Chk

Email To: jfranks@scsengineers.com; jay.martin@kcpl.com;

Project Description: KCPL - LaCygne Generating Station

City/State Collected: LaCygne, KS

Phone: 913-681-0030
Fax: 913-681-0012

Client Project # 27217233.18

Lab Project # AQUAOPKS-LACYGNE

Collected by (print): Whit Martin

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Std

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions (Cld, F, SO4) 125mlHDPE-NoPres	B, Ca - 6010 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres								Remarks	Sample # (lab only)
								12										
MW-805	Grab	GW		5/23/18	1315	3	X	X	X									11
801 MS #3	Grab	GW		5/23/18	1250	3	X	X	X									07
801 MSD #3	Grab	GW		5/23/18	1255	3	X	X	X									07
DUPLICATE 3	Grab	GW		5/23/18	—	3	X	X	X									12

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

ESC

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 956935

Table #

Acctnum: AQUAOPKS
Template: T136276
Prelogin: P653905
TSR: 206 - Jeff Carr
PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/24/18	1415	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.1 °C Bottles Received: 42

Date: 5/25/18 Time: 1000

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ATTACHMENT 1-3

July 2018 Sampling Event Laboratory Report

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 19, 2018

SCS Engineers - KS

Sample Delivery Group:	L1008819
Samples Received:	07/12/2018
Project Number:	27217233.18
Description:	KCPL - LaCygne Generating Station

Report To: Jason Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-11 L1008819-01 GW

Collected by: Gabby Penaflok | Collected date/time: 07/11/18 10:40 | Received date/time: 07/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1138084	1	07/16/18 23:15	07/16/18 23:15	MCG
Metals (ICP) by Method 6010B	WG1137343	1	07/13/18 09:49	07/14/18 17:40	WBD

MW-13 L1008819-02 GW

Collected by: Gabby Penaflok | Collected date/time: 07/11/18 13:05 | Received date/time: 07/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1138084	1	07/17/18 00:17	07/17/18 00:17	MCG
Metals (ICP) by Method 6010B	WG1137343	1	07/13/18 09:49	07/14/18 18:21	WBD

MW-804 L1008819-03 GW

Collected by: Gabby Penaflok | Collected date/time: 07/11/18 12:35 | Received date/time: 07/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1138084	1	07/17/18 01:05	07/17/18 01:05	MCG
Metals (ICP) by Method 6010B	WG1137343	1	07/13/18 09:49	07/14/18 18:24	WBD

DUPLICATE 1 L1008819-04 GW

Collected by: Gabby Penaflok | Collected date/time: 07/11/18 10:40 | Received date/time: 07/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1138084	1	07/17/18 01:20	07/17/18 01:20	MCG
Metals (ICP) by Method 6010B	WG1137343	1	07/13/18 09:49	07/14/18 18:26	WBD

MW-902 L1008819-05 GW

Collected by: Gabby Penaflok | Collected date/time: 07/11/18 11:15 | Received date/time: 07/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1137343	1	07/13/18 09:49	07/14/18 18:29	WBD

MW-903 L1008819-06 GW

Collected by: Gabby Penaflok | Collected date/time: 07/11/18 10:25 | Received date/time: 07/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1137343	1	07/13/18 09:49	07/14/18 17:51	WBD

DUPLICATE 2 L1008819-07 GW

Collected by: Gabby Penaflok | Collected date/time: 07/11/18 10:20 | Received date/time: 07/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1137343	1	07/13/18 09:49	07/14/18 18:37	WBD

MW-704 L1008819-08 GW

Collected by: Gabby Penaflok | Collected date/time: 07/11/18 11:30 | Received date/time: 07/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1137760	1	07/14/18 01:05	07/14/18 01:05	MAJ

DUPLICATE 3 L1008819-09 GW

Collected by: Gabby Penaflok
Collected date/time: 07/11/18 11:30
Received date/time: 07/12/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1137214	5	07/14/18 21:49	07/14/18 21:49	MCG

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jeff Carr
Project Manager

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Fluoride	532		100	1	07/16/2018 23:15	WG1138084

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1170		200	1	07/14/2018 17:40	WG1137343

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Fluoride	181		100	1	07/17/2018 00:17	WG1138084

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	533		200	1	07/14/2018 18:21	WG1137343

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Fluoride	449		100	1	07/17/2018 01:05	WG1138084

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1670		200	1	07/14/2018 18:24	WG1137343

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Fluoride	530		100	1	07/17/2018 01:20	WG1138084

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1170		200	1	07/14/2018 18:26	WG1137343

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	69100		1000	1	07/14/2018 18:29	WG1137343

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	371000	V	1000	1	07/14/2018 17:51	WG1137343

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	373000		1000	1	07/14/2018 18:37	WG1137343

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	87100		1000	1	07/14/2018 01:05	WG1137760

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	82800		5000	5	07/14/2018 21:49	WG1137214

Method Blank (MB)

(MB) R3325628-1 07/14/18 12:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Chloride	U		51.9	1000

L1008561-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1008561-01 07/14/18 17:42 • (DUP) R3325628-4 07/14/18 17:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	8250	8260	1	0.176		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3325628-2 07/14/18 13:03 • (LCSD) R3325628-3 07/14/18 13:18

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	38100	38100	95.1	95.2	80.0-120			0.0993	15

L1008561-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1008561-01 07/14/18 17:42 • (MS) R3325628-5 07/14/18 18:13

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	8250	57900	99.3	1	80.0-120	

Method Blank (MB)

(MB) R3325510-1 07/13/18 20:40

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Chloride	U		51.9	1000

L1008471-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1008471-01 07/13/18 23:00 • (DUP) R3325510-4 07/13/18 23:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	4400	4400	1	0.116		15

L1008819-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1008819-08 07/14/18 01:05 • (DUP) R3325510-6 07/14/18 01:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	87100	87000	1	0.148		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3325510-2 07/13/18 20:54 • (LCSD) R3325510-3 07/13/18 21:08

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39100	39100	97.8	97.8	80.0-120			0.00256	15

L1008471-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1008471-01 07/13/18 23:00 • (MS) R3325510-5 07/13/18 23:56

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	4400	55800	103	1	80.0-120	

L1008819-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1008819-08 07/14/18 01:05 • (MS) R3325510-7 07/14/18 01:33 • (MSD) R3325510-8 07/14/18 01:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Chloride	50000	87100	134000	134000	92.9	93.4	1	80.0-120	E	E	0.202	15

Method Blank (MB)

(MB) R3326123-1 07/16/18 16:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Fluoride	U		9.90	100

L1008819-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1008819-01 07/16/18 23:15 • (DUP) R3326123-4 07/16/18 23:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Fluoride	532	600	1	11.9		15

L1009414-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1009414-07 07/17/18 04:40 • (DUP) R3326123-7 07/17/18 04:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Fluoride	ND	0.000	1	0.000		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3326123-2 07/16/18 16:53 • (LCSD) R3326123-3 07/16/18 17:09

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Fluoride	8000	8180	8170	102	102	80.0-120			0.0807	15

L1008819-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1008819-01 07/16/18 23:15 • (MS) R3326123-5 07/16/18 23:46 • (MSD) R3326123-6 07/17/18 00:01

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Fluoride	5000	532	5450	5610	98.4	101	1	80.0-120			2.77	15

L1009414-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1009414-07 07/17/18 04:40 • (MS) R3326123-8 07/17/18 05:11

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Fluoride	5000	ND	5110	102	1	80.0-120	

Method Blank (MB)

(MB) R3325573-1 07/14/18 17:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Boron	U		12.6	200
Calcium	U		46.3	1000

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3325573-2 07/14/18 17:35 • (LCSD) R3325573-3 07/14/18 17:38

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Boron	1000	971	969	97.1	96.9	80.0-120			0.228	20
Calcium	10000	10000	10000	100	100	80.0-120			0.195	20

L1008819-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1008819-01 07/14/18 17:40 • (MS) R3325573-5 07/14/18 17:46 • (MSD) R3325573-6 07/14/18 17:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	1170	2110	2110	93.9	94.3	1	75.0-125			0.164	20
Calcium	10000	56200	65600	65800	94.1	96.6	1	75.0-125			0.378	20

L1008819-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1008819-06 07/14/18 17:51 • (MS) R3325573-7 07/14/18 17:54 • (MSD) R3325573-8 07/14/18 17:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	489	1480	1460	98.9	97.5	1	75.0-125			0.974	20
Calcium	10000	371000	376000	377000	53.6	63.5	1	75.0-125	V	V	0.262	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

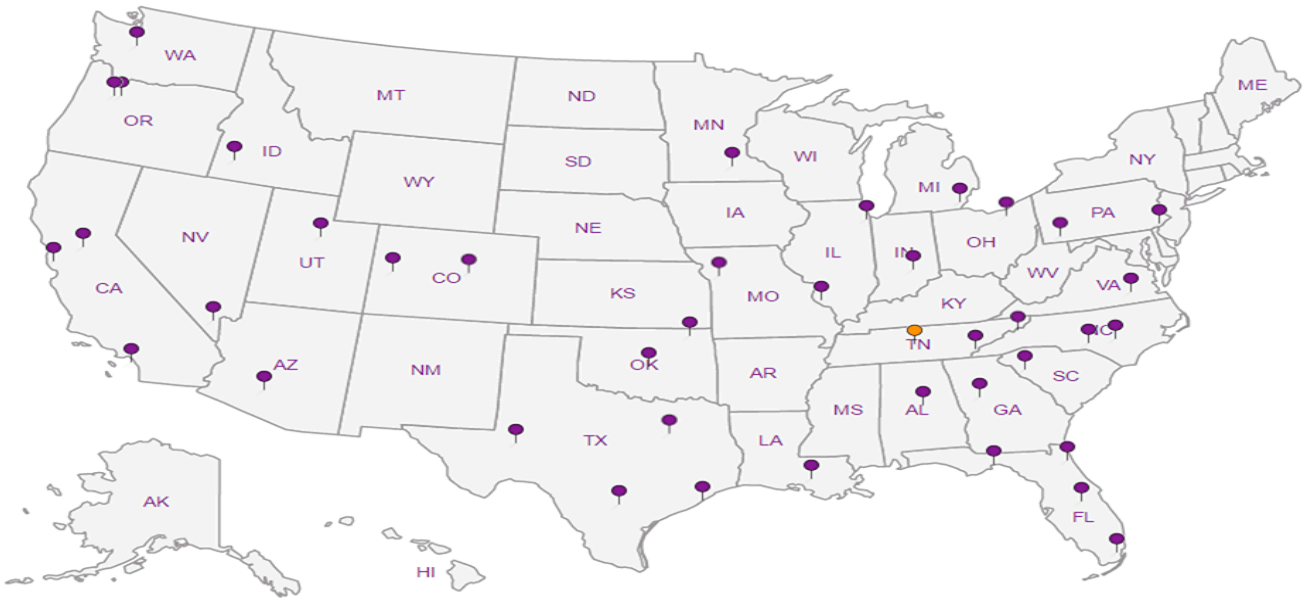
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



SCS Engineers - KS
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Billing Information:
Accounts Payable
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Pres Chk

Report to: Jason Franks

Email To: jfranks@scsengineers.com; jay.martin@kcpl.com;

Project Description: KCPL - LaCygne Generating Station

City/State Collected: LA CYGNE, KS

Phone: 913-681-0030
Fax: 913-681-0012

Client Project # 27217233.18

Lab Project # AQUAOPKS-LACYGNE

Collected by (print): Gabby Penaflor

Site/Facility ID #

P.O. #

Collected by (signature): Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: STD

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Boron - 6010 250mlHDPE-HNO3	Calcium - 6010 250mlHDPE-HNO3	Chloride 125mlHDPE-NoPres	Fluoride 125mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-11	GRAB	GW		7/11/18	1040	2	X			X		-01
MW-13		GW			1305	2	X			X		-02
MW-804		GW			1235	2	X			X		-03
DUPLICATE 1		GW			1040	2	X			X		-04
MS/MSD		GW			1040	2	X			X		
MW-902		GW			1115	1		X				-05
MW-903		GW			1025	1		X				-06
DUPLICATE 2		GW			1020	1		X				-07
MS/MSD		GW			1020	1		X				
MW-704		GW			1130	1			X			-08

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

ESC
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1008819
A003

Acctnum: AQUAOPKS
Template: T136292
Prelogin: P659524
TSR: 206 - Jeff Carr
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH ___ Temp ___
Flow ___ Other ___

Samples returned via:
__ UPS __ FedEx __ Courier __ ___

Tracking # 4361 6933 8720

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.4/9 °C Bottles Received: 17

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	7-11-18	1502	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Date: 7/12/18 Time: 8:45

Chain of Custody Page 2 of 2

SCS Engineers - KS
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Billing Information:
Accounts Payable
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Report to: **Jason Franks**

Email To: jfranks@scsengineers.com; jay.martin@kcpl.com;

Project Description: **KCPL - LaCygne Generating Station**

City/State Collected: LA CYGNE, KS

Phone: **913-681-0030** Fax: **913-681-0012**

Client Project # **27217233.18**

Lab Project # **AQUAOPKS-LACYGNE**

Collected by (print): Gabby Penaflor

Site/Facility ID #

P.O. #

Collected by (signature): Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: STD

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Boron - 6010 250mlHDPE-HNO3	Calcium - 6010 250mlHDPE-HNO3	Chloride 125mlHDPE-NoPres	Fluoride 125mlHDPE-NoPres	Remarks	Sample # (lab only)
DUPLICATE 3	GRAB	GW		7/11/18	1130	1			X			-09
MS/MSD	GRAB	GW		7/11/18	1130	1			X			

Analysis / Container / Preservative: 2 2

L# 1008810
Table #
Acctnum: AQUAOPKS
Template: T136292
Prelogin: P659524
TSR: 206 - Jeff Carr
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ___ FedEx ___ Courier ___ _____

Tracking # 4361 6933 8720

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Trip Blank Received: Yes / (No) HCL / MeoH TBR

Temp: 3.4°C Bottles Received: 17

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	7-11-18	1502	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
			Date: 7/12/18 Time: 8:45

ATTACHMENT 1-4

August 2018 Sampling Event Laboratory Report

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

August 27, 2018

SCS Engineers - KS

Sample Delivery Group:	L1019102
Samples Received:	08/18/2018
Project Number:	27217233.18
Description:	KCPL - LaCygne Generating Station

Report To: Jason Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-13 L1019102-01 GW

Collected by: Gabby Penaflor | Collected date/time: 08/16/18 10:50 | Received date/time: 08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1155538	1	08/23/18 12:53	08/24/18 00:34	TRB

MW-804 L1019102-02 GW

Collected by: Gabby Penaflor | Collected date/time: 08/16/18 12:22 | Received date/time: 08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1155538	1	08/23/18 12:53	08/23/18 23:34	TRB

DUPLICATE 1 L1019102-03 GW

Collected by: Gabby Penaflor | Collected date/time: 08/16/18 12:27 | Received date/time: 08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1155538	1	08/23/18 12:53	08/24/18 00:37	TRB

MW-704 L1019102-04 GW

Collected by: Gabby Penaflor | Collected date/time: 08/16/18 13:26 | Received date/time: 08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1154936	1	08/21/18 01:40	08/21/18 01:40	ELN

DUPLICATE 2 L1019102-05 GW

Collected by: Gabby Penaflor | Collected date/time: 08/16/18 13:31 | Received date/time: 08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1154936	5	08/21/18 02:58	08/21/18 02:58	ELN

MW-903 L1019102-06 GW

Collected by: Gabby Penaflor | Collected date/time: 08/16/18 14:03 | Received date/time: 08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1155538	1	08/23/18 12:53	08/23/18 23:44	TRB

DUPLICATE 3 L1019102-07 GW

Collected by: Gabby Penaflor | Collected date/time: 08/16/18 14:08 | Received date/time: 08/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1155538	1	08/23/18 12:53	08/24/18 00:39	TRB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jeff Carr
Project Manager

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	513		200	1	08/24/2018 00:34	WG1155538

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1760		200	1	08/23/2018 23:34	WG1155538

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1770		200	1	08/24/2018 00:37	WG1155538

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	83300		1000	1	08/21/2018 01:40	WG1154936

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	83200		5000	5	08/21/2018 02:58	WG1154936

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	382000	V	1000	1	08/23/2018 23:44	WG1155538

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	381000		1000	1	08/24/2018 00:39	WG1155538

Method Blank (MB)

(MB) R3335357-1 08/20/18 19:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	128	J	51.9	1000

L1019087-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1019087-09 08/20/18 23:06 • (DUP) R3335357-4 08/20/18 23:22

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1680	1630	1	2.96		15

L1019138-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1019138-01 08/21/18 05:16 • (DUP) R3335357-7 08/21/18 05:32

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	42900	43000	1	0.284		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3335357-2 08/20/18 20:07 • (LCSD) R3335357-3 08/20/18 20:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	38300	38300	95.7	95.7	80.0-120			0.0136	15

L1019102-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019102-04 08/21/18 01:40 • (MS) R3335357-5 08/21/18 01:56 • (MSD) R3335357-6 08/21/18 02:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	83300	129000	129000	91.2	91.5	1	80.0-120	E	E	0.118	15

L1019136-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019136-01 08/21/18 06:18 • (MS) R3335357-8 08/21/18 06:34 • (MSD) R3335357-9 08/21/18 06:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	46300	92000	93000	91.4	93.4	1	80.0-120			1.10	15

Method Blank (MB)

(MB) R3336323-1 08/23/18 23:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Boron	U		12.6	200
Calcium	U		46.3	1000

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3336323-2 08/23/18 23:28 • (LCSD) R3336323-3 08/23/18 23:31

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Boron	1000	991	963	99.1	96.3	80.0-120			2.87	20
Calcium	10000	10200	10100	102	101	80.0-120			0.623	20

L1019102-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019102-02 08/23/18 23:34 • (MS) R3336323-5 08/23/18 23:39 • (MSD) R3336323-6 08/23/18 23:42

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	1760	2700	2730	93.5	97.0	1	75.0-125			1.27	20
Calcium	10000	68600	78500	78200	98.9	95.3	1	75.0-125			0.461	20

L1019102-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1019102-06 08/23/18 23:44 • (MS) R3336323-7 08/23/18 23:47 • (MSD) R3336323-8 08/23/18 23:49

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	469	1480	1490	101	102	1	75.0-125			0.802	20
Calcium	10000	382000	386000	384000	31.2	15.3	1	75.0-125	V	V	0.414	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

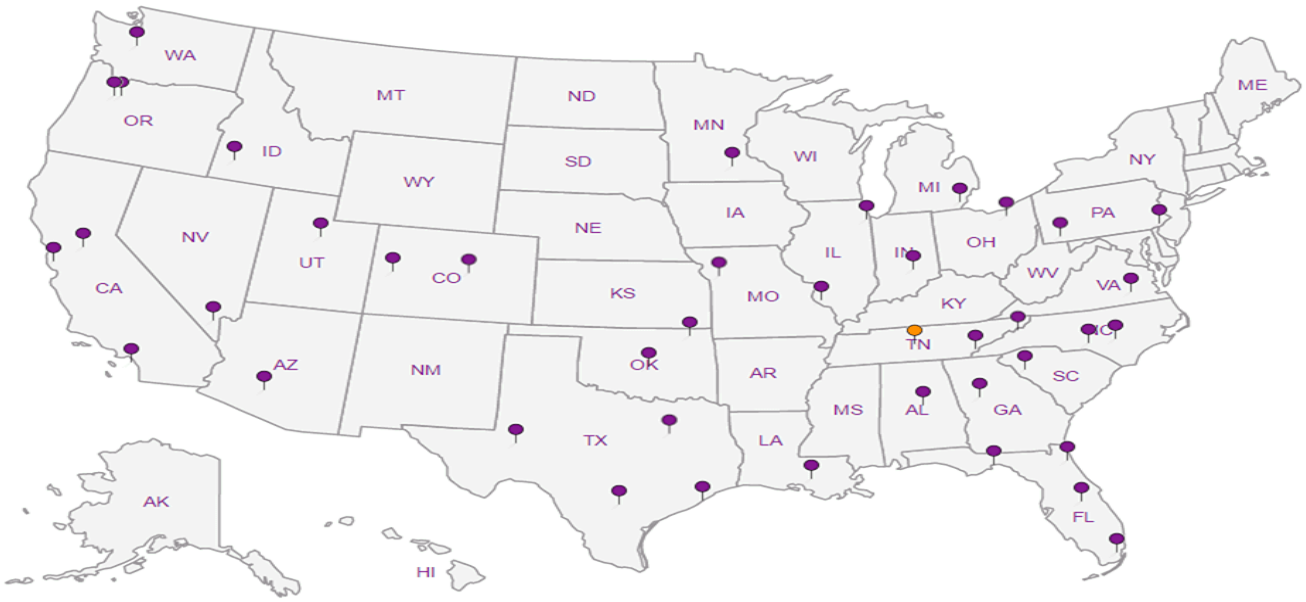
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



SCS Engineers - KS

7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Billing Information:
Accounts Payable
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Pres Chk

Report to:
Jason Franks

Email To: jfranks@scsengineers.com; jay.martin@kcpl.com;

Project Description: **KCPL - LaCygne Generating Station**

City/State Collected:

Phone: 913-681-0030
Fax: 913-681-0012

Client Project # **27217233.18**

Lab Project # **AQUAOPKS-LACYGNE**

Collected by (initials):

Site/Facility ID #

P.O. #

Collected by (signature): Gabby Penaflor

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Standard

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No of Cntrs	Boron - 6010 250mlHDPE-HNO3	Calcium - 6010 250mlHDPE-HNO3	Chloride 125mlHDPE-NoPres							Remarks	Sample # (lab only)
MW-13	GRAB	GW		8/16/18	1050	1	X										01
MW-804		GW			1222	1	X										02
DUPLICATE 1		GW			1227	1	X										03
MS/MSD		GW			1232	1	X										02
MW-704		GW			1326	1			X								04
DUPLICATE 2		GW			1331	1			X								05
MS/MSD		GW			1336	1			X								04
MW-903		GW			1403	1		X									06
DUPLICATE 3		GW			1408	1		X									07
MS/MSD		GW			1413	1		X									06

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 101902
C052
T

Acctnum: **AQUAOPKS**
Template: **T136292**
Prelogin: **P667527**
TSR: **206 - Jeff Carr**
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS V FedEx __ Courier __ _____

Tracking # 4361 6937 7856

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
4.5 NaOH/HR

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
	8/17/18	1327	8-17-18 1330	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.6 °C Bottles Received: 10
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/18/18 Time: 0745

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ATTACHMENT 1-5

November 2018 Sampling Event Laboratory Report

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 12, 2018

SCS Engineers - KS

Sample Delivery Group:	L1049239
Samples Received:	12/04/2018
Project Number:	27217233.18
Description:	KCPL - LaCygne Generating Station

Report To:

Jason Franks
8575 West 110th Street
Suite 100
Overland Park, KS 66210

Entire Report Reviewed By:

Jeff Carr
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-10 L1049239-01 GW

Collected by: Jason R. Franks | Collected date/time: 11/30/18 13:30 | Received date/time: 12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205182	1	12/05/18 11:39	12/05/18 12:05	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 14:44	12/06/18 14:44	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:32	ST

MW-13 L1049239-02 GW

Collected by: Jason R. Franks | Collected date/time: 11/30/18 12:40 | Received date/time: 12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205182	1	12/05/18 11:39	12/05/18 12:05	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 15:01	12/06/18 15:01	ELN
Wet Chemistry by Method 9056A	WG1205591	20	12/07/18 09:38	12/07/18 09:38	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:35	ST

MW-14R L1049239-03 GW

Collected by: Jason R. Franks | Collected date/time: 11/30/18 11:15 | Received date/time: 12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205182	1	12/05/18 11:39	12/05/18 12:05	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 15:34	12/06/18 15:34	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:37	ST

MW-15 L1049239-04 GW

Collected by: Jason R. Franks | Collected date/time: 11/30/18 14:05 | Received date/time: 12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205184	1	12/05/18 12:08	12/05/18 12:44	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 16:08	12/06/18 16:08	ELN
Wet Chemistry by Method 9056A	WG1205591	5	12/07/18 09:55	12/07/18 09:55	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:40	ST

MW-601 L1049239-05 GW

Collected by: Jason R. Franks | Collected date/time: 11/30/18 10:20 | Received date/time: 12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205184	1	12/05/18 12:08	12/05/18 12:44	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 16:25	12/06/18 16:25	ELN
Wet Chemistry by Method 9056A	WG1205591	5	12/06/18 17:19	12/06/18 17:19	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:43	ST

MW-602 L1049239-06 GW

Collected by: Jason R. Franks | Collected date/time: 11/30/18 12:00 | Received date/time: 12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205184	1	12/05/18 12:08	12/05/18 12:44	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 17:36	12/06/18 17:36	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:46	ST

MW-801 L1049239-07 GW

Collected by	Collected date/time	Received date/time
Jason R. Franks	11/30/18 15:00	12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205184	1	12/05/18 12:08	12/05/18 12:44	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 17:53	12/06/18 17:53	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:04	ST

MW-802 L1049239-08 GW

Collected by	Collected date/time	Received date/time
Jason R. Franks	11/30/18 15:45	12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205184	1	12/05/18 12:08	12/05/18 12:44	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 19:01	12/06/18 19:01	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:49	ST

MW-803 L1049239-09 GW

Collected by	Collected date/time	Received date/time
Jason R. Franks	11/30/18 16:10	12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205184	1	12/05/18 12:08	12/05/18 12:44	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 19:18	12/06/18 19:18	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:52	ST

MW-804 L1049239-10 GW

Collected by	Collected date/time	Received date/time
Jason R. Franks	11/30/18 17:25	12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205184	1	12/05/18 12:08	12/05/18 12:44	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 19:34	12/06/18 19:34	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 22:54	ST

MW-805 L1049239-11 GW

Collected by	Collected date/time	Received date/time
Jason R. Franks	11/30/18 16:50	12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205184	1	12/05/18 12:08	12/05/18 12:44	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 19:51	12/06/18 19:51	ELN
Wet Chemistry by Method 9056A	WG1205591	10	12/06/18 20:42	12/06/18 20:42	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 23:03	ST

DUPLICATE 3 L1049239-12 GW

Collected by	Collected date/time	Received date/time
Jason R. Franks	11/30/18 15:05	12/04/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1205184	1	12/05/18 12:08	12/05/18 12:44	AJS
Wet Chemistry by Method 9056A	WG1205591	1	12/06/18 20:59	12/06/18 20:59	ELN
Metals (ICP) by Method 6010B	WG1205167	1	12/04/18 13:27	12/04/18 23:05	ST

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jeff Carr
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	588000		10000	1	12/05/2018 12:05	WG1205182

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	55500		1000	1	12/06/2018 14:44	WG1205591
Fluoride	300		100	1	12/06/2018 14:44	WG1205591
Sulfate	17800		5000	1	12/06/2018 14:44	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	914		200	1	12/04/2018 22:32	WG1205167
Calcium	57500		1000	1	12/04/2018 22:32	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1760000		25000	1	12/05/2018 12:05	WG1205182

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	12800		1000	1	12/06/2018 15:01	WG1205591
Fluoride	191		100	1	12/06/2018 15:01	WG1205591
Sulfate	978000		100000	20	12/07/2018 09:38	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	698		200	1	12/04/2018 22:35	WG1205167
Calcium	209000		1000	1	12/04/2018 22:35	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	563000		10000	1	12/05/2018 12:05	WG1205182

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	5690		1000	1	12/06/2018 15:34	WG1205591
Fluoride	231		100	1	12/06/2018 15:34	WG1205591
Sulfate	65400		5000	1	12/06/2018 15:34	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	812		200	1	12/04/2018 22:37	WG1205167
Calcium	59000		1000	1	12/04/2018 22:37	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	709000		13300	1	12/05/2018 12:44	WG1205184

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	12900		1000	1	12/06/2018 16:08	WG1205591
Fluoride	206		100	1	12/06/2018 16:08	WG1205591
Sulfate	191000		25000	5	12/07/2018 09:55	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	305		200	1	12/04/2018 22:40	WG1205167
Calcium	105000		1000	1	12/04/2018 22:40	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	924000		20000	1	12/05/2018 12:44	WG1205184

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	160000		5000	5	12/06/2018 17:19	WG1205591
Fluoride	1540		100	1	12/06/2018 16:25	WG1205591
Sulfate	5980		5000	1	12/06/2018 16:25	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1850		200	1	12/04/2018 22:43	WG1205167
Calcium	17500		1000	1	12/04/2018 22:43	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	579000		10000	1	12/05/2018 12:44	WG1205184

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	16500		1000	1	12/06/2018 17:36	WG1205591
Fluoride	1090		100	1	12/06/2018 17:36	WG1205591
Sulfate	24200		5000	1	12/06/2018 17:36	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2320		200	1	12/04/2018 22:46	WG1205167
Calcium	23700		1000	1	12/04/2018 22:46	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	832000		20000	1	12/05/2018 12:44	WG1205184

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	92900		1000	1	12/06/2018 17:53	WG1205591
Fluoride	984		100	1	12/06/2018 17:53	WG1205591
Sulfate	ND		5000	1	12/06/2018 17:53	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2210		200	1	12/04/2018 22:04	WG1205167
Calcium	26800		1000	1	12/04/2018 22:04	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	663000		13300	1	12/05/2018 12:44	WG1205184

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	35900		1000	1	12/06/2018 19:01	WG1205591
Fluoride	932		100	1	12/06/2018 19:01	WG1205591
Sulfate	ND		5000	1	12/06/2018 19:01	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2490		200	1	12/04/2018 22:49	WG1205167
Calcium	27800		1000	1	12/04/2018 22:49	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	601000		10000	1	12/05/2018 12:44	WG1205184

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	48700		1000	1	12/06/2018 19:18	WG1205591
Fluoride	566		100	1	12/06/2018 19:18	WG1205591
Sulfate	24500		5000	1	12/06/2018 19:18	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2090		200	1	12/04/2018 22:52	WG1205167
Calcium	44200		1000	1	12/04/2018 22:52	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	550000		10000	1	12/05/2018 12:44	WG1205184

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	32200		1000	1	12/06/2018 19:34	WG1205591
Fluoride	378		100	1	12/06/2018 19:34	WG1205591
Sulfate	19400		5000	1	12/06/2018 19:34	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1750		200	1	12/04/2018 22:54	WG1205167
Calcium	67600		1000	1	12/04/2018 22:54	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2070000		50000	1	12/05/2018 12:44	WG1205184

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	471000		10000	10	12/06/2018 20:42	WG1205591
Fluoride	124		100	1	12/06/2018 19:51	WG1205591
Sulfate	722000		50000	10	12/06/2018 20:42	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	525		200	1	12/04/2018 23:03	WG1205167
Calcium	455000		1000	1	12/04/2018 23:03	WG1205167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	816000		13300	1	12/05/2018 12:44	WG1205184

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	93200		1000	1	12/06/2018 20:59	WG1205591
Fluoride	986		100	1	12/06/2018 20:59	WG1205591
Sulfate	ND		5000	1	12/06/2018 20:59	WG1205591

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	2230		200	1	12/04/2018 23:05	WG1205167
Calcium	27400		1000	1	12/04/2018 23:05	WG1205167

Method Blank (MB)

(MB) R3365983-1 12/05/18 12:05

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		2820	10000

L1048864-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1048864-03 12/05/18 12:05 • (DUP) R3365983-3 12/05/18 12:05

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	390000	388000	1	0.514		5

Laboratory Control Sample (LCS)

(LCS) R3365983-2 12/05/18 12:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8520000	96.8	85.0-115	

Method Blank (MB)

(MB) R3365976-1 12/05/18 12:44

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		2820	10000

L1049217-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1049217-01 12/05/18 12:44 • (DUP) R3365976-3 12/05/18 12:44

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	304000	313000	1	2.92		5

Laboratory Control Sample (LCS)

(LCS) R3365976-2 12/05/18 12:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8630000	98.1	85.0-115	

Method Blank (MB)

(MB) R3366155-1 12/06/18 11:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	233	J	51.9	1000
Fluoride	U		9.90	100
Sulfate	U		77.4	5000

L1049239-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1049239-03 12/06/18 15:34 • (DUP) R3366155-3 12/06/18 15:51

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5690	5730	1	0.678		15
Fluoride	231	268	1	14.9		15
Sulfate	65400	65400	1	0.0629		15

L1049379-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1049379-01 12/07/18 00:22 • (DUP) R3366155-6 12/07/18 00:39

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3800	3790	1	0.200		15
Fluoride	ND	54.2	1	24.4	J P1	15
Sulfate	7380	7420	1	0.537		15

Laboratory Control Sample (LCS)

(LCS) R3366155-2 12/06/18 11:55

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38100	95.3	80.0-120	
Fluoride	8000	7760	97.0	80.0-120	
Sulfate	40000	37800	94.5	80.0-120	

L1049239-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1049239-07 12/06/18 17:53 • (MS) R3366155-4 12/06/18 18:10 • (MSD) R3366155-5 12/06/18 18:27

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Fluoride	5000	984	5870	5870	97.8	97.6	1	80.0-120			0.124	15
Sulfate	50000	ND	48700	48400	95.6	95.1	1	80.0-120			0.573	15

L1049379-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1049379-01 12/07/18 00:22 • (MS) R3366155-7 12/07/18 00:56

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	3800	53100	98.6	1	80.0-120	
Fluoride	5000	ND	4910	97.3	1	80.0-120	
Sulfate	50000	7380	57000	99.2	1	80.0-120	

Method Blank (MB)

(MB) R3365244-1 12/04/18 21:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Boron	U		12.6	200
Calcium	U		46.3	1000

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3365244-2 12/04/18 21:59 • (LCSD) R3365244-3 12/04/18 22:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Boron	1000	985	970	98.5	97.0	80.0-120			1.57	20
Calcium	10000	10000	9810	100	98.1	80.0-120			1.92	20

L1049239-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1049239-07 12/04/18 22:04 • (MS) R3365244-5 12/04/18 22:10 • (MSD) R3365244-6 12/04/18 22:12

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	2210	3140	3180	93.4	96.8	1	75.0-125			1.07	20
Calcium	10000	26800	36500	36800	96.9	100	1	75.0-125			0.845	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

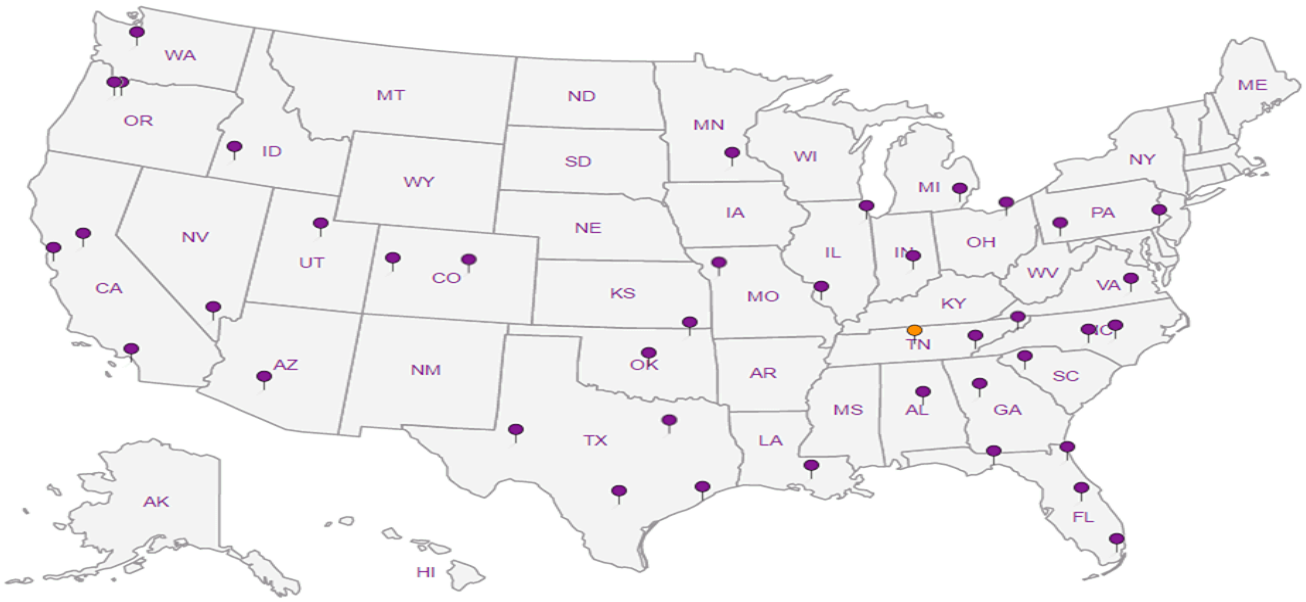
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



SCS Engineers - KS

8575 West 110th Street
Suite 100
Overland Park, KS 66210

Billing Information:
Accounts Payable
8575 West 110th Street
Suite 100
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Pres Chk

Report to: Jason Franks

Email To: jfranks@scsengineers.com; jay.martin@kcpl.com;

Project Description: KCPL - LaCygne Generating Station

City/State Collected: LaCygne, KS

Phone: 913-681-0030
Fax: 913-681-0012

Client Project # 27217233.18

Lab Project # AQUAOPKS-LACYGNE

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature): Jason R Franks

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions (Cld, F, SO4) 125mlHDPE-NoPres	B, Ca - 6010 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-10	GRAB	GW		11/30/18	1330	3	X	X	X		-01
MW-13		GW			1240	3	X	X	X		-02
MW-14R		GW			1115	3	X	X	X		-03
MW-15		GW			1405	3	X	X	X		-04
MW-601		GW			1020	3	X	X	X		-05
MW-602		GW			1200	3	X	X	X		-06
MW-801		GW			1500	3	X	X	X		-07
MW-802		GW			1545	3	X	X	X		-08
MW-803		GW			1610	3	X	X	X		-09
MW-804		GW			1725	3	X	X	X		-10

Chain of Custody Page 1 of 2

Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1049239

C106

Acctnum: AQUAOPKS
Template: T136276
Prelogin: P679781
TSR: 206 - Jeff Carr
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # Southwest

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Jason R Franks	12/03/18	1342	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes (No) HCL / MeoH TBR
0

Temp: 0.2 -0.1 = 0.1 °C Bottles Received: 42

Date: 12/4/18 Time: 8:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

SCS Engineers - KS
8575 West 110th Street
Suite 100
Overland Park, KS 66210

Billing Information:
Accounts Payable
8575 West 110th Street
Suite 100
Overland Park, KS 66210

Pres Chk

Report to: Jason Franks

Email To: jfranks@scsengineers.com; jay.martin@kcpl.com;

Project Description: KCPL - LaCygne Generating Station

City/State Collected: LaCygne, KS

Phone: 913-681-0030
Fax: 913-681-0012

Client Project # 27217233.18

Lab Project # AQUAOPKS-LACYGNE

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y ✓

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions (Cld, F, SO4) 125mlHDPE-NoPres	B, Ca - 6010 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-805	GRAB	GW		11/30/18	1650	3	X	X	X		-11
801 MS		GW			1510	3	X	X	X		
801 MSD		GW			1515	3	X	X	X		
DUPLICATE 3		GW			1505	3	X	X	X		-12

Chain of Custody Page 2 of 2

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1049239

Table #

Acctnum: AQUAOPKS
Template: T136276
Prelogin: P679781
TSR: 206 - Jeff Carr
PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH ___ Temp ___
Flow ___ Other ___

Samples returned via:
__ UPS __ FedEx __ Courier ___

Tracking # Southwest

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	12/03/18	1242	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Date: 12/4/18 Time: 42

Trip Blank Received: Yes (No) HCL / MeoH TBR
0

Temp: °C Bottles Received: 42
6.2 - 0.1 = 6.1°C

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ATTACHMENT 2

Statistical Analyses

ATTACHMENT 2-1

Fall 2017 Semiannual Detection Monitoring Statistical Analyses

MEMORANDUM

June 04, 2018

To: La Cygne Generating Station
25166 East 2200 Road
La Cygne, Kansas 66040
Kansas City Power & Light Company

From: SCS Engineers

RE: Revision to January 15, 2018 Memorandum
Determination of Statistically Significant Increases
CCR Landfill and Lower AQC Impoundment

Statistical analysis of monitoring data from the multiunit groundwater monitoring system for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station has been completed in substantial compliance with the "Statistical Method Certification By A Qualified Professional Engineer" dated October 12, 2017. Groundwater samples were collected and analyzed by October 17, 2017. A statistical analysis was conducted to determine whether there is a statistically significant increase over background values for each constituent listed in Appendix III to Part 257-Constituents for Detection Monitoring.

The completed statistical evaluation identified an Appendix III constituent, pH, below its lower prediction limit in monitoring well MW-601. The lower prediction limit for pH in monitoring well MW-601 is 7.61 standard units (S.U.). The detection monitoring sample was reported at 7.53 S.U. The first verification re-sample was collected on January 9, 2018 with a result of 7.41 S.U., which is still below the lower prediction limit. Therefore, in accordance with the Statistical Method Certification, the detection monitoring sample for pH from monitoring well MW-601 is below its lower prediction limit and is a confirmed statistically significant decrease below background; unless, a second verification re-sample is collected and is above the lower prediction limit.

Attached to this memorandum are the following backup information:

Attachment 1: Sanitas™ Output:
Statistical evaluation output from Sanitas™ for the prediction limit analysis. This includes prediction limit plots, prediction limit background data, detection sample result, 1st verification re-sample result (when applicable), 2nd verification re-sample result (when applicable), extra sample result for quality control (if applicable), and a Prediction Limit summary table. Output documentation includes the analytical data used for the statistical analyses.

Attachment 2: Sanitas™ Configuration Settings:
Screen shots of the applicable Sanitas™ configuration settings for the statistical prediction limit analysis. This includes data configuration, output configuration, prediction limit configuration and other tests configuration.

Revision Number	Revision Date	Attachment Revised	Summary of Revisions
1	1/22/2018	Cover letter	Revision table added. No changes to text regarding statistical analyses. Attachment 1 description was revised to match the revisions made in the attachment.
1	1/22/2018	Attachment 1	Arsenic data was inadvertently included in the Sanitas™ Output and was therefore removed from the output. Arsenic is not required for detection monitoring. Some samples previously identified as verification re-samples are now more appropriately identified as "extra samples". These samples were taken as part of the quality control process, and were not required as part of verification re-sampling.
2	6/04/2018	Attachment 1	The prediction limit plots, input tables, and summary table for Dissolved Solids was not include with the Sanitas™ Output. These data were added to the end of Attachment 1.

La Cygne Generating Station
Determination of Statistically Significant Increases
CCR Landfill and Lower AQC Impoundment
June 04, 2018

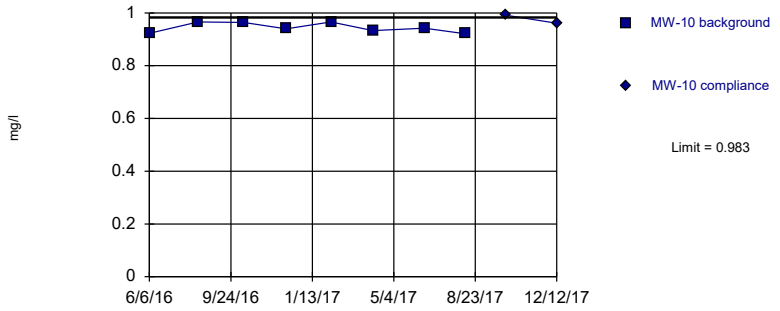
ATTACHMENT 1

Sanitas™ Output

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.944, Std. Dev.=0.0188, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.867, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

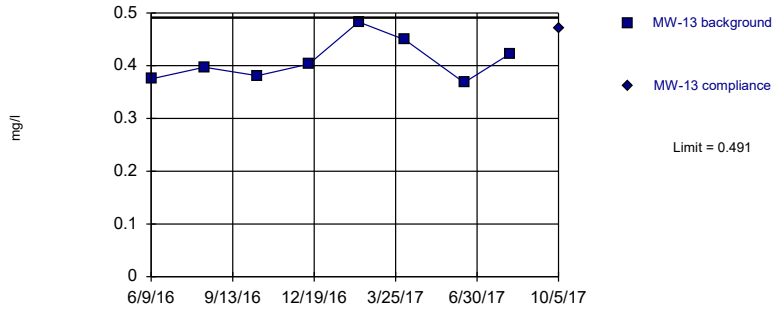
Constituent: BORON Analysis Run 1/18/2018 2:27 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.41, Std. Dev.=0.0397, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.915, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

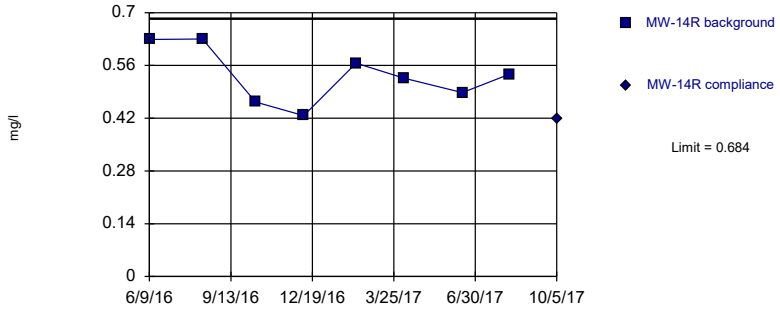
Constituent: BORON Analysis Run 1/18/2018 2:27 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.533, Std. Dev.=0.0736, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.947, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

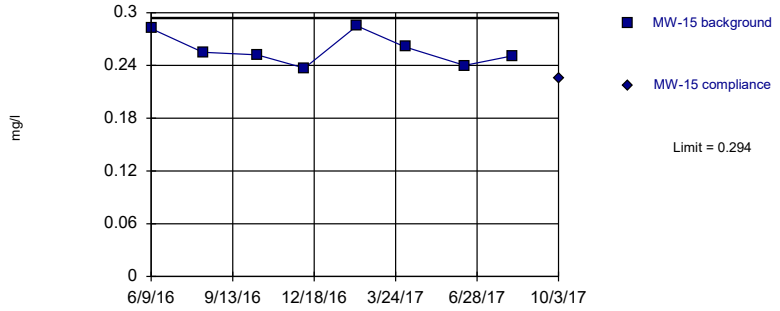
Constituent: BORON Analysis Run 1/18/2018 2:27 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.258, Std. Dev.=0.0176, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.901, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10	
6/6/2016	0.923		
8/11/2016	0.966		
10/12/2016	0.964		
12/9/2016	0.94		
2/8/2017	0.966		
4/6/2017	0.933		
6/15/2017	0.942		
8/10/2017	0.921		
10/4/2017		0.991	
12/12/2017		0.961	1st verification re-sample

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	0.375	
8/11/2016	0.397	
10/13/2016	0.381	
12/13/2016	0.403	
2/10/2017	0.483	
4/6/2017	0.449	
6/15/2017	0.368	
8/8/2017	0.422	
10/5/2017		0.47

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	0.629	
8/11/2016	0.63	
10/13/2016	0.463	
12/9/2016	0.427	
2/9/2017	0.566	
4/7/2017	0.526	
6/15/2017	0.488	
8/10/2017	0.537	
10/5/2017		0.42

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

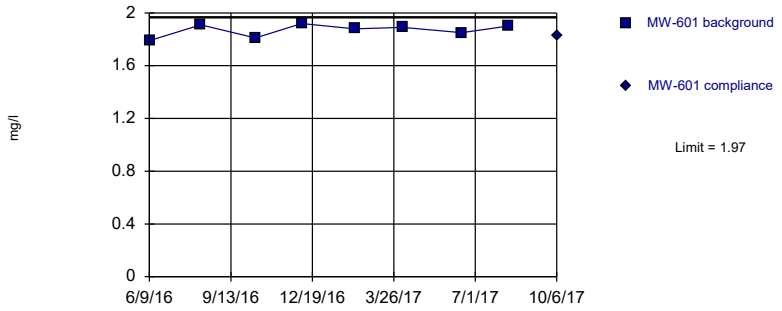
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	0.282	
8/9/2016	0.255	
10/12/2016	0.252	
12/7/2016	0.237	
2/7/2017	0.285	
4/5/2017	0.261	
6/14/2017	0.24	
8/10/2017	0.251	
10/3/2017		0.225

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.87, Std. Dev.=0.0476, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

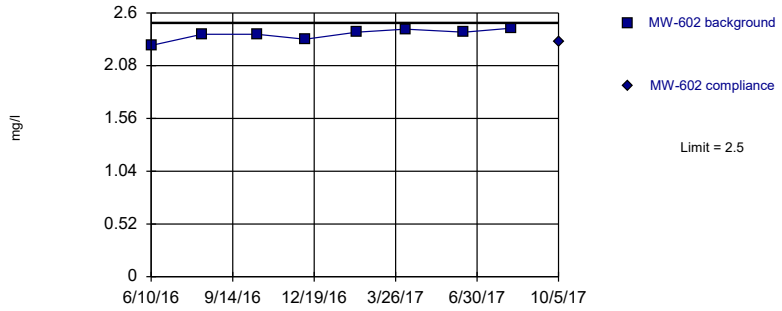
Constituent: BORON Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.39, Std. Dev.=0.0554, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.901, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

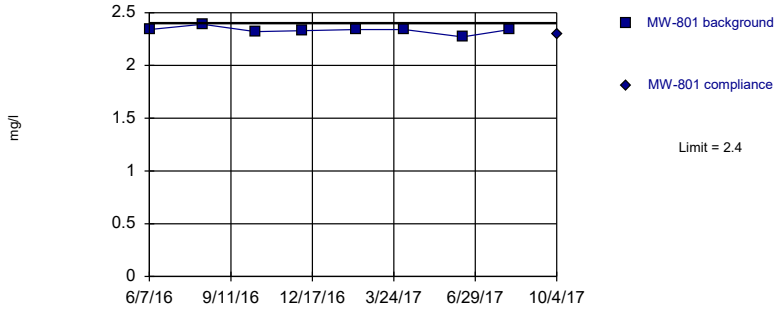
Constituent: BORON Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.33, Std. Dev.=0.0329, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.858, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

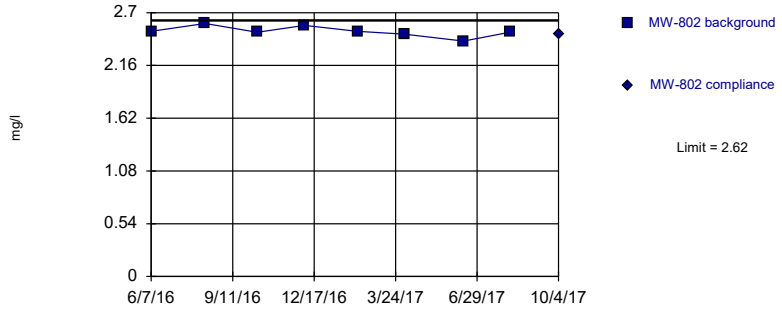
Constituent: BORON Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.51, Std. Dev.=0.0549, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.926, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	1.79	
8/9/2016	1.91	
10/13/2016	1.81	
12/7/2016	1.92	
2/8/2017	1.88	
4/6/2017	1.89	
6/15/2017	1.85	
8/9/2017	1.9	
10/6/2017		1.83

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	2.28	
8/9/2016	2.39	
10/13/2016	2.39	
12/9/2016	2.34	
2/8/2017	2.41	
4/7/2017	2.44	
6/15/2017	2.41	
8/10/2017	2.45	
10/5/2017		2.31

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	2.34	
8/9/2016	2.39	
10/11/2016	2.32	
12/6/2016	2.33	
2/7/2017	2.34	
4/6/2017	2.34	
6/14/2017	2.27	
8/9/2017	2.34	
10/4/2017		2.3

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

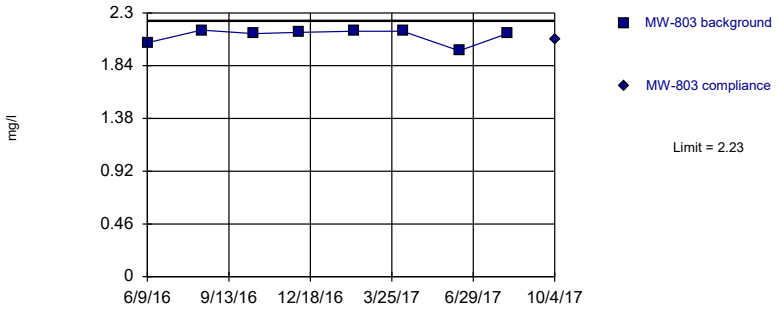
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	2.51	
8/10/2016	2.59	
10/11/2016	2.5	
12/6/2016	2.57	
2/7/2017	2.51	
4/4/2017	2.48	
6/13/2017	2.41	
8/7/2017	2.5	
10/4/2017		2.48

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.1, Std. Dev.=0.0631, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.75, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

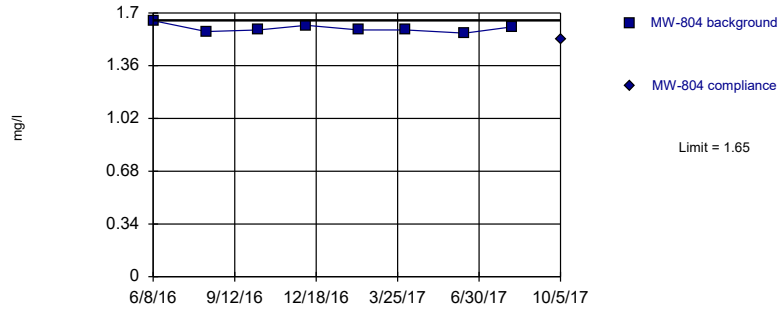
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.6, Std. Dev.=0.0256, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.906, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

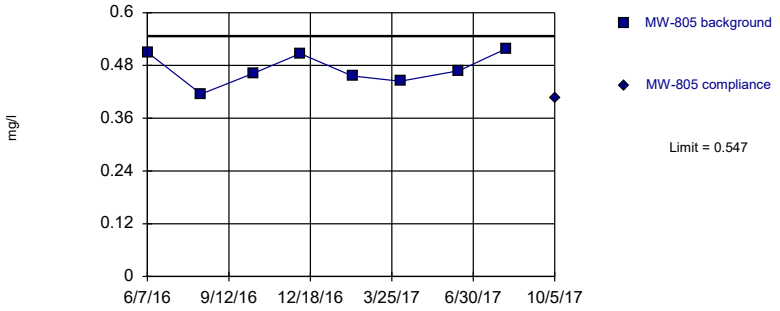
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.473, Std. Dev.=0.0362, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.93, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

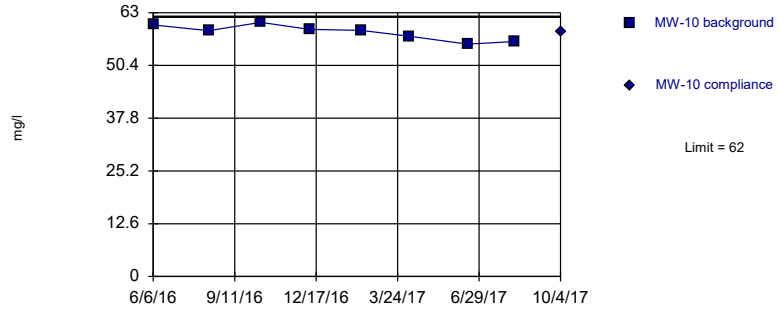
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=58.3, Std. Dev.=1.83, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.943, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	2.04	
8/12/2016	2.15	
10/13/2016	2.12	
12/6/2016	2.13	
2/8/2017	2.14	
4/7/2017	2.14	
6/13/2017	1.97	
8/9/2017	2.12	
10/4/2017		2.07

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	1.65	
8/10/2016	1.58	
10/11/2016	1.59	
12/7/2016	1.62	
2/7/2017	1.59	
4/4/2017	1.59	
6/13/2017	1.57	
8/8/2017	1.61	
10/5/2017		1.53

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	0.51	
8/10/2016	0.415	
10/11/2016	0.462	
12/6/2016	0.507	
2/6/2017	0.456	
4/4/2017	0.444	
6/13/2017	0.468	
8/8/2017	0.518	
10/5/2017		0.406

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

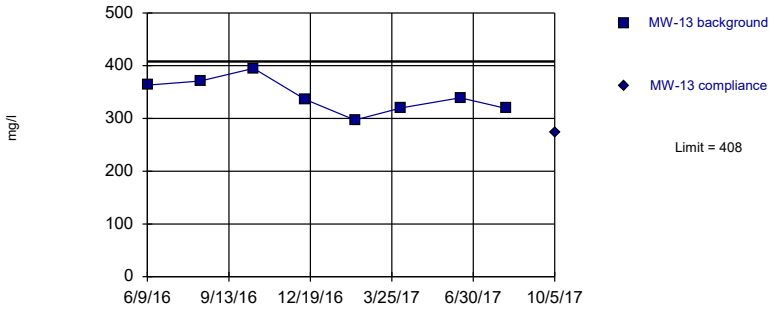
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	60.1	
8/11/2016	58.7	
10/12/2016	60.7	
12/9/2016	59	
2/8/2017	58.8	
4/6/2017	57.4	
6/15/2017	55.5	
8/10/2017	56.1	
10/4/2017		58.4

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=343, Std. Dev.=32, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.97, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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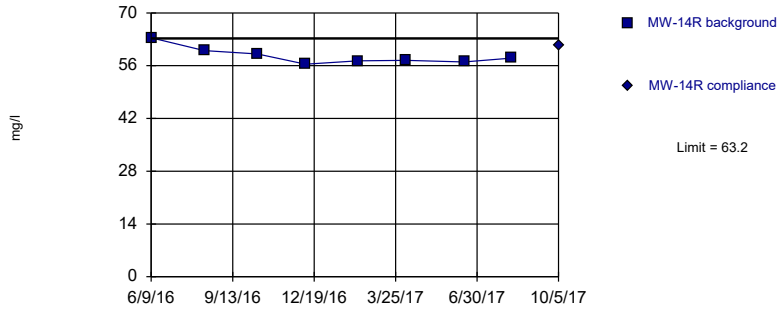
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=58.6, Std. Dev.=2.27, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.847, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

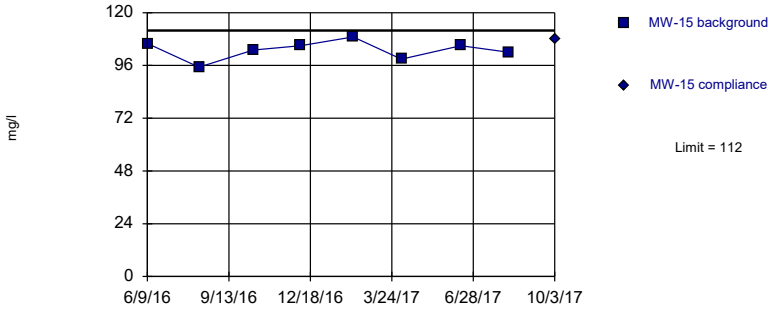
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=103, Std. Dev.=4.34, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.959, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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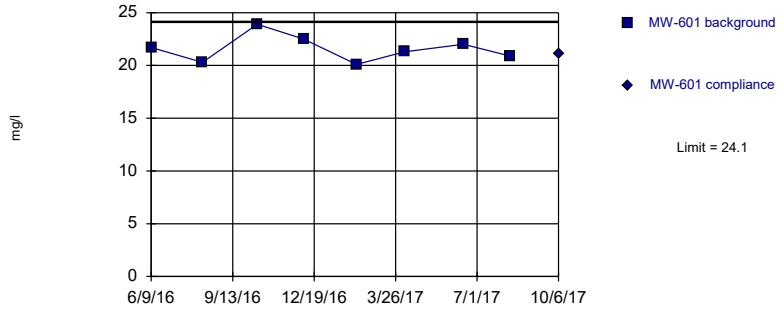
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=21.6, Std. Dev.=1.24, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.955, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	363	
8/11/2016	371	
10/13/2016	395	
12/13/2016	336	
2/10/2017	297	
4/6/2017	320	
6/15/2017	339	
8/8/2017	319	
10/5/2017		274

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	63.4	
8/11/2016	60	
10/13/2016	59.1	
12/9/2016	56.4	
2/9/2017	57.3	
4/7/2017	57.4	
6/15/2017	57	
8/10/2017	58	
10/5/2017		61.5

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	106	
8/9/2016	95.2	
10/12/2016	103	
12/7/2016	105	
2/7/2017	109	
4/5/2017	98.9	
6/14/2017	105	
8/10/2017	102	
10/3/2017		108

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

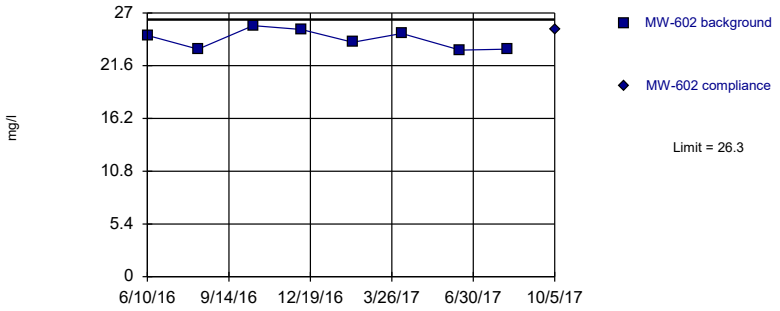
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	21.7	
8/9/2016	20.3	
10/13/2016	23.9	
12/7/2016	22.5	
2/8/2017	20.1	
4/6/2017	21.3	
6/15/2017	22	
8/9/2017	20.9	
10/6/2017		21.1

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=24.3, Std. Dev.=0.984, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.895, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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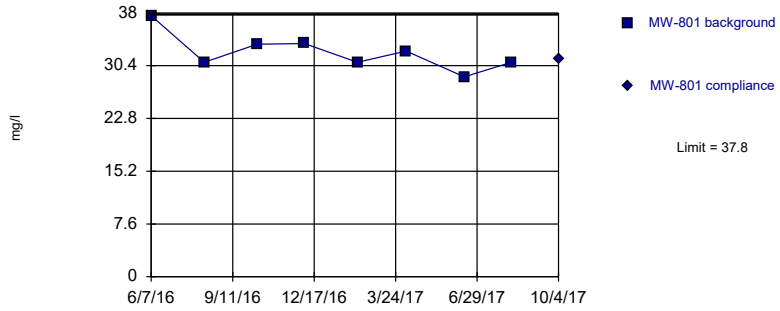
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=32.3, Std. Dev.=2.66, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.915, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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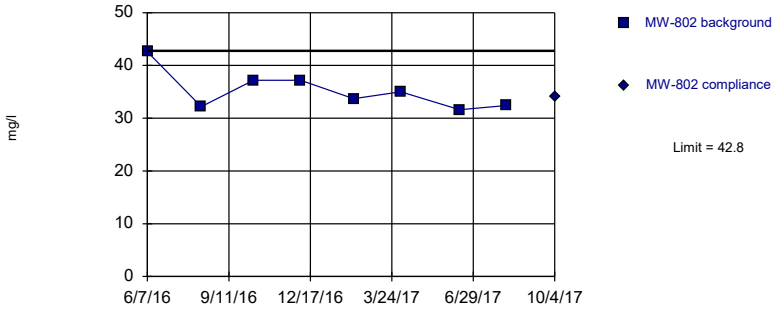
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=35.2, Std. Dev.=3.68, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.883, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

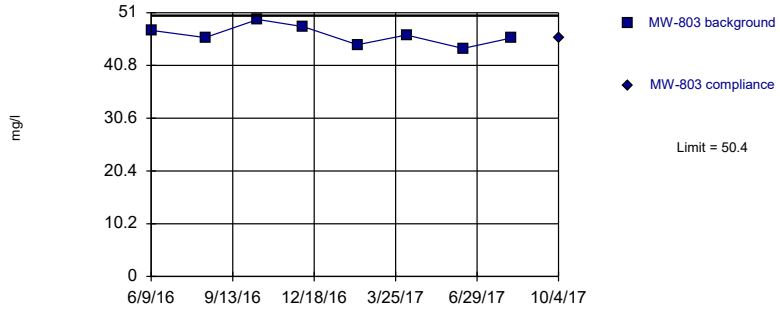
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=46.7, Std. Dev.=1.83, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.981, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	24.7	
8/9/2016	23.3	
10/13/2016	25.7	
12/9/2016	25.3	
2/8/2017	24	
4/7/2017	24.9	
6/15/2017	23.2	
8/10/2017	23.3	
10/5/2017		25.3

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	37.6	
8/9/2016	30.9	
10/11/2016	33.5	
12/6/2016	33.6	
2/7/2017	30.9	
4/6/2017	32.5	
6/14/2017	28.8	
8/9/2017	30.9	
10/4/2017		31.4

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	42.6	
8/10/2016	32.2	
10/11/2016	37.2	
12/6/2016	37.2	
2/7/2017	33.7	
4/4/2017	35	
6/13/2017	31.6	
8/7/2017	32.4	
10/4/2017		34.1

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

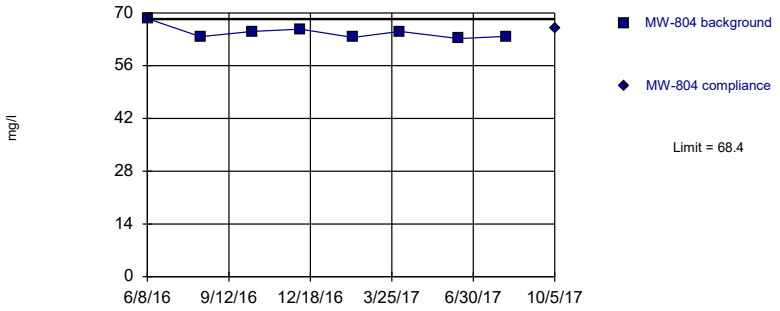
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	47.6	
8/12/2016	46.2	
10/13/2016	49.7	
12/6/2016	48.3	
2/8/2017	44.8	
4/7/2017	46.7	
6/13/2017	44.1	
8/9/2017	46.1	
10/4/2017		46.1

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=64.8, Std. Dev.=1.74, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.843, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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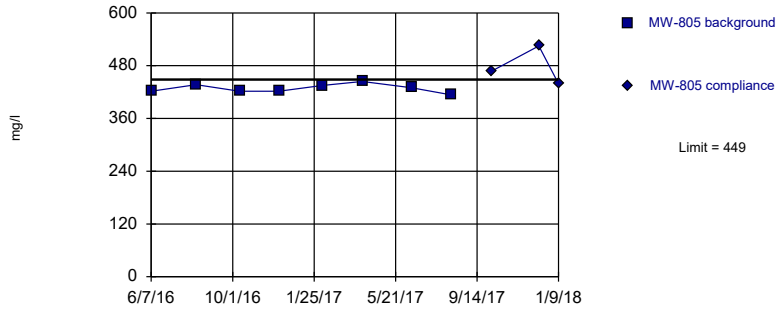
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=428, Std. Dev.=9.95, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.946, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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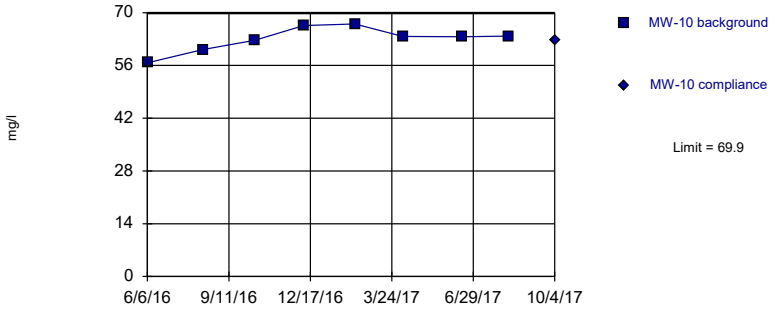
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=63, Std. Dev.=3.34, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.916, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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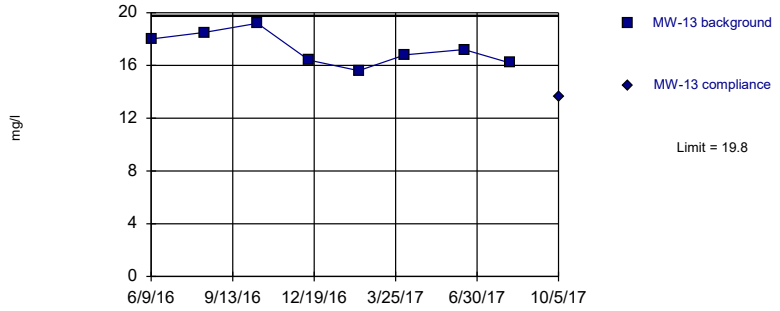
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=17.2, Std. Dev.=1.24, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.964, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	68.5	
8/10/2016	63.7	
10/11/2016	65.1	
12/7/2016	65.7	
2/7/2017	63.5	
4/4/2017	65.1	
6/13/2017	63.2	
8/8/2017	63.8	
10/5/2017		65.9

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805	
6/7/2016	422		
8/10/2016	437		
10/11/2016	422		
12/6/2016	422		
2/6/2017	435		
4/4/2017	444		
6/13/2017	430		
8/8/2017	414		
10/5/2017		467	
12/12/2017		525	1st verification re-samle
1/9/2018		439	2nd verification re-sample

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	56.7	
8/11/2016	60.2	
10/12/2016	62.7	
12/9/2016	66.6	
2/8/2017	67	
4/6/2017	63.7	
6/15/2017	63.6	
8/10/2017	63.8	
10/4/2017		62.8

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

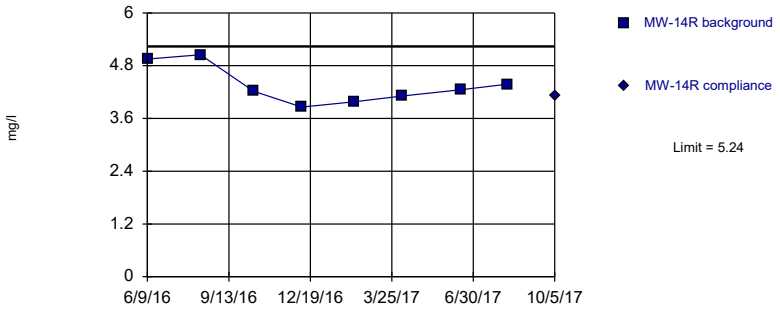
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	18	
8/11/2016	18.5	
10/13/2016	19.2	
12/13/2016	16.4	
2/10/2017	15.6	
4/6/2017	16.8	
6/15/2017	17.2	
8/8/2017	16.2	
10/5/2017		13.6

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.35, Std. Dev.=0.433, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.882, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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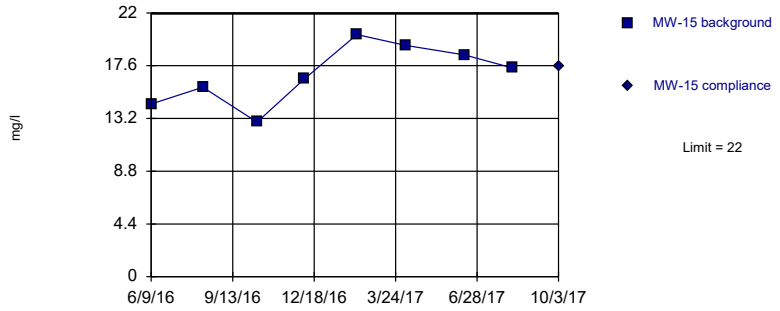
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=16.9, Std. Dev.=2.48, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.978, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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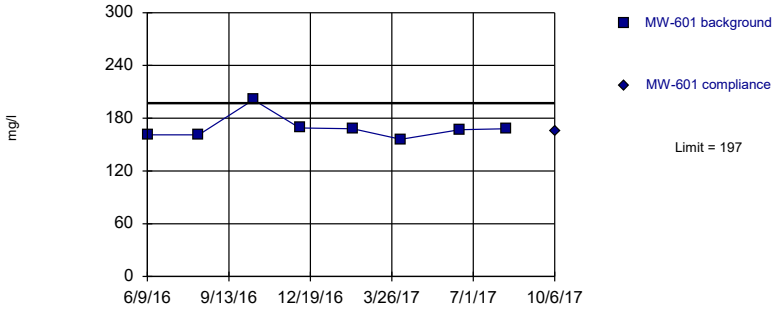
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=5.13, Std. Dev.=0.0768, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.754, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

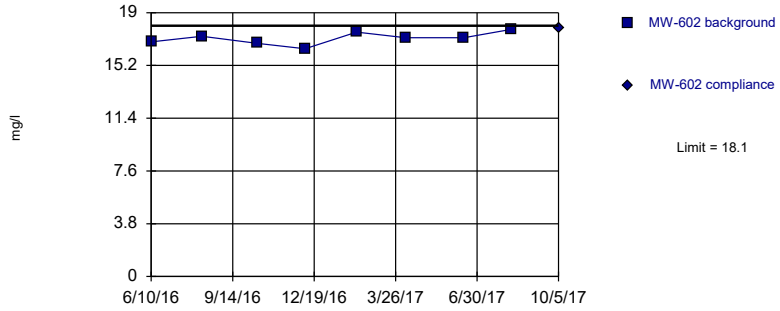
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=17.2, Std. Dev.=0.447, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.978, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	4.95	
8/11/2016	5.05	
10/13/2016	4.22	
12/9/2016	3.86	
2/9/2017	3.98	
4/7/2017	4.11	
6/15/2017	4.25	
8/10/2017	4.38	
10/5/2017		4.12

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	14.4	
8/9/2016	15.8	
10/12/2016	12.9	
12/7/2016	16.5	
2/7/2017	20.2	
4/5/2017	19.3	
6/14/2017	18.5	
8/10/2017	17.4	
10/3/2017		17.5

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	161	
8/9/2016	161	
10/13/2016	201	
12/7/2016	169	
2/8/2017	168	
4/6/2017	156	
6/15/2017	167	
8/9/2017	168	
10/6/2017		166

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

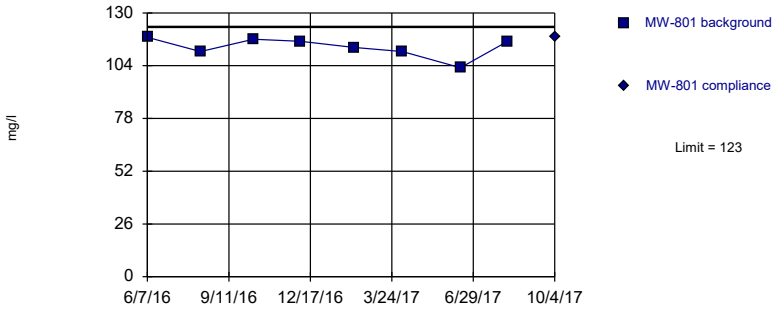
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	16.9	
8/9/2016	17.3	
10/13/2016	16.8	
12/9/2016	16.4	
2/8/2017	17.6	
4/7/2017	17.2	
6/15/2017	17.2	
8/10/2017	17.8	
10/5/2017		17.9

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=113, Std. Dev.=4.88, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.865, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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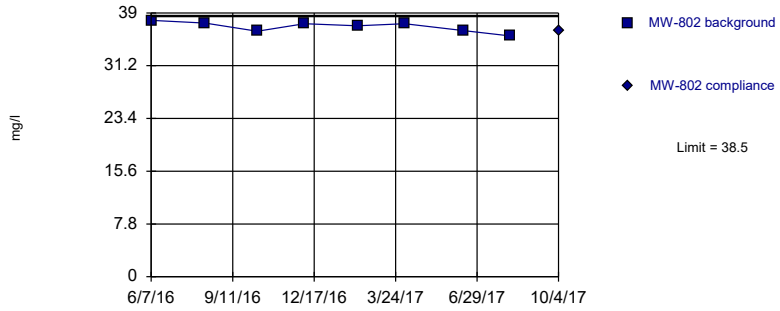
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=37, Std. Dev.=0.773, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.922, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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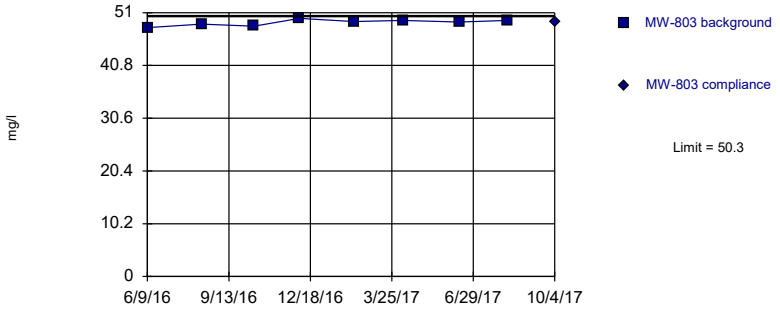
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=49.1, Std. Dev.=0.608, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.946, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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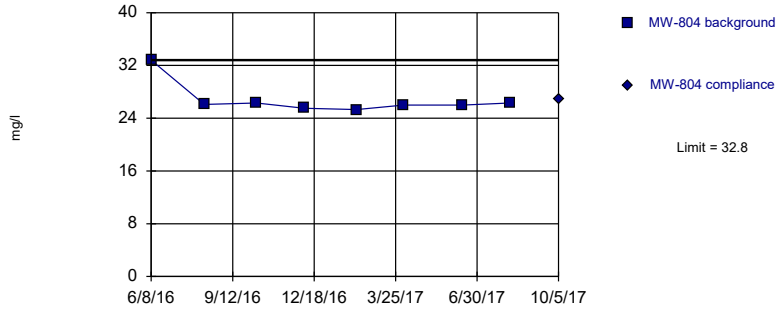
Within Limit

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 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	118	
8/9/2016	111	
10/11/2016	117	
12/6/2016	116	
2/7/2017	113	
4/6/2017	111	
6/14/2017	103	
8/9/2017	116	
10/4/2017		118

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	37.9	
8/10/2016	37.5	
10/11/2016	36.3	
12/6/2016	37.4	
2/7/2017	37.1	
4/4/2017	37.4	
6/13/2017	36.4	
8/7/2017	35.6	
10/4/2017		36.4

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	48.1	
8/12/2016	48.8	
10/13/2016	48.4	
12/6/2016	49.9	
2/8/2017	49.3	
4/7/2017	49.5	
6/13/2017	49.2	
8/9/2017	49.5	
10/4/2017		49.3

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

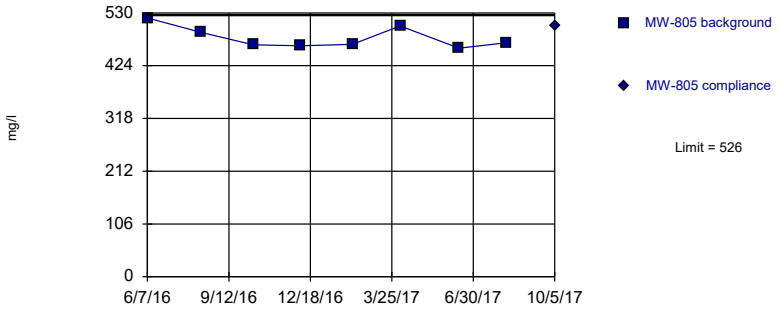
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	32.8	
8/10/2016	26.1	
10/11/2016	26.3	
12/7/2016	25.5	
2/7/2017	25.3	
4/4/2017	26	
6/13/2017	26	
8/8/2017	26.3	
10/5/2017		26.9

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=480, Std. Dev.=22.2, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.846, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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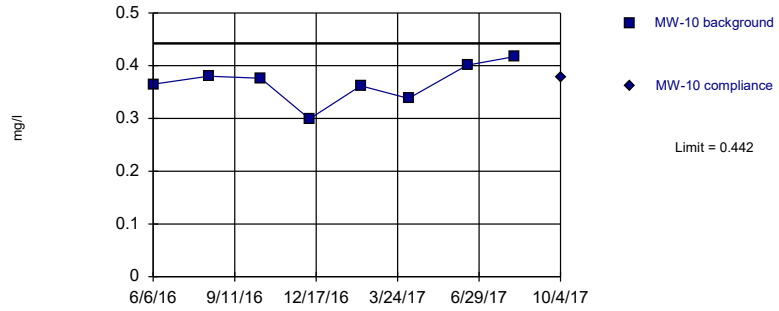
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.367, Std. Dev.=0.0366, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.962, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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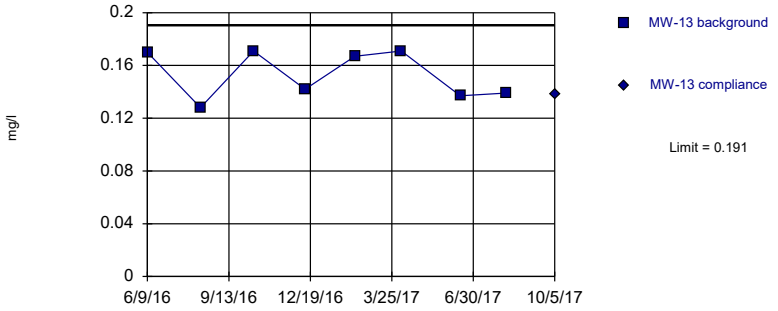
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.153, Std. Dev.=0.0182, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.815, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

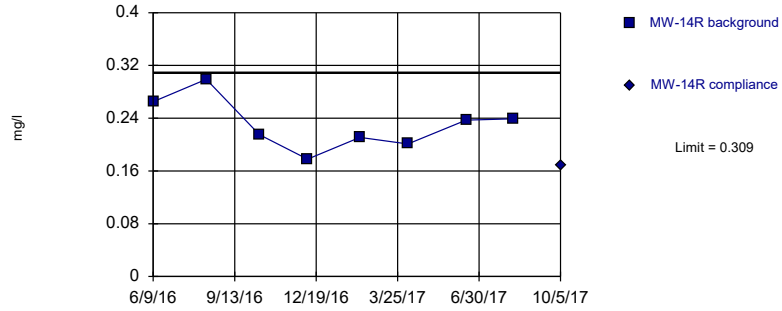
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.231, Std. Dev.=0.0383, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.968, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	520	
8/10/2016	491	
10/11/2016	466	
12/6/2016	464	
2/6/2017	467	
4/4/2017	504	
6/13/2017	459	
8/8/2017	470	
10/5/2017		505

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	0.365	
8/11/2016	0.38	
10/12/2016	0.376	
12/9/2016	0.299	
2/8/2017	0.362	
4/6/2017	0.338	
6/15/2017	0.401	
8/10/2017	0.417	
10/4/2017		0.377

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	0.17	
8/11/2016	0.128	
10/13/2016	0.171	
12/13/2016	0.142	
2/10/2017	0.167	
4/6/2017	0.171	
6/15/2017	0.137	
8/8/2017	0.139	
10/5/2017		0.138

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

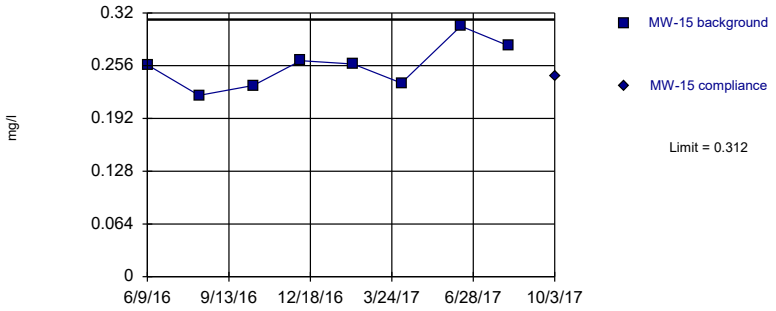
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	0.265	
8/11/2016	0.299	
10/13/2016	0.215	
12/9/2016	0.178	
2/9/2017	0.211	
4/7/2017	0.201	
6/15/2017	0.237	
8/10/2017	0.239	
10/5/2017		0.169

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.256, Std. Dev.=0.0273, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.957, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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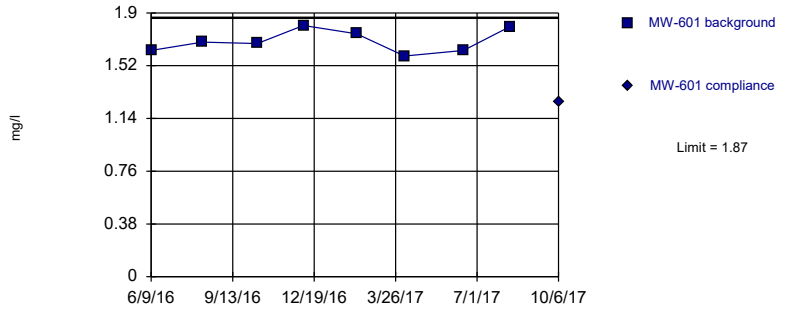
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.7, Std. Dev.=0.0819, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.925, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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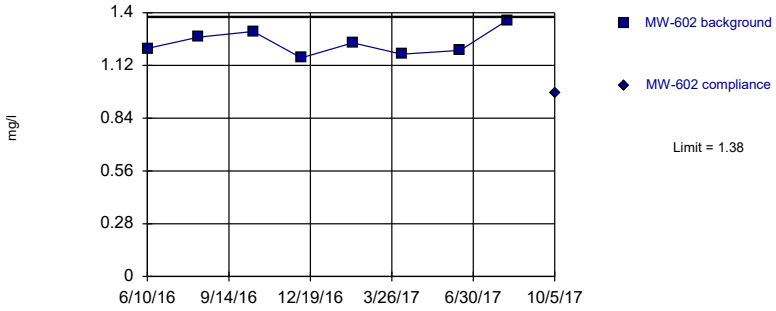
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.24, Std. Dev.=0.067, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.952, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

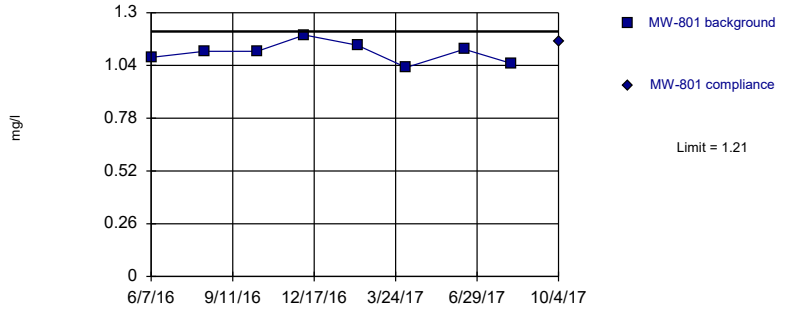
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.1, Std. Dev.=0.0507, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.973, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	0.257	
8/9/2016	0.22	
10/12/2016	0.232	
12/7/2016	0.262	
2/7/2017	0.258	
4/5/2017	0.235	
6/14/2017	0.304	
8/10/2017	0.28	
10/3/2017		0.244

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	1.63	
8/9/2016	1.69	
10/13/2016	1.68	
12/7/2016	1.81	
2/8/2017	1.75	
4/6/2017	1.59	
6/15/2017	1.63	
8/9/2017	1.8	
10/6/2017		1.26

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	1.21	
8/9/2016	1.27	
10/13/2016	1.3	
12/9/2016	1.16	
2/8/2017	1.24	
4/7/2017	1.18	
6/15/2017	1.2	
8/10/2017	1.36	
10/5/2017		0.972

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

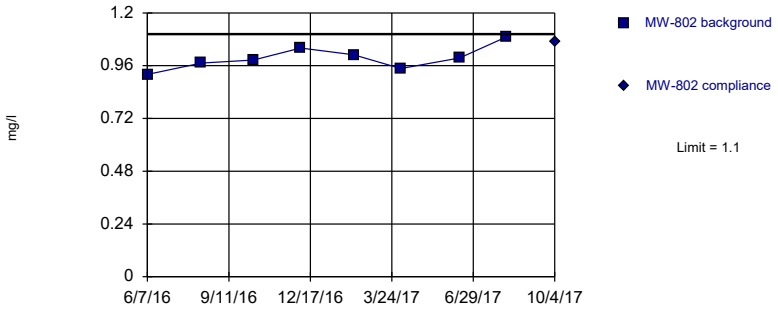
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	1.08	
8/9/2016	1.11	
10/11/2016	1.11	
12/6/2016	1.19	
2/7/2017	1.14	
4/6/2017	1.03	
6/14/2017	1.12	
8/9/2017	1.05	
10/4/2017		1.16

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.995, Std. Dev.=0.0532, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.981, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

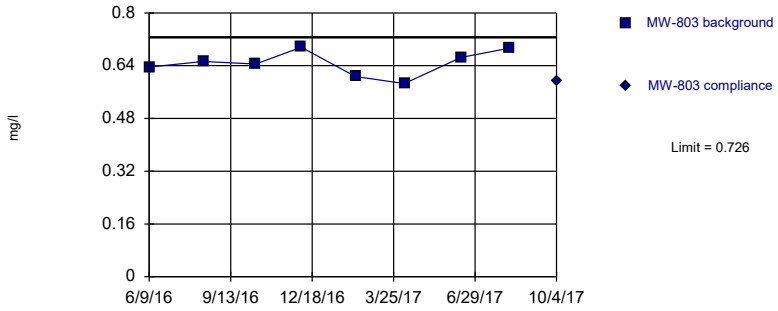
Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.648, Std. Dev.=0.0384, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.955, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

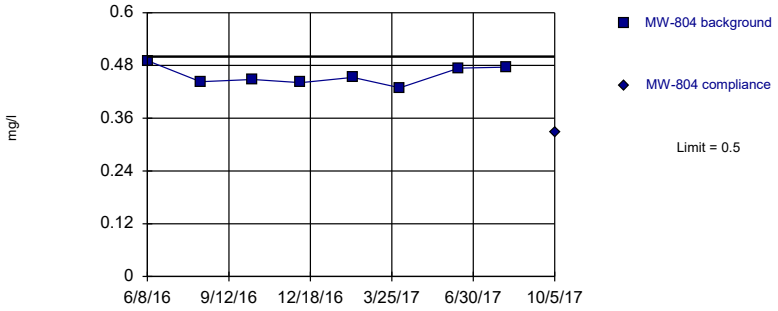
Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.457, Std. Dev.=0.0212, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.939, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

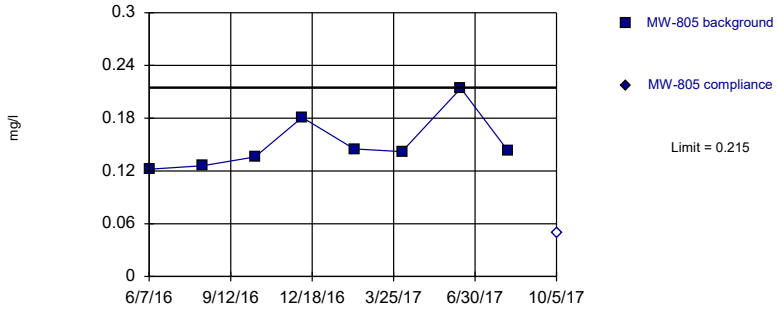
LaCygne Client: SCS Engineers Data: LaC GW Data

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.151, Std. Dev.=0.031, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.828, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	0.92	
8/10/2016	0.972	
10/11/2016	0.986	
12/6/2016	1.04	
2/7/2017	1.01	
4/4/2017	0.947	
6/13/2017	0.995	
8/7/2017	1.09	
10/4/2017		1.07

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	0.636	
8/12/2016	0.653	
10/13/2016	0.645	
12/6/2016	0.696	
2/8/2017	0.607	
4/7/2017	0.586	
6/13/2017	0.665	
8/9/2017	0.693	
10/4/2017		0.594

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	0.491	
8/10/2016	0.443	
10/11/2016	0.448	
12/7/2016	0.441	
2/7/2017	0.453	
4/4/2017	0.429	
6/13/2017	0.474	
8/8/2017	0.476	
10/5/2017		0.327

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

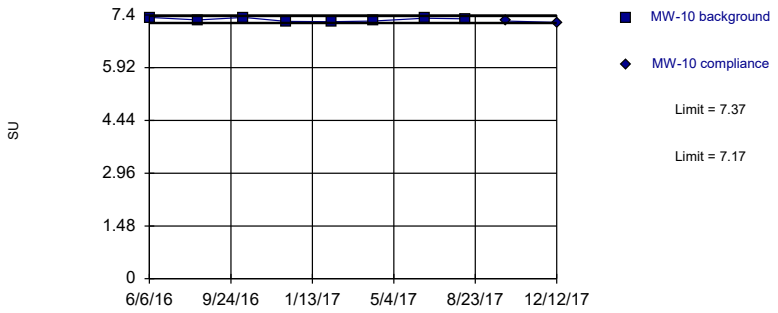
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	0.122	
8/10/2016	0.126	
10/11/2016	0.136	
12/6/2016	0.181	
2/6/2017	0.145	
4/4/2017	0.142	
6/13/2017	0.214	
8/8/2017	0.143	
10/5/2017		<0.1

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.27, Std. Dev.=0.0492, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.893, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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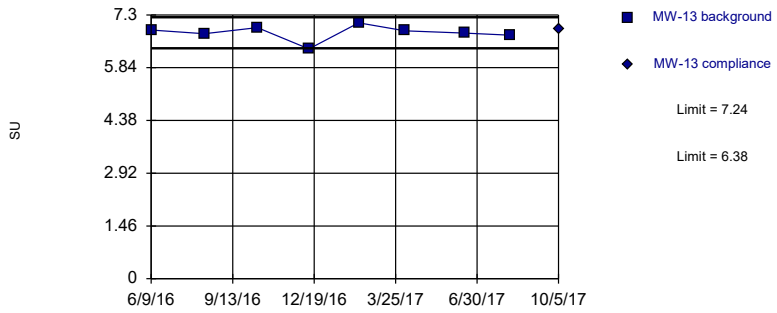
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.81, Std. Dev.=0.21, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.887, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

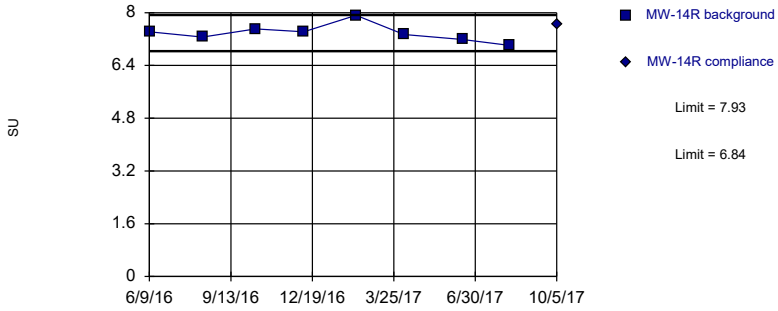
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.38, Std. Dev.=0.267, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.936, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

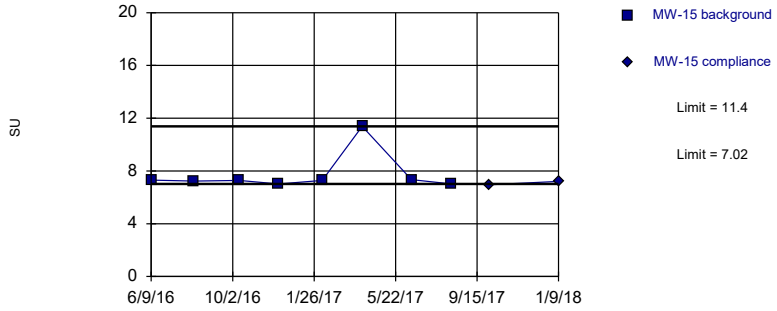
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limits

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 0.01 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.0236. Individual comparison alpha = 0.0118 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10	
6/6/2016	7.33		
8/11/2016	7.26		
10/12/2016	7.33		
12/9/2016	7.22		
2/8/2017	7.21		
4/6/2017	7.23		
6/15/2017	7.31		
8/10/2017	7.29		
10/4/2017		7.23	
12/12/2017		7.19	extra sample

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	6.88	
8/11/2016	6.78	
10/13/2016	6.95	
12/13/2016	6.36	
2/10/2017	7.08	
4/6/2017	6.86	
6/15/2017	6.8	
8/8/2017	6.74	
10/5/2017		6.9

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	7.42	
8/11/2016	7.26	
10/13/2016	7.51	
12/9/2016	7.42	
2/9/2017	7.92	
4/7/2017	7.34	
6/15/2017	7.19	
8/10/2017	7.01	
10/5/2017		7.63

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

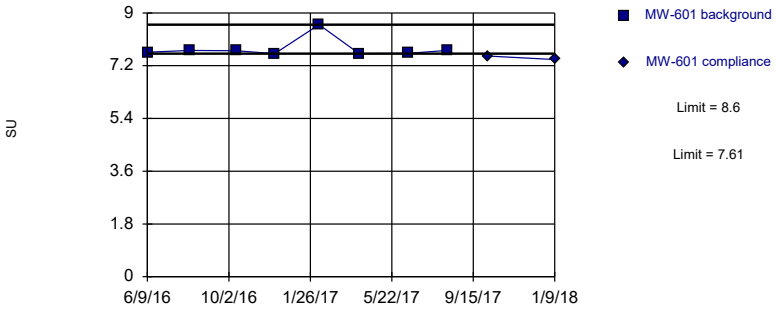
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15	
6/9/2016	7.31		
8/9/2016	7.23		
10/12/2016	7.28		
12/7/2016	7.02		
2/7/2017	7.28		
4/5/2017	11.38		
6/14/2017	7.34		
8/10/2017	7.02		
10/3/2017		6.95	
1/9/2018		7.21	1st verification re-sample

Exceeds Limits

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 0.01 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.0236. Individual comparison alpha = 0.0118 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

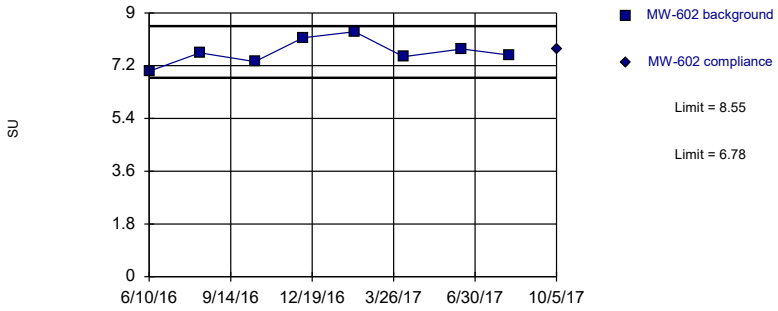
Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.67, Std. Dev.=0.431, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.971, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

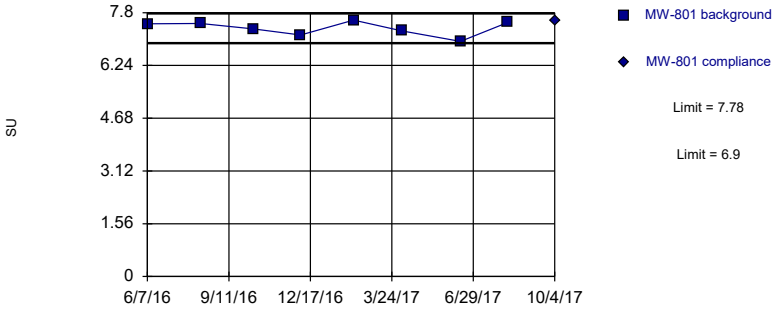
Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.34, Std. Dev.=0.214, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.923, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

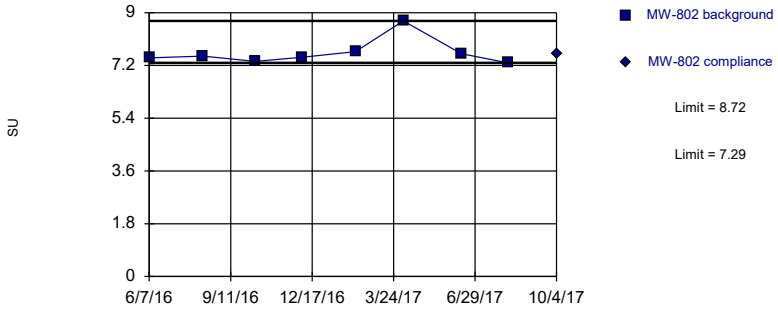
Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

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 0.01 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.0236. Individual comparison alpha = 0.0118 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601	
6/9/2016	7.66		
8/9/2016	7.72		
10/13/2016	7.71		
12/7/2016	7.61		
2/8/2017	8.6		
4/6/2017	7.61		
6/15/2017	7.62		
8/9/2017	7.72		
10/6/2017		7.53	
1/9/2018		7.41	1st verification re-sample

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	7.01	
8/9/2016	7.64	
10/13/2016	7.34	
12/9/2016	8.15	
2/8/2017	8.36	
4/7/2017	7.51	
6/15/2017	7.77	
8/10/2017	7.56	
10/5/2017		7.78

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	7.47	
8/9/2016	7.48	
10/11/2016	7.32	
12/6/2016	7.14	
2/7/2017	7.58	
4/6/2017	7.26	
6/14/2017	6.95	
8/9/2017	7.51	
10/4/2017		7.58

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

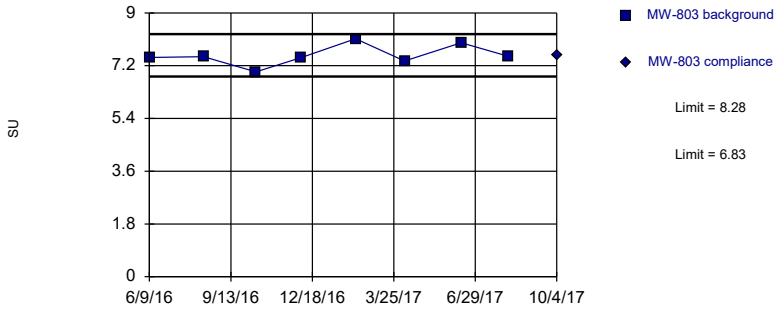
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	7.46	
8/10/2016	7.52	
10/11/2016	7.34	
12/6/2016	7.48	
2/7/2017	7.67	
4/5/2017	8.72	
6/13/2017	7.6	
8/7/2017	7.29	
10/4/2017		7.58

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.56, Std. Dev.=0.353, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.906, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

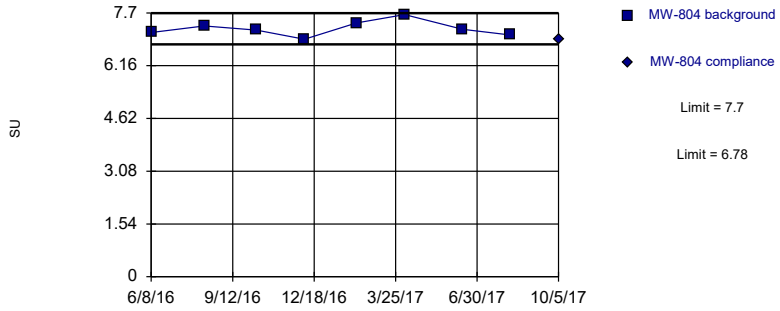
Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.24, Std. Dev.=0.222, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.975, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

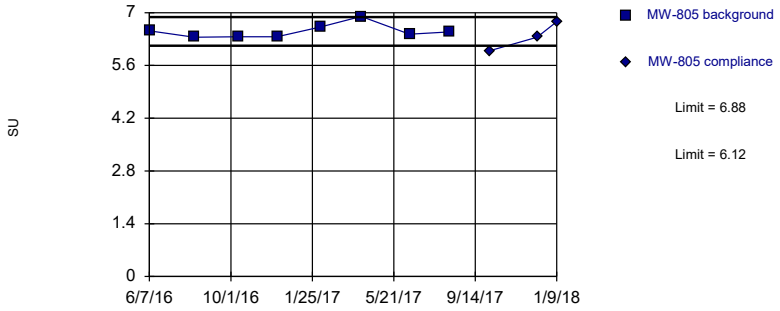
Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.5, Std. Dev.=0.186, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.825, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

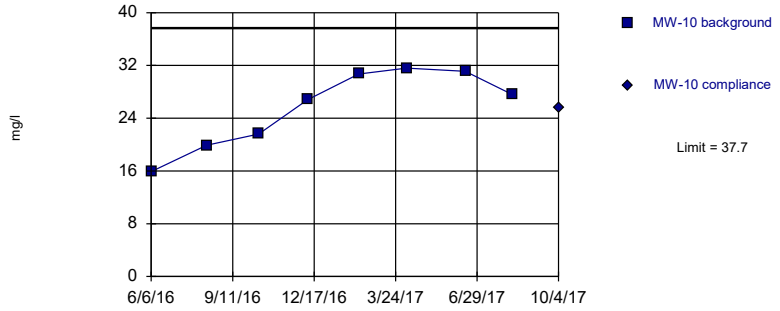
Constituent: pH Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=25.7, Std. Dev.=5.86, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.897, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	7.48	
8/12/2016	7.51	
10/13/2016	6.99	
12/6/2016	7.48	
2/8/2017	8.12	
4/7/2017	7.36	
6/13/2017	7.98	
8/8/2017	7.52	
10/4/2017		7.55

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	7.13	
8/10/2016	7.32	
10/11/2016	7.2	
12/7/2016	6.93	
2/7/2017	7.41	
4/5/2017	7.65	
6/13/2017	7.22	
8/8/2017	7.06	
10/5/2017		6.93

Prediction Limit

Constituent: pH (SU) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805	
6/7/2016	6.52		
8/10/2016	6.35		
10/11/2016	6.36		
12/6/2016	6.36		
2/6/2017	6.62		
4/5/2017	6.9		
6/13/2017	6.43		
8/8/2017	6.49		
10/5/2017		5.99	
12/12/2017		6.35	1st verification re-sample
1/9/2018		6.76	extra sample

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

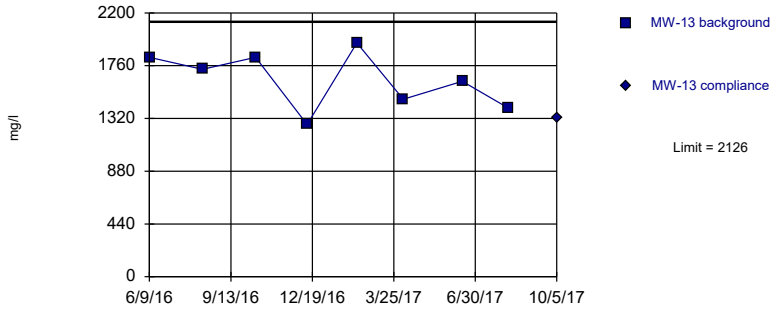
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	15.9	
8/11/2016	19.9	
10/12/2016	21.6	
12/9/2016	26.8	
2/8/2017	30.7	
4/6/2017	31.6	
6/15/2017	31.1	
8/10/2017	27.6	
10/4/2017		25.5

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1641, Std. Dev.=237, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.953, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

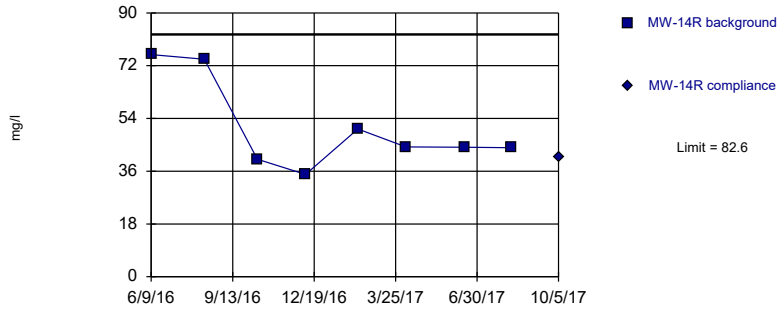
Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=51, Std. Dev.=15.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.804, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

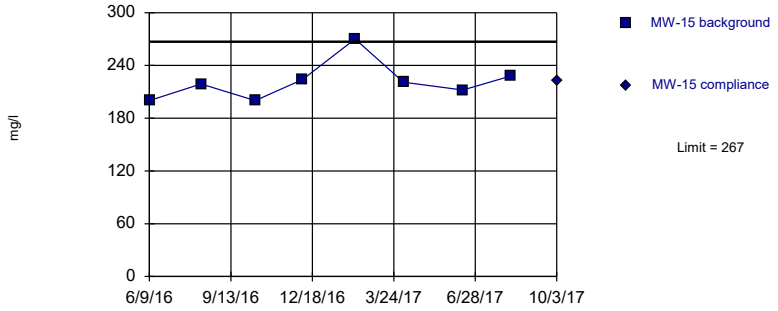
Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=222, Std. Dev.=22.1, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.834, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

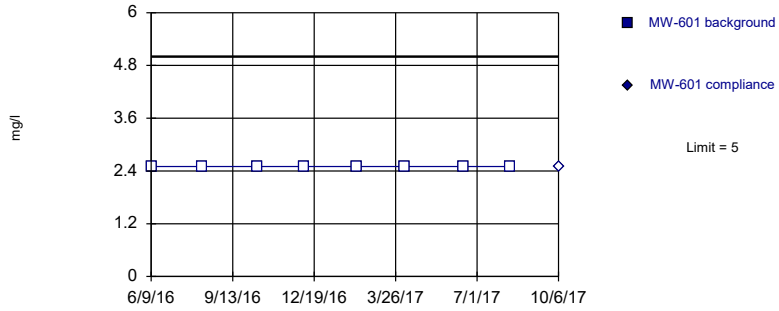
LaCygne Client: SCS Engineers Data: LaC GW Data

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%. All background values (n = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	1830	
8/11/2016	1730	
10/13/2016	1830	
12/13/2016	1270	
2/10/2017	1950	
4/6/2017	1480	
6/15/2017	1630	
8/8/2017	1410	
10/5/2017		1330

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	75.8	
8/11/2016	74.2	
10/13/2016	40.1	
12/9/2016	34.9	
2/9/2017	50.4	
4/7/2017	44.3	
6/15/2017	44.2	
8/10/2017	44	
10/5/2017		40.7

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	200	
8/9/2016	219	
10/12/2016	200	
12/7/2016	224	
2/7/2017	270	
4/5/2017	221	
6/14/2017	212	
8/10/2017	228	
10/3/2017		222

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

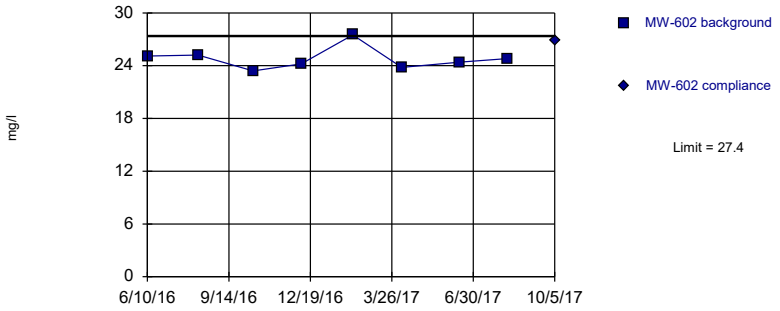
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	<5	
8/9/2016	<5	
10/13/2016	<5	
12/7/2016	<5	
2/8/2017	<5	
4/6/2017	<5	
6/15/2017	<5	
8/9/2017	<5	
10/6/2017		<5

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=24.8, Std. Dev.=1.25, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.874, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

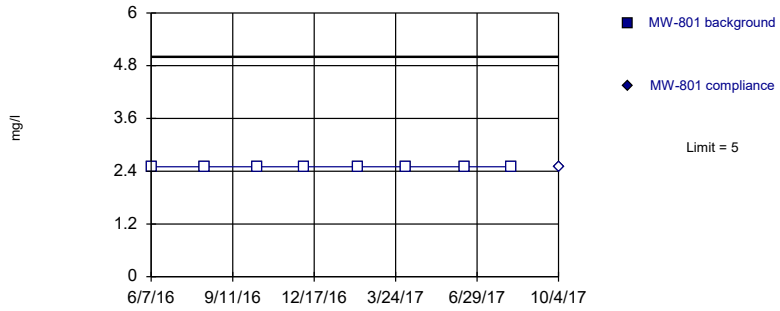
LaCygne Client: SCS Engineers Data: LaC GW Data

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%. All background values (n = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

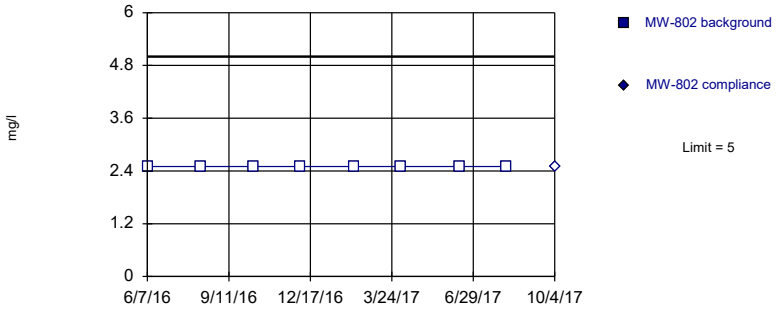
LaCygne Client: SCS Engineers Data: LaC GW Data

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%. All background values (n = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

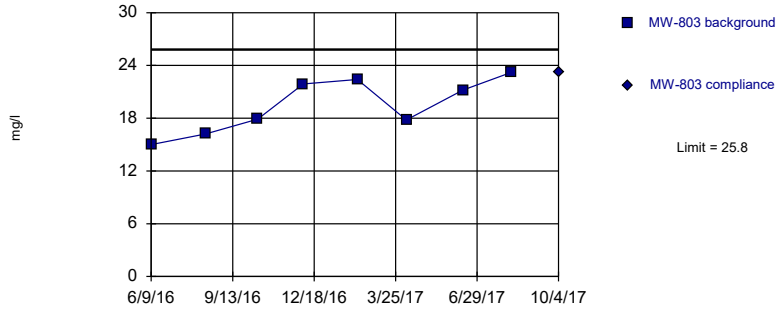
Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=19.5, Std. Dev.=3.1, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.909, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	25.1	
8/9/2016	25.2	
10/13/2016	23.4	
12/9/2016	24.2	
2/8/2017	27.5	
4/7/2017	23.8	
6/15/2017	24.4	
8/10/2017	24.8	
10/5/2017		26.9

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	<5	
8/9/2016	<5	
10/11/2016	<5	
12/6/2016	<5	
2/7/2017	<5	
4/6/2017	<5	
6/14/2017	<5	
8/9/2017	<5	
10/4/2017		<5

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	<5	
8/10/2016	<5	
10/11/2016	<5	
12/6/2016	<5	
2/7/2017	<5	
4/4/2017	<5	
6/13/2017	<5	
8/7/2017	<5	
10/4/2017		<5

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

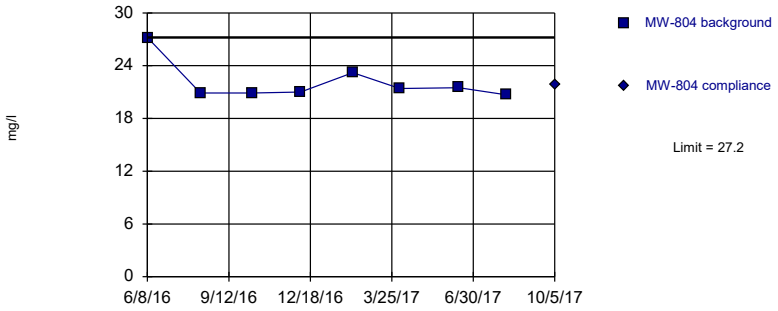
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	15	
8/12/2016	16.2	
10/13/2016	17.9	
12/6/2016	21.9	
2/8/2017	22.4	
4/7/2017	17.8	
6/13/2017	21.2	
8/9/2017	23.2	
10/4/2017		23.2

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 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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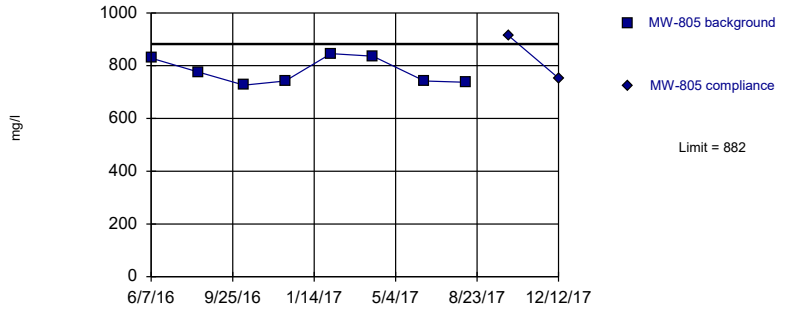
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=779, Std. Dev.=50.1, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.834, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 1/18/2018 2:28 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	27.2	
8/10/2016	20.9	
10/11/2016	20.9	
12/7/2016	21	
2/7/2017	23.2	
4/4/2017	21.4	
6/13/2017	21.5	
8/8/2017	20.7	
10/5/2017		21.9

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 1/18/2018 2:30 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805	
6/7/2016	829		
8/10/2016	776		
10/11/2016	726		
12/6/2016	742		
2/6/2017	846		
4/4/2017	836		
6/13/2017	742		
8/8/2017	737		
10/5/2017		914	
12/12/2017		753	1st verification re-sample

Prediction Limit

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 1/18/2018, 2:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
BORON (mg/l)	MW-10	0.983	n/a	12/12/2017	0.961	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-13	0.491	n/a	10/5/2017	0.47	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-14R	0.684	n/a	10/5/2017	0.42	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-15	0.294	n/a	10/3/2017	0.225	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-601	1.97	n/a	10/6/2017	1.83	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-602	2.5	n/a	10/5/2017	2.31	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-801	2.4	n/a	10/4/2017	2.3	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-802	2.62	n/a	10/4/2017	2.48	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-803	2.23	n/a	10/4/2017	2.07	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-804	1.65	n/a	10/5/2017	1.53	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-805	0.547	n/a	10/5/2017	0.406	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-10	62	n/a	10/4/2017	58.4	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-13	408	n/a	10/5/2017	274	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-14R	63.2	n/a	10/5/2017	61.5	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-15	112	n/a	10/3/2017	108	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-601	24.1	n/a	10/6/2017	21.1	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-602	26.3	n/a	10/5/2017	25.3	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-801	37.8	n/a	10/4/2017	31.4	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-802	42.8	n/a	10/4/2017	34.1	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-803	50.4	n/a	10/4/2017	46.1	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-804	68.4	n/a	10/5/2017	65.9	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-805	449	n/a	1/9/2018	439	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-10	69.9	n/a	10/4/2017	62.8	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-13	19.8	n/a	10/5/2017	13.6	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-14R	5.24	n/a	10/5/2017	4.12	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-15	22	n/a	10/3/2017	17.5	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-601	197	n/a	10/6/2017	166	No	8	0	ln(x)	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-602	18.1	n/a	10/5/2017	17.9	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-801	123	n/a	10/4/2017	118	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-802	38.5	n/a	10/4/2017	36.4	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-803	50.3	n/a	10/4/2017	49.3	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-804	32.8	n/a	10/5/2017	26.9	No	8	0	n/a	0.00591	NP Intra (normality) ...
CHLORIDE (mg/l)	MW-805	526	n/a	10/5/2017	505	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-10	0.442	n/a	10/4/2017	0.377	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-13	0.191	n/a	10/5/2017	0.138	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-14R	0.309	n/a	10/5/2017	0.169	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-15	0.312	n/a	10/3/2017	0.244	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-601	1.87	n/a	10/6/2017	1.26	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-602	1.38	n/a	10/5/2017	0.972	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-801	1.21	n/a	10/4/2017	1.16	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-802	1.1	n/a	10/4/2017	1.07	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-803	0.726	n/a	10/4/2017	0.594	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-804	0.5	n/a	10/5/2017	0.327	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-805	0.215	n/a	10/5/2017	0.05ND	No	8	0	No	0.00107	Param Intra 1 of 3
pH (SU)	MW-10	7.37	7.17	12/12/2017	7.19	No	8	0	No	0.000537	Param Intra 1 of 3
pH (SU)	MW-13	7.24	6.38	10/5/2017	6.9	No	8	0	No	0.000537	Param Intra 1 of 3
pH (SU)	MW-14R	7.93	6.84	10/5/2017	7.63	No	8	0	No	0.000537	Param Intra 1 of 3
pH (SU)	MW-15	11.4	7.02	1/9/2018	7.21	No	8	0	n/a	0.0118	NP Intra (normality) ...
pH (SU)	**MW-601**	**8.6**	**7.61**	**1/9/2018**	**7.41**	**Yes**	**8**	**0**	**n/a**	**0.0118**	**NP Intra (normality) ...**
pH (SU)	MW-602	8.55	6.78	10/5/2017	7.78	No	8	0	No	0.000537	Param Intra 1 of 3

Prediction Limit

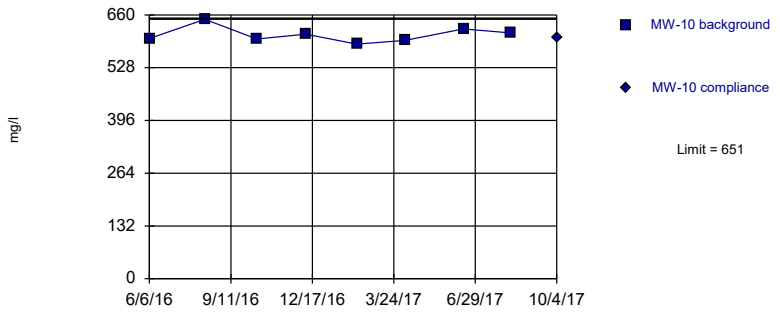
LaCygne Client: SCS Engineers Data: LaC GW Data Printed 1/18/2018, 2:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
pH (SU)	MW-801	7.78	6.9	10/4/2017	7.58	No	8	0	No	0.000537	Param Intra 1 of 3
pH (SU)	MW-802	8.72	7.29	10/4/2017	7.58	No	8	0	n/a	0.0118	NP Intra (normality) ...
pH (SU)	MW-803	8.28	6.83	10/4/2017	7.55	No	8	0	No	0.000537	Param Intra 1 of 3
pH (SU)	MW-804	7.7	6.78	10/5/2017	6.93	No	8	0	No	0.000537	Param Intra 1 of 3
pH (SU)	MW-805	6.88	6.12	1/9/2018	6.76	No	8	0	No	0.000537	Param Intra 1 of 3
SULFATE (mg/l)	MW-10	37.7	n/a	10/4/2017	25.5	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-13	2126	n/a	10/5/2017	1330	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-14R	82.6	n/a	10/5/2017	40.7	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-15	267	n/a	10/3/2017	222	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-601	5	n/a	10/6/2017	2.5ND	No	8	100	n/a	0.00591	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-602	27.4	n/a	10/5/2017	26.9	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-801	5	n/a	10/4/2017	2.5ND	No	8	100	n/a	0.00591	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-802	5	n/a	10/4/2017	2.5ND	No	8	100	n/a	0.00591	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-803	25.8	n/a	10/4/2017	23.2	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-804	27.2	n/a	10/5/2017	21.9	No	8	0	n/a	0.00591	NP Intra (normality) ...
SULFATE (mg/l)	MW-805	882	n/a	12/12/2017	753	No	8	0	No	0.00107	Param Intra 1 of 3

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=611, Std. Dev.=19.6, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.931, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

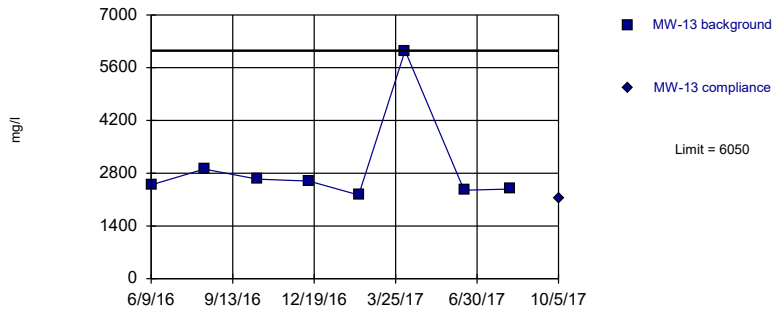
Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

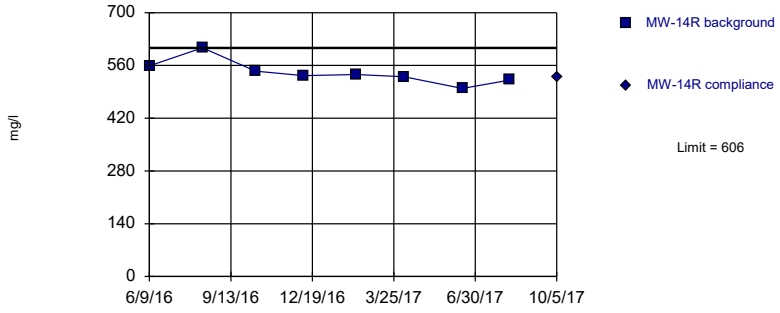
Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=541, Std. Dev.=31.8, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.909, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

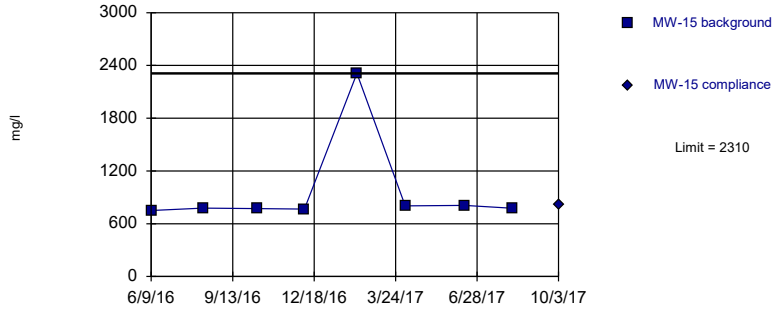
Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	601	
8/11/2016	649	
10/12/2016	600	
12/9/2016	612	
2/8/2017	587	
4/6/2017	596	
6/15/2017	625	
8/10/2017	615	
10/4/2017		604

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	2490	
8/11/2016	2910	
10/13/2016	2640	
12/13/2016	2590	
2/10/2017	2220	
4/6/2017	6050	
6/15/2017	2350	
8/8/2017	2380	
10/5/2017		2140

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	559	
8/11/2016	607	
10/13/2016	545	
12/9/2016	533	
2/9/2017	536	
4/7/2017	530	
6/15/2017	499	
8/10/2017	521	
10/5/2017		529

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

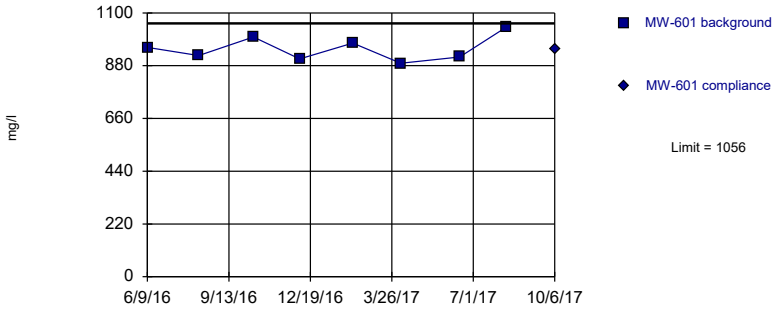
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	751	
8/9/2016	777	
10/12/2016	772	
12/7/2016	767	
2/7/2017	2310	
4/5/2017	803	
6/14/2017	808	
8/10/2017	775	
10/3/2017		815

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=951, Std. Dev.=51.4, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.94, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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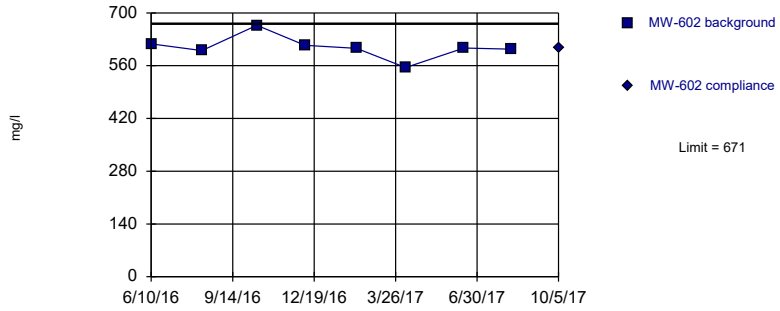
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=609, Std. Dev.=30.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.871, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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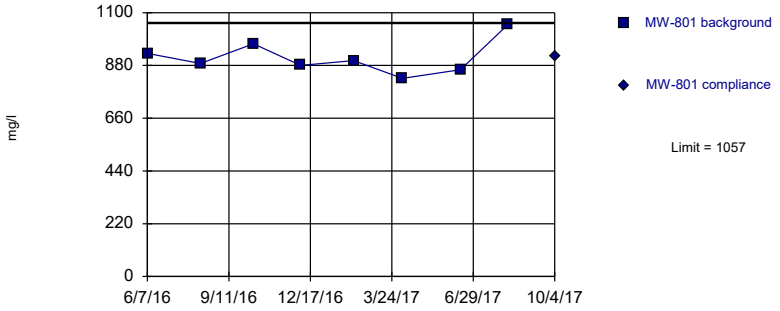
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=913, Std. Dev.=70.1, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.934, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

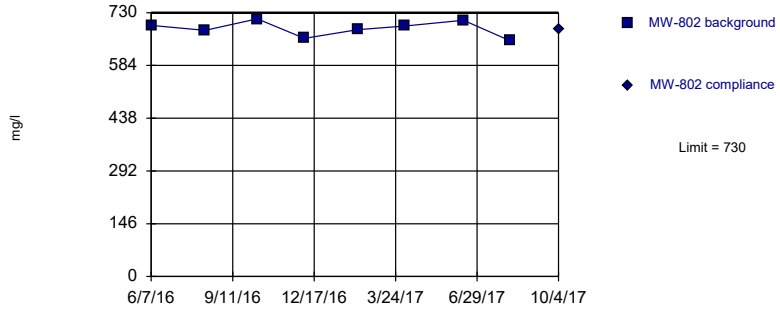
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.5.32 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=686, Std. Dev.=21.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.938, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	956	
8/9/2016	922	
10/13/2016	1000	
12/7/2016	908	
2/8/2017	974	
4/6/2017	890	
6/15/2017	916	
8/9/2017	1040	
10/6/2017		948

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	618	
8/9/2016	600	
10/13/2016	667	
12/9/2016	614	
2/8/2017	606	
4/7/2017	555	
6/15/2017	607	
8/10/2017	604	
10/5/2017		607

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	930	
8/9/2016	888	
10/11/2016	970	
12/6/2016	880	
2/7/2017	900	
4/6/2017	826	
6/14/2017	862	
8/9/2017	1050	
10/4/2017		916

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

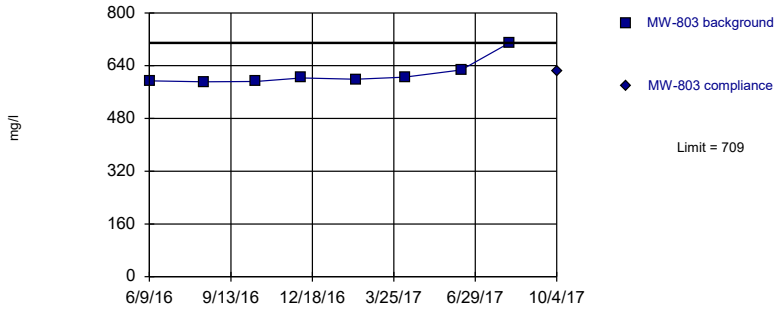
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	695	
8/10/2016	681	
10/11/2016	713	
12/6/2016	659	
2/7/2017	683	
4/4/2017	693	
6/13/2017	709	
8/7/2017	653	
10/4/2017		684

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 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

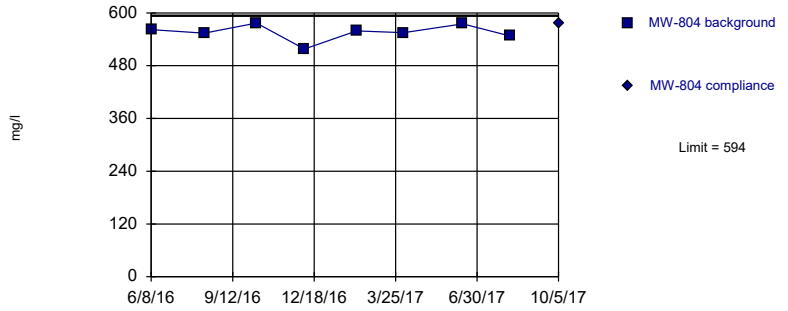
Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=556, Std. Dev.=18.4, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.891, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

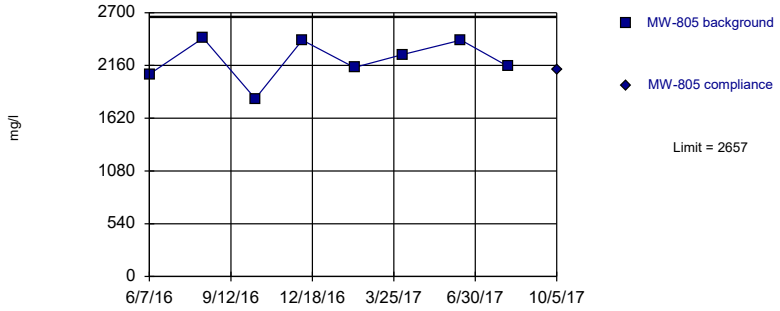
Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2216, Std. Dev.=215, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.903, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 6/1/2018 3:06 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	594	
8/12/2016	591	
10/13/2016	592	
12/6/2016	603	
2/8/2017	599	
4/7/2017	605	
6/13/2017	627	
8/9/2017	709	
10/4/2017		625

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	562	
8/10/2016	554	
10/11/2016	577	
12/7/2016	518	
2/7/2017	559	
4/4/2017	555	
6/13/2017	575	
8/8/2017	548	
10/5/2017		577

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 6/1/2018 3:07 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	2070	
8/10/2016	2440	
10/11/2016	1820	
12/6/2016	2420	
2/6/2017	2140	
4/4/2017	2270	
6/13/2017	2420	
8/8/2017	2150	
10/5/2017		2110

Prediction Limit

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 6/1/2018, 3:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
DISSOLVED SOLIDS (mg/l)	MW-10	651	n/a	10/4/2017	604	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-13	6050	n/a	10/5/2017	2140	No	8	0	n/a	0.00591	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	MW-14R	606	n/a	10/5/2017	529	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-15	2310	n/a	10/3/2017	815	No	8	0	n/a	0.00591	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	MW-601	1056	n/a	10/6/2017	948	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-602	671	n/a	10/5/2017	607	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-801	1057	n/a	10/4/2017	916	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-802	730	n/a	10/4/2017	684	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-803	709	n/a	10/4/2017	625	No	8	0	n/a	0.00591	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	MW-804	594	n/a	10/5/2017	577	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-805	2657	n/a	10/5/2017	2110	No	8	0	No	0.00107	Param Intra 1 of 3

ATTACHMENT 2

Sanitas™ Configuration Settings

Options

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

Exclude data flags:

Data Reading Options

- (•) Individual Observations
- ( ) Mean of Each: Month
- ( ) Median of Each: Season

Non-Detect / Trace Handling...

Setup Seasons...

[ ] Automatically Process Resamples...

OK | Cancel | Save Settings As... | Load Saved Settings... | Defaults... | Edit INI File | 

Options

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

- [ ] Black and White Output
- [x] Four Plots Per Page
  - [ ] Always Combine Data Pages...
  - [x] Include Tick Marks on Data Page
  - [ ] Use Constituent Name for Graph Title
- [ ] Draw Border Around Text Reports and Data Pages
- [x] Enlarge/Reduce Fonts (Graphs): 100%
- [x] Enlarge/Reduce Fonts (Data/Text Reports): 100%
- [x] Wide Margins (on reports without explicit setting)
- [ ] Use CAS# (Not Const. Name)
- [ ] Truncate File Names to 20 Characters
- [ ] Include Limit Lines when found in Database...
- [x] Show Deselected Data on Time Series Lighter
- [x] Show Deselected Data on all Data Pages Lighter

Setup Symbols and Colors...

- [x] Prompt to Overwrite/Append Summary Tables
- [ ] Round Limits to 2 Sig. Digits (when not set in data file)
- [ ] User-Set Scale
- [x] Indicate Background Data
- [ ] Show Exact Dates
- [ ] Thick Plot Lines

Zoom Factor: 200%

Output Decimal Precision

- (•) Less Precision
- ( ) Normal Precision
- ( ) More Precision

- [x] Store Print Jobs in Multiple Constituent Mode

Store All Print Jobs...

Printer: Adobe PDF

Printers...

OK | Cancel | Save Settings As... | Load Saved Settings... | Defaults... | Edit INI File

Options

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

☑ Test for Normality using Shapiro-Wilk/Francia at Alpha = 0.01

☑ Use Non-Parametric Test when Non-Detects Percent > 50

Use Aitchison's Adjustment when Non-Detects Percent > 15

☐ Optional Further Refinement: Use when NDs % > 50

☐ Use Poisson Prediction Limit when Non-Detects Percent > 0

Transformation

- ◉ Use Ladder of Powers
- ○ Natural Log or No Transformation
- ○ Never Transform
- ○ Use Specific Transformation: Natural Log

☐ Use Best W Statistic

☐ Plot Transformed Values

Deseasonalize (Intra- and InterWell)

- ◉ If Seasonality Is Detected
- ○ If Seasonality Is Detected Or Insufficient to Test
- ○ Always (When Sufficient Data)
- ○ Never

☐ Always Use Non-Parametric

Facility α

Statistical Evaluations per Year: 2

Constituents Analyzed: 7

Downgradient (Compliance) Wells: 7

Sampling Plan

Comparing Individual Observations

○ 1 of 1 ○ 1 of 2 ◉ 1 of 3 ○ 1 of 4

○ 2 of 4 ("Modified California")

IntraWell Other

☐ Stop if Background Trend Detected at Alpha = 0.05

☑ Plot Background Data

Override Standard Deviation:

Override DF: Override Kappa:

☐ Automatically Remove Background Outliers

☐ 2-Tailed Test Mode...

☐ Show Deselected Data Lighter

Non-Parametric Limit = Highest Background Value

Non-Parametric Limit when 100% Non-Detects:

- ○ Highest/Second Highest Background Value
- ◉ Most Recent PQL if available, or MDL
- ○ Most Recent Background Value (subst. method)

OK | Cancel | Save Settings As... | Load Saved Settings... | Defaults... | Edit INI File | 🖶

Options

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

Rank Von Neumann, Wilcoxon Rank Sum / Mann-Whitney

- [ ] Use Modified Alpha...
- [ ] 2-Tailed Test Mode...

Outlier Tests

- ( ) EPA 1989 Outlier Screening (fixed alpha of 0.05)
- (•) Dixon's at α= 0.05 or if n > 22 Rosner's at α= 0.01 [x] Use EPA Screening to establish Suspected Outliers
- ( ) Tukey's Outlier Screening, with IQR Multiplier = 3.0 [ ] Use Ladder of Powers to achieve Best W Stat
- [x] Test For Normality using Shapiro-Wilk/Francia at Alpha = 0.1
  - (•) Stop if Non-Normal
  - ( ) Continue with Parametric Test if Non-Normal
  - ( ) Tukey's if Non-Normal, with IQR Multiplier = 3.0 [ ] Use Ladder of Powers to achieve Best W Stat
- [x] No Outlier If Less Than 3.0 Times Median
- [ ] Apply Rules found in Ohio Guidance Document 0715
- [ ] Combine Background Wells on the Outlier Report...

Piper, Stiff Diagram

- [ ] Combine Wells
- [ ] Combine Dates
- (•) Use Default Constituent Names
- ( ) Use Constituent Definition File Edit
- [x] Label Constituents
- [x] Label Axes
- [x] Note Cation-Anion Balance (Piper only)

OK | Cancel | Save Settings As... | Load Saved Settings... | Defaults... | Edit INI File

ATTACHMENT 2-2

Spring 2018 Semiannual Detection Monitoring Statistical Analyses

MEMORANDUM

September 12, 2018

To: La Cygne Generating Station
25166 East 2200 Road
La Cygne, Kansas 66040
Kansas City Power & Light Company

From: SCS Engineers

RE: Determination of Statistically Significant Increases –
CCR Landfill and Lower AQC Impoundment
Spring 2018 Semiannual Detection Monitoring 40 CFR 257.94

Statistical analysis of monitoring data from the groundwater monitoring system for the CCR Landfill and Lower AQC Impoundment at the La Cygne Generating Station has been completed in substantial compliance with the "Statistical Method Certification by A Qualified Professional Engineer" dated October 12, 2017. Detection monitoring groundwater samples were collected on May 23, 2018. Review and validation of the results from the May 2018 Detection Monitoring Event was completed on June 15, 2018, which constitutes completion and finalization of detection monitoring laboratory analyses. A statistical analysis was then conducted to determine whether there was a statistically significant increase (SSI) over background values for each constituent listed in Appendix III to Part 257-Constituents for Detection Monitoring. Two rounds of verification sampling were conducted for certain constituents on July 11, 2018 and August 16, 2018.

The completed statistical evaluation identified Appendix III constituent, boron, above its respective prediction limit in monitoring wells MW-13 and MW-804, and pH below its respective lower prediction limit in monitoring well MW-601.

The prediction limit for boron in upgradient monitoring well MW-13 is 0.491 mg/L. The detection monitoring sample was reported at 0.57 mg/L. The first verification re-sample was collected on July 11, 2018 with a result of 0.533 mg/L. The second verification re-sample was collected on August 16, 2018 with a result of 0.513 mg/L.

The prediction limit for boron in monitoring well MW-804 is 1.65 mg/L. The detection monitoring sample was reported at 1.72 mg/L. The first verification re-sample was collected on July 11, 2018 with a result of 1.67 mg/L. The second verification re-sample was collected on August 16, 2018 with a result of 1.76 mg/L.

Therefore, in accordance with the Statistical Method Certification, the detection monitoring sample for boron from monitoring wells MW-13 and MW-804 exceed their respective prediction limits and are confirmed statistically significant increases (SSIs) over background.

The lower prediction limit for pH in upgradient monitoring well MW-601 is 7.61 S.U. The detection monitoring sample was reported at 7.56 S.U. The first verification re-sample was

collected on July 11, 2018 with a result of 7.43 S.U. The second verification re-sample was collected on August 16, 2018 with a result of 7.59 S.U.

Therefore, in accordance with the Statistical Method Certification, the detection monitoring sample for pH from monitoring wells MW-601 was below its lower prediction limit and is a confirmed statistically significant decrease (SSDs) below background.

Determination: A statistical evaluation was completed for all Appendix III detection monitoring constituents in accordance with the certified statistical method. The statistical evaluation identified two SSIs above the background prediction limit for boron in upgradient monitor well MW-13 and downgradient monitor well MW-804. Additionally, the statistical evaluation identified one statistically significant decrease (SSD) below the background lower prediction limit for pH in upgradient monitor well MW-601.

Attached to this memorandum are the following backup information:

Attachment 1: Sanitas™ Output:

Statistical evaluation output from Sanitas™ for the prediction limit analysis. This includes prediction limit plots, prediction limit background data, detection sample result, 1st verification re-sample result (when applicable), 2nd verification re-sample result (when applicable), extra sample results for pH because pH is collected as part of the sampling procedure, and a Prediction Limit summary table. Output documentation includes the analytical data used for the statistical analyses.

Attachment 2: Sanitas™ Configuration Settings:

Screen shots of the applicable Sanitas™ configuration settings for the statistical prediction limit analysis. This includes data configuration, output configuration, prediction limit configuration and other tests configuration.

Revision Number	Revision Date	Attachment Revised	Summary of Revisions

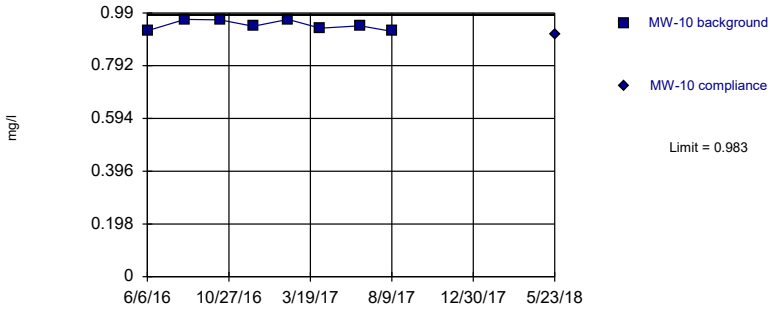
ATTACHMENT 1

Sanitas™ Output

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.944, Std. Dev.=0.0188, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.867, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

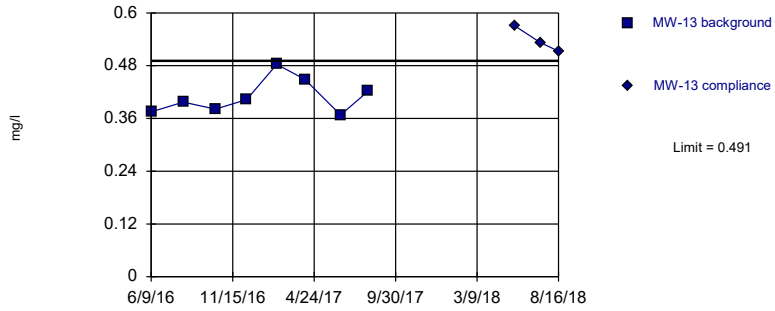
Constituent: BORON Analysis Run 8/27/2018 2:52 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.41, Std. Dev.=0.0397, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.915, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

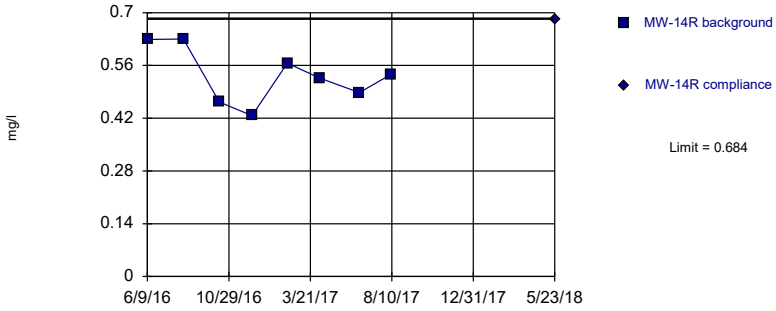
Constituent: BORON Analysis Run 8/27/2018 2:52 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.533, Std. Dev.=0.0736, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.947, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

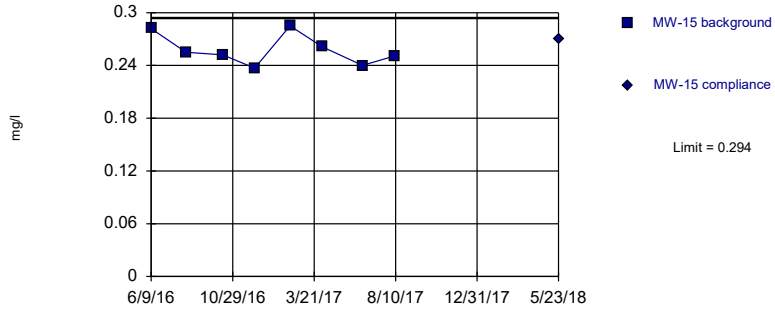
Constituent: BORON Analysis Run 8/27/2018 2:52 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.258, Std. Dev.=0.0176, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.901, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 8/27/2018 2:52 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	0.923	
8/11/2016	0.966	
10/12/2016	0.964	
12/9/2016	0.94	
2/8/2017	0.966	
4/6/2017	0.933	
6/15/2017	0.942	
8/10/2017	0.921	
5/23/2018		0.91

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13	
6/9/2016	0.375		
8/11/2016	0.397		
10/13/2016	0.381		
12/13/2016	0.403		
2/10/2017	0.483		
4/6/2017	0.449		
6/15/2017	0.368		
8/8/2017	0.422		
5/23/2018		0.57	
7/11/2018		0.533	1st verification re-sample
8/16/2018		0.513	2nd verification re-sample

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	0.629	
8/11/2016	0.63	
10/13/2016	0.463	
12/9/2016	0.427	
2/9/2017	0.566	
4/7/2017	0.526	
6/15/2017	0.488	
8/10/2017	0.537	
5/23/2018		0.682

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

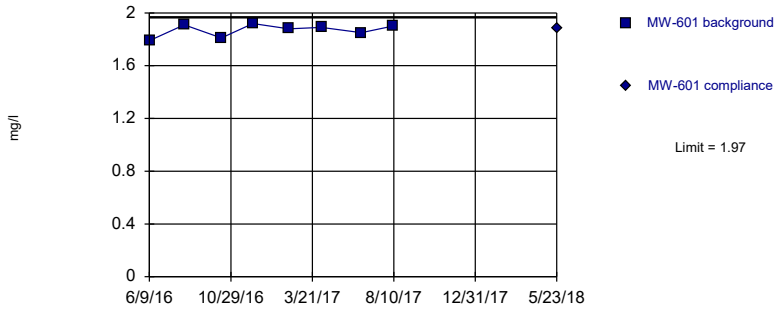
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	0.282	
8/9/2016	0.255	
10/12/2016	0.252	
12/7/2016	0.237	
2/7/2017	0.285	
4/5/2017	0.261	
6/14/2017	0.24	
8/10/2017	0.251	
5/23/2018		0.27

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.87, Std. Dev.=0.0476, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 8/27/2018 2:52 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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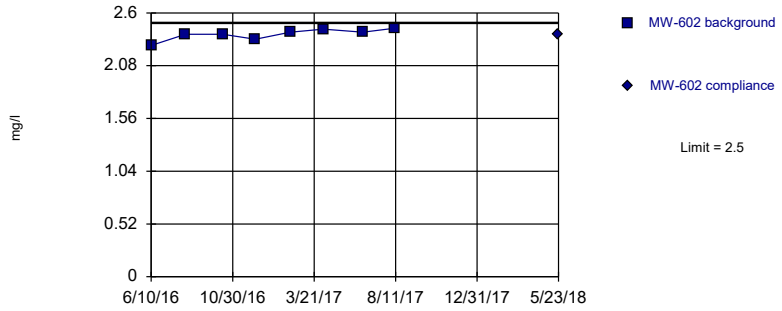
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.39, Std. Dev.=0.0554, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.901, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 8/27/2018 2:52 PM View: LF LAQC III

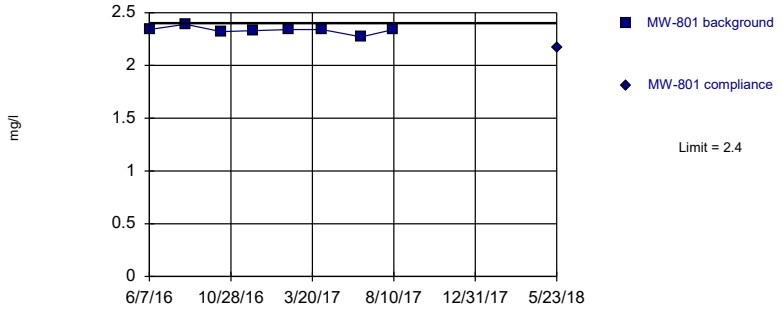
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.09 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.33, Std. Dev.=0.0329, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.858, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 8/27/2018 2:52 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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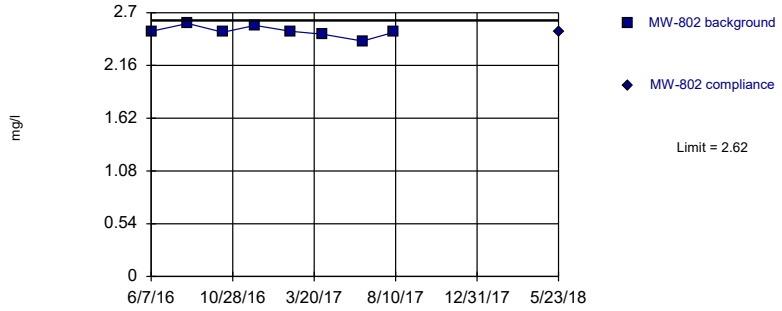
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.51, Std. Dev.=0.0549, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.926, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: BORON Analysis Run 8/27/2018 2:52 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	1.79	
8/9/2016	1.91	
10/13/2016	1.81	
12/7/2016	1.92	
2/8/2017	1.88	
4/6/2017	1.89	
6/15/2017	1.85	
8/9/2017	1.9	
5/23/2018		1.88

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	2.28	
8/9/2016	2.39	
10/13/2016	2.39	
12/9/2016	2.34	
2/8/2017	2.41	
4/7/2017	2.44	
6/15/2017	2.41	
8/10/2017	2.45	
5/23/2018		2.39

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	2.34	
8/9/2016	2.39	
10/11/2016	2.32	
12/6/2016	2.33	
2/7/2017	2.34	
4/6/2017	2.34	
6/14/2017	2.27	
8/9/2017	2.34	
5/23/2018		2.17

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

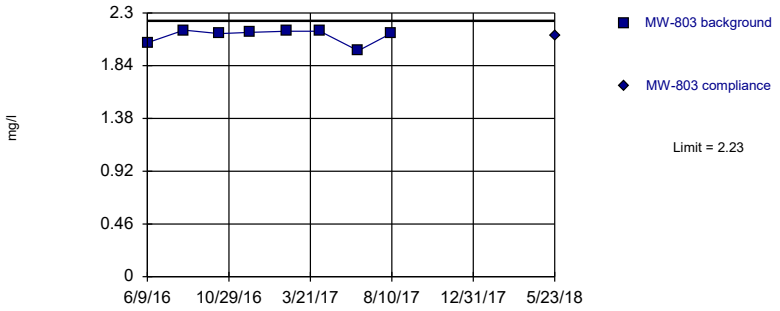
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	2.51	
8/10/2016	2.59	
10/11/2016	2.5	
12/6/2016	2.57	
2/7/2017	2.51	
4/4/2017	2.48	
6/13/2017	2.41	
8/7/2017	2.5	
5/23/2018		2.5

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.1, Std. Dev.=0.0631, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.75, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

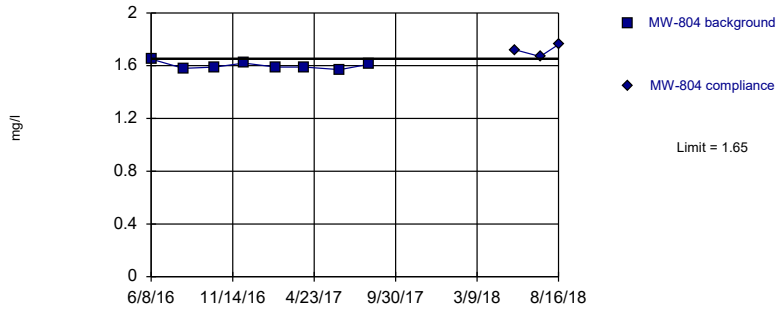
Constituent: BORON Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.6, Std. Dev.=0.0256, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.906, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

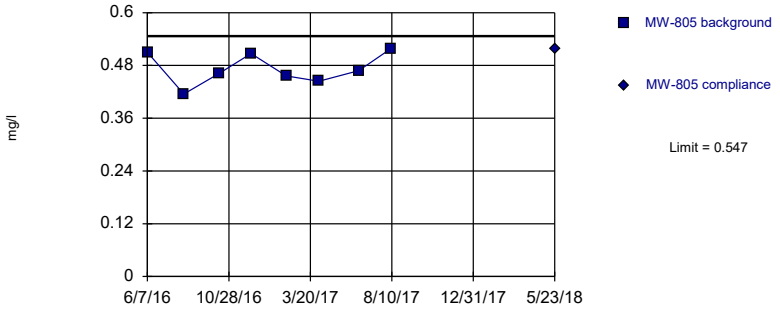
Constituent: BORON Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.473, Std. Dev.=0.0362, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.93, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

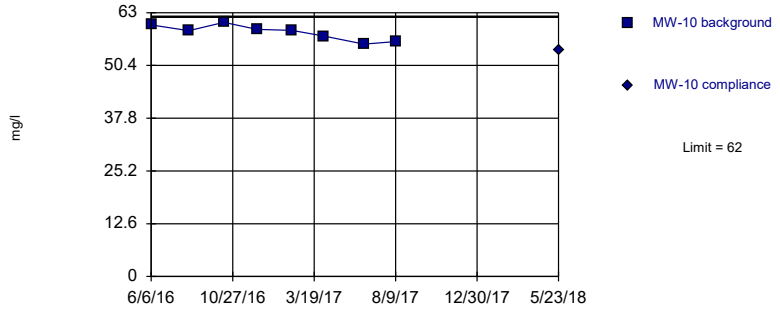
Constituent: BORON Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=58.3, Std. Dev.=1.83, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.943, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	2.04	
8/12/2016	2.15	
10/13/2016	2.12	
12/6/2016	2.13	
2/8/2017	2.14	
4/7/2017	2.14	
6/13/2017	1.97	
8/9/2017	2.12	
5/23/2018		2.1

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804	
6/8/2016	1.65		
8/10/2016	1.58		
10/11/2016	1.59		
12/7/2016	1.62		
2/7/2017	1.59		
4/4/2017	1.59		
6/13/2017	1.57		
8/8/2017	1.61		
5/23/2018		1.72	
7/11/2018		1.67	1st verification re-sample
8/16/2018		1.76	2nd verification re-sample

Prediction Limit

Constituent: BORON (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	0.51	
8/10/2016	0.415	
10/11/2016	0.462	
12/6/2016	0.507	
2/6/2017	0.456	
4/4/2017	0.444	
6/13/2017	0.468	
8/8/2017	0.518	
5/23/2018		0.517

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

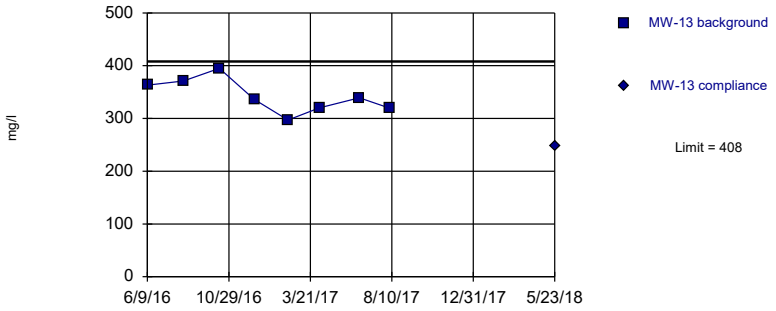
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	60.1	
8/11/2016	58.7	
10/12/2016	60.7	
12/9/2016	59	
2/8/2017	58.8	
4/6/2017	57.4	
6/15/2017	55.5	
8/10/2017	56.1	
5/23/2018		54.1

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=343, Std. Dev.=32, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.97, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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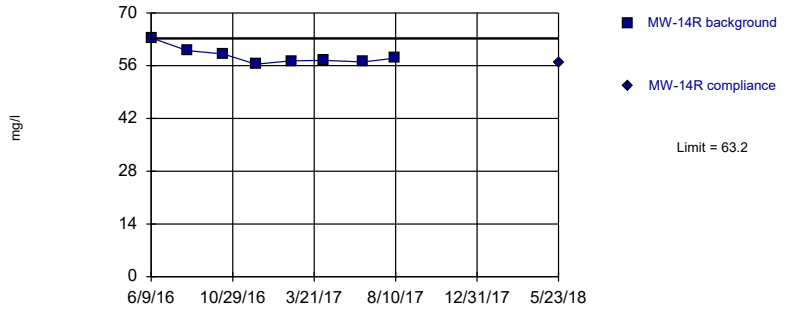
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=58.6, Std. Dev.=2.27, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.847, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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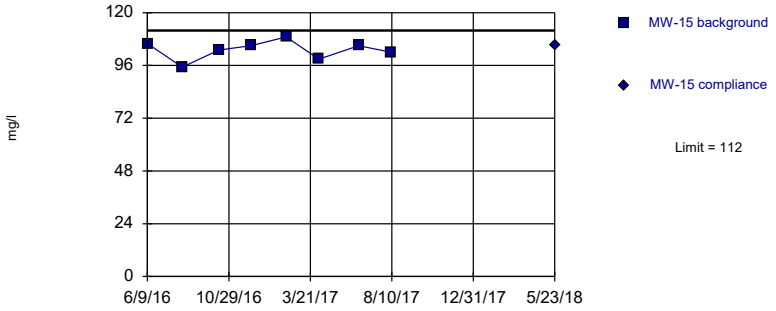
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=103, Std. Dev.=4.34, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.959, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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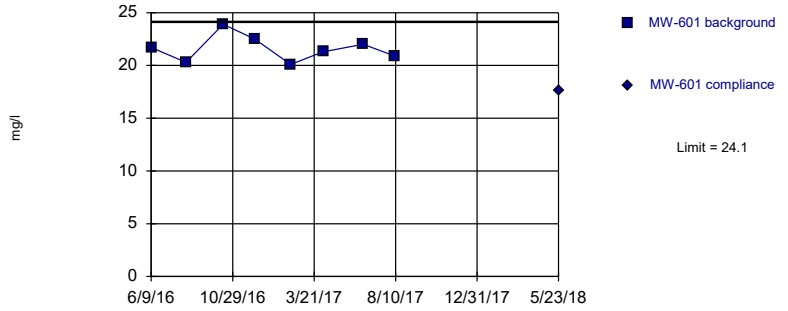
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=21.6, Std. Dev.=1.24, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.955, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	363	
8/11/2016	371	
10/13/2016	395	
12/13/2016	336	
2/10/2017	297	
4/6/2017	320	
6/15/2017	339	
8/8/2017	319	
5/23/2018		248

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	63.4	
8/11/2016	60	
10/13/2016	59.1	
12/9/2016	56.4	
2/9/2017	57.3	
4/7/2017	57.4	
6/15/2017	57	
8/10/2017	58	
5/23/2018		56.9

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	106	
8/9/2016	95.2	
10/12/2016	103	
12/7/2016	105	
2/7/2017	109	
4/5/2017	98.9	
6/14/2017	105	
8/10/2017	102	
5/23/2018		105

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

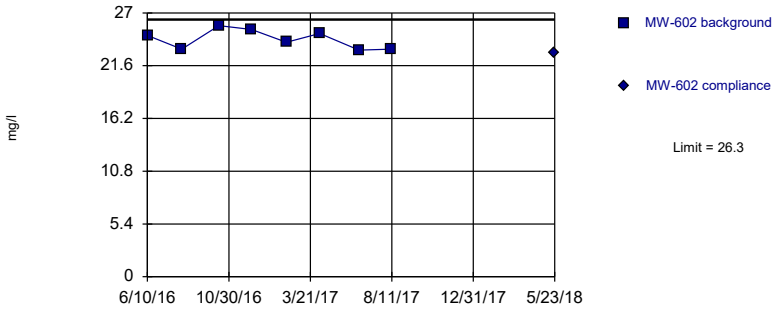
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	21.7	
8/9/2016	20.3	
10/13/2016	23.9	
12/7/2016	22.5	
2/8/2017	20.1	
4/6/2017	21.3	
6/15/2017	22	
8/9/2017	20.9	
5/23/2018		17.6

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=24.3, Std. Dev.=0.984, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.895, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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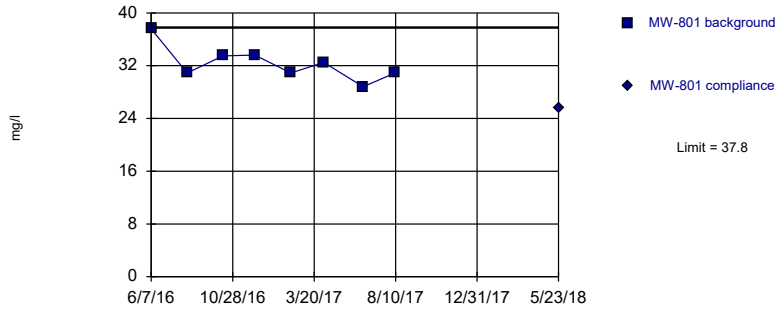
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=32.3, Std. Dev.=2.66, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.915, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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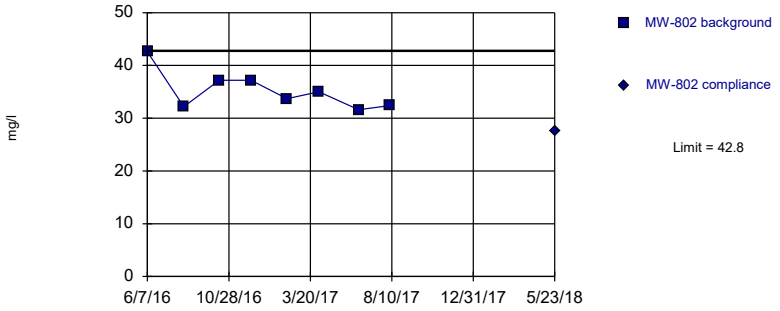
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=35.2, Std. Dev.=3.68, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.883, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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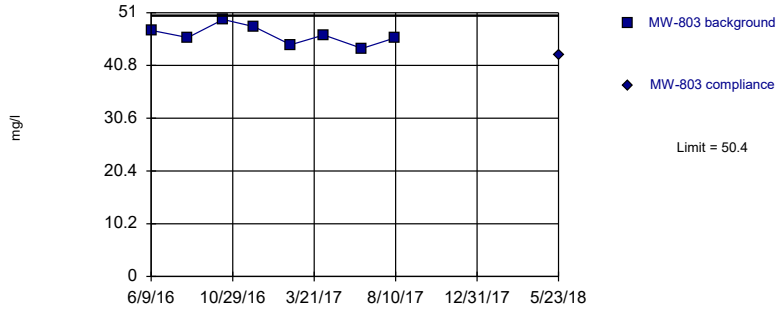
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=46.7, Std. Dev.=1.83, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.981, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	24.7	
8/9/2016	23.3	
10/13/2016	25.7	
12/9/2016	25.3	
2/8/2017	24	
4/7/2017	24.9	
6/15/2017	23.2	
8/10/2017	23.3	
5/23/2018		22.9

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	37.6	
8/9/2016	30.9	
10/11/2016	33.5	
12/6/2016	33.6	
2/7/2017	30.9	
4/6/2017	32.5	
6/14/2017	28.8	
8/9/2017	30.9	
5/23/2018		25.6

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	42.6	
8/10/2016	32.2	
10/11/2016	37.2	
12/6/2016	37.2	
2/7/2017	33.7	
4/4/2017	35	
6/13/2017	31.6	
8/7/2017	32.4	
5/23/2018		27.5

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

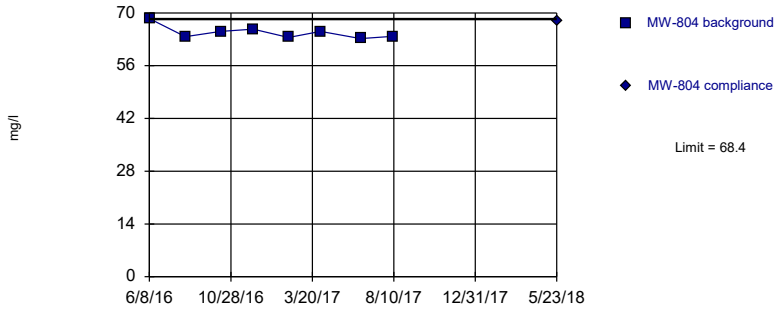
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	47.6	
8/12/2016	46.2	
10/13/2016	49.7	
12/6/2016	48.3	
2/8/2017	44.8	
4/7/2017	46.7	
6/13/2017	44.1	
8/9/2017	46.1	
5/23/2018		42.9

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=64.8, Std. Dev.=1.74, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.843, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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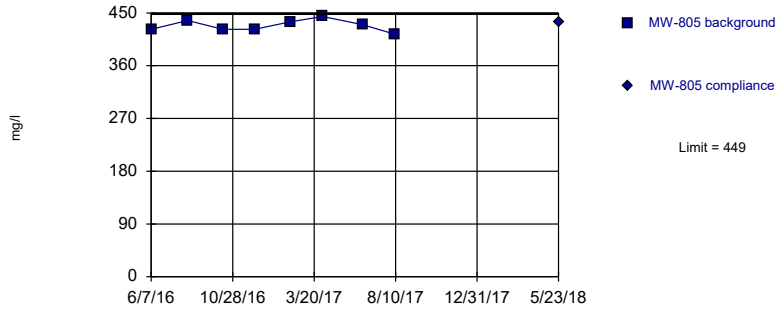
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=428, Std. Dev.=9.95, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.946, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CALCIUM Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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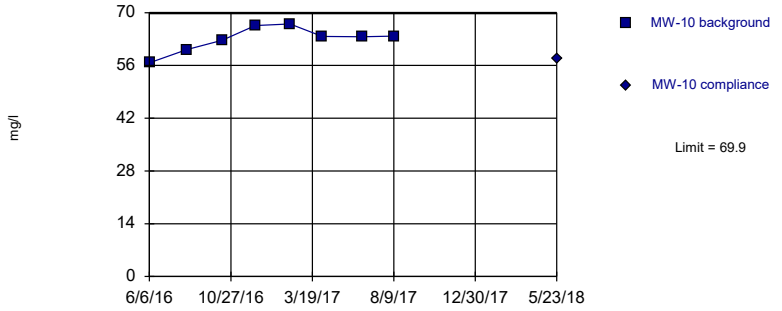
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=63, Std. Dev.=3.34, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.916, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

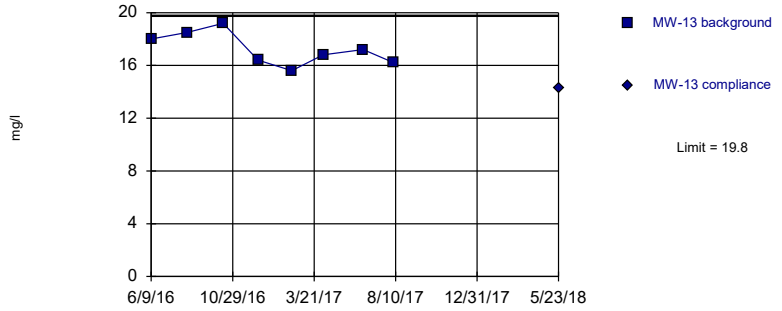
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.09 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=17.2, Std. Dev.=1.24, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.964, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	68.5	
8/10/2016	63.7	
10/11/2016	65.1	
12/7/2016	65.7	
2/7/2017	63.5	
4/4/2017	65.1	
6/13/2017	63.2	
8/8/2017	63.8	
5/23/2018		67.8

Prediction Limit

Constituent: CALCIUM (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	422	
8/10/2016	437	
10/11/2016	422	
12/6/2016	422	
2/6/2017	435	
4/4/2017	444	
6/13/2017	430	
8/8/2017	414	
5/23/2018		434

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	56.7	
8/11/2016	60.2	
10/12/2016	62.7	
12/9/2016	66.6	
2/8/2017	67	
4/6/2017	63.7	
6/15/2017	63.6	
8/10/2017	63.8	
5/23/2018		57.9

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

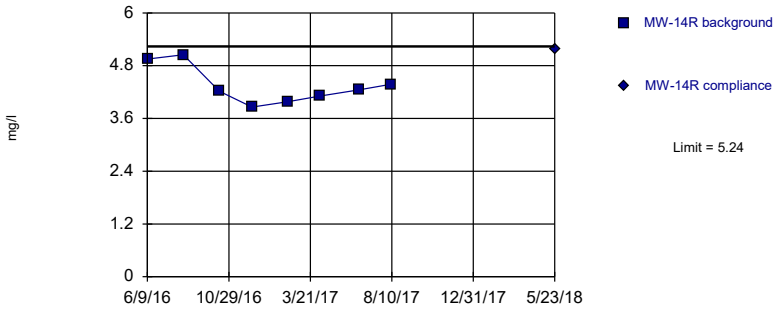
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	18	
8/11/2016	18.5	
10/13/2016	19.2	
12/13/2016	16.4	
2/10/2017	15.6	
4/6/2017	16.8	
6/15/2017	17.2	
8/8/2017	16.2	
5/23/2018		14.3

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.35, Std. Dev.=0.433, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.882, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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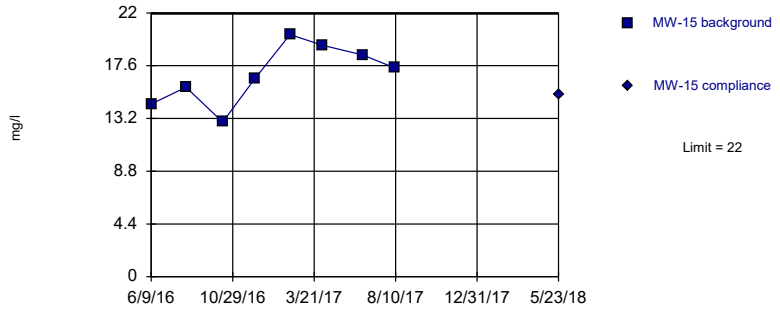
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=16.9, Std. Dev.=2.48, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.978, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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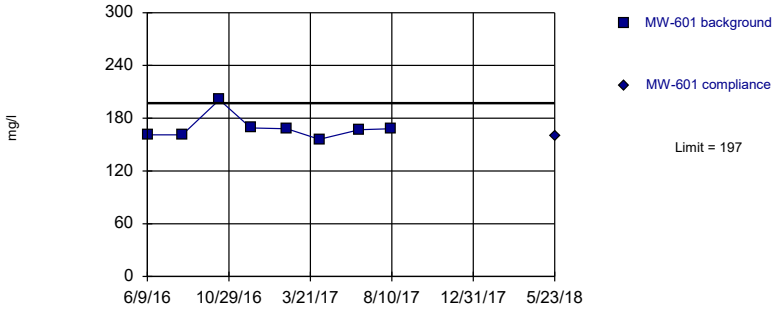
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=5.13, Std. Dev.=0.0768, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.754, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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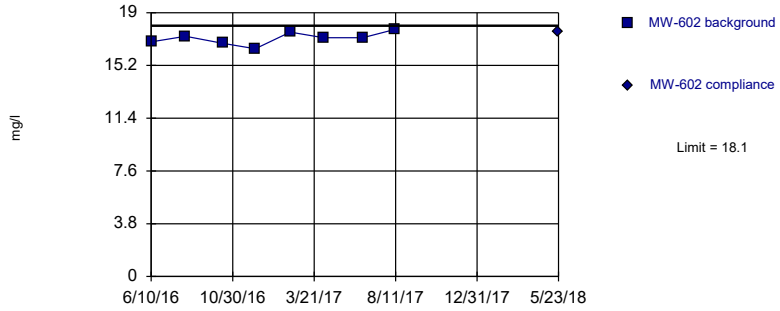
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=17.2, Std. Dev.=0.447, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.978, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	4.95	
8/11/2016	5.05	
10/13/2016	4.22	
12/9/2016	3.86	
2/9/2017	3.98	
4/7/2017	4.11	
6/15/2017	4.25	
8/10/2017	4.38	
5/23/2018		5.17

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	14.4	
8/9/2016	15.8	
10/12/2016	12.9	
12/7/2016	16.5	
2/7/2017	20.2	
4/5/2017	19.3	
6/14/2017	18.5	
8/10/2017	17.4	
5/23/2018		15.2

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	161	
8/9/2016	161	
10/13/2016	201	
12/7/2016	169	
2/8/2017	168	
4/6/2017	156	
6/15/2017	167	
8/9/2017	168	
5/23/2018		160

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

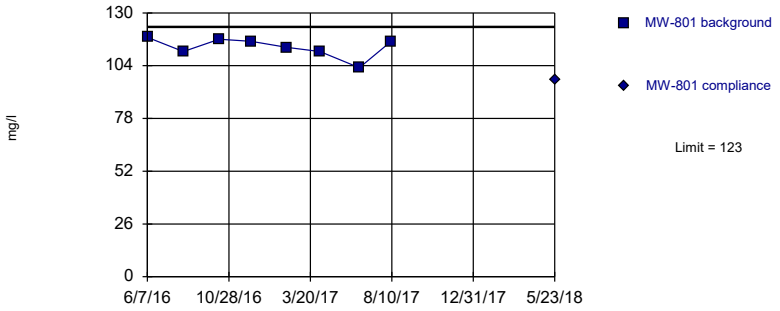
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	16.9	
8/9/2016	17.3	
10/13/2016	16.8	
12/9/2016	16.4	
2/8/2017	17.6	
4/7/2017	17.2	
6/15/2017	17.2	
8/10/2017	17.8	
5/23/2018		17.6

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=113, Std. Dev.=4.88, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.865, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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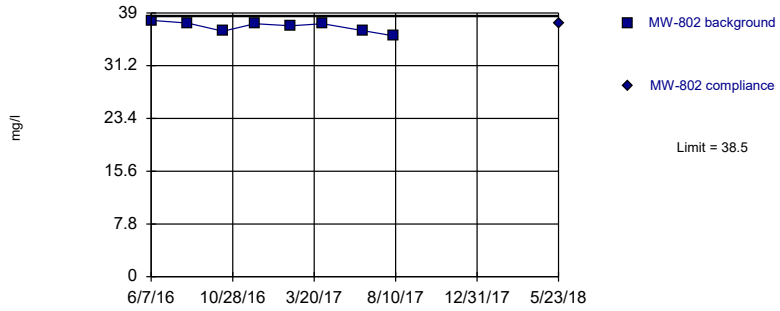
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=37, Std. Dev.=0.773, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.922, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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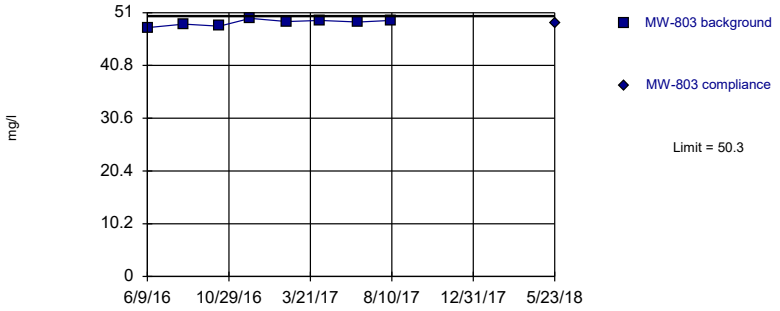
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=49.1, Std. Dev.=0.608, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.946, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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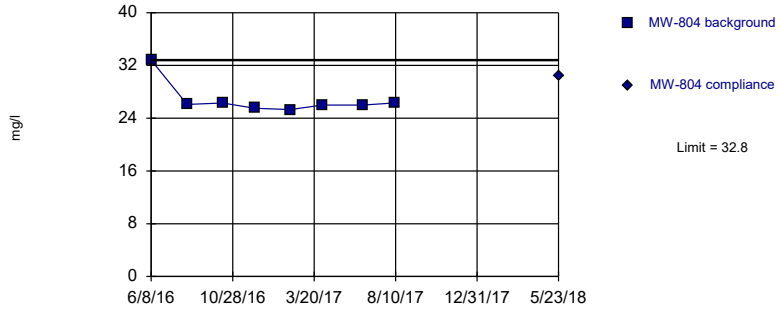
Within Limit

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 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	118	
8/9/2016	111	
10/11/2016	117	
12/6/2016	116	
2/7/2017	113	
4/6/2017	111	
6/14/2017	103	
8/9/2017	116	
5/23/2018		97.1

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	37.9	
8/10/2016	37.5	
10/11/2016	36.3	
12/6/2016	37.4	
2/7/2017	37.1	
4/4/2017	37.4	
6/13/2017	36.4	
8/7/2017	35.6	
5/23/2018		37.5

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	48.1	
8/12/2016	48.8	
10/13/2016	48.4	
12/6/2016	49.9	
2/8/2017	49.3	
4/7/2017	49.5	
6/13/2017	49.2	
8/9/2017	49.5	
5/23/2018		48.9

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

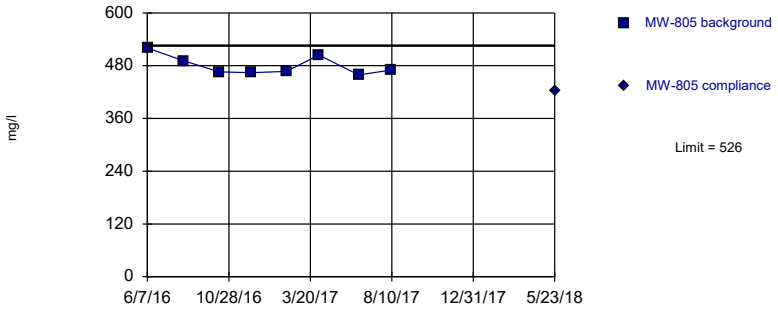
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	32.8	
8/10/2016	26.1	
10/11/2016	26.3	
12/7/2016	25.5	
2/7/2017	25.3	
4/4/2017	26	
6/13/2017	26	
8/8/2017	26.3	
5/23/2018		30.4

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=480, Std. Dev.=22.2, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.846, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: CHLORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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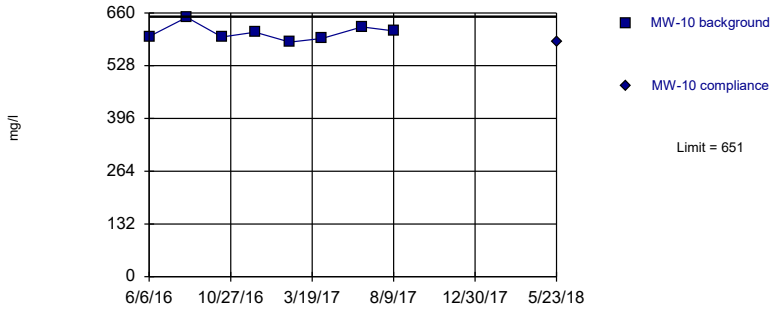
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=611, Std. Dev.=19.6, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.931, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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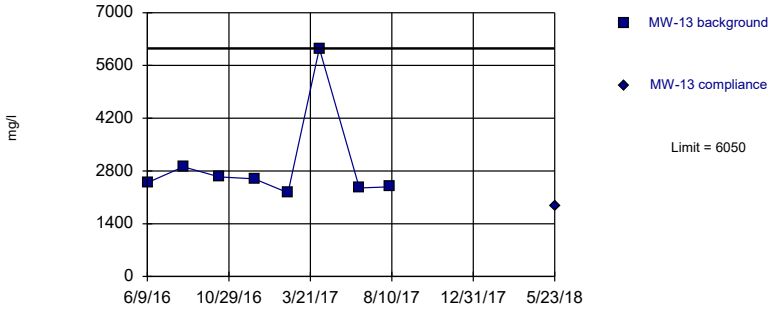
Within Limit

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 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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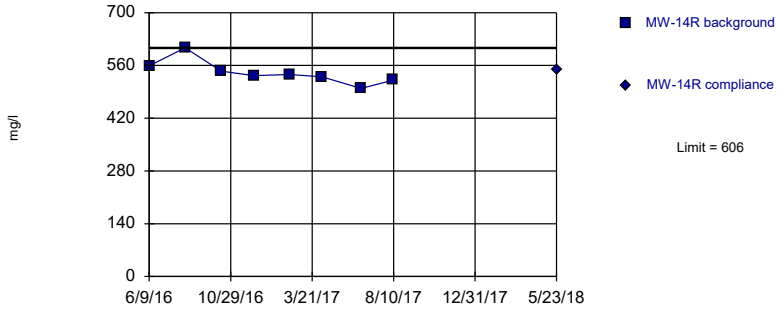
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=541, Std. Dev.=31.8, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.909, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	520	
8/10/2016	491	
10/11/2016	466	
12/6/2016	464	
2/6/2017	467	
4/4/2017	504	
6/13/2017	459	
8/8/2017	470	
5/23/2018		424

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	601	
8/11/2016	649	
10/12/2016	600	
12/9/2016	612	
2/8/2017	587	
4/6/2017	596	
6/15/2017	625	
8/10/2017	615	
5/23/2018		589

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	2490	
8/11/2016	2910	
10/13/2016	2640	
12/13/2016	2590	
2/10/2017	2220	
4/6/2017	6050	
6/15/2017	2350	
8/8/2017	2380	
5/23/2018		1860

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

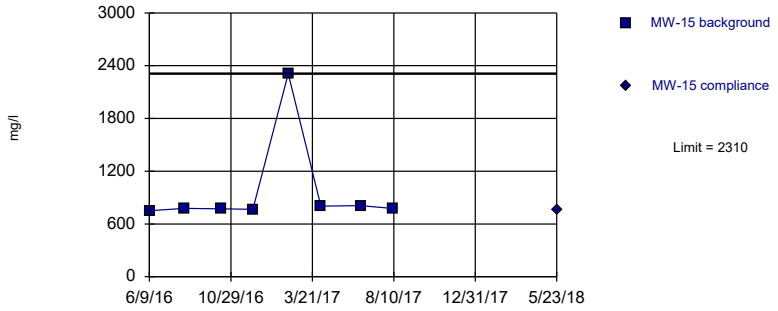
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	559	
8/11/2016	607	
10/13/2016	545	
12/9/2016	533	
2/9/2017	536	
4/7/2017	530	
6/15/2017	499	
8/10/2017	521	
5/23/2018		548

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 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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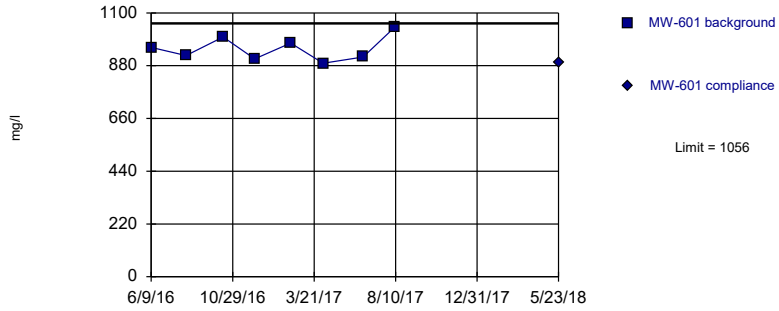
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=951, Std. Dev.=51.4, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.94, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

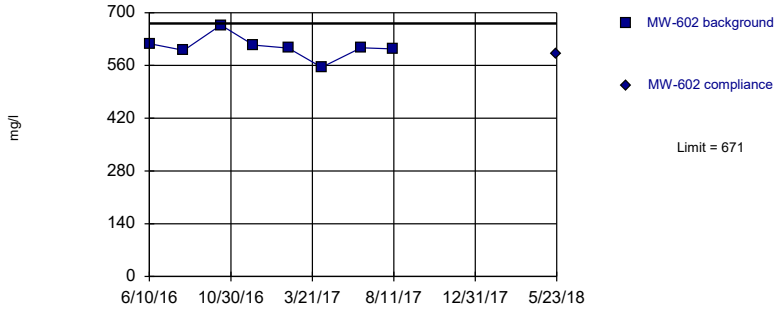
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.09 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=609, Std. Dev.=30.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.871, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

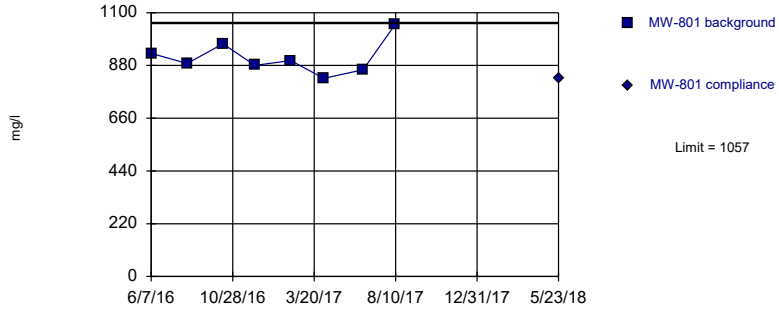
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.09 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=913, Std. Dev.=70.1, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.934, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	751	
8/9/2016	777	
10/12/2016	772	
12/7/2016	767	
2/7/2017	2310	
4/5/2017	803	
6/14/2017	808	
8/10/2017	775	
5/23/2018		757

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	956	
8/9/2016	922	
10/13/2016	1000	
12/7/2016	908	
2/8/2017	974	
4/6/2017	890	
6/15/2017	916	
8/9/2017	1040	
5/23/2018		894

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	618	
8/9/2016	600	
10/13/2016	667	
12/9/2016	614	
2/8/2017	606	
4/7/2017	555	
6/15/2017	607	
8/10/2017	604	
5/23/2018		592

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

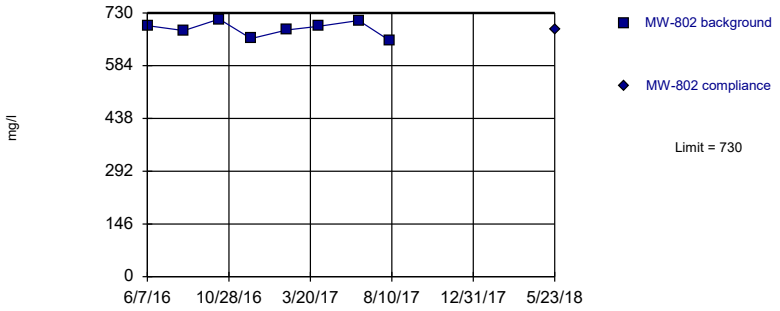
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	930	
8/9/2016	888	
10/11/2016	970	
12/6/2016	880	
2/7/2017	900	
4/6/2017	826	
6/14/2017	862	
8/9/2017	1050	
5/23/2018		828

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=686, Std. Dev.=21.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.938, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

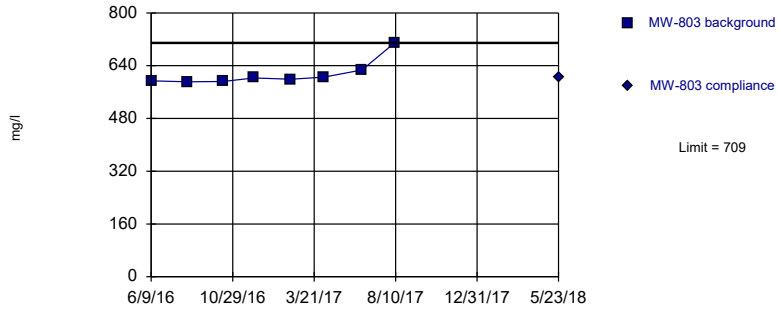
Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

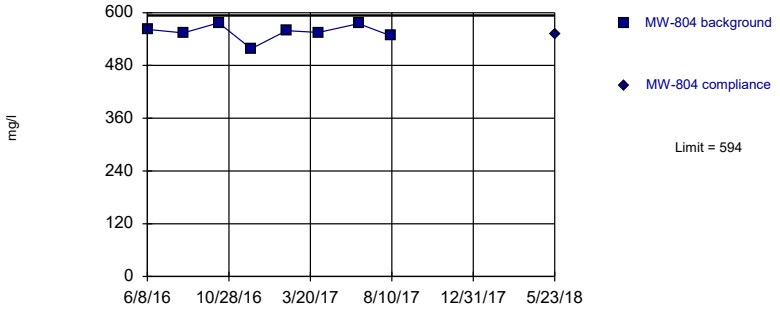
Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=556, Std. Dev.=18.4, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.891, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

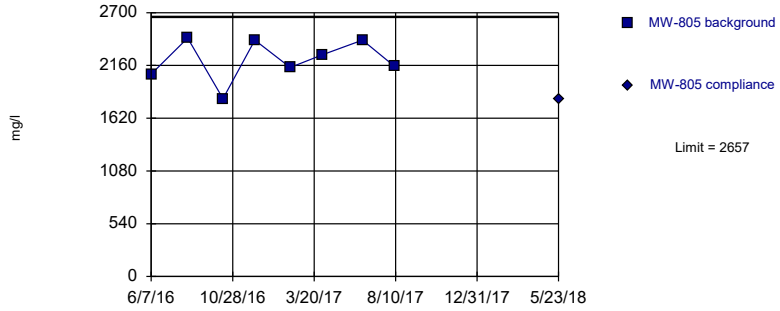
Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2216, Std. Dev.=215, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.903, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: DISSOLVED SOLIDS Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	695	
8/10/2016	681	
10/11/2016	713	
12/6/2016	659	
2/7/2017	683	
4/4/2017	693	
6/13/2017	709	
8/7/2017	653	
5/23/2018		683

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	594	
8/12/2016	591	
10/13/2016	592	
12/6/2016	603	
2/8/2017	599	
4/7/2017	605	
6/13/2017	627	
8/9/2017	709	
5/23/2018		606

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	562	
8/10/2016	554	
10/11/2016	577	
12/7/2016	518	
2/7/2017	559	
4/4/2017	555	
6/13/2017	575	
8/8/2017	548	
5/23/2018		551

Prediction Limit

Constituent: DISSOLVED SOLIDS (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

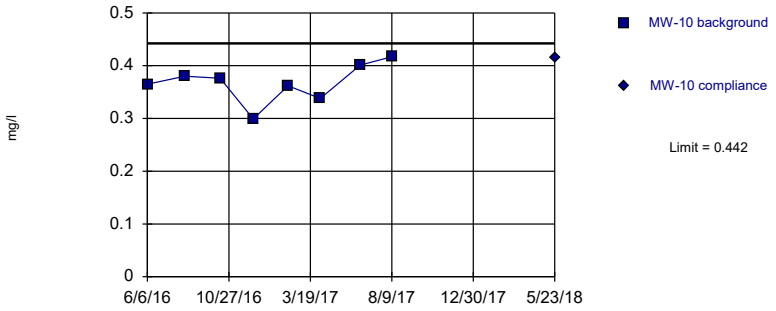
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	2070	
8/10/2016	2440	
10/11/2016	1820	
12/6/2016	2420	
2/6/2017	2140	
4/4/2017	2270	
6/13/2017	2420	
8/8/2017	2150	
5/23/2018		1810

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.367, Std. Dev.=0.0366, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.962, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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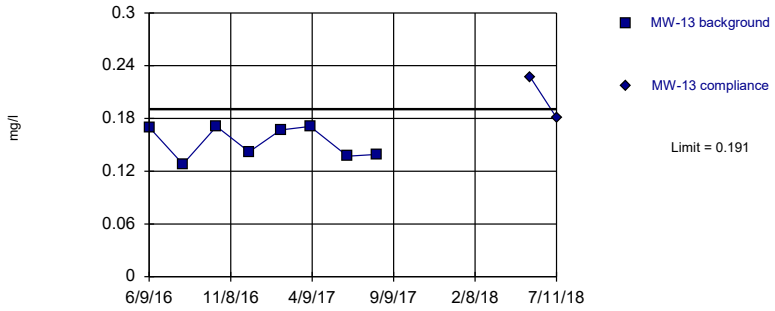
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.153, Std. Dev.=0.0182, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.815, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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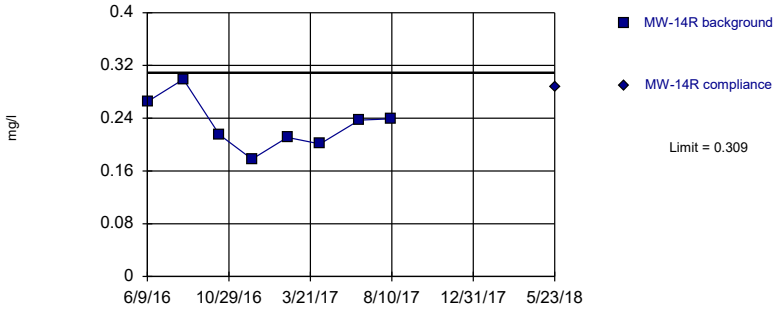
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.231, Std. Dev.=0.0383, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.968, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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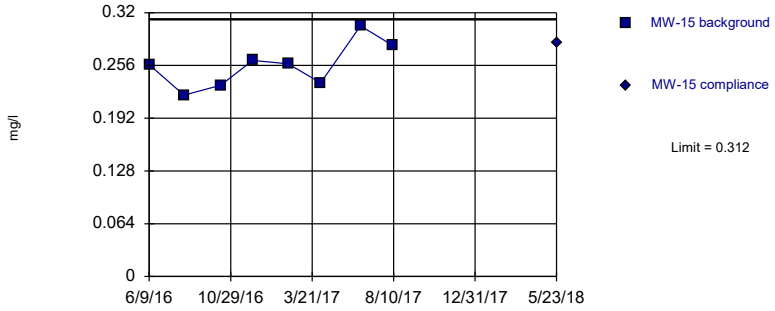
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.256, Std. Dev.=0.0273, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.957, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	0.365	
8/11/2016	0.38	
10/12/2016	0.376	
12/9/2016	0.299	
2/8/2017	0.362	
4/6/2017	0.338	
6/15/2017	0.401	
8/10/2017	0.417	
5/23/2018		0.414

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13	
6/9/2016	0.17		
8/11/2016	0.128		
10/13/2016	0.171		
12/13/2016	0.142		
2/10/2017	0.167		
4/6/2017	0.171		
6/15/2017	0.137		
8/8/2017	0.139		
5/23/2018		0.227	
7/11/2018		0.181	1st verification re-sample

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	0.265	
8/11/2016	0.299	
10/13/2016	0.215	
12/9/2016	0.178	
2/9/2017	0.211	
4/7/2017	0.201	
6/15/2017	0.237	
8/10/2017	0.239	
5/23/2018		0.287

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

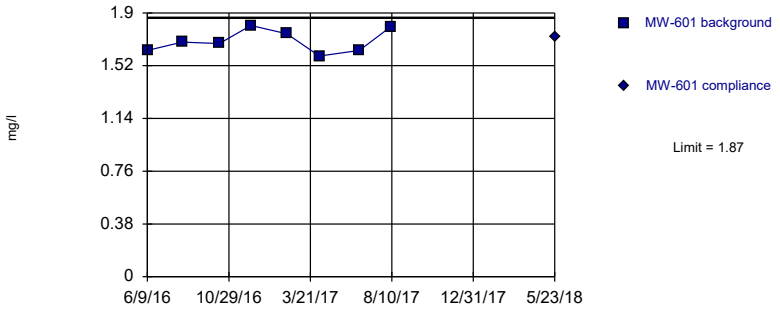
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	0.257	
8/9/2016	0.22	
10/12/2016	0.232	
12/7/2016	0.262	
2/7/2017	0.258	
4/5/2017	0.235	
6/14/2017	0.304	
8/10/2017	0.28	
5/23/2018		0.283

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.7, Std. Dev.=0.0819, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.925, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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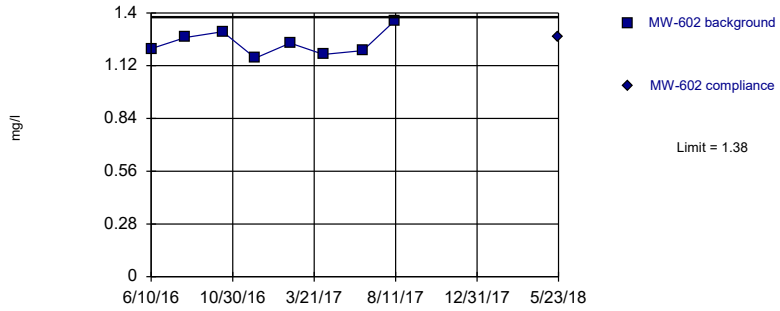
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.24, Std. Dev.=0.067, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.952, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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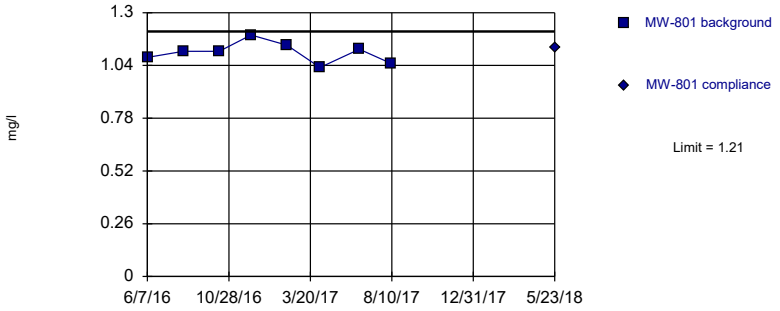
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.1, Std. Dev.=0.0507, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.973, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

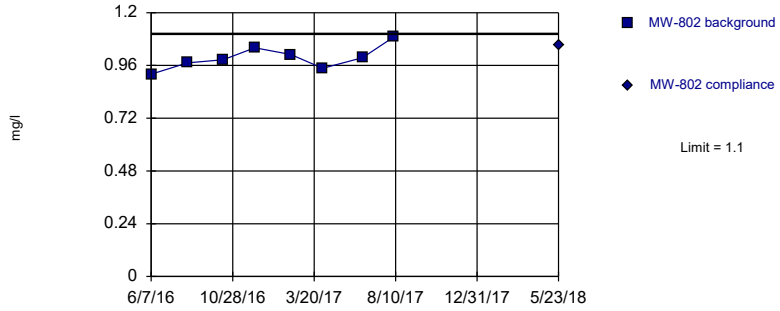
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.09 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.995, Std. Dev.=0.0532, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.981, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: FLUORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	1.63	
8/9/2016	1.69	
10/13/2016	1.68	
12/7/2016	1.81	
2/8/2017	1.75	
4/6/2017	1.59	
6/15/2017	1.63	
8/9/2017	1.8	
5/23/2018		1.73

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	1.21	
8/9/2016	1.27	
10/13/2016	1.3	
12/9/2016	1.16	
2/8/2017	1.24	
4/7/2017	1.18	
6/15/2017	1.2	
8/10/2017	1.36	
5/23/2018		1.27

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	1.08	
8/9/2016	1.11	
10/11/2016	1.11	
12/6/2016	1.19	
2/7/2017	1.14	
4/6/2017	1.03	
6/14/2017	1.12	
8/9/2017	1.05	
5/23/2018		1.13

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

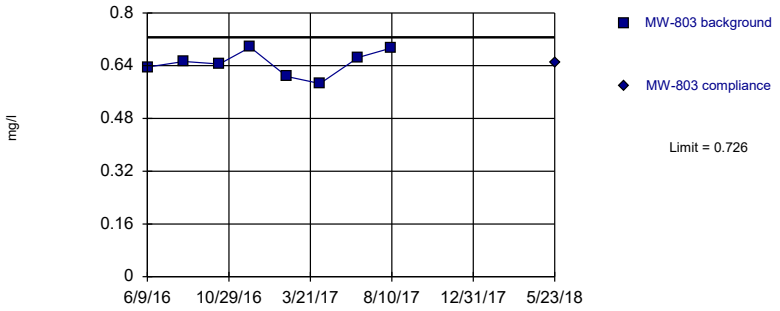
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	0.92	
8/10/2016	0.972	
10/11/2016	0.986	
12/6/2016	1.04	
2/7/2017	1.01	
4/4/2017	0.947	
6/13/2017	0.995	
8/7/2017	1.09	
5/23/2018		1.05

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.648, Std. Dev.=0.0384, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.955, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

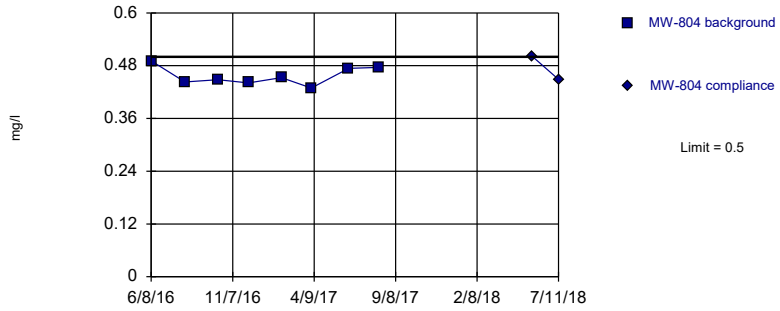
Constituent: FLUORIDE Analysis Run 8/27/2018 2:53 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.457, Std. Dev.=0.0212, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.939, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

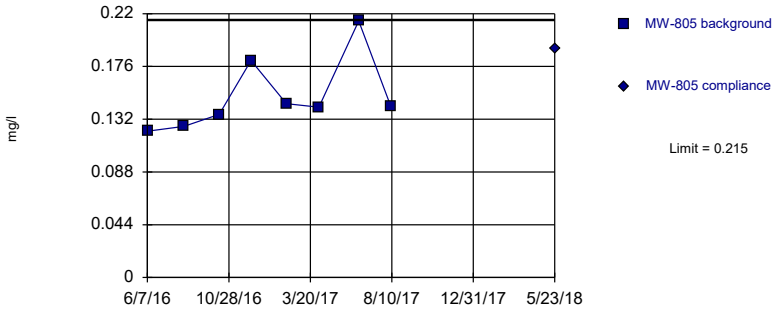
Constituent: FLUORIDE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.151, Std. Dev.=0.031, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.828, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

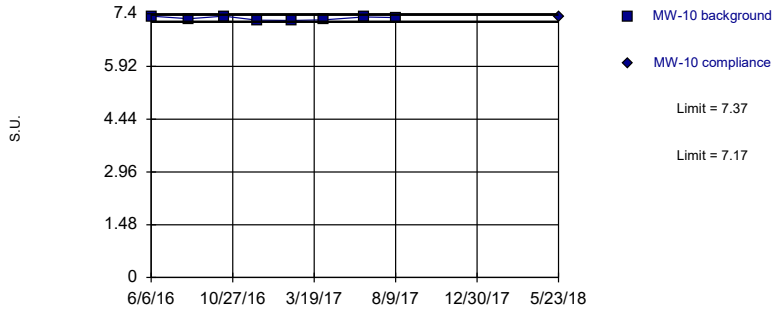
Constituent: FLUORIDE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.27, Std. Dev.=0.0492, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.893, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	0.636	
8/12/2016	0.653	
10/13/2016	0.645	
12/6/2016	0.696	
2/8/2017	0.607	
4/7/2017	0.586	
6/13/2017	0.665	
8/9/2017	0.693	
5/23/2018		0.649

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804	
6/8/2016	0.491		
8/10/2016	0.443		
10/11/2016	0.448		
12/7/2016	0.441		
2/7/2017	0.453		
4/4/2017	0.429		
6/13/2017	0.474		
8/8/2017	0.476		
5/23/2018		0.501	
7/11/2018		0.449	1st verification re-sample

Prediction Limit

Constituent: FLUORIDE (mg/l) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	0.122	
8/10/2016	0.126	
10/11/2016	0.136	
12/6/2016	0.181	
2/6/2017	0.145	
4/4/2017	0.142	
6/13/2017	0.214	
8/8/2017	0.143	
5/23/2018		0.191

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

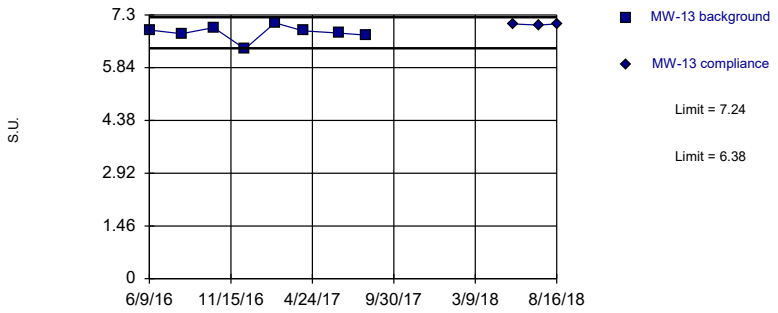
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	7.33	
8/11/2016	7.26	
10/12/2016	7.33	
12/9/2016	7.22	
2/8/2017	7.21	
4/6/2017	7.23	
6/15/2017	7.31	
8/10/2017	7.29	
5/23/2018		7.32

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.81, Std. Dev.=0.21, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.887, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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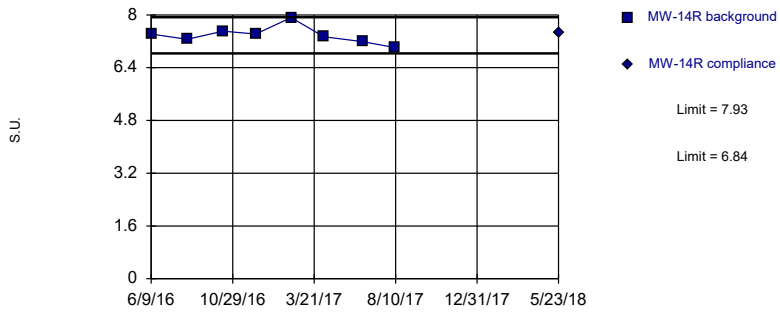
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.38, Std. Dev.=0.267, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.936, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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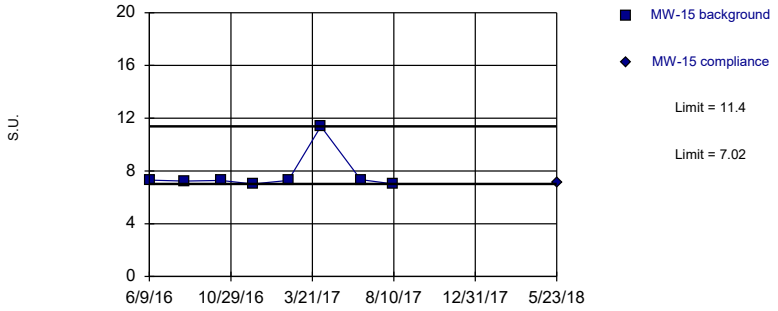
Within Limits

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 0.01 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.0236. Individual comparison alpha = 0.0118 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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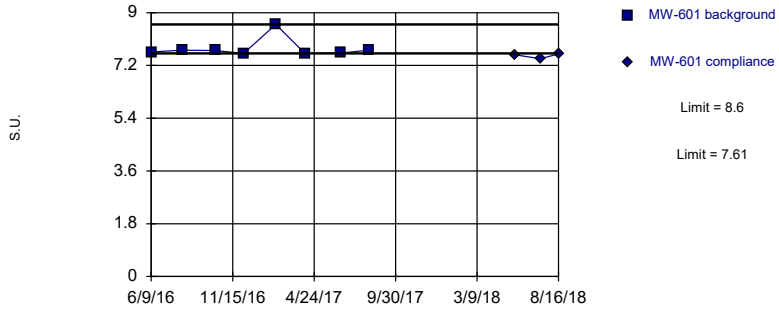
Exceeds Limits

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 0.01 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.0236. Individual comparison alpha = 0.0118 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13	
6/9/2016	6.88		
8/11/2016	6.78		
10/13/2016	6.95		
12/13/2016	6.36		
2/10/2017	7.08		
4/6/2017	6.86		
6/15/2017	6.8		
8/8/2017	6.74		
5/23/2018		7.05	
7/11/2018		7.02	extra sample
8/16/2018		7.05	extra sample

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	7.42	
8/11/2016	7.26	
10/13/2016	7.51	
12/9/2016	7.42	
2/9/2017	7.92	
4/7/2017	7.34	
6/15/2017	7.19	
8/10/2017	7.01	
5/23/2018		7.45

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	7.31	
8/9/2016	7.23	
10/12/2016	7.28	
12/7/2016	7.02	
2/7/2017	7.28	
4/5/2017	11.38	
6/14/2017	7.34	
8/10/2017	7.02	
5/23/2018		7.1

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

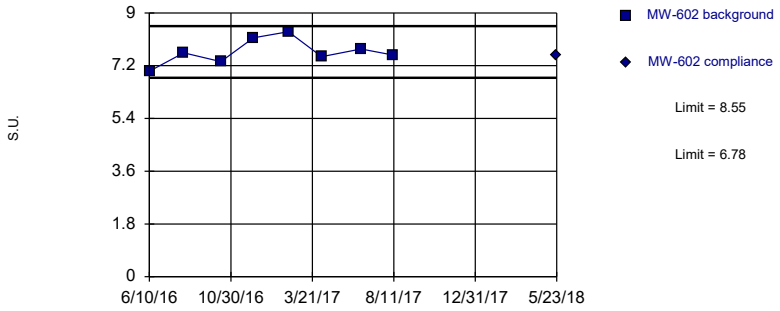
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601	
6/9/2016	7.66		
8/9/2016	7.72		
10/13/2016	7.71		
12/7/2016	7.61		
2/8/2017	8.6		
4/6/2017	7.61		
6/15/2017	7.62		
8/9/2017	7.72		
5/23/2018		7.56	
7/11/2018		7.43	1st verification re-sample
8/16/2018		7.59	2nd verification re-sample

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.67, Std. Dev.=0.431, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.971, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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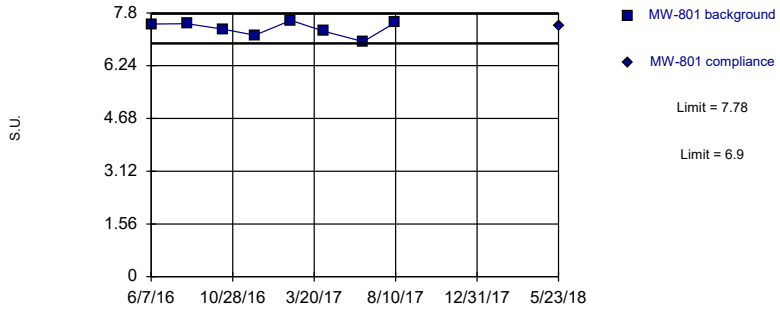
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.34, Std. Dev.=0.214, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.923, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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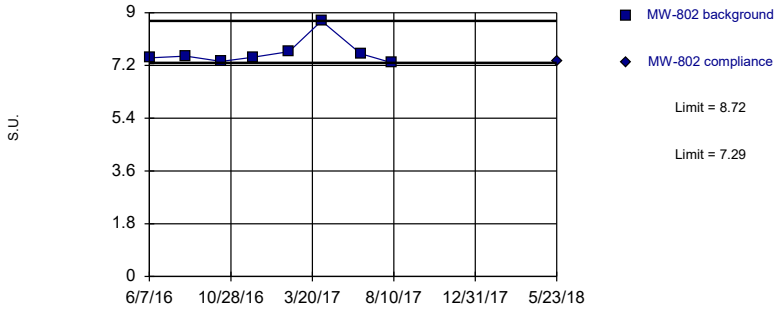
Within Limits

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 0.01 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.0236. Individual comparison alpha = 0.0118 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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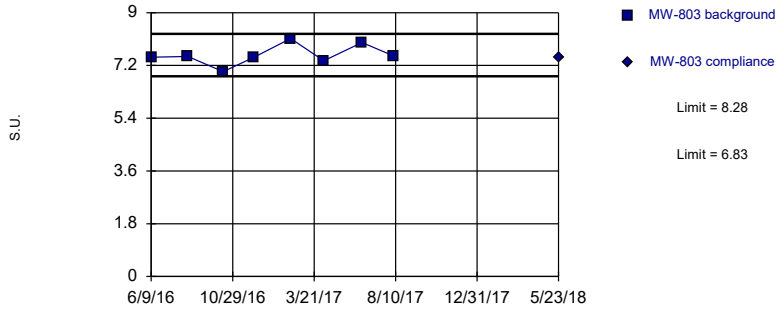
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.56, Std. Dev.=0.353, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.906, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	7.01	
8/9/2016	7.64	
10/13/2016	7.34	
12/9/2016	8.15	
2/8/2017	8.36	
4/7/2017	7.51	
6/15/2017	7.77	
8/10/2017	7.56	
5/23/2018		7.54

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	7.47	
8/9/2016	7.48	
10/11/2016	7.32	
12/6/2016	7.14	
2/7/2017	7.58	
4/6/2017	7.26	
6/14/2017	6.95	
8/9/2017	7.51	
5/23/2018		7.42

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:57 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	7.46	
8/10/2016	7.52	
10/11/2016	7.34	
12/6/2016	7.48	
2/7/2017	7.67	
4/5/2017	8.72	
6/13/2017	7.6	
8/7/2017	7.29	
5/23/2018		7.34

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

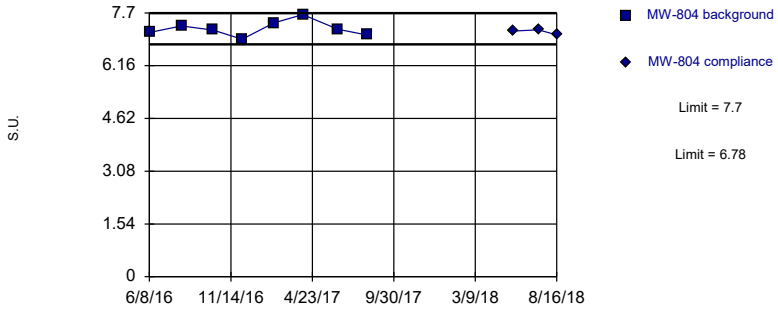
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	7.48	
8/12/2016	7.51	
10/13/2016	6.99	
12/6/2016	7.48	
2/8/2017	8.12	
4/7/2017	7.36	
6/13/2017	7.98	
8/8/2017	7.52	
5/23/2018		7.46

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.24, Std. Dev.=0.222, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.975, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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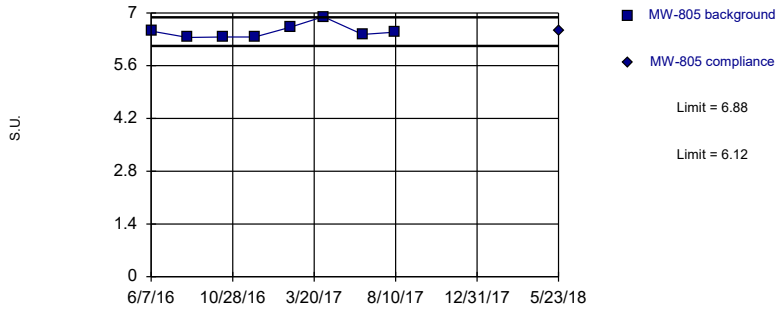
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.5, Std. Dev.=0.186, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.825, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: pH Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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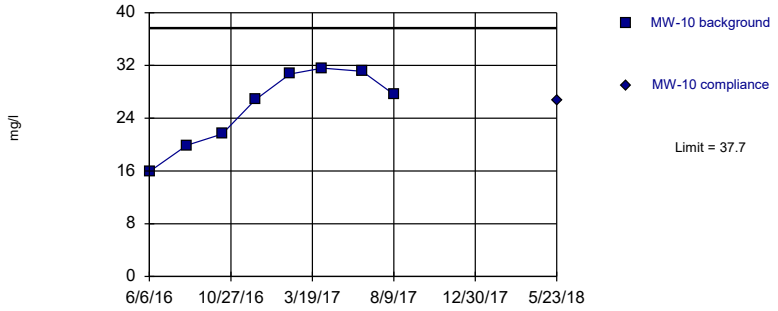
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=25.7, Std. Dev.=5.86, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.897, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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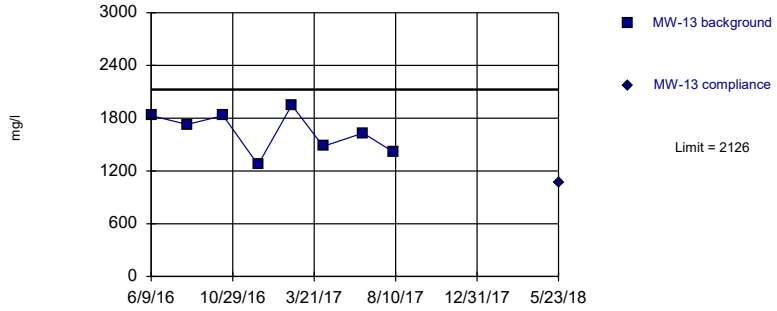
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1641, Std. Dev.=237, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.953, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804	
6/8/2016	7.13		
8/10/2016	7.32		
10/11/2016	7.2		
12/7/2016	6.93		
2/7/2017	7.41		
4/5/2017	7.65		
6/13/2017	7.22		
8/8/2017	7.06		
5/23/2018		7.17	
7/11/2018		7.21	extra sample
8/16/2018		7.06	extra sample

Prediction Limit

Constituent: pH (S.U.) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	6.52	
8/10/2016	6.35	
10/11/2016	6.36	
12/6/2016	6.36	
2/6/2017	6.62	
4/5/2017	6.9	
6/13/2017	6.43	
8/8/2017	6.49	
5/23/2018		6.52

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-10	MW-10
6/6/2016	15.9	
8/11/2016	19.9	
10/12/2016	21.6	
12/9/2016	26.8	
2/8/2017	30.7	
4/6/2017	31.6	
6/15/2017	31.1	
8/10/2017	27.6	
5/23/2018		26.7

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

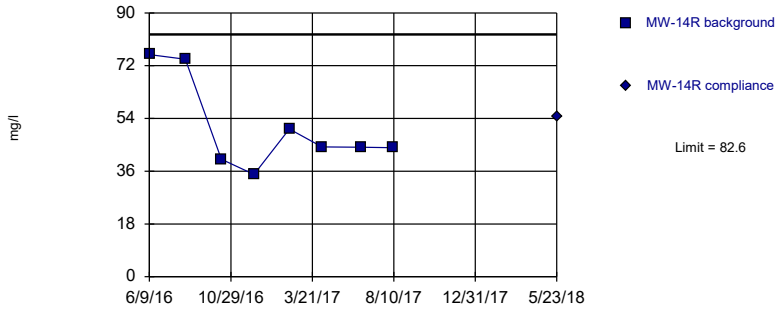
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-13	MW-13
6/9/2016	1830	
8/11/2016	1730	
10/13/2016	1830	
12/13/2016	1270	
2/10/2017	1950	
4/6/2017	1480	
6/15/2017	1630	
8/8/2017	1410	
5/23/2018		1070

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=51, Std. Dev.=15.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.804, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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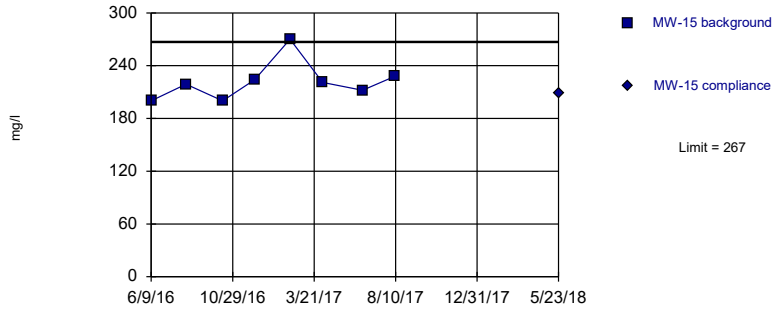
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=222, Std. Dev.=22.1, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.834, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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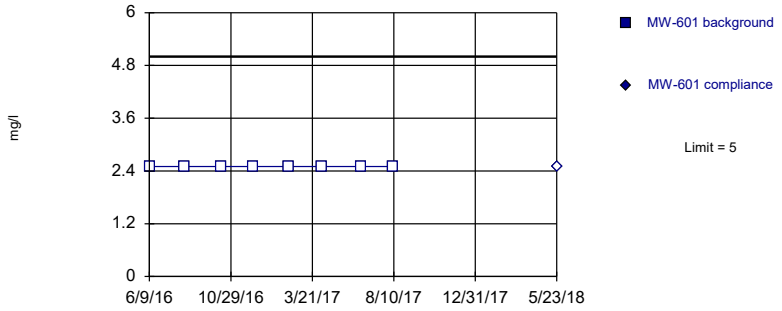
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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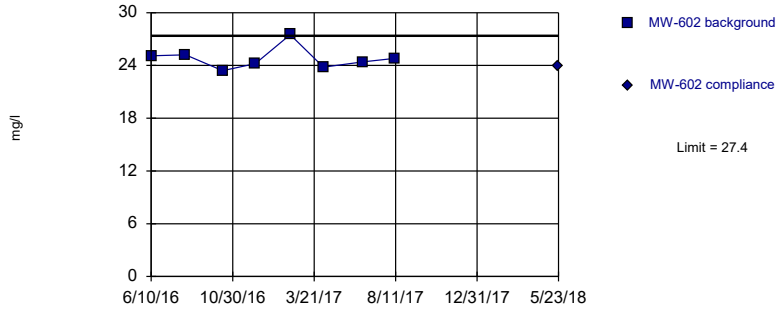
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=24.8, Std. Dev.=1.25, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.874, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-14R	MW-14R
6/9/2016	75.8	
8/11/2016	74.2	
10/13/2016	40.1	
12/9/2016	34.9	
2/9/2017	50.4	
4/7/2017	44.3	
6/15/2017	44.2	
8/10/2017	44	
5/23/2018		54.5

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-15	MW-15
6/9/2016	200	
8/9/2016	219	
10/12/2016	200	
12/7/2016	224	
2/7/2017	270	
4/5/2017	221	
6/14/2017	212	
8/10/2017	228	
5/23/2018		209

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-601	MW-601
6/9/2016	<5	
8/9/2016	<5	
10/13/2016	<5	
12/7/2016	<5	
2/8/2017	<5	
4/6/2017	<5	
6/15/2017	<5	
8/9/2017	<5	
5/23/2018		<5

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-602	MW-602
6/10/2016	25.1	
8/9/2016	25.2	
10/13/2016	23.4	
12/9/2016	24.2	
2/8/2017	27.5	
4/7/2017	23.8	
6/15/2017	24.4	
8/10/2017	24.8	
5/23/2018		23.9

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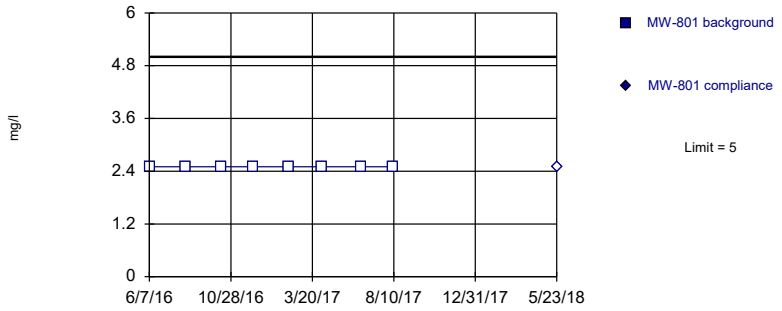
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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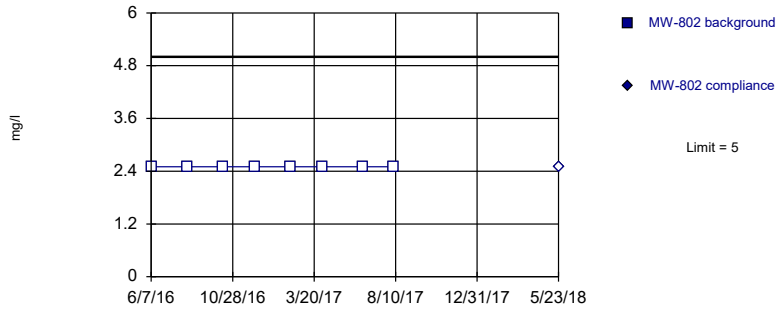
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

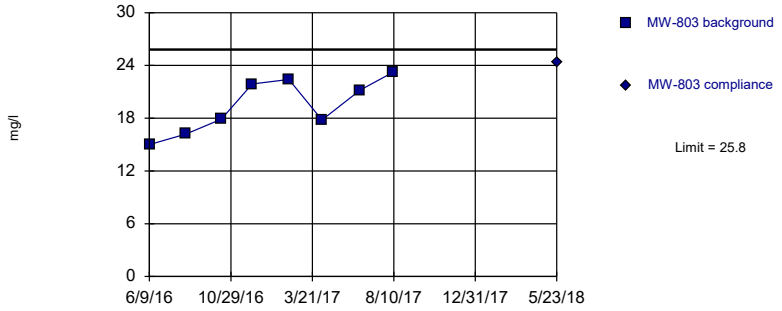
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.09 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=19.5, Std. Dev.=3.1, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.909, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

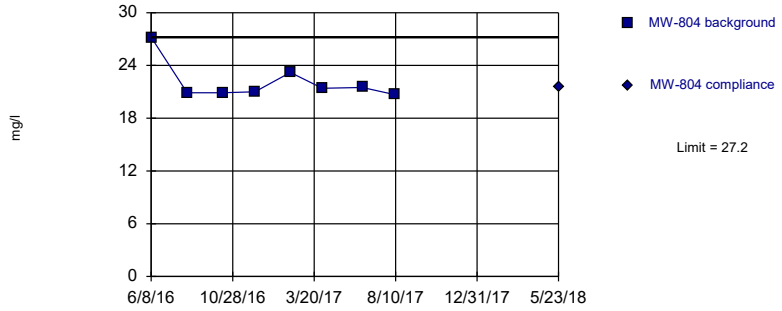
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.09 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.0118. Individual comparison alpha = 0.00591 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-801	MW-801
6/7/2016	<5	
8/9/2016	<5	
10/11/2016	<5	
12/6/2016	<5	
2/7/2017	<5	
4/6/2017	<5	
6/14/2017	<5	
8/9/2017	<5	
5/23/2018		<5

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-802	MW-802
6/7/2016	<5	
8/10/2016	<5	
10/11/2016	<5	
12/6/2016	<5	
2/7/2017	<5	
4/4/2017	<5	
6/13/2017	<5	
8/7/2017	<5	
5/23/2018		<5

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-803	MW-803
6/9/2016	15	
8/12/2016	16.2	
10/13/2016	17.9	
12/6/2016	21.9	
2/8/2017	22.4	
4/7/2017	17.8	
6/13/2017	21.2	
8/9/2017	23.2	
5/23/2018		24.4

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

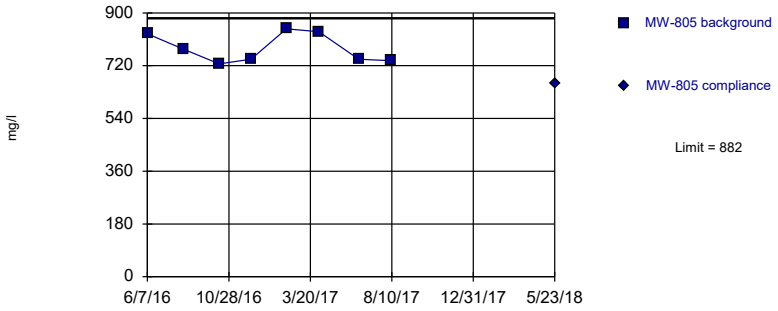
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-804	MW-804
6/8/2016	27.2	
8/10/2016	20.9	
10/11/2016	20.9	
12/7/2016	21	
2/7/2017	23.2	
4/4/2017	21.4	
6/13/2017	21.5	
8/8/2017	20.7	
5/23/2018		21.5

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=779, Std. Dev.=50.1, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.834, critical = 0.749. Kappa = 2.05 (c=7, w=7, 1 of 3, event alpha = 0.0513). Report alpha = 0.00107.

Constituent: SULFATE Analysis Run 8/27/2018 2:54 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE (mg/l) Analysis Run 8/27/2018 2:58 PM View: LF LAQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-805	MW-805
6/7/2016	829	
8/10/2016	776	
10/11/2016	726	
12/6/2016	742	
2/6/2017	846	
4/4/2017	836	
6/13/2017	742	
8/8/2017	737	
5/23/2018		660

Prediction Limit

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 8/27/2018, 2:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
BORON (mg/l)	MW-10	0.983	n/a	5/23/2018	0.91	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	**MW-13**	**0.491**	**n/a**	**8/16/2018**	**0.513**	**Yes**	**8**	**0**	**No**	**0.00107**	**Param Intra 1 of 3**
BORON (mg/l)	MW-14R	0.684	n/a	5/23/2018	0.682	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-15	0.294	n/a	5/23/2018	0.27	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-601	1.97	n/a	5/23/2018	1.88	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-602	2.5	n/a	5/23/2018	2.39	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-801	2.4	n/a	5/23/2018	2.17	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-802	2.62	n/a	5/23/2018	2.5	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	MW-803	2.23	n/a	5/23/2018	2.1	No	8	0	No	0.00107	Param Intra 1 of 3
BORON (mg/l)	**MW-804**	**1.65**	**n/a**	**8/16/2018**	**1.76**	**Yes**	**8**	**0**	**No**	**0.00107**	**Param Intra 1 of 3**
BORON (mg/l)	MW-805	0.547	n/a	5/23/2018	0.517	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-10	62	n/a	5/23/2018	54.1	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-13	408	n/a	5/23/2018	248	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-14R	63.2	n/a	5/23/2018	56.9	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-15	112	n/a	5/23/2018	105	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-601	24.1	n/a	5/23/2018	17.6	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-602	26.3	n/a	5/23/2018	22.9	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-801	37.8	n/a	5/23/2018	25.6	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-802	42.8	n/a	5/23/2018	27.5	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-803	50.4	n/a	5/23/2018	42.9	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-804	68.4	n/a	5/23/2018	67.8	No	8	0	No	0.00107	Param Intra 1 of 3
CALCIUM (mg/l)	MW-805	449	n/a	5/23/2018	434	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-10	69.9	n/a	5/23/2018	57.9	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-13	19.8	n/a	5/23/2018	14.3	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-14R	5.24	n/a	5/23/2018	5.17	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-15	22	n/a	5/23/2018	15.2	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-601	197	n/a	5/23/2018	160	No	8	0	ln(x)	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-602	18.1	n/a	5/23/2018	17.6	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-801	123	n/a	5/23/2018	97.1	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-802	38.5	n/a	5/23/2018	37.5	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-803	50.3	n/a	5/23/2018	48.9	No	8	0	No	0.00107	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-804	32.8	n/a	5/23/2018	30.4	No	8	0	n/a	0.00591	NP Intra (normality) ...
CHLORIDE (mg/l)	MW-805	526	n/a	5/23/2018	424	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-10	651	n/a	5/23/2018	589	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-13	6050	n/a	5/23/2018	1860	No	8	0	n/a	0.00591	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	MW-14R	606	n/a	5/23/2018	548	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-15	2310	n/a	5/23/2018	757	No	8	0	n/a	0.00591	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	MW-601	1056	n/a	5/23/2018	894	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-602	671	n/a	5/23/2018	592	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-801	1057	n/a	5/23/2018	828	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-802	730	n/a	5/23/2018	683	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-803	709	n/a	5/23/2018	606	No	8	0	n/a	0.00591	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	MW-804	594	n/a	5/23/2018	551	No	8	0	No	0.00107	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-805	2657	n/a	5/23/2018	1810	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-10	0.442	n/a	5/23/2018	0.414	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-13	0.191	n/a	7/11/2018	0.181	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-14R	0.309	n/a	5/23/2018	0.287	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-15	0.312	n/a	5/23/2018	0.283	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-601	1.87	n/a	5/23/2018	1.73	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-602	1.38	n/a	5/23/2018	1.27	No	8	0	No	0.00107	Param Intra 1 of 3

Prediction Limit

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 8/27/2018, 2:58 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
FLUORIDE (mg/l)	MW-801	1.21	n/a	5/23/2018	1.13	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-802	1.1	n/a	5/23/2018	1.05	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-803	0.726	n/a	5/23/2018	0.649	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-804	0.5	n/a	7/11/2018	0.449	No	8	0	No	0.00107	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-805	0.215	n/a	5/23/2018	0.191	No	8	0	No	0.00107	Param Intra 1 of 3
pH (S.U.)	MW-10	7.37	7.17	5/23/2018	7.32	No	8	0	No	0.000537	Param Intra 1 of 3
pH (S.U.)	MW-13	7.24	6.38	8/16/2018	7.05	No	8	0	No	0.000537	Param Intra 1 of 3
pH (S.U.)	MW-14R	7.93	6.84	5/23/2018	7.45	No	8	0	No	0.000537	Param Intra 1 of 3
pH (S.U.)	MW-15	11.4	7.02	5/23/2018	7.1	No	8	0	n/a	0.0118	NP Intra (normality) ...
pH (S.U.)	**MW-601**	**8.6**	**7.61**	**8/16/2018**	**7.59**	**Yes**	**8**	**0**	**n/a**	**0.0118**	**NP Intra (normality) ...**
pH (S.U.)	MW-602	8.55	6.78	5/23/2018	7.54	No	8	0	No	0.000537	Param Intra 1 of 3
pH (S.U.)	MW-801	7.78	6.9	5/23/2018	7.42	No	8	0	No	0.000537	Param Intra 1 of 3
pH (S.U.)	MW-802	8.72	7.29	5/23/2018	7.34	No	8	0	n/a	0.0118	NP Intra (normality) ...
pH (S.U.)	MW-803	8.28	6.83	5/23/2018	7.46	No	8	0	No	0.000537	Param Intra 1 of 3
pH (S.U.)	MW-804	7.7	6.78	8/16/2018	7.06	No	8	0	No	0.000537	Param Intra 1 of 3
pH (S.U.)	MW-805	6.88	6.12	5/23/2018	6.52	No	8	0	No	0.000537	Param Intra 1 of 3
SULFATE (mg/l)	MW-10	37.7	n/a	5/23/2018	26.7	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-13	2126	n/a	5/23/2018	1070	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-14R	82.6	n/a	5/23/2018	54.5	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-15	267	n/a	5/23/2018	209	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-601	5	n/a	5/23/2018	2.5ND	No	8	100	n/a	0.00591	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-602	27.4	n/a	5/23/2018	23.9	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-801	5	n/a	5/23/2018	2.5ND	No	8	100	n/a	0.00591	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-802	5	n/a	5/23/2018	2.5ND	No	8	100	n/a	0.00591	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-803	25.8	n/a	5/23/2018	24.4	No	8	0	No	0.00107	Param Intra 1 of 3
SULFATE (mg/l)	MW-804	27.2	n/a	5/23/2018	21.5	No	8	0	n/a	0.00591	NP Intra (normality) ...
SULFATE (mg/l)	MW-805	882	n/a	5/23/2018	660	No	8	0	No	0.00107	Param Intra 1 of 3

ATTACHMENT 2

Sanitas™ Configuration Settings

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

Exclude data flags:

Data Reading Options

- (•) Individual Observations
- ( ) Mean of Each: ( ) Month
- ( ) Median of Each: ( ) Season

Non-Detect / Trace Handling...

Setup Seasons...

[ ] Automatically Process Resamples...

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

- [ ] Black and White Output
- [x] Four Plots Per Page
  - [ ] Always Combine Data Pages...
  - [x] Include Tick Marks on Data Page
  - [ ] Use Constituent Name for Graph Title
- [ ] Draw Border Around Text Reports and Data Pages
- [x] Enlarge/Reduce Fonts (Graphs): 100%
- [x] Enlarge/Reduce Fonts (Data/Text Reports): 100%
- [x] Wide Margins (on reports without explicit setting)
- [ ] Use CAS# (Not Const. Name)
- [ ] Truncate File Names to 20 Characters
- [ ] Include Limit Lines when found in Database...
- [x] Show Deselected Data on Time Series Lighter
- [x] Show Deselected Data on all Data Pages Lighter

Setup Symbols and Colors...

- [x] Prompt to Overwrite/Append Summary Tables
- [ ] Round Limits to 2 Sig. Digits (when not set in data file)
- [ ] User-Set Scale
- [x] Indicate Background Data
- [ ] Show Exact Dates
- [ ] Thick Plot Lines

Zoom Factor: 200%

Output Decimal Precision

- (•) Less Precision
- ( ) Normal Precision
- ( ) More Precision

- [x] Store Print Jobs in Multiple Constituent Mode

Store All Print Jobs...

Printer: Adobe PDF

Printers...

Data | Output | Trend Test | Control Cht | **Prediction Lim** | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

☑ Test for Normality using Shapiro-Wilk/Francia at Alpha = 0.01

☑ Use Non-Parametric Test when Non-Detects Percent > 50

Use Aitchison's Adjustment when Non-Detects Percent > 15

☐ Optional Further Refinement: Use _____ when NDs % > 50

☐ Use Poisson Prediction Limit when Non-Detects Percent > 0

Transformation

- ◉ Use Ladder of Powers
- ○ Natural Log or No Transformation
- ○ Never Transform
- ○ Use Specific Transformation: Natural Log

☐ Use Best W Statistic

☐ Plot Transformed Values

Deseasonalize (Intra- and InterWell)

- ◉ If Seasonality Is Detected
- ○ If Seasonality Is Detected Or Insufficient to Test
- ○ Always (When Sufficient Data)
- ○ Never

☐ Always Use Non-Parametric

Facility α

Statistical Evaluations per Year: 2

Constituents Analyzed: 7

Downgradient (Compliance) Wells: 7

Sampling Plan

Comparing Individual Observations

○ 1 of 1 ○ 1 of 2 ◉ 1 of 3 ○ 1 of 4

○ 2 of 4 ("Modified California")

IntraWell Other

☐ Stop if Background Trend Detected at Alpha = 0.05

☑ Plot Background Data

Override Standard Deviation: _____

Override DF: _____ Override Kappa: _____

☐ Automatically Remove Background Outliers

☐ 2-Tailed Test Mode...

☐ Show Deselected Data Lighter

Non-Parametric Limit = Highest Background Value

Non-Parametric Limit when 100% Non-Detects:

- ○ Highest/Second Highest Background Value
- ◉ Most Recent PQL if available, or MDL
- ○ Most Recent Background Value (subst. method)

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

Rank Von Neumann, Wilcoxon Rank Sum / Mann-Whitney

- [ ] Use Modified Alpha...
- [ ] 2-Tailed Test Mode...

Outlier Tests

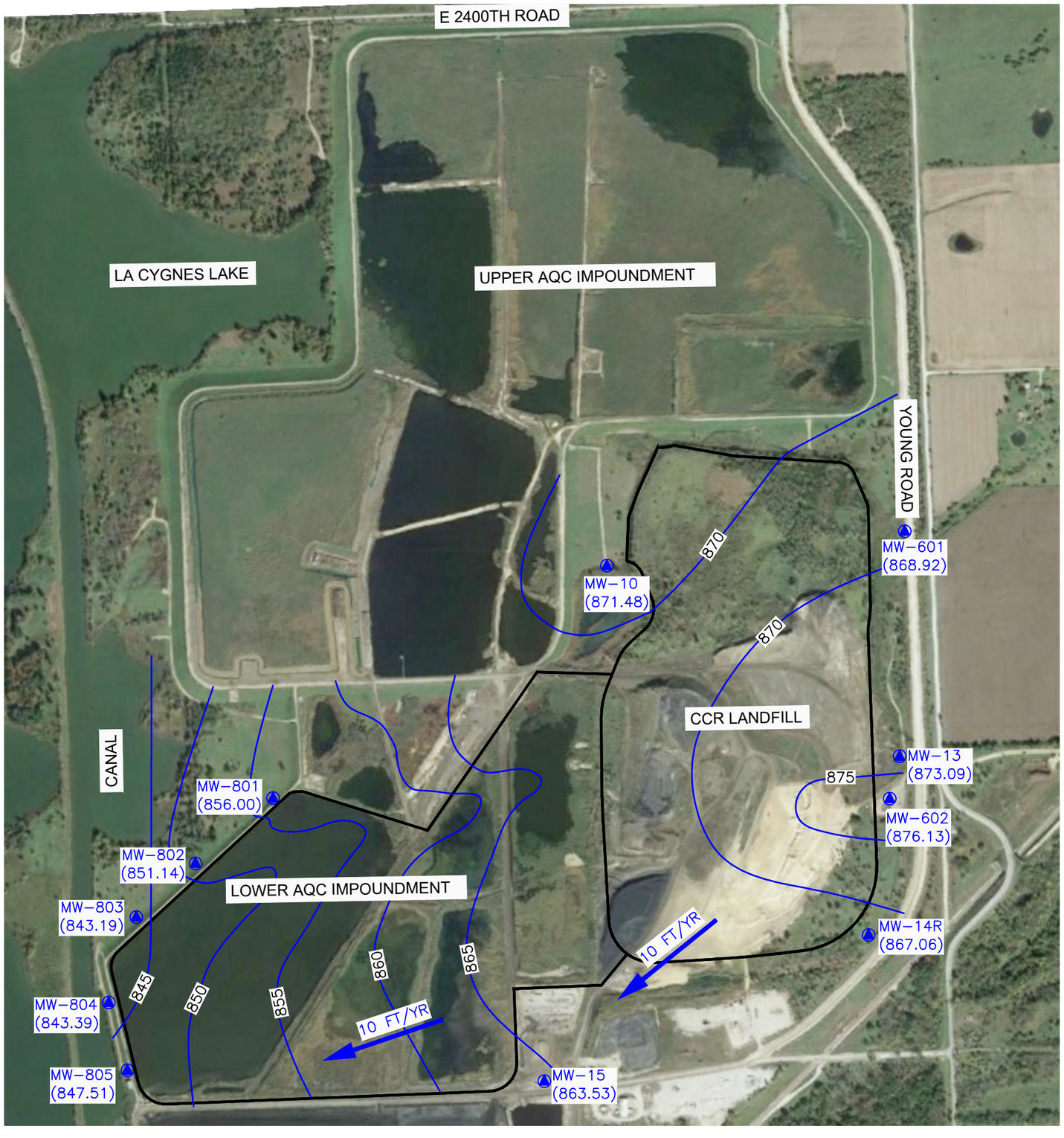
- ( ) EPA 1989 Outlier Screening (fixed alpha of 0.05)
- (•) Dixon's at α= 0.05 or if n > 22 Rosner's at α= 0.01 [x] Use EPA Screening to establish Suspected Outliers
- ( ) Tukey's Outlier Screening, with IQR Multiplier = 3.0 [ ] Use Ladder of Powers to achieve Best W Stat
- [x] Test For Normality using Shapiro-Wilk/Francia at Alpha = 0.1
  - (•) Stop if Non-Normal
  - ( ) Continue with Parametric Test if Non-Normal
  - ( ) Tukey's if Non-Normal, with IQR Multiplier = 3.0 [x] Use Ladder of Powers to achieve Best W Stat
- [x] No Outlier If Less Than 3.0 Times Median
- [ ] Apply Rules found in Ohio Guidance Document 0715
- [ ] Combine Background Wells on the Outlier Report...

Piper, Stiff Diagram

- [ ] Combine Wells
- [ ] Combine Dates
- (•) Use Default Constituent Names
- ( ) Use Constituent Definition File Edit
- [x] Label Constituents
- [x] Label Axes
- [x] Note Cation-Anion Balance (Piper only)

ATTACHMENT 3

Groundwater Potentiometric Surface Maps



LEGEND

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- −875— GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- MW-702* INDICATES WELL NOT USED IN POTENTIOMETRIC SURFACE MAP CREATION
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. KDHE FACILITY PERMIT AND LANDFILL PERMIT BOUNDARIES VARY FROM THAT SHOWN.
2. GOOGLE EARTH IMAGE DATED OCTOBER 2014. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.
4. WATER LEVEL MEASUREMENTS COMPLETED ON MAY 23 AND 24, 2018

800 0 800 1600

SCALE FEET

REV.	DATE	CK. BY
0	–	–
1	–	–
2	–	–
3	–	–
4	–	–
5	–	–

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL-LAQC IMPOUNDMENT (MAY 2018)

PROJECT TITLE
2018 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY METRO, INC
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

SCS ENGINEERS
7311 W. 130th St. Ste. 100
Overland Park, Kansas 66213
PH. (913) 681-0030 FAX. (913) 681-0012

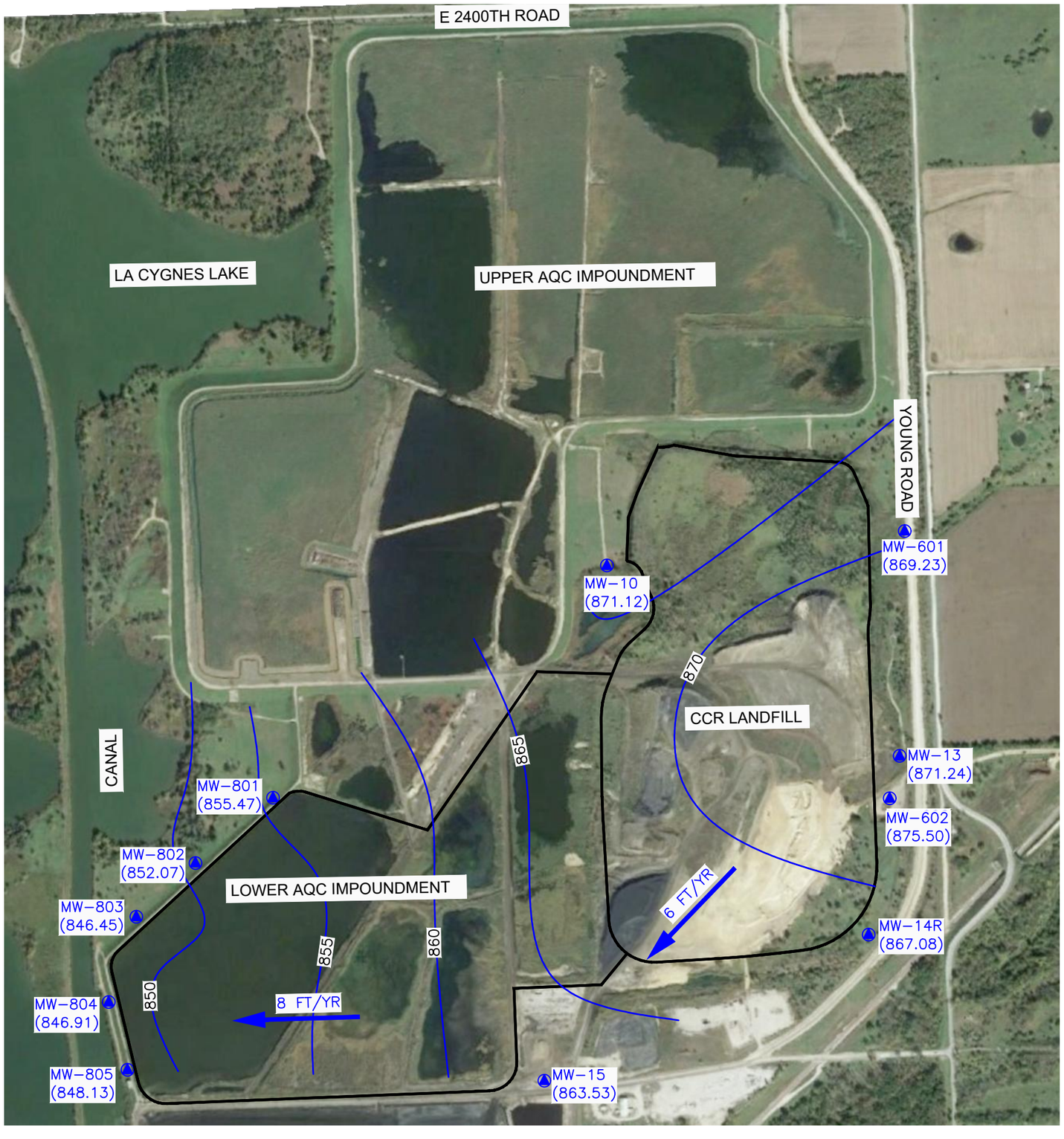
PROJ. NO.	DWN. BY:	Q/A REW BY:
27217233.00	RCW	JRR
DSN. BY:	CHK. BY:	PROJ. MGR
RCW	JRR	JRR

CADD FILE:
LA CYGNE LF LAQC IMP & UAQC FIG 1_MAY 2018 - COMBINED.DWG

DATE:
11/30/22

FIGURE NO.
1

N:\KCPL\Projects\Groundwater\DWG\La Cygne\2018\GW\La Cygne LF LAQC Imp & UAQC Fig 1_MAY 2018 - COMBINED.dwg Nov 30, 2022 - 3:29pm Layout Name: Fig 1 LAQC By: cgoeringer



LEGEND

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- −875— GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- MW-702* INDICATES WELL NOT USED IN POTENTIOMETRIC SURFACE MAP CREATION
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. KDHE FACILITY PERMIT AND LANDFILL PERMIT BOUNDARIES VARY FROM THAT SHOWN.
2. GOOGLE EARTH IMAGE DATED OCTOBER 2014. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.
4. WATER LEVEL MEASUREMENTS COMPLETED ON NOVEMBER 30 THROUGH DECEMBER 4, 2017

800 0 800 1600

SCALE FEET

REV.	DATE	CK. BY
0	-	-
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL-LAQC IMPOUNDMENT (NOVEMBER - DECEMBER 2018)

PROJECT TITLE
2018 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY METRO, INC
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

SCS ENGINEERS
8575 W. 110th St. Ste. 100
Overland Park, Kansas 66210
PH. (913) 681-0030 FAX. (913) 681-0012

PROJ. NO.	DSN. BY:	CHK. BY:	Q/A REVIEW BY:
27217233.18	TGW	JRR	JRR
DSR. BY: TGW			PROJ. MGR JRR

CADD FILE: LA CYGNE LF LAQC IMP & UAQC FIG 1_COMBINED.DWG

DATE: 5/23/19

FIGURE NO. 2

N:\KCPL\Projects\Groundwater\DWG\La Cygne\2018\GW\La Cygne LF LAQC Imp & UAQC Fig 1_Combined.dwg Nov 30, 2022 - 8:57am Layout Name: Fig 1 LAQC By: cgoeringer