2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

UPPER AQC IMPOUNDMENT
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

Presented To:
Evergy Metro, Inc.

SCS ENGINEERS

27217233.21 | January 2022, Revised December 16, 2022

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

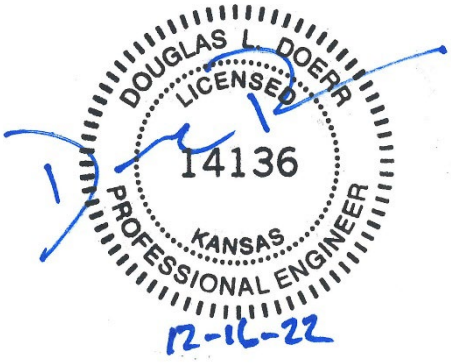
CERTIFICATIONS

I, John R. Rockhold, being a qualified groundwater scientist and Professional Geologist in the State of Kansas, do hereby certify that the 2021 Annual Groundwater Monitoring and Corrective Action Report for the Upper 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 2021 Annual Groundwater Monitoring and Corrective Action Report for the Upper 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 2022	NA	Original
1	December 16, 2022	Addendum 1	Added Addendum 1

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1 INTRODUCTION

This 2021 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), and subsequent revisions. Specifically, this report was prepared for Evergy Metro, Inc. (Evergy) 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 2021 Annual Groundwater Monitoring and Corrective Action Report for the Upper AQC Impoundment at the La Cygne Generating Station.

1.1 § 257.90(e)(6) SUMMARY

A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:

1.1.1 § 257.90(e)(6)(i) Initial Monitoring Program

At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;

At the start of the current annual reporting period, (January 1, 2021), the CCR Impoundment was operating under a detection monitoring program in compliance with § 257.94.

1.1.2 § 257.90(e)(6)(ii) Final Monitoring Program

At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;

At the end of the current annual reporting period, (December 31, 2021), the CCR Impoundment was operating under a detection monitoring program in compliance with § 257.94.

1.1.3 § 257.90(e)(6)(iii) Statistically Significant Increases

If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III to this part pursuant to § 257.94(e):

(A) Identify those constituents listed in Appendix III to this part and the names of the monitoring wells associated with such an increase; and

Monitoring Event	Monitoring Well	Constituent	ASD
Fall 2020	MW-704	Chloride	Successful
Fall 2020	MW-706	Sulfate	Successful
Fall 2020	MW-TW-1	Sulfate	Successful
Spring 2021	MW-704	Chloride	Successful

Monitoring Event	Monitoring Well	Constituent	ASD
Spring 2021	MW-706	Sulfate	Successful
Spring 2021	TW-1	Sulfate	Successful

(B) Provide the date when the assessment monitoring program was initiated for the CCR unit.

Not applicable because an assessment monitoring program was not initiated.

1.1.4 § 257.90(e)(6)(iv) Statistically Significant Levels

If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in Appendix IV to this part pursuant to § 257.95(g) include all of the following:

(A) Identify those constituents listed in Appendix IV to this part and the names of the monitoring wells associated with such an increase;

Not applicable because there was no assessment monitoring conducted.

(B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;

Not applicable because there was no assessment of corrective measures initiated for the CCR Unit.

(C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit*; and*

Not applicable because there was no assessment of corrective measures initiated for the CCR Unit.

(D) Provide the date when the assessment of corrective measures was completed for the CCR unit.

Not applicable because there was no assessment of corrective measures initiated for the CCR Unit.

1.1.5 § 257.90(e)(6)(v) Selection of Remedy

Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection; and

Not applicable because corrective measures are not required.

1.1.6 § 257.90(e)(6)(vi) Remedial Activities

Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

Not applicable because corrective measures are not required.

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 Upper AQC Impoundment and all background (or upgradient) and downgradient monitoring wells with identification numbers for the Upper 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 Upper AQC Impoundment in 2021.

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 required to be conducted during the reporting period (2021). Samples collected in 2021 were collected and analyzed for Appendix III detection monitoring constituents. Results of the sampling events are provided in **Appendix B**, **Table 1** (Appendix III Detection Monitoring Results), and **Table 2** (Detection Monitoring Field Measurements). These tables include Fall 2020 semiannual detection monitoring event verification sample data collected and analyzed in 2021; Spring 2021 semiannual detection monitoring data and verification sample data; and the initial Fall 2021 semiannual detection monitoring data. The dates of sample collection and the monitoring program requiring the sample are also provided in these tables.

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 2021. Only detection monitoring was conducted in 2021.

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 Fall 2020 verification sampling and analyses per the certified statistical method,

b. completion of the statistical evaluation of the Fall 2020 semiannual detection monitoring sampling and analysis event per the certified statistical method,

c. completion of the 2020 Annual Groundwater Monitoring and Corrective Action Report,

d. completion of a successful alternative source demonstration for the Fall 2020 semiannual detection monitoring sampling and analysis event,

e. completion of the Spring 2021 semiannual detection monitoring sampling and analysis event with subsequent verification sampling per the certified statistical method,

f. completion of the statistical evaluation of the Spring 2021 semiannual detection monitoring sampling and analysis event per the certified statistical method,

g. initiation of the Fall 2021 semiannual detection monitoring sampling and analysis event, and

h. completion of a successful alternative source demonstration for the Spring 2021 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 (2022).

Completion of verification sampling and data analysis, and the statistical evaluation of Fall 2021 detection monitoring sampling and analysis event, and, if required, alternative source demonstration(s). Semiannual Spring and Fall 2022 groundwater sampling and analysis. Completion of the statistical evaluation of the Spring 2022 detection monitoring sampling and analysis event, 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 demonstration reports are included as **Appendix C**:

C1 CCR Groundwater Monitoring Alternative Source Demonstration Report November 2020 Groundwater Monitoring Event, Upper AQC Impoundment, La Cygne Generating Station (May 2021)

C2 CCR Groundwater Monitoring Alternative Source Demonstration Report May 2021 Groundwater Monitoring Event, Upper AQC Impoundment, La Cygne Generating Station (January 2022)

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.

2.6 § 257.90(e)(6) OVERVIEW SUMMARY

A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit.

§ 257.90(e)(6) is addressed in Section 1.1 of this report.

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 Evergy Metro, Inc. for specific application to the La Cygne Generating Station Upper AQC Impoundment. No warranties, express or implied, are intended or made.

APPENDIX A

FIGURES

Figure 1: Site Map

Figure 2: Potentiometric Surface Map (May 2021)

Figure 3: Potentiometric Surface Map (November 2021)

LEGEND

CCR UNIT BOUNDARY
(APPROXIMATE LIMITS OF UPPER AQC IMPOUNDMENT)

MW-703 CCR GROUNDWATER MONITORING SYSTEM WELLS

NOTES:

1. KDHE FACILITY PERMIT AND LANDFILL PERMIT BOUNDARIES VARY FROM THAT SHOWN.
2. DRONE IMAGE DATED JANUARY 2021. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.

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SHEET TITLE
SITE MAP
UPPER AQC IMPOUNDMENT
CCR GROUNDWATER MONITORING SYSTEM

PROJECT TITLE
2021 CCR GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT

CLIENT
EVERGY METRO, INC
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

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PROJ. NO.	DWN. BY:	O/A RVW BY:
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DSN. BY:	CHK. BY:	PROJ. MGR
ALR	JF	JRR

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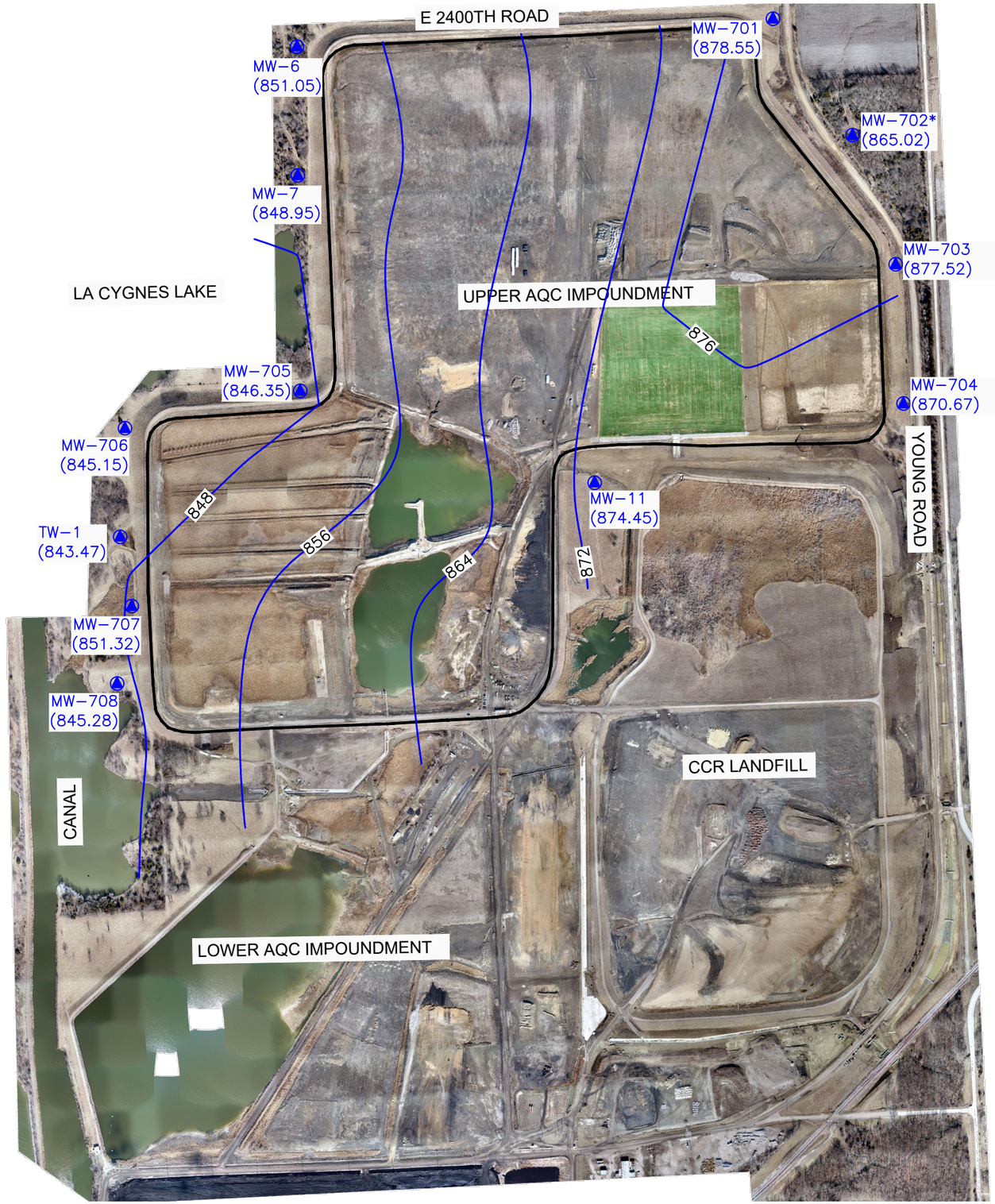

LEGEND

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS OF UPPER AQC IMPOUNDMENT)
- MW-703 (877.00) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- —875— GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (REPRESENTATIVE FOR THIS UNIT)
- MW-702* INDICATES WELL NOT USED IN POTENTIOMETRIC SURFACE MAP CREATION

NOTES:

1. KDHE FACILITY PERMIT AND LANDFILL PERMIT BOUNDARIES VARY FROM THAT SHOWN.
2. DRONE IMAGE DATED JANUARY 2021. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.

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SHEET TITLE
POTENTIOMETRIC SURFACE MAP
UAQC IMPOUNDMENT (MAY 2021)

PROJECT TITLE
2021 CCR GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CLIENT
EVERGY METRO, INC
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

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PROJ. NO.	DSN. BY:	Q/A RVW BY:
27217233.21	MRB	JRR
DSN. BY:	CHK. BY:	PROJ. MGR
DAW	JF	JRR

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FIGURE NO.
2

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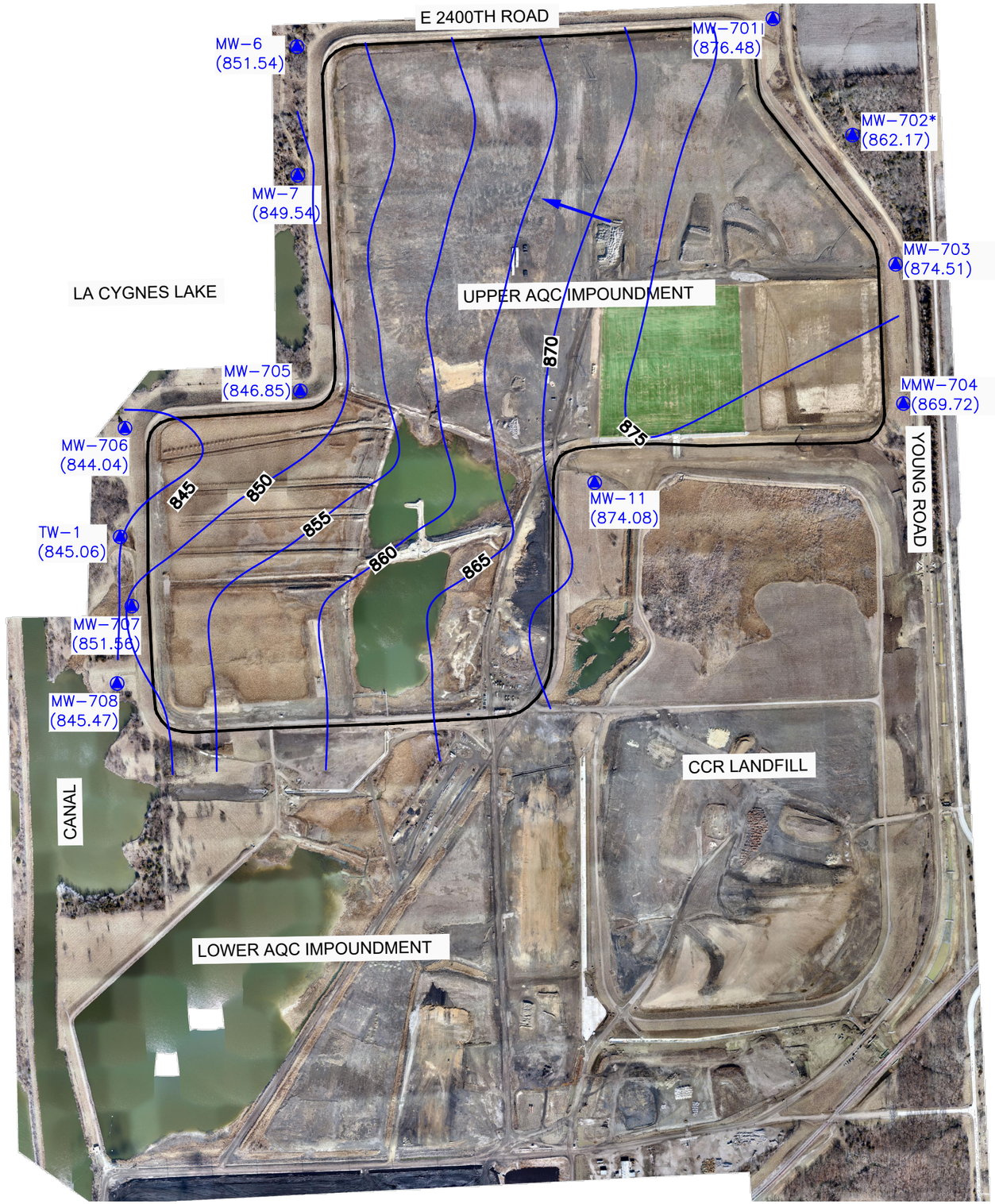

LEGEND

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS OF UPPER AQC IMPOUNDMENT)
- MW–703 (877.00) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- –875— GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (REPRESENTATIVE FOR THIS UNIT)
- MW–702* INDICATES WELL NOT USED IN POTENTIOMETRIC SURFACE MAP CREATION

NOTES:

1. KDHE FACILITY PERMIT AND LANDFILL PERMIT BOUNDARIES VARY FROM THAT SHOWN.
2. DRONE IMAGE DATED JANUARY 2021. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.
4. WATER LEVEL MEASUREMENTS COMPLETED ON NOVEMBER 18, 2021.

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SHEET TITLE
POTENTIOMETRIC SURFACE MAP (NOVEMBER 2021) UAQC

PROJECT TITLE
2021 CCR GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CLIENT
EVERGY METRO, INC
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

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PROJ. NO. 27217233.20
DSN. BY: MBJ
Q/A RVW BY: JRR
DSN. BY: DAW
CHK. BY: JF
PROJ. MGR JRR

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FIGURE NO.
3

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APPENDIX B

TABLES

Table 1: Appendix III Detection Monitoring Results

Table 2: Detection Monitoring Field Measurements

Table 1
Upper AQC Impoundment
Appendix III Detection Monitoring Results
Evergy LaCygne 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-6	5/19/2021	1.14	73.2	193	0.522	7.62	123	1060
MW-6	7/21/2021	---	---	---	---	*7.10	---	---
MW-6	11/18/2021	1.14	77.8	201	0.549	7.10	115	1090
MW-7	5/19/2021	1.54	21.0	95.4	1.10	8.01	2.17 (J)	854
MW-7	7/21/2021	---	---	---	---	*7.97	---	---
MW-7	11/18/2021	1.56	20.3	95.9	1.22	7.70	2.21 (J)	864
MW-11	5/19/2021	1.18	51.8	76.3	0.530	7.55	176	900
MW-11	11/18/2021	1.05	60.3	80.9	0.514	7.23	240	946
MW-701	2/4/2021	---	*43.5	---	---	**7.23	---	---
MW-701	5/19/2021	0.931	43.0	48.2	0.641	7.83	86.2	561
MW-701	11/18/2021	0.907	45.3	47.4	0.589	7.45	86.3	534
MW-702	5/19/2021	1.58	5.07	41.0	1.09	9.51	1.85 (J)	527
MW-702	7/21/2021	---	---	---	---	*9.45	---	---
MW-702	8/30/2021	---	---	---	---	*8.87	---	---
MW-702	11/18/2021	1.53	4.61	42.2	1.19	8.15	1.97 (J)	541
MW-703	2/4/2021	---	---	---	*1.51	*7.37	---	---
MW-703	5/19/2021	1.79	19.0	108	1.30	7.87	0.657	870
MW-703	11/18/2021	1.79	17.8	114	1.46	7.38	<5.00	840
MW-704	2/4/2021	---	---	*90.8	---	**7.62	---	---
MW-704	3/2/2021	---	---	*91.0	---	**7.69	---	---
MW-704	5/19/2021	2.07	21.1	90.5	0.781	7.75	154	1180
MW-704	7/21/2021	---	---	*91.9	---	**7.64	---	---
MW-704	8/30/2021	---	---	*90.4	---	**7.74	---	---
MW-704	11/18/2021	2.00	21.9	88.1	0.834	7.36	170	1230
MW-705	5/19/2021	2.17	28.6	139	0.887	7.53	38.6	932
MW-705	7/21/2021	---	---	---	---	*7.15	---	---
MW-705	11/18/2021	2.12	28.7	141	0.966	7.16	38.6	1000
MW-706	2/4/2021	---	---	---	---	*7.25	*23.9	---
MW-706	3/3/2021	---	---	---	---	**7.64	*29.7	---
MW-706	5/19/2021	2.04	24.1	236	0.946	7.69	19.2	1160
MW-706	7/21/2021	---	---	---	---	**7.27	*17.4	---
MW-706	8/30/2021	---	---	---	---	**7.40	*17.0	---
MW-706	11/18/2021	2.05	24.6	245	1.050	7.23	16.8	1170
MW-707B	2/4/2021	---	---	*168	---	*6.89	---	---
MW-707B	5/19/2021	1.88	412	170	0.281	6.94	5480	6860
MW-707B	7/21/2021	---	---	---	---	**6.81	*5070	---
MW-707B	11/18/2021	1.94	431	199	0.250	6.84	6500	6140
MW-708	2/4/2021	---	---	---	---	**7.01	*9.54	---
MW-708	5/19/2021	1.36	29.6	45.0	0.546	7.73	8.64	624
MW-708	7/21/2021	---	---	---	---	*7.30	---	---
MW-708	11/18/2021	1.37	30.9	46.2	0.567	7.23	12.7	641
TW-1	2/4/2021	---	---	---	---	**7.15	*68.3	---
TW-1	3/3/2021	---	---	---	---	**7.42	*74.4	---
TW-1	5/19/2021	1.42	24.5	40.8	0.412	7.52	67.7	1030
TW-1	7/21/2021	---	---	---	---	**7.53	*68.5	---
TW-1	8/30/2021	---	---	---	---	**7.59	*70.8	---
TW-1	11/18/2021	1.45	25.5	40.2	0.404	7.50	70.4	994

* 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

pCi/L - picocuries per liter

S.U. - Standard Units

(J) - Reported concentration is below the laboratory reporting limit - concentration is estimated.

--- Not Sampled

Table 2
Upper AQC Impoundment
Detection Monitoring Field Measurements
Evergy LaCygne 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-6	5/19/2021	7.62	1730	15.57	3.3	-16	0.00	9.63	851.05
MW-6	7/21/2021	*7.10	1890	15.88	0.0	-133	3.92	9.28	851.40
MW-6	11/18/2021	7.10	1980	14.78	0.0	-151	0.00	9.14	851.54
MW-7	5/19/2021	8.01	1390	15.35	5.8	-37	0.00	6.71	848.95
MW-7	7/21/2021	*7.97	1580	19.10	0.0	-171	2.47	6.60	849.06
MW-7	11/18/2021	7.70	1600	14.27	0.0	-192	0.00	6.12	849.54
MW-11	5/19/2021	7.55	1590	15.03	0.0	117	1.50	2.53	874.45
MW-11	11/18/2021	7.23	1680	14.54	3.9	-30	0.00	2.90	874.08
MW-701	2/4/2021	**7.23	937	7.78	8.7	49	0.00	8.01	877.22
MW-701	5/19/2021	7.83	8.64	17.90	9.1	29	1.63	6.68	878.55
MW-701	11/18/2021	7.45	983	15.18	4.6	-25	0.00	8.75	876.48
MW-702	5/19/2021	9.51	1050	16.99	0.0	43	2.31	18.15	865.02
MW-702	7/21/2021	*9.45	993	17.54	0.0	-51	3.31	19.63	863.54
MW-702	8/30/2021	*8.87	1060	19.07	0.0	88	0.00	21.09	862.08
MW-702	11/18/2021	8.15	1120	14.14	3.2	-58	0.94	21.00	862.17
MW-703	2/4/2021	*7.37	1700	9.86	6.5	11	0.82	5.62	878.22
MW-703	5/19/2021	7.87	1600	16.00	0.0	-19	0.00	6.32	877.52
MW-703	11/18/2021	7.38	1590	15.24	0.0	-135	0.00	9.33	874.51
MW-704	2/4/2021	**7.62	1890	8.58	0.0	70	1.24	12.30	870.87
MW-704	3/2/2021	**7.69	1970	15.08	0.0	119	1.47	13.15	870.02
MW-704	5/19/2021	7.75	1780	19.43	13.6	71	1.34	12.50	870.67
MW-704	7/21/2021	**7.64	2040	19.85	0.0	29	0.64	13.29	869.88
MW-704	8/30/2021	**7.74	2050	22.30	0.0	123	0.00	13.85	869.32
MW-704	11/18/2021	7.36	2020	15.42	0.0	-40	0.00	13.45	869.72
MW-705	5/19/2021	7.53	1590	16.38	1.9	-17	0.36	9.60	846.35
MW-705	7/21/2021	*7.15	1670	16.27	0.0	-63	0.00	8.84	847.11
MW-705	11/18/2021	7.16	1780	15.08	0.0	-79	0.00	9.10	846.85
MW-706	2/4/2021	*7.25	2140	12.21	7.6	65	1.70	8.51	845.77
MW-706	3/3/2021	**7.64	2000	14.35	9.8	-31	1.79	8.87	845.41
MW-706	5/19/2021	7.69	1940	16.26	5.1	-37	0.00	9.13	845.15
MW-706	7/21/2021	**7.27	2060	17.17	0.0	-67	0.00	10.15	844.13
MW-706	8/30/2021	**7.40	2090	19.05	4.1	-100	0.97	10.90	843.38
MW-706	11/18/2021	7.23	2180	15.27	0.0	-83	0.00	10.24	844.04
MW-707B	2/4/2021	*6.89	8490	12.57	17.7	77	0.47	8.22	850.58
MW-707B	5/19/2021	6.94	8100	16.68	60.9	50	4.13	7.48	851.32
MW-707B	7/21/2021	**6.81	8250	18.00	16.2	38	0.00	7.82	850.98
MW-707B	11/18/2021	6.84	8360	14.74	27.0	42	0.00	7.24	851.56
MW-708	2/4/2021	**7.01	1180	13.19	7.3	70	0.87	7.98	845.05
MW-708	5/19/2021	7.73	1140	15.21	4.8	130	2.01	7.75	845.28
MW-708	7/21/2021	*7.30	1100	17.78	0.0	19	0.00	7.78	845.25
MW-708	11/18/2021	7.23	1210	15.14	4.0	2	0.20	7.56	845.47
TW-1	2/4/2021	**7.15	1730	13.17	10.4	57	0.55	16.43	845.67
TW-1	3/3/2021	**7.42	1680	15.26	0.0	47	0.68	16.70	845.40
TW-1	5/19/2021	7.52	1680	16.21	1.7	102	2.35	18.63	843.47
TW-1	7/21/2021	**7.53	1670	17.25	0.0	-1	3.13	18.41	843.69
TW-1	8/30/2021	**7.59	1700	18.53	0.0	69	2.09	18.29	843.81
TW-1	11/18/2021	7.50	1740	15.68	0.0	-28	0.00	17.04	845.06

* 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

***Depth to water measured in all monitoring wells within 24 hour period prior to the sampling event

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

C1 CCR Groundwater Monitoring Alternative Source Demonstration Report November 2020 Groundwater Monitoring Event, Upper AQC Impoundment, La Cygne Generating Station (May 2021)

C2 CCR Groundwater Monitoring Alternative Source Demonstration Report May 2021 Groundwater Monitoring Event, Upper AQC Impoundment, La Cygne Generating Station (January 2022)

C1 CCR Groundwater Monitoring Alternative Source Demonstration Report November 2020 Groundwater Monitoring Event, Upper AQC Impoundment, La Cygne Generating Station (May 2021)

CCR GROUNDWATER MONITORING
ALTERNATIVE SOURCE DEMONSTRATION REPORT
NOVEMBER 2020 GROUNDWATER MONITORING EVENT

UPPER AQC IMPOUNDMENT

La Cygne Generating Station
Evergy Metro, Inc.
La Cygne, Kansas

SCS ENGINEERS

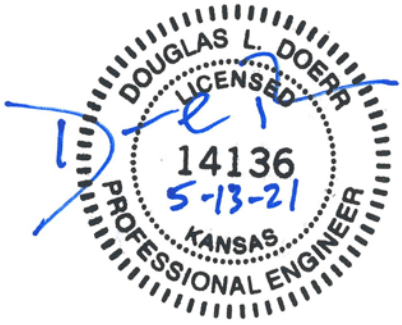
May 2021
File No. 27217233.20

8575 W. 110th Suite 100
Overland Park, KS 66210
913-749-0700

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 Upper 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 Upper 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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2 Statistical Results **1**
3 Alternative Source Demonstration **2**
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3.2 Box and Whiskers Plots 2
3.3 Time Series Plots 3
3.4 Piper Diagram Plots 3
4 Conclusion **4**
5 General Comments **4**

Appendices

Appendix A **Figure 1**
Appendix B **Box and Whiskers Plots**
Appendix C **Time Series Plots**
Appendix D **Piper Diagram Plots and Analytical Results**

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 alternative 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 Upper 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 November 12, 2020. Review and validation of the results from the November 2020 Detection Monitoring Event was completed on December 24, 2020, 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 February 4, 2021 and March 3, 2021.

The completed statistical evaluation identified two Appendix III constituents above their respective prediction limits established for monitoring wells MW-704, MW-706 and TW-1.

Constituent/Monitoring Well	*UPL	Observation November 12, 2020	1st Verification February 4, 2021	2nd Verification March 3, 2021
Chloride				
MW-704	88.89	90.2	90.8	91.0
Sulfate				
MW-706	8.79	20.0	23.9	29.7
TW-1	67.15	73.8	68.3	74.4

*UPL – Upper Prediction Limit

Determination: A statistical evaluation was completed for all Appendix III detection monitoring constituents in accordance with the certified statistical method. The statistical evaluation identified three SSIs above the background prediction limit for chloride at MW-704, and sulfate at monitoring wells MW-706 and TW-1.

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. For the above identified SSI for the Upper 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 Upper 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 Upper AQC Impoundment at the time of sampling. The groundwater flow directions indicated are for the November 2020 groundwater monitoring event and are typical flow directions for this unit. Upgradient monitoring well MW-701 has higher sulfate concentrations than both MW-706 and TW-1. As seen on the map, monitoring well MW-701 is located upgradient from the Upper AQC Impoundment indicating that naturally occurring sulfate levels can be significantly higher than the sulfate levels in MW-706 and TW-1. Therefore, natural groundwater flow from upgradient of the Upper AQC Impoundment likely contributed to the geochemistry of groundwater downgradient of the Upper AQC Impoundment and caused the sulfate level to increase. This demonstrates that a source other than the Upper AQC Impoundment could have caused the SSIs above the background level for sulfate, or that the SSI resulted from 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 axis 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 chloride for upgradient wells MW-701, MW-702, and MW-703 and MW-704. Although the chloride SSI was only identified in MW-704, the box and whiskers plots show that it is below the chloride range for upgradient well MW-703. The comparison indicates the chloride level in upgradient well MW-703 is greater than the chloride level in MW-704. This demonstrates that a source other than the Upper AQC Impoundment could have caused the SSI above background levels for chloride, or that the SSI resulted from natural variation in groundwater quality. Box and whiskers plots are provided in **Appendix B**.

Box and whiskers plots were prepared for sulfate for upgradient wells MW-701, MW-702, and MW-703 and downgradient wells MW-706 and TW-1. Although sulfate SSIs were only identified in downgradient wells MW-706 and TW-1, the box and whiskers plots show that concentrations in those wells are below the sulfate range for upgradient well MW-701. The comparison indicates the sulfate level in upgradient well MW-701 is greater than the sulfate level in MW-706 and TW-1. This demonstrates that a source other than the Upper AQC Impoundment could have caused the SSIs above background levels for sulfate, or that the SSIs resulted from 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 chloride were prepared for the CCR monitoring system upgradient wells MW-701, MW-702, and MW-703 and MW-704. Although the chloride SSI was only identified in well MW-704, the time series plots show that chloride concentrations in MW-704 are below the chloride concentrations in upgradient well MW-703. This demonstrates that a source other than the Upper AQC Impoundment could have caused the chloride SSI or that the SSI resulted from natural variation in groundwater quality. Time series plots are provided in **Appendix C**.

Time series plots for sulfate were prepared for the CCR monitoring system upgradient wells MW-701, MW-702, and MW-703 and downgradient wells MW-706 and TW-1. Although the sulfate SSIs were only identified in downgradient wells MW-706 and TW-1, the time series plots show that sulfate concentrations in these wells are below the sulfate concentrations in upgradient well MW-701. The comparison indicates the sulfate level in upgradient well MW-701 is greater than the sulfate levels in downgradient wells MW-706 and TW-1. This demonstrates that a source other than the Upper AQC Impoundment could have caused the sulfate SSI or that the SSI resulted from natural variation in groundwater quality. Time series plots are provided in **Appendix C**.

3.4 PIPER DIAGRAM PLOTS

Piper diagrams are a form of tri-linear diagram, and a widely accepted method to provide a visual representation of the ion concentration of groundwater. Piper diagrams portray water compositions and facilitate the interpretation and presentation of chemical analyses. They may be used to visually compare the chemical composition of water quality across wells, and aid in determining whether the waters are similar or dis-similar, and can over time indicate whether the waters are mixing.

A piper diagram has two triangular plots on the right and left side of a 4-sided center field. The three major cations are plotted in the left triangle and anions in the right. Each of the three cation/anion variables, in milliequivalents, is divided by the sum of the three values, to produce a percent of total cation/anions. These percentages determine the location of the associated symbol. The data points in the center field are located by extending the points in the lower triangles to the point of intersection. In order for a piper

diagram to be produced, the selected data file must contain the following constituents: Sodium (Na), Potassium (K), Calcium (Ca), Magnesium (Mg), Chloride (Cl), Sulfate (SO4), Carbonate (CO3), and Bicarbonate (HCO3).

A piper diagram was generated for samples from upgradient wells MW-701, MW-702, and MW-703 and from wells MW-704, MW-706 and TW-1. The samples from wells MW-704, MW-706 and TW-1 plot between the samples from upgradient wells MW-701 and MW-702 and between samples from MW-701 and MW-703 indicating similar geochemical characteristics to upgradient wells. Additionally of note, the difference between the upgradient wells indicates that natural variability occurs between relatively close upgradient wells and is likely to occur across the site. This demonstrates that a source other than the Upper AQC Impoundment could have caused the SSIs for MW-704, MW-706 and TW-1, or that the SSI resulted from natural variation in groundwater quality. The piper diagram plots and analytical results are provided in **Appendix D**.

4 CONCLUSION

Our opinion is that a sufficient body of evidence is available and presented above to demonstrate that a source other than the Upper AQC Impoundment caused the SSIs for chloride and sulfate, or that the SSI resulted from natural variation in groundwater quality. Based on the successful ASD, the owner or operator of the Upper AQC Impoundment may continue with the detection monitoring program under § 257.94.

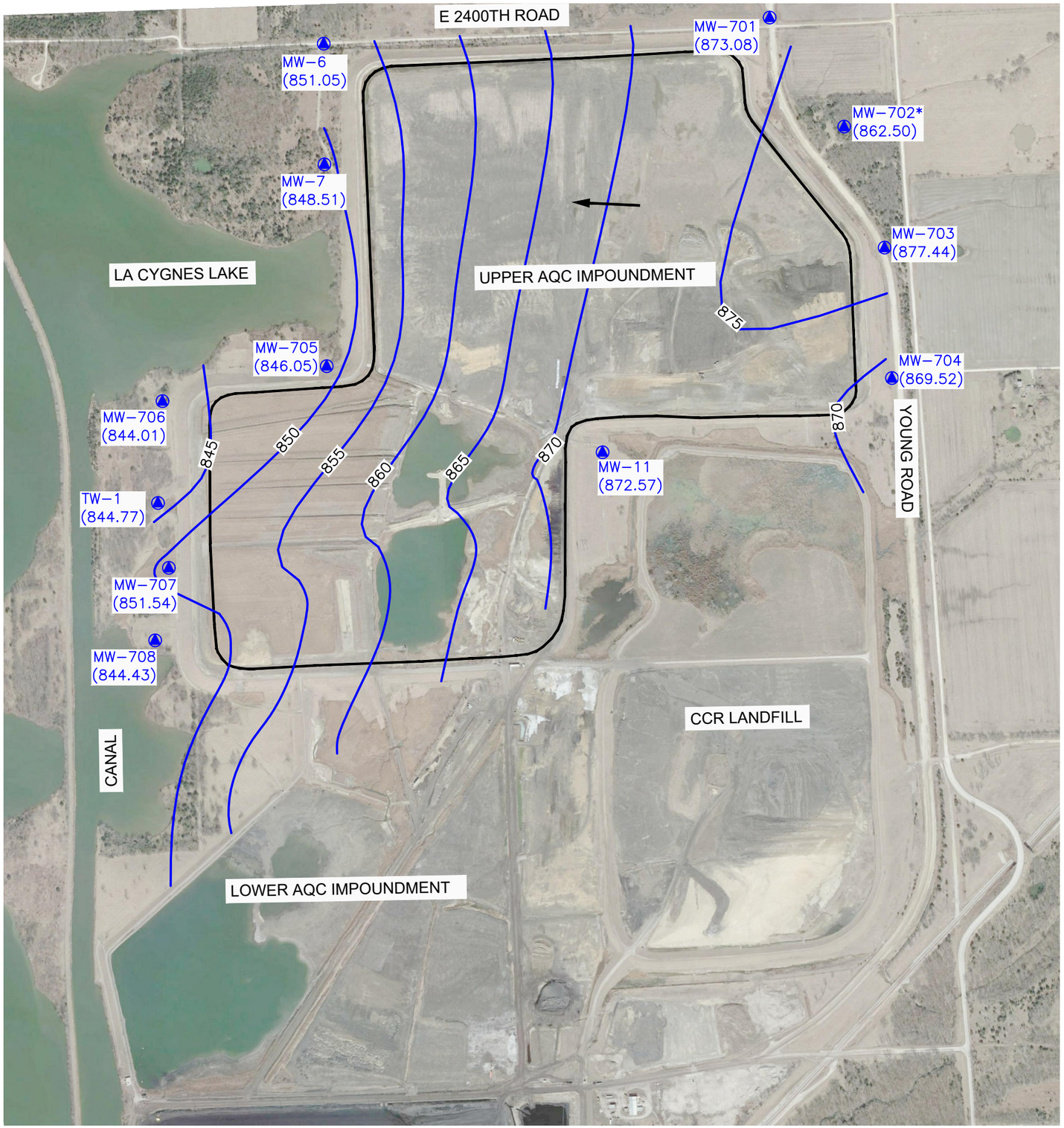
5 GENERAL COMMENTS

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 Evergy Metro, Inc. for specific application to the La Cygne Generating Station. No warranties, express or implied, are intended or made.

The signatures 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 their professional judgement in accordance with the standard of practice, it is their professional opinions that the aforementioned information is accurate as of the date of such signatures. Any opinion or decisions by them are made on the basis of their 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 UPPER AQC IMPOUNDMENT)
- MW-703 (877.00) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- —875— GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (REPRESENTATIVE FOR THIS UNIT)
- MW-702* 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 MARCH 2020. 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 2020)
UAQC

PROJECT TITLE
UPPER ADQ IMPOUNDMENT - LANDFILL
2020 GROUNDWATER

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. 27217233.20
DSN. BY: DAW
DWN. BY: MBJ
CHK. BY: JF
QA/A RVW BY: JRR
PROJ. MGR: JRR

CADD FILE:
LA CYGNE LF LAQC IMP. & UAQC FIG 1_NOVEMBER 2020 - COMBINED V2.DWG

DATE: 4/29/21

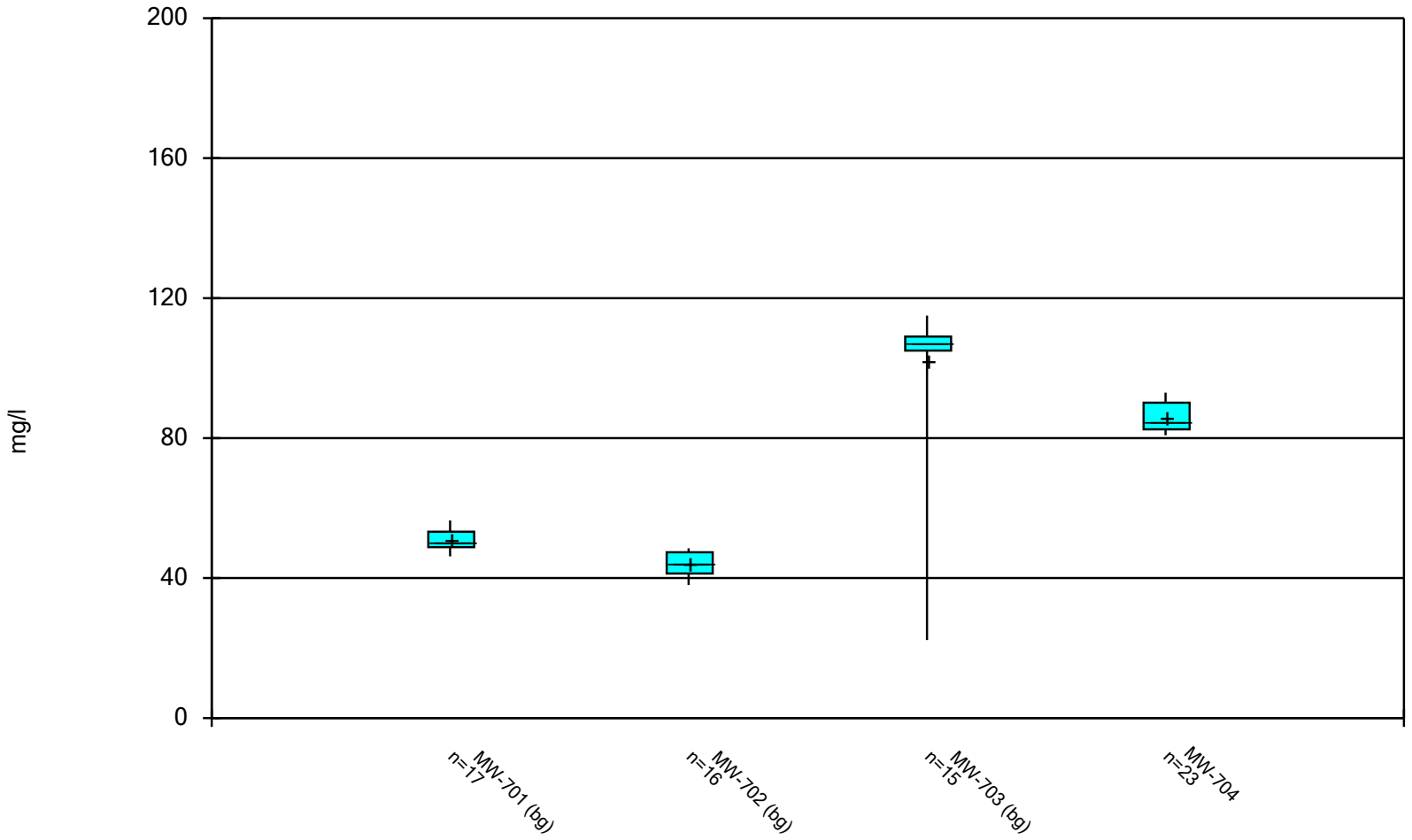
FIGURE NO. 1

N:\KCPL\Projects\Groundwater\DWG\La Cygne\2020\La Cygne LF LAQC Imp & UAQC Fig 1_NOVEMBER 2020 - COMBINED V2.dwg May 12, 2021 - 9:42am Layout Name: Fig 1 Upper By: 4415alr

Appendix B

Box and Whiskers Plots

Box & Whiskers Plot



Constituent: CHLORIDE Analysis Run 4/28/2021 12:42 PM View: Upper AQC III

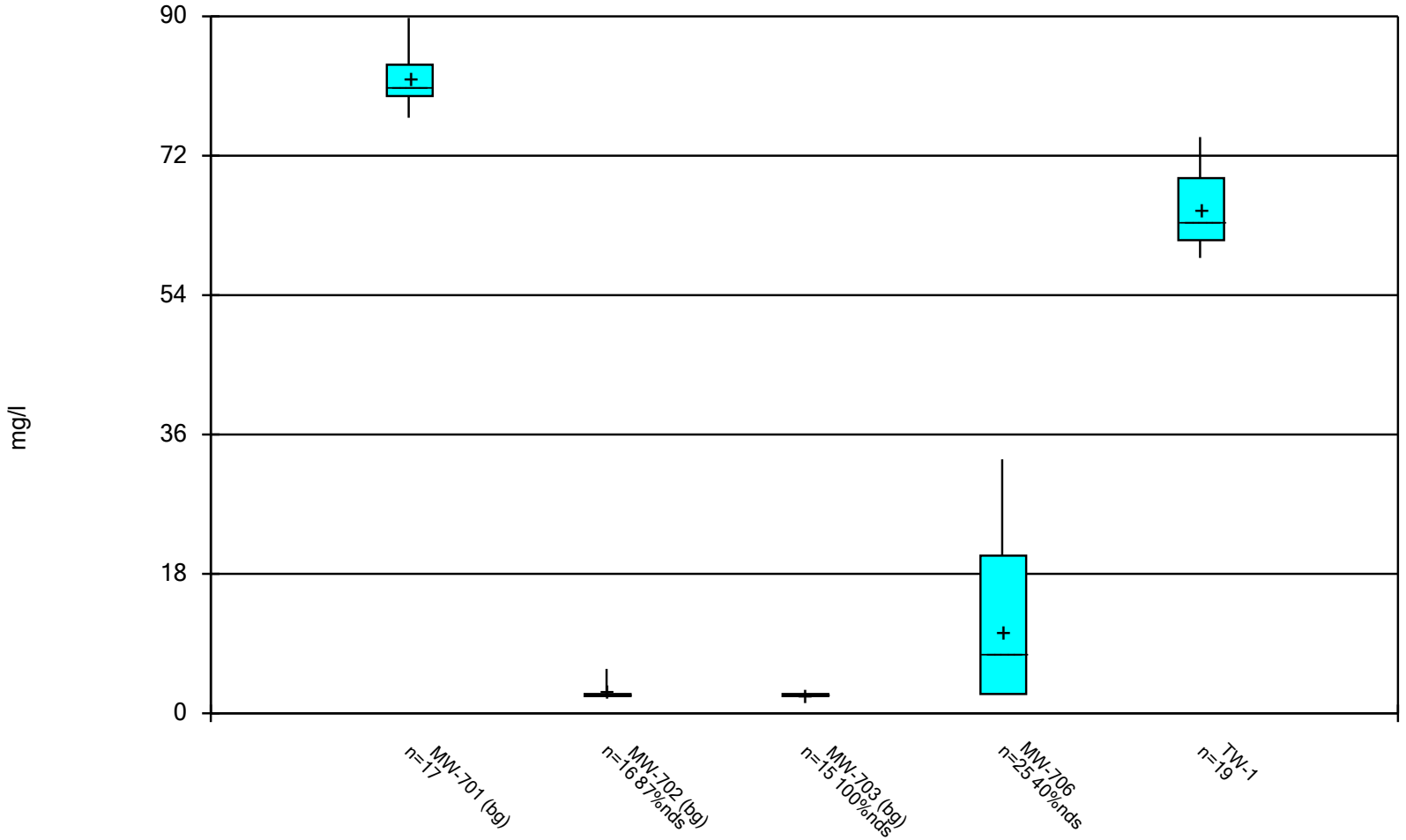
LaCygne Client: SCS Engineers Data: LaC GW Data

Box & Whiskers Plot

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 4/28/2021, 12:43 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
CHLORIDE (mg/l)	MW-701 (bg)	17	50.89	2.84	0.6889	50.6	46.2	56.5	0
CHLORIDE (mg/l)	MW-702 (bg)	16	44.02	3.517	0.8794	43.95	38	48.5	0
CHLORIDE (mg/l)	MW-703 (bg)	15	102	22.29	5.756	107	22.3	115	0
CHLORIDE (mg/l)	MW-704	23	86.16	3.856	0.8041	85	80.8	93	0

Box & Whiskers Plot



Constituent: SULFATE Analysis Run 4/28/2021 12:40 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Box & Whiskers Plot

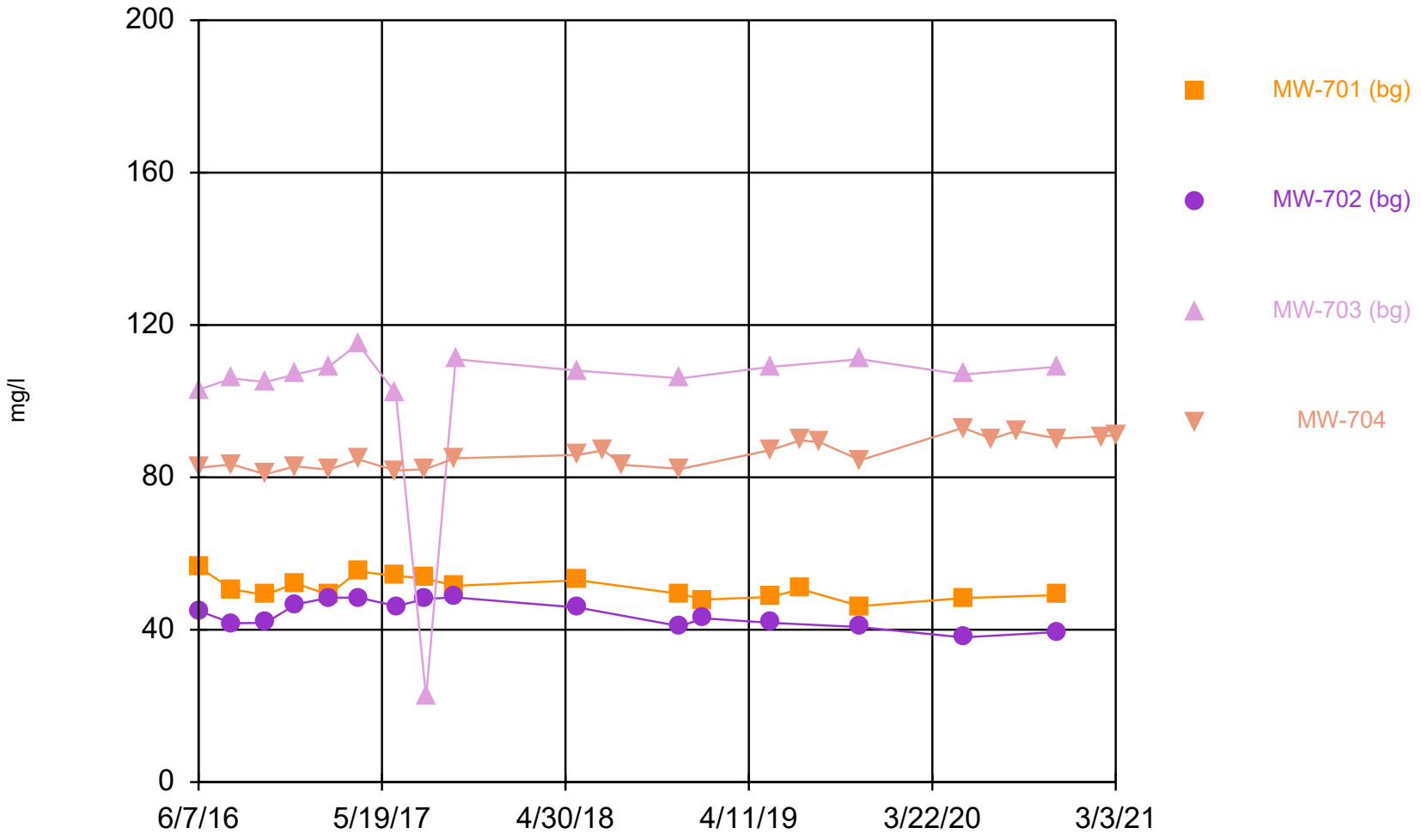
LaCygne Client: SCS Engineers Data: LaC GW Data Printed 4/28/2021, 12:41 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
SULFATE (mg/l)	MW-701 (bg)	17	81.88	3.147	0.7633	80.9	76.9	89.8	0
SULFATE (mg/l)	MW-702 (bg)	16	2.887	1.058	0.2646	2.5	2.5	5.73	87.5
SULFATE (mg/l)	MW-703 (bg)	15	2.5	0	0	2.5	2.5	2.5	100
SULFATE (mg/l)	MW-706	25	10.51	9.693	1.939	7.69	2.5	32.8	40
SULFATE (mg/l)	TW-1	19	65.15	4.925	1.13	63.4	58.8	74.4	0

Appendix C

Time Series Plots

Time Series

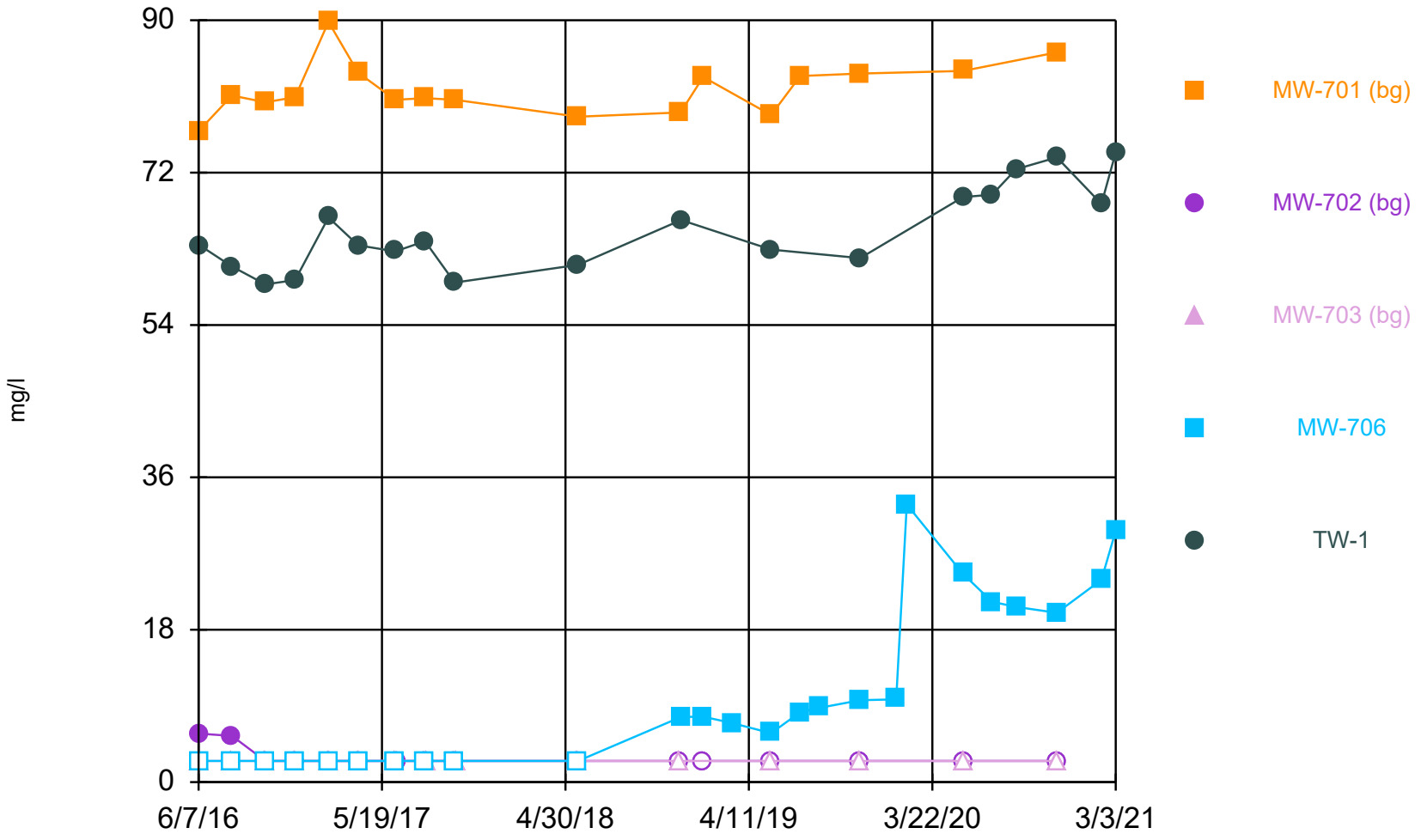


Constituent: CHLORIDE Analysis Run 4/28/2021 12:32 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Hollow symbols indicate censored values.

Time Series



Constituent: SULFATE Analysis Run 4/28/2021 12:36 PM View: Upper AQC III

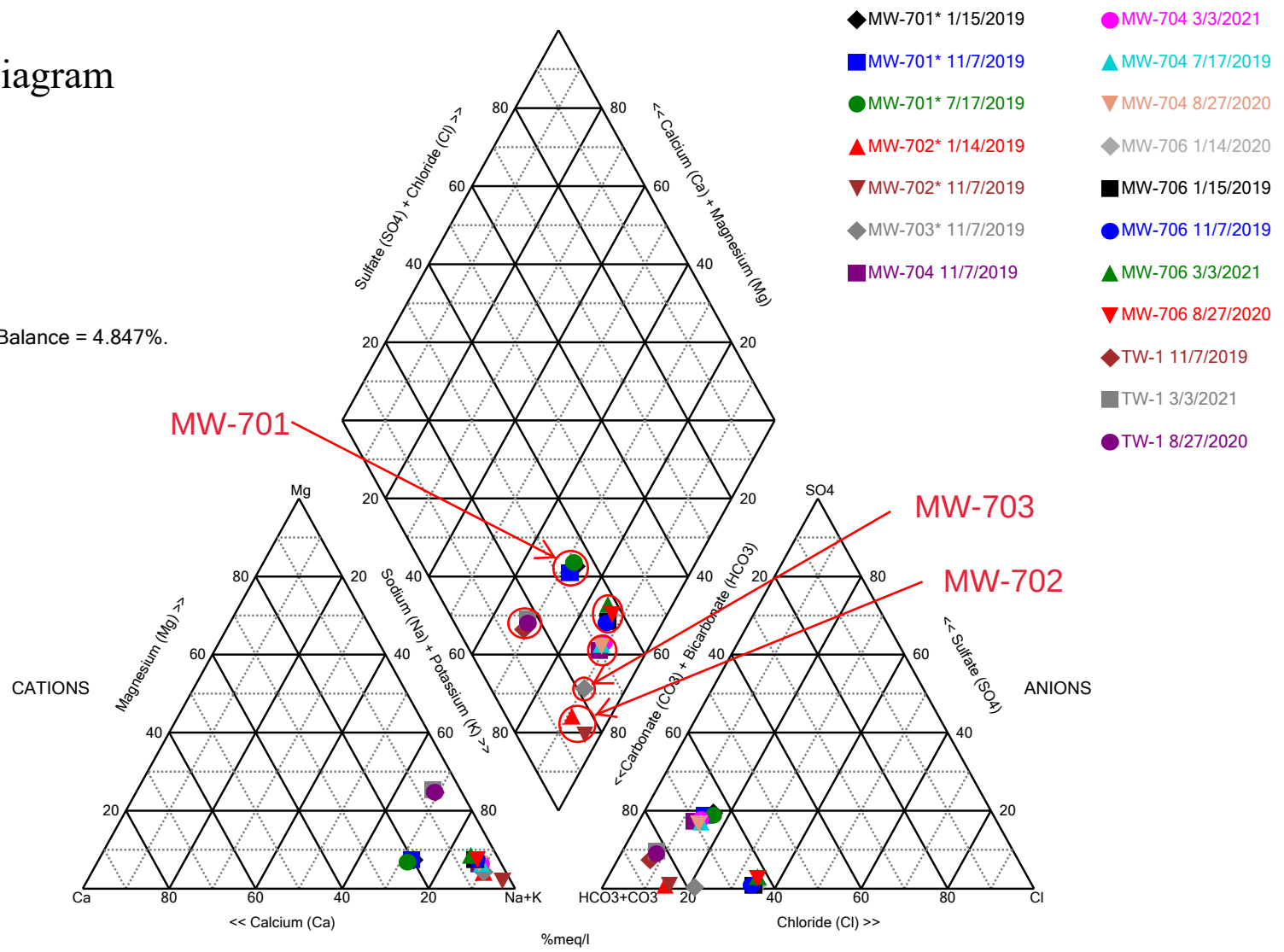
LaCygne Client: SCS Engineers Data: LaC GW Data

Appendix D

Piper Diagram Plots and Analytical Results

Piper Diagram

Cation-Anion Balance = 4.847%.



Analysis Run 4/28/2021 12:47 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Piper Diagram

Analysis Run 4/28/2021 12:49 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Totals (ppm)	Na	K	Ca	Mg	Cl	SO4	HCO3	CO3
MW-701* 1/15/2019	169	3.11	40.2	8.79	47.9	83.3	336	10
MW-701* 7/17/2019	172	2.91	45	8.71	50.7	83.4	349	10
MW-701* 11/7/2019	163	2.85	40.4	8.6	46.2	83.7	369	10
MW-702* 1/14/2019	230	3.14	11.2	5.24	43	2.5	461	10
MW-702* 11/7/2019	167	2.58	2.73	1.7	40.7	2.5	249	87.9
MW-703* 11/7/2019	339	3.53	17.6	8.07	111	2.5	725	10
MW-704 7/17/2019	442	5.85	21.5	15.8	89.7	156	790	10
MW-704 11/7/2019	429	5.47	21	15.5	84.5	163	844	10
MW-704 8/27/2020	444	5.51	21.8	16.1	92.2	150	803	10
MW-704 3/3/2021	434	5.6	20.7	15.7	91	164	791	10
MW-706 1/15/2019	442	6.52	24.7	19.5	238	7.73	769	10
MW-706 11/7/2019	427	6.26	22.5	19	240	9.68	806	10
MW-706 1/14/2020	422	6.18	24.4	19.3	247	9.78	767	10
MW-706 8/27/2020	437	6.25	23	19.4	238	20.7	751	10
MW-706 3/3/2021	412	6.65	25.7	21.6	228	29.7	716	10
TW-1 11/7/2019	286	7.72	23.3	55.4	40.1	61.9	878	10
TW-1 8/27/2020	304	7.61	23.6	58.3	41	72.4	835	10
TW-1 3/3/2021	298	7.95	24.9	59.2	40.2	74.4	818	10

C2 CCR Groundwater Monitoring Alternative Source Demonstration Report May 2021 Groundwater Monitoring Event, Upper AQC Impoundment, La Cygne Generating Station (January 2022)

CCR GROUNDWATER MONITORING ALTERNATIVE SOURCE DEMONSTRATION REPORT MAY 2021 GROUNDWATER MONITORING EVENT

UPPER AQC IMPOUNDMENT

La Cygne Generating Station
Evergy Metro, Inc.
La Cygne, Kansas

SCS ENGINEERS

January 2022
File No. 27217233.21

8575 W. 110th Suite 100
Overland Park, KS 66210
913-749-0700

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 Upper 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 Upper 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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2 Statistical Results **1**
3 Alternative Source Demonstration **2**
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3.2 Box and Whiskers Plots 2
3.3 Time Series Plots 3
3.4 Piper Diagram Plots 3
4 Conclusion **4**
5 General Comments **4**

Appendices

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Appendix B Box and Whiskers Plots
Appendix C Time Series Plots
Appendix D Piper Diagram Plots and Analytical Results

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 alternative 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 Upper 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 19, 2021. Review and validation of the results from the May 2021 Detection Monitoring Event was completed on July 8, 2021, 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 21, 2021 and August 30, 2021.

The completed statistical evaluation identified three Appendix III constituents above their respective prediction limits established for monitoring wells MW-704, MW-706 and TW-1.

Constituent/Monitoring Well	*UPL	Observation May 19, 2021	1st Verification July 21, 2021	2nd Verification August 30, 2021
MW-704				
Chloride	88.89	90.5	91.9	90.4
MW-706				
Sulfate	8.79	19.2	17.4	17.0
TW-1				
Sulfate	67.15	67.7	68.5	70.8

*UPL – Upper Prediction Limit

Determination: A statistical evaluation was completed for all Appendix III detection monitoring constituents in accordance with the certified statistical method. The statistical evaluation identified three SSIs above the background prediction limit. These included chloride at MW-704, and sulfate at monitoring wells MW-706 and TW-1.

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. For the above identified SSI for the Upper 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 Upper 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 Upper AQC Impoundment at the time of sampling. The groundwater flow directions indicated are for the May 2021 groundwater monitoring event and are typical flow directions for this unit. Upgradient monitoring well MW-701 has higher sulfate concentrations than both MW-706 and TW-1 and upgradient well MW-703 has higher chloride concentrations than MW-704. As seen on the map, monitoring well MW-701 and MW-703 are located upgradient from the Upper AQC Impoundment indicating that naturally occurring sulfate levels can be significantly higher than the sulfate levels in MW-706 and TW-1; and that naturally occurring chloride levels can be significantly higher than the chloride levels in MW-704 . Therefore, natural groundwater flow from upgradient of the Upper AQC Impoundment likely contributed to the geochemistry of groundwater downgradient of the Upper AQC Impoundment and caused the sulfate and chloride levels to increase. This demonstrates that a source other than the Upper AQC Impoundment could have caused the SSIs above the background level for sulfate and chloride, or that the SSI resulted from 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 axis 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 chloride for upgradient wells MW-701, MW-702, and MW-703 and MW-704. Although the chloride SSI was only identified in MW-704, the box and whiskers plots show that it is below the chloride range for upgradient well MW-703. The comparison indicates the chloride level in upgradient well MW-703 is greater than the chloride level in MW-704. This demonstrates that a source other than the Upper AQC Impoundment could have caused the SSI above

background levels for chloride, or that the SSI resulted from natural variation in groundwater quality. Box and whiskers plots are provided in **Appendix B**.

Box and whiskers plots were prepared for sulfate for upgradient wells MW-701, MW-702, and MW-703 and downgradient wells MW-706 and TW-1. Although sulfate SSIs were only identified in downgradient wells MW-706 and TW-1, the box and whiskers plots show that concentrations in those wells are below the sulfate range for upgradient well MW-701. The comparison indicates the sulfate level in upgradient well MW-701 is greater than the sulfate level in MW-706 and TW-1. This demonstrates that a source other than the Upper AQC Impoundment could have caused the SSIs above background levels for sulfate, or that the SSIs resulted from 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 chloride were prepared for the CCR monitoring system upgradient wells MW-701, MW-702, and MW-703 and MW-704. Although the chloride SSI was only identified in well MW-704, the time series plots show that chloride concentrations in MW-704 are below the chloride concentrations in upgradient well MW-703. This demonstrates that a source other than the Upper AQC Impoundment caused the chloride SSI or that the SSI resulted from natural variation in groundwater quality. Time series plots are provided in **Appendix C**.

Time series plots for sulfate were prepared for the CCR monitoring system upgradient wells MW-701, MW-702, and MW-703 and downgradient wells MW-706 and TW-1. Although the sulfate SSIs were only identified in downgradient wells MW-706 and TW-1, the time series plots show that sulfate concentrations in these wells are below the sulfate concentrations in upgradient well MW-701. The comparison indicates the sulfate level in upgradient well MW-701 is greater than the sulfate levels in downgradient wells MW-706 and TW-1. This demonstrates that a source other than the Upper AQC Impoundment caused the sulfate SSI or that the SSI resulted from natural variation in groundwater quality. Time series plots are provided in **Appendix C**.

3.4 PIPER DIAGRAM PLOTS

Piper diagrams are a form of tri-linear diagram, and a widely accepted method to provide a visual representation of the ion concentration of groundwater. Piper diagrams portray water compositions and facilitate the interpretation and presentation of chemical analyses. They may be used to visually compare the chemical composition of water quality across wells, and aid in determining whether the waters are similar or dis-similar, and can over time indicate whether the waters are mixing.

A piper diagram has two triangular plots on the right and left side of a 4-sided center field. The three major cations are plotted in the left triangle and anions in the right. Each of the three cation/anion variables, in milliequivalents, is divided by the sum of the three values, to produce a percent of total cation/anions. These percentages determine the location of the associated symbol. The data points in the center field are located by extending the points in the lower triangles to the point of intersection.

In order for a piper diagram to be produced, the selected data file must contain the following constituents: Sodium (Na), Potassium (K), Calcium (Ca), Magnesium (Mg), Chloride (Cl), Sulfate (SO4), Carbonate (CO3), and Bicarbonate (HCO3).

A piper diagram was generated for samples from upgradient wells MW-701, MW-702, and MW-703 and from wells MW-704, MW-706 and TW-1. The samples from wells MW-704, MW-706 and TW-1 plot between the samples from upgradient wells MW-701 and MW-702 and between samples from MW-701 and MW-703 indicating similar geochemical characteristics to upgradient wells. Additionally of note, the difference between the upgradient wells indicates that natural variability occurs between relatively close upgradient wells and is likely to occur across the site. This demonstrates that a source other than the Upper AQC Impoundment caused the SSIs for MW-704, MW-706 and TW-1, or that the SSI resulted from natural variation in groundwater quality. The piper diagram plots and analytical results are provided in **Appendix D**.

4 CONCLUSION

Our opinion is that a sufficient body of evidence is available and presented above to demonstrate that a source other than the Upper AQC Impoundment caused the SSIs for chloride and sulfate, or that the SSI resulted from natural variation in groundwater quality. Based on the successful ASD, the owner or operator of the Upper AQC Impoundment may continue with the detection monitoring program under § 257.94.

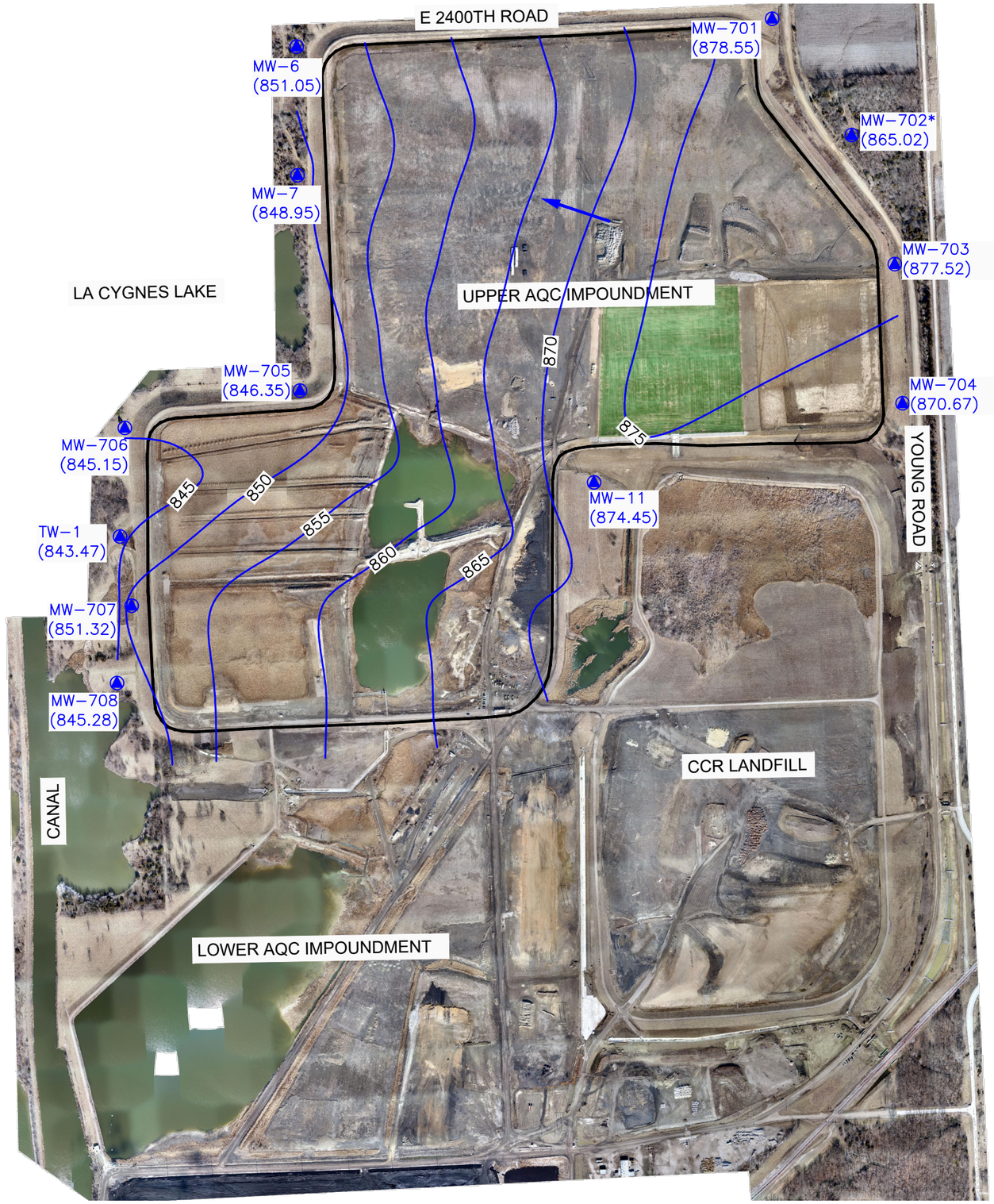
5 GENERAL COMMENTS

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 Evergy Metro, Inc. for specific application to the La Cygne Generating Station. No warranties, express or implied, are intended or made.

The signatures 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 their professional judgement in accordance with the standard of practice, it is their professional opinions that the aforementioned information is accurate as of the date of such signatures. Any opinion or decisions by them are made on the basis of their 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 UNIT)
- MW-703 (877.00) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- —875— GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (REPRESENTATIVE FOR THIS UNIT)
- MW-702* INDICATES WELL NOT USED IN POTENTIOMETRIC SURFACE MAP CREATION

NOTES:

1. KDHE FACILITY PERMIT AND LANDFILL PERMIT BOUNDARIES VARY FROM THAT SHOWN.
2. DRONE IMAGE DATED JANUARY 2021. 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
UAQC IMPOUNDMENT (MAY 2021)

PROJECT TITLE
LA CYGNE UAQC IMPOUNDMENT
ALTERNATIVE SOURCE DEMONSTRATION

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. 27217233.21	DWN. BY: ALR	QA/QC BY: JRR	
DSN. BY: DAW	CHK. BY: JF	PROJ. MGR: JRR	

CADD FILE:
LA CYGNE LF LAQC IMP & UAQC FIG 1_MAY2021 V.3.DWG

DATE:
12/30/21

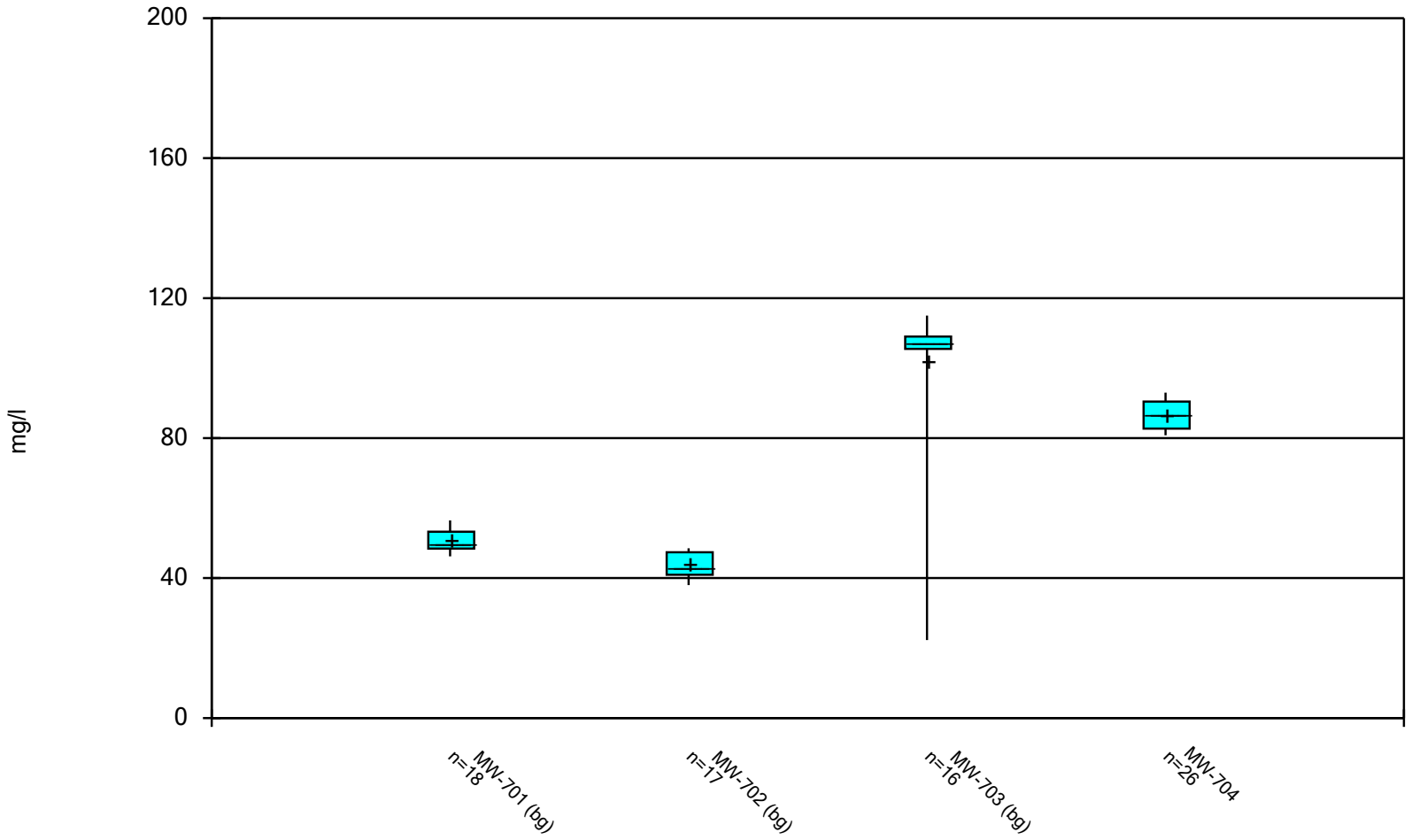
FIGURE NO.
1

\\kan-fs01\clients\KCPL\Projects\Groundwater\DWG\La Cygne\2021\Alternative Source Demonstration\La Cygne LF LAQC Imp & UAQC Fig 1_MAY2021 v.3.dwg Jan 03, 2022 - 9:36am Layout Name: Fig 1 Upper By: 4415alr

Appendix B

Box and Whiskers Plots

Box & Whiskers Plot



Constituent: CHLORIDE Analysis Run 12/7/2021 11:20 AM View: Upper AQC III

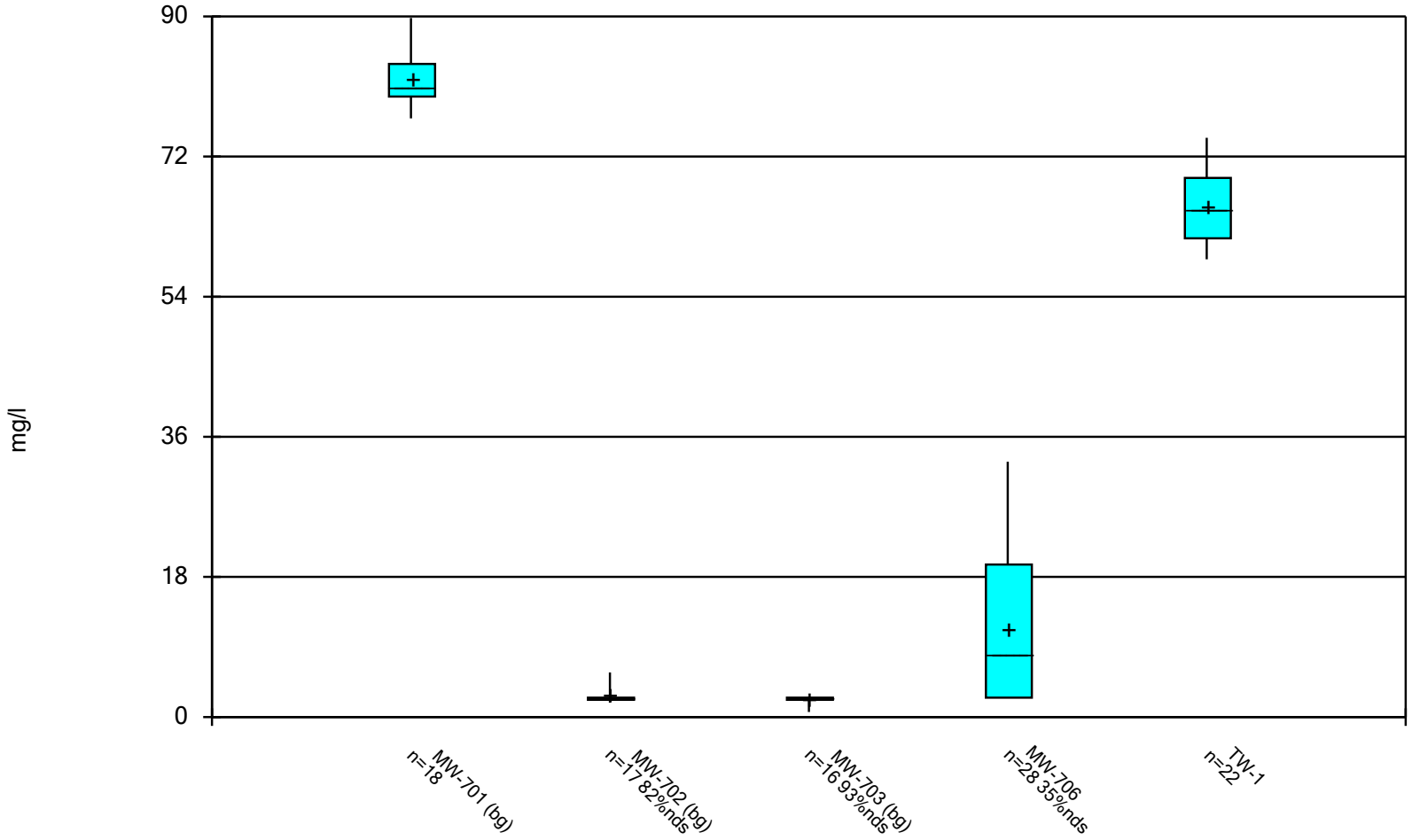
LaCygne Client: SCS Engineers Data: LaC GW Data

Box & Whiskers Plot

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 12/7/2021, 11:21 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
CHLORIDE (mg/l)	MW-701 (bg)	18	50.74	2.828	0.6665	50	46.2	56.5	0
CHLORIDE (mg/l)	MW-702 (bg)	17	43.84	3.484	0.8449	43	38	48.5	0
CHLORIDE (mg/l)	MW-703 (bg)	16	102.4	21.59	5.397	107.5	22.3	115	0
CHLORIDE (mg/l)	MW-704	26	86.71	3.945	0.7737	86.5	80.8	93	0

Box & Whiskers Plot



Constituent: SULFATE Analysis Run 12/7/2021 11:24 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Box & Whiskers Plot

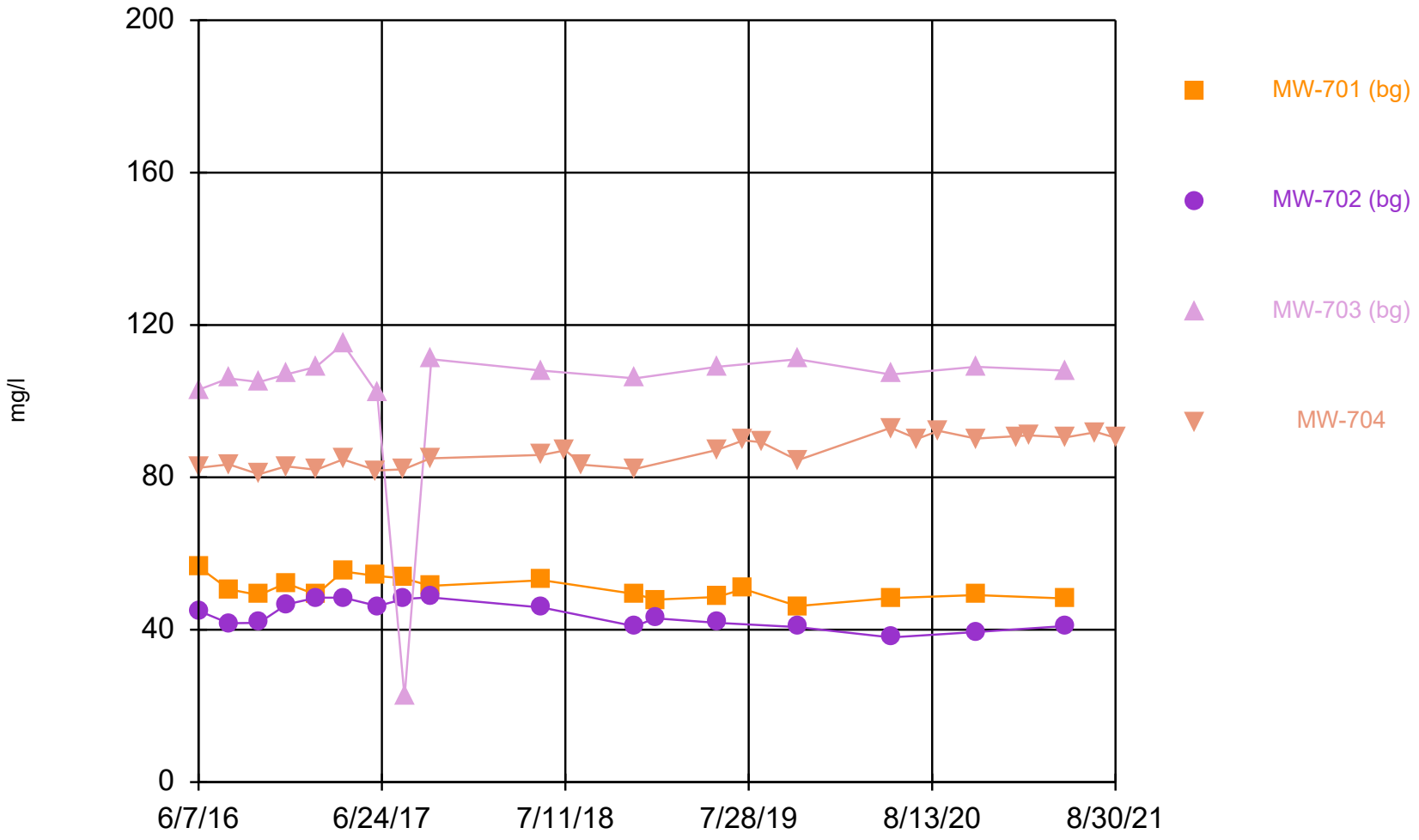
LaCygne Client: SCS Engineers Data: LaC GW Data Printed 12/7/2021, 11:25 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
SULFATE (mg/l)	MW-701 (bg)	18	82.12	3.219	0.7587	81	76.9	89.8	0
SULFATE (mg/l)	MW-702 (bg)	17	2.826	1.055	0.2559	2.5	1.85	5.73	82.35
SULFATE (mg/l)	MW-703 (bg)	16	2.385	0.4608	0.1152	2.5	0.657	2.5	93.75
SULFATE (mg/l)	MW-706	28	11.3	9.433	1.783	8	2.5	32.8	35.71
SULFATE (mg/l)	TW-1	22	65.67	4.782	1.02	65.15	58.8	74.4	0

Appendix C

Time Series Plots

Time Series



Constituent: CHLORIDE Analysis Run 12/9/2021 12:54 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Time Series

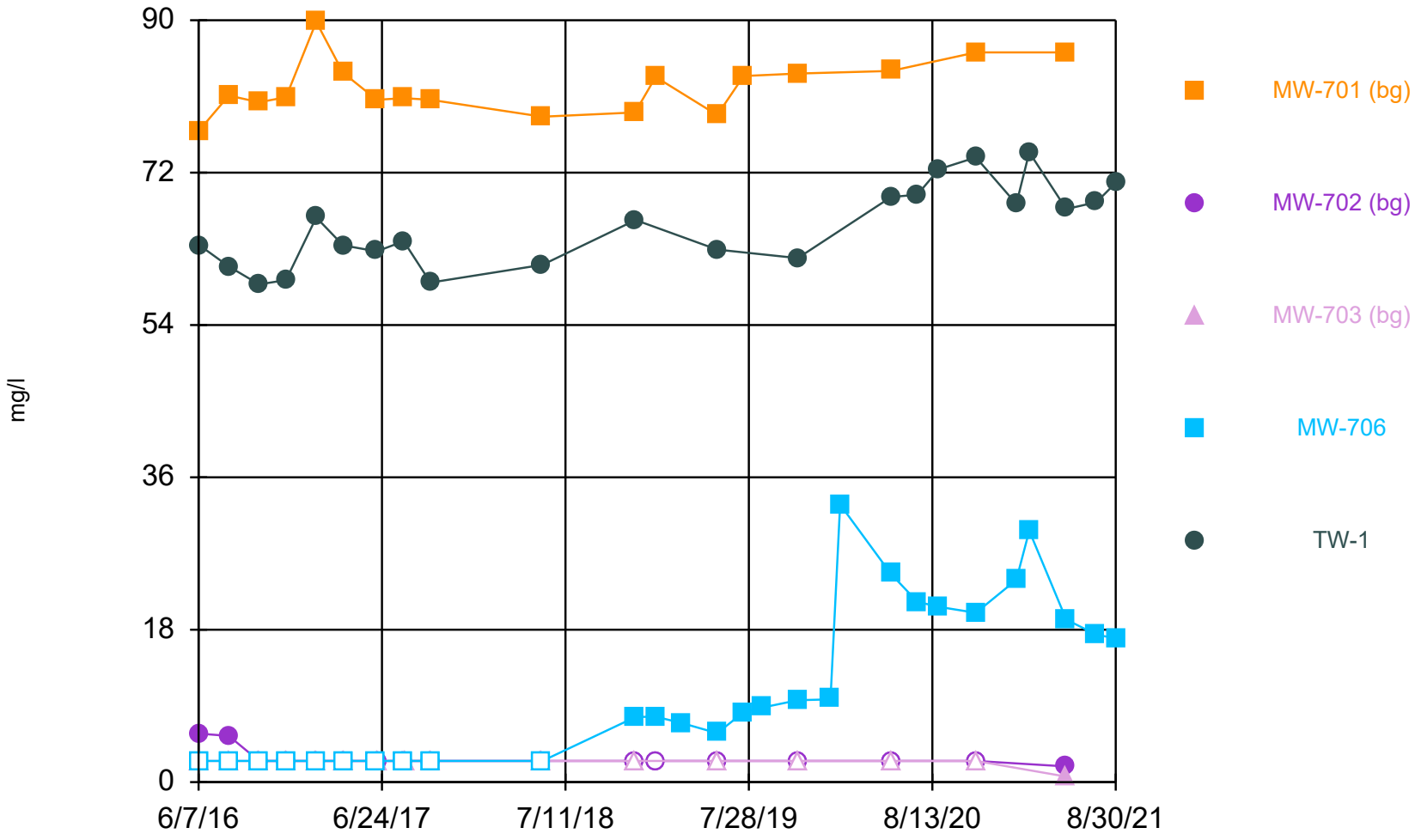
Constituent: CHLORIDE (mg/l) Analysis Run 12/9/2021 12:55 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-701 (bg)	MW-702 (bg)	MW-703 (bg)	MW-704
6/7/2016	56.5		103	82.5
6/8/2016		44.9		
8/9/2016	50.6	41.7	106	83.4
10/11/2016	49.1	41.8	105	80.8
12/6/2016	52.2		107	82.9
12/8/2016		46.7		
2/7/2017	49.2		109	82
2/8/2017		48.4		
4/4/2017	55.3		115	84.7
4/5/2017		48.4		
6/13/2017	54.1			81.8
6/14/2017			102	
6/15/2017		46.2		
8/8/2017	53.5			82.1
8/9/2017		48.1		
8/10/2017			22.3	
10/3/2017	51.5	48.5		85
10/5/2017			111	
5/24/2018	53	45.8	108	85.9
7/11/2018				87.1
8/16/2018				83.3
12/3/2018	49.4	40.9	106	82.2
1/14/2019		43		
1/15/2019	47.9			
5/23/2019	48.6	41.8	109	87.2
7/17/2019	50.7			89.7
8/23/2019				89.2
11/7/2019	46.2	40.7	111	84.5
5/19/2020	48.3	38	107	93
7/13/2020				90.1
8/27/2020				92.2
11/12/2020	49.1	39.4	109	90.2
2/4/2021				90.8
3/3/2021				91
5/19/2021	48.2	41	108	90.5
7/21/2021				91.9
8/30/2021				90.4

Hollow symbols indicate censored values.

Time Series



Constituent: SULFATE Analysis Run 12/9/2021 12:56 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Time Series

Constituent: SULFATE (mg/l) Analysis Run 12/9/2021 12:57 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

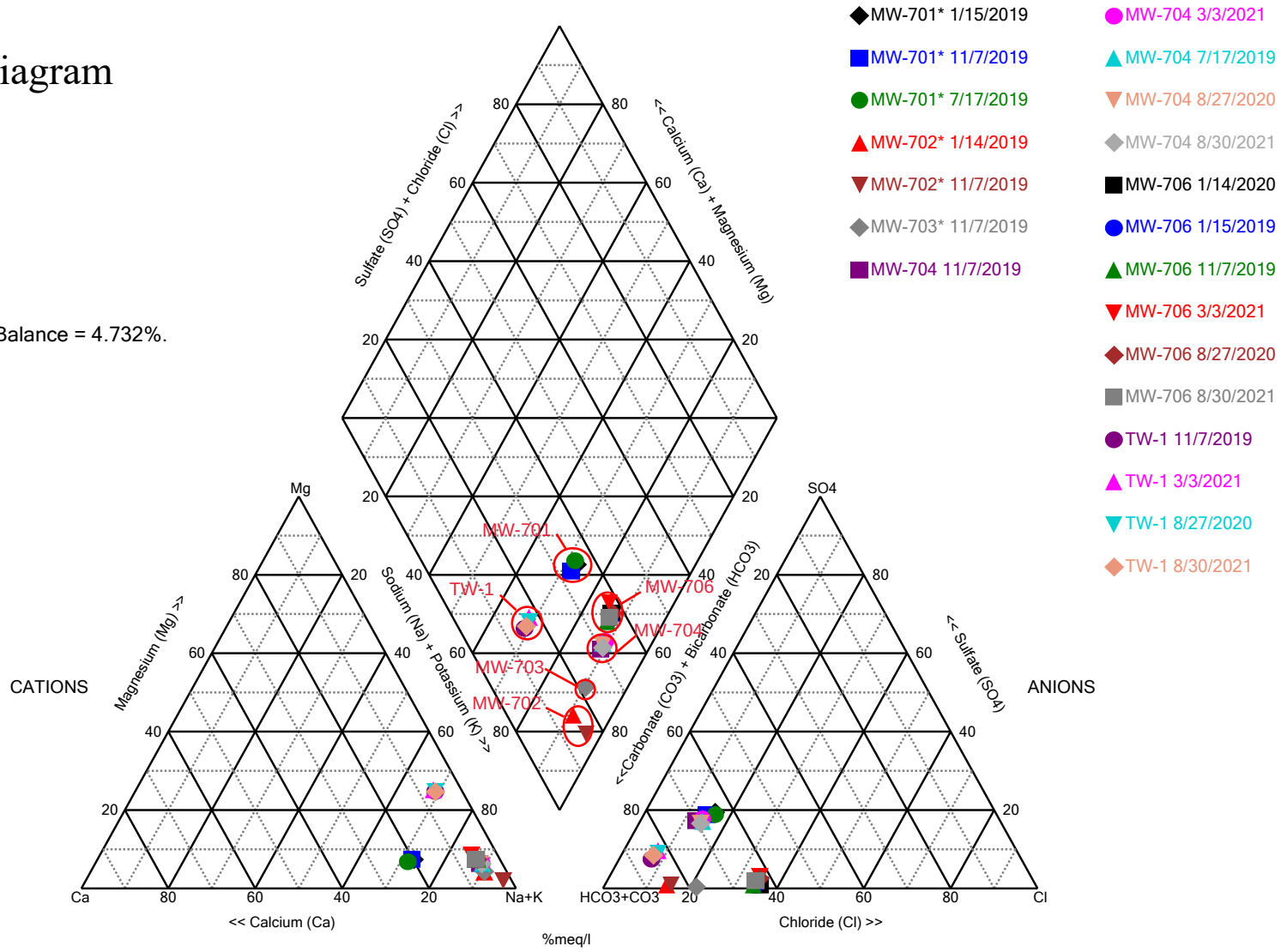
	MW-701 (bg)	MW-702 (bg)	MW-703 (bg)	MW-706	TW-1
6/7/2016	76.9		<5		
6/8/2016		5.73		<5	
6/9/2016					63.4
8/9/2016	81.1	5.46	<5	<5	60.9
10/11/2016	80.3	<5	<5	<5	58.8
12/6/2016	80.9		<5	<5	59.3
12/8/2016		<5			
2/7/2017	89.8		<5	<5	66.7
2/8/2017		<5			
4/4/2017	83.8		<5	<5	63.4
4/5/2017		<5			
6/13/2017	80.6			<5	62.7
6/14/2017			<5		
6/15/2017		<5			
8/8/2017	80.8				63.9
8/9/2017		<5		<5	
8/10/2017			<5		
10/3/2017	80.6	<5			59
10/4/2017				<5	
10/5/2017			<5		
5/24/2018	78.6	<5	<5	<5	61.1
12/3/2018	79.1	<5	<5		
12/4/2018				7.69	66.4
1/14/2019		<5			
1/15/2019	83.3			7.73	
3/11/2019				6.96	
5/23/2019	78.8	<5	<5	5.78	62.9
7/17/2019	83.4			8.27	
8/23/2019				8.79	
11/7/2019	83.7	<5	<5	9.68	61.9
1/14/2020				9.78	
2/3/2020				32.8	
5/19/2020	84	<5	<5	24.6	69.1
7/13/2020				21.3	69.4
8/27/2020				20.7	72.4
11/12/2020	86.2	<5	<5	20	73.8
2/4/2021				23.9	68.3
3/3/2021				29.7	74.4
5/19/2021	86.2	1.85	0.657	19.2	67.7
7/21/2021				17.4	68.5
8/30/2021				17	70.8

Appendix D

Piper Diagram Plots and Analytical Results

Piper Diagram

Cation-Anion Balance = 4.732%.



Analysis Run 12/7/2021 11:28 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Piper Diagram

Analysis Run 12/7/2021 11:32 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Totals (ppm)	Na	K	Ca	Mg	Cl	SO4	HCO3	CO3
MW-701* 1/15/2019	169	3.11	40.2	8.79	47.9	83.3	336	10
MW-701* 7/17/2019	172	2.91	45	8.71	50.7	83.4	349	10
MW-701* 11/7/2019	163	2.85	40.4	8.6	46.2	83.7	369	10
MW-702* 1/14/2019	230	3.14	11.2	5.24	43	2.5	461	10
MW-702* 11/7/2019	167	2.58	2.73	1.7	40.7	2.5	249	87.9
MW-703* 11/7/2019	339	3.53	17.6	8.07	111	2.5	725	10
MW-704 7/17/2019	442	5.85	21.5	15.8	89.7	156	790	10
MW-704 11/7/2019	429	5.47	21	15.5	84.5	163	844	10
MW-704 8/27/2020	444	5.51	21.8	16.1	92.2	150	803	10
MW-704 3/3/2021	434	5.6	20.7	15.7	91	164	791	10
MW-704 8/30/2021	432	5.39	20.8	15.4	90.4	154	816	10
MW-706 1/15/2019	442	6.52	24.7	19.5	238	7.73	769	10
MW-706 11/7/2019	427	6.26	22.5	19	240	9.68	806	10
MW-706 1/14/2020	422	6.18	24.4	19.3	247	9.78	767	10
MW-706 8/27/2020	437	6.25	23	19.4	238	20.7	751	10
MW-706 3/3/2021	412	6.65	25.7	21.6	228	29.7	716	10
MW-706 8/30/2021	428	6.29	23.8	19.4	236	17	780	10
TW-1 11/7/2019	286	7.72	23.3	55.4	40.1	61.9	878	10
TW-1 8/27/2020	304	7.61	23.6	58.3	41	72.4	835	10
TW-1 3/3/2021	298	7.95	24.9	59.2	40.2	74.4	818	10
TW-1 8/30/2021	299	7.74	24.2	57	41	70.8	878	10

Addendum 1

2021 Annual Groundwater Monitoring and Corrective Action Report Addendum 1

December 16, 2022
File No. 27217233.22

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: 2021 Annual Groundwater Monitoring and Corrective Action Report Addendum 1
Evergy Metro, Inc.
Upper AQC Impoundment
La Cygne Generating Station - La Cygne, Kansas

The Upper AQC Impoundment at the La Cygne Generating Station is 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 2021 for the Upper AQC Impoundment was completed and placed in the facility's operating record on January 28, 2022, 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:

  - February 2021 – First verification sampling for the Fall 2020 detection monitoring sampling event.
  - March 2021 – Second verification sampling for the Fall 2020 detection monitoring sampling event.
  - May 2021 - Spring 2021 semiannual detection monitoring sampling event.
  - July 2021 – First verification sampling for the Spring 2021 detection monitoring sampling event.
  - August 2021 - Second verification sampling for the Spring 2021 detection monitoring sampling event.
  - November 2021 - Fall 2021 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 2021 included the following:

  - Fall 2020 semiannual detection monitoring statistical analyses.
  - Spring 2021 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 2021 - Spring 2021 semiannual detection monitoring sampling event.
  - November 2021 - Fall 2021 semiannual detection monitoring sampling event.

Jared Morrison
December 16, 2022

ATTACHMENT 1

Laboratory Analytical Reports

Jared Morrison
December 16, 2022

ATTACHMENT 1-1

February 2021 Sampling Event Laboratory Report

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 15, 2021

SCS Engineers - KS

Sample Delivery Group:	L1314797
Samples Received:	02/06/2021
Project Number:	27217233.21
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

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MW-701 L1314797-01 GW

Collected by: Whit Martin | Collected date/time: 02/04/21 12:10 | Received date/time: 02/06/21 13:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG1619006	1	02/12/21 17:54	02/12/21 20:11	KMG	Mt. Juliet, TN

DUPLICATE 1 L1314797-02 GW

Collected by: Whit Martin | Collected date/time: 02/04/21 12:15 | Received date/time: 02/06/21 13:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG1619006	1	02/12/21 17:54	02/12/21 20:49	KMG	Mt. Juliet, TN

MW-703 L1314797-03 GW

Collected by: Whit Martin | Collected date/time: 02/04/21 13:10 | Received date/time: 02/06/21 13:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1619204	1	02/11/21 18:48	02/11/21 18:48	MCG	Mt. Juliet, TN

MW-704 L1314797-04 GW

Collected by: Whit Martin | Collected date/time: 02/04/21 12:45 | Received date/time: 02/06/21 13:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1619204	5	02/11/21 19:02	02/11/21 19:02	MCG	Mt. Juliet, TN

MW-706 L1314797-05 GW

Collected by: Whit Martin | Collected date/time: 02/04/21 10:35 | Received date/time: 02/06/21 13:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1619204	1	02/11/21 19:28	02/11/21 19:28	MCG	Mt. Juliet, TN

DUPLICATE 2 L1314797-06 GW

Collected by: Whit Martin | Collected date/time: 02/04/21 10:35 | Received date/time: 02/06/21 13:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1619204	5	02/11/21 20:46	02/11/21 20:46	MCG	Mt. Juliet, TN

MW-707B L1314797-07 GW

Collected by: Whit Martin | Collected date/time: 02/04/21 12:00 | Received date/time: 02/06/21 13:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1619204	5	02/11/21 20:59	02/11/21 20:59	MCG	Mt. Juliet, TN

MW-708 L1314797-08 GW

Collected by: Whit Martin | Collected date/time: 02/04/21 12:30 | Received date/time: 02/06/21 13:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1620537	1	02/12/21 15:45	02/12/21 15:45	MCG	Mt. Juliet, TN

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 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	43500	O1	79.3	1000	1	02/12/2021 20:11	WG1619006

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	43200		79.3	1000	1	02/12/2021 20:49	WG1619006

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Fluoride	1510		64.0	150	1	02/11/2021 18:48	WG1619204

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	90800		1900	5000	5	02/11/2021 19:02	WG1619204

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	23900		594	5000	1	02/11/2021 19:28	WG1619204

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	25400		2970	25000	5	02/11/2021 20:46	WG1619204

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	168000		1900	5000	5	02/11/2021 20:59	WG1619204

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	9540		594	5000	1	02/12/2021 15:45	WG1620537

Method Blank (MB)

(MB) R3621967-1 02/11/21 10:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1314568-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1314568-01 02/11/21 15:33 • (DUP) R3621967-3 02/11/21 15:46

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	2580	2430	1	6.12		15
Sulfate	25700	25000	1	2.81		15

L1314797-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1314797-04 02/11/21 19:02 • (DUP) R3621967-6 02/11/21 19:15

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	90800	91000	5	0.217		15
Fluoride	866	862	5	0.521		15
Sulfate	149000	150000	5	0.636		15

Laboratory Control Sample (LCS)

(LCS) R3621967-2 02/11/21 10:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	40600	102	80.0-120	
Fluoride	8000	8400	105	80.0-120	
Sulfate	40000	41200	103	80.0-120	

L1314568-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1314568-03 02/11/21 16:12 • (MS) R3621967-4 02/11/21 16:25 • (MSD) R3621967-5 02/11/21 16:38

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	3060	53200	54000	100	102	1	80.0-120			1.50	15
Fluoride	5000	3220	8120	8210	97.9	99.8	1	80.0-120			1.17	15

L1314568-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1314568-03 02/11/21 16:12 • (MS) R3621967-4 02/11/21 16:25 • (MSD) R3621967-5 02/11/21 16:38

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 %
Sulfate	50000	61200	108000	109000	93.0	96.3	1	80.0-120	E	E	1.53	15

L1314797-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1314797-05 02/11/21 19:28 • (MS) R3621967-7 02/11/21 19:41 • (MSD) R3621967-8 02/11/21 20:20

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	234000	279000	280000	90.4	92.5	1	80.0-120	E	E	0.364	15
Fluoride	5000	1040	6280	6310	105	105	1	80.0-120			0.577	15
Sulfate	50000	23900	75200	75500	103	103	1	80.0-120			0.494	15

L1314799-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1314799-01 02/11/21 21:25 • (MS) R3621967-9 02/11/21 21:38 • (MSD) R3621967-10 02/11/21 21:51

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	6560	56200	57300	99.3	102	1	80.0-120			1.99	15
Fluoride	5000	291	5280	5390	99.9	102	1	80.0-120			1.96	15
Sulfate	50000	65000	113000	115000	95.5	99.1	1	80.0-120	E	E	1.58	15

Method Blank (MB)

(MB) R3622246-1 02/12/21 09:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Sulfate	U		594	5000

L1314797-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1314797-08 02/12/21 15:45 • (DUP) R3622246-3 02/12/21 15:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	9540	9480	1	0.591		15

L1316685-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1316685-08 02/12/21 20:51 • (DUP) R3622246-6 02/12/21 21:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	4450	4480	1	0.795	J	15

Laboratory Control Sample (LCS)

(LCS) R3622246-2 02/12/21 09:20

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Sulfate	40000	40800	102	80.0-120	

L1314799-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1314799-03 02/12/21 16:10 • (MS) R3622246-4 02/12/21 16:23 • (MSD) R3622246-5 02/12/21 16:36

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	%	%		%			%	%
Sulfate	50000	9760	60000	60300	100	101	1	80.0-120			0.498	15

L1316685-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1316685-09 02/12/21 21:16 • (MS) R3622246-7 02/12/21 21:29

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Sulfate	50000	5200	56800	103	1	80.0-120	

Method Blank (MB)

(MB) R3622291-1 02/12/21 20:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Calcium	U		79.3	1000

Laboratory Control Sample (LCS)

(LCS) R3622291-2 02/12/21 20:08

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Calcium	10000	9540	95.4	80.0-120	

L1314797-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1314797-01 02/12/21 20:11 • (MS) R3622291-4 02/12/21 20:16 • (MSD) R3622291-5 02/12/21 20:19

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	%	%		%			%	%
Calcium	10000	43500	52400	52100	89.6	86.5	1	75.0-125			0.577	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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
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
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.

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.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

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

Company Name/Address:
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

Report to:
Jason Franks

Email To:
jfranks@scsengineers.com;jay.martin@evergy.c

Project Description:
KCPL – LaCygne Generating Station

City/State Collected: **LaCygne, KS**

Please Circle: PT MT (CT) ET

Phone: **913-681-0030**

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**

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Calcium - 6010 250mlHDPE-HNO3	Chloride 125mlHDPE-NoPres	Fluoride 125mlHDPE-NoPres	Sulfate 125mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-701	GRAB	GW		2/4/21	1210	1	X					-01
DUPLICATE 1		GW			1215	1	X					-02
MW-701 MS/MSD		GW			1220	1	X					-01
MW-703		GW			1310	1			X			-03
MW-704		GW			1245	1		X				-04
MW-706		GW			1035	1				X		-05
DUPLICATE 2		GW			1035	1				X		-06
MW-706 MS/MSD		GW			1035	1				X		-05
MW-707B		GW			1200	1		X				-07
MW-708		GW			1230	1				X		-08

* 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 #

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Road Mt Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1314757
F230
Ta
Acctnum: **AQUAOPKS**
Template: **T136292**
Prelogin: **P825436**
PM: **206 - Jeff Carr**
PB:
Shipped Via:

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: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	2-5-21	1012	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Cathi Compton

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received:
2.6-.1=2.5 X0 A3 10

Date: 2/6/21 CC Time: 1340 CC

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 15, 2021

SCS Engineers - KS

Sample Delivery Group:	L1314795
Samples Received:	02/06/2021
Project Number:	27217233.21
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

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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Wet Chemistry by Method 9056A 6

Gl: Glossary of Terms 8

Al: Accreditations & Locations 9

Sc: Sample Chain of Custody 10

TW-1 L1314795-01 GW

Collected by: Whit Martin
Collected date/time: 02/04/21 11:20
Received date/time: 02/06/21 13:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1619204	5	02/11/21 18:35	02/11/21 18:35	MCG	Mt. Juliet, TN

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

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	68300		2970	25000	5	02/11/2021 18:35	WG1619204

Method Blank (MB)

(MB) R3621967-1 02/11/21 10:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfate	U		594	5000

L1314568-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1314568-01 02/11/21 15:33 • (DUP) R3621967-3 02/11/21 15:46

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	25700	25000	1	2.81		15

L1314797-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1314797-04 02/11/21 19:02 • (DUP) R3621967-6 02/11/21 19:15

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	149000	150000	5	0.636		15

Laboratory Control Sample (LCS)

(LCS) R3621967-2 02/11/21 10:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	41200	103	80.0-120	

L1314568-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1314568-03 02/11/21 16:12 • (MS) R3621967-4 02/11/21 16:25 • (MSD) R3621967-5 02/11/21 16:38

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 %
Sulfate	50000	61200	108000	109000	93.0	96.3	1	80.0-120	E	E	1.53	15

L1314797-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1314797-05 02/11/21 19:28 • (MS) R3621967-7 02/11/21 19:41 • (MSD) R3621967-8 02/11/21 20:20

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 %
Sulfate	50000	23900	75200	75500	103	103	1	80.0-120			0.494	15

L1314799-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1314799-01 02/11/21 21:25 • (MS) R3621967-9 02/11/21 21:38 • (MSD) R3621967-10 02/11/21 21:51

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 %
Sulfate	50000	65000	113000	115000	95.5	99.1	1	80.0-120	E	E	1.58	15

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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).

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.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
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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]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

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

Company Name/Address:
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@evergy.c

Project Description:
KCPL - LaCygne Generating Station

City/State Collected: LaCygne, KS

Please Circle: PT MT (CT) ET

Phone: **913-681-0030**

Client Project #
27217233.18

Lab Project #
AQUAOPKS-LACYGNE

Collected by (print):
Whit Martin

Site/Facility ID #

P.O. #

Collected by (signature):
Whit Martin

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	Calcium - 6010 250mlHDPE-HNO3	Chloride 125mlHDPE-NoPres	Fluoride 125mlHDPE-NoPres	Sulfate 125mlHDPE-NoPres	Remarks	Sample # (lab only)
TW-1		GW		2/4/21	1120	1				X		-01

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

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SDG # L1314795

Table F229

Acctnum: **AQUAOPKS**

Template: **T136292**

Prelogin: **P825436**

PM: **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
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	2-5-21	1012	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Caleb Compton

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

Temp: °C 2.6-.1=2.5 Bottles Received: 1

Date: 2/6/21 Time: 1340

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Jared Morrison
December 16, 2022

ATTACHMENT 1-2

March 2021 Sampling Event Laboratory Report

ANALYTICAL REPORT

March 11, 2021

SCS Engineers - KS

Sample Delivery Group:	L1322867
Samples Received:	03/04/2021
Project Number:	27217233.21
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

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TW-1 L1322867-04 8

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Gl: Glossary of Terms 11

Al: Accreditations & Locations 12

Sc: Sample Chain of Custody 13

MW-704 L1322867-01 GW

Collected by: Jason R Franks | Collected date/time: 03/03/21 11:05 | Received date/time: 03/04/21 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1631611	5	03/10/21 02:56	03/10/21 02:56	LBR	Mt. Juliet, TN

MW-706 L1322867-02 GW

Collected by: Jason R Franks | Collected date/time: 03/03/21 11:55 | Received date/time: 03/04/21 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1631611	1	03/10/21 03:12	03/10/21 03:12	LBR	Mt. Juliet, TN

DUPLICATE 1 L1322867-03 GW

Collected by: Jason R Franks | Collected date/time: 03/03/21 11:55 | Received date/time: 03/04/21 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1631611	5	03/10/21 04:18	03/10/21 04:18	LBR	Mt. Juliet, TN

TW-1 L1322867-04 GW

Collected by: Jason R Franks | Collected date/time: 03/03/21 12:35 | Received date/time: 03/04/21 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1631611	5	03/10/21 04:34	03/10/21 04:34	LBR	Mt. Juliet, TN

CASE NARRATIVE

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

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	91000		1900	5000	5	03/10/2021 02:56	WG1631611

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	29700		594	5000	1	03/10/2021 03:12	WG1631611

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	28400		2970	25000	5	03/10/2021 04:18	WG1631611

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	74400		2970	25000	5	03/10/2021 04:34	WG1631611

Method Blank (MB)

(MB) R3629265-1 03/09/21 23:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Sulfate	U		594	5000

L1322693-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1322693-01 03/10/21 01:17 • (DUP) R3629265-3 03/10/21 01:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	32200	32200	1	0.201		15
Sulfate	181000	181000	1	0.134	E	15

L1322693-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1322693-01 03/10/21 01:50 • (DUP) R3629265-4 03/10/21 02:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	178000	178000	5	0.299		15

L1323210-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1323210-01 03/10/21 09:13 • (DUP) R3629265-8 03/10/21 09:29

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	213000	213000	10	0.138		15
Sulfate	8660	8380	10	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3629265-2 03/09/21 23:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	42600	106	80.0-120	
Sulfate	40000	43200	108	80.0-120	

L1322867-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1322867-02 03/10/21 03:12 • (MS) R3629265-5 03/10/21 03:28 • (MSD) R3629265-6 03/10/21 03:45

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	225000	265000	268000	80.8	87.7	1	80.0-120	E	E	1.30	15
Sulfate	50000	29700	79600	71900	99.8	84.4	1	80.0-120			10.2	15

L1323137-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1323137-01 03/10/21 07:51 • (MS) R3629265-7 03/10/21 08:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	6320	57000	101	1	80.0-120	
Sulfate	50000	72300	117000	90.1	1	80.0-120	E

GLOSSARY OF TERMS

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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Company Name/Address:
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@evergy.c

Project Description:
KCPL - LaCygne Generating Station

City/State Collected: LaCygne, KS

Please Circle: PT MT CT ET

Phone: **913-681-0030**

Client Project # **27217233.21**

Lab Project # **AQUAOPKS-LACYGNE**

Collected by (print): JASON R FRANKS

Site/Facility ID #

P.O. #

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: STD

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Chloride 125mlHDPE-NoPres	Sulfate 125mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-704	GRAB	GW	-	03/03/21	1105	1	X			-01
MW-706		GW	-		1155	1		X		-02
DUPLICATE 1		GW	-		1155	1		X		-03
MW-706 MS/MSD		GW	-		1155	1		X		-02
TW-1		GW	-		1235	1		X		-04

* 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 #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
	03/03/21	1350	3/3/21 1350	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.7-2.5 °C Bottles Received: 5
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/4/21 Time: 1300

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
RAD Screen <0.5 mR/hr: __Y __N

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Road Mt Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1372867

Table # G199

Acctnum: **AQUAOPKS**
Template: **T136292**
Prelogin: **P830739**
PM: **206 - Jeff Carr**
PB:

Shipped Via:

ANALYTICAL REPORT

March 11, 2021

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

SCS Engineers - KS

Sample Delivery Group:	L1322871
Samples Received:	03/04/2021
Project Number:	27217233.21
Description:	Evergy - 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

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MW-14R L1322871-01 GW

Collected by: Jason R Franks | Collected date/time: 03/03/21 10:48 | Received date/time: 03/04/21 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1630150	1	03/07/21 03:23	03/07/21 03:23	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1631611	5	03/10/21 04:50	03/10/21 04:50	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1631345	1	03/09/21 10:14	03/09/21 15:49	CCE	Mt. Juliet, TN

MW-704 L1322871-02 GW

Collected by: Jason R Franks | Collected date/time: 03/03/21 11:05 | Received date/time: 03/04/21 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1630150	1	03/07/21 03:31	03/07/21 03:31	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1631611	5	03/10/21 05:07	03/10/21 05:07	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1631345	1	03/09/21 10:14	03/09/21 15:52	CCE	Mt. Juliet, TN

MW-706 L1322871-03 GW

Collected by: Jason R Franks | Collected date/time: 03/03/21 11:55 | Received date/time: 03/04/21 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1630150	1	03/07/21 03:39	03/07/21 03:39	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1631611	10	03/10/21 05:23	03/10/21 05:23	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1631345	1	03/09/21 10:14	03/09/21 15:55	CCE	Mt. Juliet, TN

TW-1 L1322871-04 GW

Collected by: Jason R Franks | Collected date/time: 03/03/21 12:35 | Received date/time: 03/04/21 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1630150	1	03/07/21 03:47	03/07/21 03:47	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1631611	1	03/10/21 06:12	03/10/21 06:12	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1631345	1	03/09/21 10:14	03/09/21 15:58	CCE	Mt. Juliet, TN

MW-601 L1322871-05 GW

Collected by: Jason R Franks | Collected date/time: 03/03/21 11:50 | Received date/time: 03/04/21 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1630150	1	03/07/21 03:55	03/07/21 03:55	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1631611	10	03/10/21 06:29	03/10/21 06:29	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1631345	1	03/09/21 10:14	03/09/21 16:06	CCE	Mt. Juliet, TN

CASE NARRATIVE

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

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	461000		8450	20000	1	03/07/2021 03:23	WG1630150
Alkalinity,Carbonate	U		8450	20000	1	03/07/2021 03:23	WG1630150

Sample Narrative:

L1322871-01 WG1630150: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	62200		2970	25000	5	03/10/2021 04:50	WG1631611

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	55400		79.3	1000	1	03/09/2021 15:49	WG1631345
Magnesium	40500		85.3	1000	1	03/09/2021 15:49	WG1631345
Potassium	4440		261	2000	1	03/09/2021 15:49	WG1631345
Sodium	109000		504	3000	1	03/09/2021 15:49	WG1631345

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	791000		8450	20000	1	03/07/2021 03:31	WG1630150
Alkalinity,Carbonate	U		8450	20000	1	03/07/2021 03:31	WG1630150

Sample Narrative:

L1322871-02 WG1630150: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	164000		2970	25000	5	03/10/2021 05:07	WG1631611

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	20700		79.3	1000	1	03/09/2021 15:52	WG1631345
Magnesium	15700		85.3	1000	1	03/09/2021 15:52	WG1631345
Potassium	5600		261	2000	1	03/09/2021 15:52	WG1631345
Sodium	434000		504	3000	1	03/09/2021 15:52	WG1631345

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	716000		8450	20000	1	03/07/2021 03:39	WG1630150
Alkalinity,Carbonate	U		8450	20000	1	03/07/2021 03:39	WG1630150

Sample Narrative:

L1322871-03 WG1630150: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	228000		3790	10000	10	03/10/2021 05:23	WG1631611

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	25700		79.3	1000	1	03/09/2021 15:55	WG1631345
Magnesium	21600		85.3	1000	1	03/09/2021 15:55	WG1631345
Potassium	6650		261	2000	1	03/09/2021 15:55	WG1631345
Sodium	412000		504	3000	1	03/09/2021 15:55	WG1631345

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	818000		8450	20000	1	03/07/2021 03:47	WG1630150
Alkalinity,Carbonate	U		8450	20000	1	03/07/2021 03:47	WG1630150

Sample Narrative:

L1322871-04 WG1630150: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	40200		379	1000	1	03/10/2021 06:12	WG1631611

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Calcium	24900		79.3	1000	1	03/09/2021 15:58	WG1631345
Magnesium	59200		85.3	1000	1	03/09/2021 15:58	WG1631345
Potassium	7950		261	2000	1	03/09/2021 15:58	WG1631345
Sodium	298000		504	3000	1	03/09/2021 15:58	WG1631345

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	631000		8450	20000	1	03/07/2021 03:55	WG1630150
Alkalinity,Carbonate	U		8450	20000	1	03/07/2021 03:55	WG1630150

Sample Narrative:

L1322871-05 WG1630150: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	157000		3790	10000	10	03/10/2021 06:29	WG1631611

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	17000		79.3	1000	1	03/09/2021 16:06	WG1631345
Magnesium	10900		85.3	1000	1	03/09/2021 16:06	WG1631345
Potassium	4100		261	2000	1	03/09/2021 16:06	WG1631345
Sodium	350000		504	3000	1	03/09/2021 16:06	WG1631345

Method Blank (MB)

(MB) R3628081-1 03/07/21 01:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1322776-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1322776-06 03/07/21 02:26 • (DUP) R3628081-3 03/07/21 02:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	328000	328000	1	0.101		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

L1322871-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1322871-05 03/07/21 03:55 • (DUP) R3628081-6 03/07/21 04:03

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	631000	628000	1	0.448		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3629265-1 03/09/21 23:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Sulfate	U		594	5000

L1322693-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1322693-01 03/10/21 01:17 • (DUP) R3629265-3 03/10/21 01:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	32200	32200	1	0.201		15
Sulfate	181000	181000	1	0.134	E	15

L1322693-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1322693-01 03/10/21 01:50 • (DUP) R3629265-4 03/10/21 02:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	178000	178000	5	0.299		15

L1323210-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1323210-01 03/10/21 09:13 • (DUP) R3629265-8 03/10/21 09:29

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	213000	213000	10	0.138		15
Sulfate	8660	8380	10	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3629265-2 03/09/21 23:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	42600	106	80.0-120	
Sulfate	40000	43200	108	80.0-120	

L1322867-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1322867-02 03/10/21 03:12 • (MS) R3629265-5 03/10/21 03:28 • (MSD) R3629265-6 03/10/21 03:45

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	225000	265000	268000	80.8	87.7	1	80.0-120	E	E	1.30	15
Sulfate	50000	29700	79600	71900	99.8	84.4	1	80.0-120			10.2	15

L1323137-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1323137-01 03/10/21 07:51 • (MS) R3629265-7 03/10/21 08:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	6320	57000	101	1	80.0-120	
Sulfate	50000	72300	117000	90.1	1	80.0-120	E

Method Blank (MB)

(MB) R3629050-1 03/09/21 15:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Calcium	U		79.3	1000
Magnesium	U		85.3	1000
Potassium	U		261	2000
Sodium	562	J	504	3000

Laboratory Control Sample (LCS)

(LCS) R3629050-2 03/09/21 15:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	10000	9770	97.7	80.0-120	
Magnesium	10000	9990	99.9	80.0-120	
Potassium	10000	9460	94.6	80.0-120	
Sodium	10000	9890	98.9	80.0-120	

L1322782-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1322782-01 03/09/21 15:38 • (MS) R3629050-4 03/09/21 15:44 • (MSD) R3629050-5 03/09/21 15:46

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 %
Calcium	10000	66100	75200	75200	91.1	91.3	1	75.0-125			0.0205	20
Magnesium	10000	11400	20900	21000	94.3	95.4	1	75.0-125			0.523	20
Potassium	10000	6950	16000	16200	91.0	92.5	1	75.0-125			0.913	20
Sodium	10000	38800	47800	47900	90.7	91.6	1	75.0-125			0.182	20

GLOSSARY OF TERMS

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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
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
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.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Company Name/Address:
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@evergy.c

Project Description:
Evergy - LaCygne Generating Station

City/State Collected: LaCygne, KS

Please Circle: PT MT CT ET

Phone: **913-681-0030**

Client Project #
27217233.21

Lab Project #
AQUAOPKS-LACYGNE

Collected by (print): Jason R. Franks

Collected by (signature):

Site/Facility ID #

P.O. #

Quote #

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

Date Results Needed: STD

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALKBI, ALKCA 125mlHDPE-NoPres	Ca, K, Mg, Na - 6010 250mlHDPE-HNO3	Chloride - 9056 125mlHDPE-NoPres	SO4 - 9056 125mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-14R	Grab	GW	-	03/03/21	1048	3	X	X		X		-01
MW-704		GW	-		1105	3	X	X		X		-02
MW-706		GW	-		1155	3	X	X	X			-03
TW-1		GW	-		1235	3	X	X	X			-04
MW-601		GW	-		1150	3	X	X	X			-05

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Road Mt Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1322871

Table G200

Acctnum: **AQUAOPKS**

Template: **T152974**

Prelogin: **P830747**

PM: **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
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	03/03/21	1350	3-3-21 1350		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.7-2.5 °C Bottles Received: 15	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/4/21 Time: 1300	Hold: Condition: NCF / OK

Jared Morrison
December 16, 2022

ATTACHMENT 1-3

May 2021 Sampling Event Laboratory Report

ANALYTICAL REPORT

June 10, 2021

SCS Engineers - KS

Sample Delivery Group:	L1355864
Samples Received:	05/20/2021
Project Number:	27217233.21-B
Description:	Evergy - 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

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MW-6 L1355864-01 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 12:30 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/02/21 23:33	06/02/21 23:33	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	5	06/02/21 23:50	06/02/21 23:50	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 09:23	EL	Mt. Juliet, TN

MW-7 L1355864-02 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 11:50 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 00:06	06/03/21 00:06	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 09:26	EL	Mt. Juliet, TN

MW-11 L1355864-03 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 10:05 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1678082	1	05/26/21 17:41	05/26/21 18:58	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 00:39	06/03/21 00:39	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	5	06/03/21 00:55	06/03/21 00:55	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 09:29	EL	Mt. Juliet, TN

MW-701 L1355864-04 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 13:20 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 01:12	06/03/21 01:12	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 09:32	EL	Mt. Juliet, TN

MW-702 L1355864-05 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 11:00 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 01:45	06/03/21 01:45	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 03:32	EL	Mt. Juliet, TN

MW-703 L1355864-06 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 11:40 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 02:50	06/03/21 02:50	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	5	06/03/21 03:40	06/03/21 03:40	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 09:11	EL	Mt. Juliet, TN

MW-704 L1355864-07 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 14:10 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 03:56	06/03/21 03:56	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	5	06/03/21 04:13	06/03/21 04:13	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 03:35	EL	Mt. Juliet, TN

MW-705 L1355864-08 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 10:25 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 04:29	06/03/21 04:29	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	5	06/03/21 04:46	06/03/21 04:46	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 03:38	EL	Mt. Juliet, TN

MW-706 L1355864-09 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 11:10 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 05:02	06/03/21 05:02	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	5	06/03/21 05:51	06/03/21 05:51	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 03:41	EL	Mt. Juliet, TN

MW-707B L1355864-10 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 11:30 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 06:08	06/03/21 06:08	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	100	06/03/21 06:24	06/03/21 06:24	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 03:44	EL	Mt. Juliet, TN

MW-708 L1355864-11 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 10:30 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681780	1	06/03/21 06:41	06/03/21 06:41	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682042	1	06/04/21 14:19	06/09/21 03:47	EL	Mt. Juliet, TN

TW-1 L1355864-12 GW

Collected by: G. Penaflor | Collected date/time: 05/19/21 12:20 | Received date/time: 05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1678189	1	05/26/21 22:20	05/26/21 23:17	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681783	1	06/02/21 22:12	06/02/21 22:12	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682043	1	06/04/21 14:14	06/09/21 06:11	EL	Mt. Juliet, TN

DUPLICATE L1355864-13 GW

Collected by	Collected date/time	Received date/time
G. Penaflor	05/19/21 11:45	05/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1677941	1	05/26/21 15:27	05/26/21 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681783	1	06/02/21 22:35	06/02/21 22:35	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1681783	5	06/02/21 22:46	06/02/21 22:46	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1682043	1	06/04/21 14:14	06/09/21 06:14	EL	Mt. Juliet, TN

CASE NARRATIVE

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 ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1060000		20000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	193000		1900	5000	5	06/02/2021 23:50	WG1681780
Fluoride	522		64.0	150	1	06/02/2021 23:33	WG1681780
Sulfate	123000		2970	25000	5	06/02/2021 23:50	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1140		20.0	200	1	06/09/2021 09:23	WG1682042
Calcium	73200		79.3	1000	1	06/09/2021 09:23	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	854000	J3	20000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	95400		379	1000	1	06/03/2021 00:06	WG1681780
Fluoride	1100		64.0	150	1	06/03/2021 00:06	WG1681780
Sulfate	2170	J	594	5000	1	06/03/2021 00:06	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1540		20.0	200	1	06/09/2021 09:26	WG1682042
Calcium	21000		79.3	1000	1	06/09/2021 09:26	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	900000		20000	1	05/26/2021 18:58	WG1678082

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	76300		379	1000	1	06/03/2021 00:39	WG1681780
Fluoride	530		64.0	150	1	06/03/2021 00:39	WG1681780
Sulfate	176000		2970	25000	5	06/03/2021 00:55	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	1180		20.0	200	1	06/09/2021 09:29	WG1682042
Calcium	51800		79.3	1000	1	06/09/2021 09:29	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	561000		10000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	48200		379	1000	1	06/03/2021 01:12	WG1681780
Fluoride	641		64.0	150	1	06/03/2021 01:12	WG1681780
Sulfate	86200		594	5000	1	06/03/2021 01:12	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	931		20.0	200	1	06/09/2021 09:32	WG1682042
Calcium	43000		79.3	1000	1	06/09/2021 09:32	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	527000		10000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	41000		379	1000	1	06/03/2021 01:45	WG1681780
Fluoride	1090		64.0	150	1	06/03/2021 01:45	WG1681780
Sulfate	1850	J	594	5000	1	06/03/2021 01:45	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1580		20.0	200	1	06/09/2021 03:32	WG1682042
Calcium	5070		79.3	1000	1	06/09/2021 03:32	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	870000		20000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	108000		1900	5000	5	06/03/2021 03:40	WG1681780
Fluoride	1300		64.0	150	1	06/03/2021 02:50	WG1681780
Sulfate	657	J	594	5000	1	06/03/2021 02:50	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1790	O1	20.0	200	1	06/09/2021 09:11	WG1682042
Calcium	19000		79.3	1000	1	06/09/2021 09:11	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1180000		20000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	90500		379	1000	1	06/03/2021 03:56	WG1681780
Fluoride	781		64.0	150	1	06/03/2021 03:56	WG1681780
Sulfate	154000		2970	25000	5	06/03/2021 04:13	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	2070		20.0	200	1	06/09/2021 03:35	WG1682042
Calcium	21100		79.3	1000	1	06/09/2021 03:35	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	932000		20000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	139000		1900	5000	5	06/03/2021 04:46	WG1681780
Fluoride	887		64.0	150	1	06/03/2021 04:29	WG1681780
Sulfate	38600		594	5000	1	06/03/2021 04:29	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	2170		20.0	200	1	06/09/2021 03:38	WG1682042
Calcium	28600		79.3	1000	1	06/09/2021 03:38	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1160000		25000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	236000		1900	5000	5	06/03/2021 05:51	WG1681780
Fluoride	946		64.0	150	1	06/03/2021 05:02	WG1681780
Sulfate	19200		594	5000	1	06/03/2021 05:02	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	2040		20.0	200	1	06/09/2021 03:41	WG1682042
Calcium	24100		79.3	1000	1	06/09/2021 03:41	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	6860000		100000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	170000		37900	100000	100	06/03/2021 06:24	WG1681780
Fluoride	281		64.0	150	1	06/03/2021 06:08	WG1681780
Sulfate	5480000		59400	500000	100	06/03/2021 06:24	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	1880		20.0	200	1	06/09/2021 03:44	WG1682042
Calcium	412000		79.3	1000	1	06/09/2021 03:44	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	624000		13300	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	45000		379	1000	1	06/03/2021 06:41	WG1681780
Fluoride	546		64.0	150	1	06/03/2021 06:41	WG1681780
Sulfate	8640		594	5000	1	06/03/2021 06:41	WG1681780

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1360		20.0	200	1	06/09/2021 03:47	WG1682042
Calcium	29600		79.3	1000	1	06/09/2021 03:47	WG1682042

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1030000		10000	1	05/26/2021 23:17	WG1678189

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	40800		379	1000	1	06/02/2021 22:12	WG1681783
Fluoride	412		64.0	150	1	06/02/2021 22:12	WG1681783
Sulfate	67700		594	5000	1	06/02/2021 22:12	WG1681783

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1420		20.0	200	1	06/09/2021 06:11	WG1682043
Calcium	24500		79.3	1000	1	06/09/2021 06:11	WG1682043

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	882000		20000	1	05/26/2021 16:33	WG1677941

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	114000		1900	5000	5	06/02/2021 22:46	WG1681783
Fluoride	1560		64.0	150	1	06/02/2021 22:35	WG1681783
Sulfate	U		594	5000	1	06/02/2021 22:35	WG1681783

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	1790		20.0	200	1	06/09/2021 06:14	WG1682043
Calcium	19300		79.3	1000	1	06/09/2021 06:14	WG1682043

Method Blank (MB)

(MB) R3660171-1 05/26/21 16:33

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

L1355864-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1355864-01 05/26/21 16:33 • (DUP) R3660171-3 05/26/21 16:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	1060000	1110000	1	4.78		5

L1355864-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1355864-02 05/26/21 16:33 • (DUP) R3660171-4 05/26/21 16:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	854000	912000	1	6.57	J3	5

Laboratory Control Sample (LCS)

(LCS) R3660171-2 05/26/21 16:33

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8610000	97.8	77.4-123	

Method Blank (MB)

(MB) R3660182-1 05/26/21 18:58

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

L1355765-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1355765-06 05/26/21 18:58 • (DUP) R3660182-3 05/26/21 18:58

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	3260000	3210000	1	1.39		5

L1355864-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1355864-03 05/26/21 18:58 • (DUP) R3660182-4 05/26/21 18:58

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	900000	942000	1	4.56		5

Laboratory Control Sample (LCS)

(LCS) R3660182-2 05/26/21 18:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8460000	96.1	77.4-123	

Method Blank (MB)

(MB) R3661354-1 05/26/21 23:17

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

L1355635-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1355635-01 05/26/21 23:17 • (DUP) R3661354-3 05/26/21 23:17

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	211000	216000	1	2.34		5

L1355864-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1355864-12 05/26/21 23:17 • (DUP) R3661354-4 05/26/21 23:17

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1030000	1030000	1	0.292		5

Laboratory Control Sample (LCS)

(LCS) R3661354-2 05/26/21 23:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8730000	99.2	77.4-123	

Method Blank (MB)

(MB) R3662636-1 06/02/21 10:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1355784-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1355784-01 06/02/21 20:00 • (DUP) R3662636-3 06/02/21 20:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	4820	4800	1	0.330		15
Fluoride	197	195	1	1.02		15
Sulfate	41100	41200	1	0.113		15

L1355864-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1355864-02 06/03/21 00:06 • (DUP) R3662636-5 06/03/21 00:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	95400	95600	1	0.145		15
Fluoride	1100	1110	1	0.480		15
Sulfate	2170	2150	1	0.849	J	15

Laboratory Control Sample (LCS)

(LCS) R3662636-2 06/02/21 10:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	39400	98.4	80.0-120	
Fluoride	8000	8060	101	80.0-120	
Sulfate	40000	39300	98.2	80.0-120	

L1355784-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1355784-01 06/02/21 20:00 • (MS) R3662636-4 06/02/21 20:32

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	4820	54900	100	1	80.0-120	
Fluoride	5000	197	4970	95.4	1	80.0-120	
Sulfate	50000	41100	91300	100	1	80.0-120	

L1355864-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1355864-06 06/03/21 02:50 • (MS) R3662636-6 06/03/21 03:07 • (MSD) R3662636-7 06/03/21 03:23

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	109000	154000	155000	90.0	92.9	1	80.0-120	E	E	0.953	15
Fluoride	5000	1300	5980	6160	93.5	97.1	1	80.0-120			2.95	15
Sulfate	50000	657	45400	45700	89.5	90.0	1	80.0-120			0.616	15

Method Blank (MB)

(MB) R3662663-1 06/02/21 21:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3662663-3 06/02/21 23:09

Analyte	Original Result	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride		537	1	0.575	J	15
Fluoride		U	1	0.000		15
Sulfate		4050	1	0.0667	J	15

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3662663-6 06/03/21 02:59

Analyte	Original Result	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride		37700	1	0.165		15
Fluoride		1010	1	9.73		15
Sulfate		U	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3662663-2 06/02/21 22:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	40200	100	80.0-120	
Fluoride	8000	8030	100	80.0-120	
Sulfate	40000	39500	98.7	80.0-120	

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3662663-4 06/02/21 23:21 • (MSD) R3662663-5 06/02/21 23:32

Analyte	Spike Amount ug/l	Original Result	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000		51900	52500	103	104	1	80.0-120			1.06	15
Fluoride	5000		5160	5280	103	106	1	80.0-120			2.24	15
Sulfate	50000		54400	55000	101	102	1	80.0-120			1.20	15

Original Sample (OS) • Matrix Spike (MS)

(OS) • (MS) R3662663-7 06/03/21 03:10

Analyte	Spike Amount ug/l	Original Result	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000		86800	98.0	1	80.0-120	
Fluoride	5000		6180	101	1	80.0-120	
Sulfate	50000		48500	97.1	1	80.0-120	

Method Blank (MB)

(MB) R3664963-6 06/09/21 09:05

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		20.0	200
Calcium	U		79.3	1000

Laboratory Control Sample (LCS)

(LCS) R3664963-7 06/09/21 09:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	987	98.7	80.0-120	
Calcium	10000	9770	97.7	80.0-120	

L1355864-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1355864-06 06/09/21 09:11 • (MS) R3664963-9 06/09/21 09:17 • (MSD) R3664963-10 06/09/21 09:20

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	1790	2730	2750	94.3	95.6	1	75.0-125			0.453	20
Calcium	10000	19000	29700	29800	107	108	1	75.0-125			0.298	20

Method Blank (MB)

(MB) R3664964-1 06/09/21 05:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		20.0	200
Calcium	U		79.3	1000

Laboratory Control Sample (LCS)

(LCS) R3664964-2 06/09/21 05:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	977	97.7	80.0-120	
Calcium	10000	9770	97.7	80.0-120	

L1355994-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1355994-07 06/09/21 06:00 • (MS) R3664964-4 06/09/21 06:06 • (MSD) R3664964-5 06/09/21 06:08

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	2210	3160	3150	94.3	93.7	1	75.0-125			0.194	20
Calcium	10000	24800	34700	34600	99.2	97.7	1	75.0-125			0.430	20

GLOSSARY OF TERMS

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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
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
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.
J3	The associated batch QC was outside the established quality control range for precision.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Company Name/Address:
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@evergy.c

Project Description:
Evergy - LaCygne Generating Station

City/State Collected: La Cygne, KS

Please Circle: PT MT (CT) ET

Phone: **913-681-0030**

Client Project #
27217233.21-B

Lab Project #
AQUAOPKS-LACYGNE

Collected by (print):
G. Pengra

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

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1355864

B191

Acctnum: **AQUAOPKS**
Template: **T150678**
Prelogin: **P846699**
PM: **206 - Jeff Carr**
PB: TN 5-11-21
Shipped Via: **FedEX Ground**

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-6	GRAB	GW		5/19/21	1230	3	X	X	X		-01
MW-7		GW			1150	3	X	X	X		-02
MW-11		GW			1005	3	X	X	X		-03
MW-701		GW			1320	3	X	X	X		-04
MW-702		GW			1100	3	X	X	X		-05
MW-703		GW			1140	3	X	X	X		~~-06~~ -010
MW-704		GW			1410	3	X	X	X		-07
MW-705		GW			1025	3	X	X	X		-08
MW-706		GW			1110	3	X	X	X		-09
MW-707B		GW			1130	3	X	X	X		-10

* 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 # 9883 0088 6524

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: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	5/19/21			0
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.4+1-0.5 °C Bottles Received: 42
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 05/20/21 Time: 09:30
				Hold: Condition: NCF / OK

Company Name/Address:
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

Report to:
Jason Franks

Email To:
jfranks@scsengineers.com;jay.martin@evergy.c

Project Description:
Evergy - LaCygne Generating Station

City/State Collected:

Please Circle: PT MT (CT) ET

Phone: **913-681-0030**

Client Project #
27217233.21-B

Lab Project #
AQUAOPKS-LACYGNE

Collected by (print):
G. Penaflor

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Site/Facility ID #

P.O. #

Quote #

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

Date Results Needed: Std

Analysis / Container / Preservative

Pres Chk

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-708	GRAB	GW		5/19/21	1030	3	X	X	X		-11
TW-1	↓	GW		↓	1220	3	X	X	X		-12
DUPLICATE	↓	GW		↓	1145	3	X	X	X		-13
703 MS/MSD	↓	GW		↓	1150	3	X	X	X		-06

Chain of Custody Page ___ of ___

Pace Analytical®

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1355804

Table #

Acctnum: **AQUAOPKS**

Template: **T150678**

Prelogin: **P846699**

PM: **206 - Jeff Carr**

PB: TN 5-11-21

Shipped Via: **FedEX Ground**

* 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 # 9883 0055 6524

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:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/19/21		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: 4.7 °C Bottles Received: 42

Date: 05/20/21 Time: 09:30

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Jared Morrison
December 16, 2022

ATTACHMENT 1-4

July 2021 Sampling Event Laboratory Report

ANALYTICAL REPORT

July 31, 2021

SCS Engineers - KS

Sample Delivery Group:	L1381859
Samples Received:	07/22/2021
Project Number:	27217233.21
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

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MW-704 L1381859-01 GW

Collected by: Whit Martin | Collected date/time: 07/21/21 10:55 | Received date/time: 07/22/21 08:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1712048	1	07/29/21 02:50	07/29/21 02:50	MSP	Mt. Juliet, TN

DUPLICATE 1 L1381859-02 GW

Collected by: Whit Martin | Collected date/time: 07/21/21 10:55 | Received date/time: 07/22/21 08:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1712048	1	07/29/21 03:30	07/29/21 03:30	MSP	Mt. Juliet, TN

MW-706 L1381859-03 GW

Collected by: Whit Martin | Collected date/time: 07/21/21 10:05 | Received date/time: 07/22/21 08:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1712048	1	07/29/21 03:43	07/29/21 03:43	MSP	Mt. Juliet, TN

MW-707B L1381859-04 GW

Collected by: Whit Martin | Collected date/time: 07/21/21 11:15 | Received date/time: 07/22/21 08:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1712048	100	07/29/21 03:56	07/29/21 03:56	MSP	Mt. Juliet, TN

TW-1 L1381859-05 GW

Collected by: Whit Martin | Collected date/time: 07/21/21 10:40 | Received date/time: 07/22/21 08:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1712048	1	07/29/21 12:54	07/29/21 12:54	MSP	Mt. Juliet, TN

DUPLICATE 2 L1381859-06 GW

Collected by: Whit Martin | Collected date/time: 07/21/21 10:40 | Received date/time: 07/22/21 08:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1712048	1	07/29/21 13:47	07/29/21 13:47	MSP	Mt. Juliet, TN

CASE NARRATIVE

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

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	91900		379	1000	1	07/29/2021 02:50	WG1712048

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	91100		379	1000	1	07/29/2021 03:30	WG1712048

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	17400		594	5000	1	07/29/2021 03:43	WG1712048

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	5070000		59400	500000	100	07/29/2021 03:56	WG1712048

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	68500		594	5000	1	07/29/2021 12:54	WG1712048

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	69600		594	5000	1	07/29/2021 13:47	WG1712048

Method Blank (MB)

(MB) R3686080-1 07/28/21 14:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Sulfate	U		594	5000

L1381859-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1381859-05 07/29/21 04:36 • (DUP) R3686080-7 07/29/21 04:49

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	41400	41200	1	0.472		15

L1381859-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1381859-05 07/29/21 12:54 • (DUP) R3686080-10 07/29/21 13:07

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	68500	68400	1	0.185		15

L1381858-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1381858-01 07/29/21 15:46 • (DUP) R3686080-13 07/29/21 16:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6150	6130	1	0.297		15
Sulfate	59300	58600	1	1.21		15

Laboratory Control Sample (LCS)

(LCS) R3686080-2 07/28/21 15:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38700	96.8	80.0-120	
Sulfate	40000	38700	96.7	80.0-120	

L1381858-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1381858-06 07/29/21 01:57 • (MS) R3686080-3 07/29/21 02:11 • (MSD) R3686080-4 07/29/21 02:24

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Chloride	50000	30000	79000	78800	98.1	97.8	1	80.0-120			0.209	15
Sulfate	50000	26000	75900	75900	99.7	99.7	1	80.0-120			0.0428	15

L1381859-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1381859-01 07/29/21 02:50 • (MS) R3686080-5 07/29/21 03:04 • (MSD) R3686080-6 07/29/21 03:17

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Chloride	50000	91900	143000	139000	103	94.6	1	80.0-120	E	E	2.81	15
Sulfate	50000	158000	211000	203000	107	90.8	1	80.0-120	E	E	3.85	15

L1381859-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1381859-05 07/29/21 04:36 • (MS) R3686080-8 07/29/21 05:03 • (MSD) R3686080-9 07/29/21 05:16

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Chloride	50000	41400	90200	90400	97.5	97.9	1	80.0-120			0.195	15

L1381859-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1381859-05 07/29/21 12:54 • (MS) R3686080-11 07/29/21 13:21 • (MSD) R3686080-12 07/29/21 13:34

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Sulfate	50000	68500	117000	117000	96.8	96.3	1	80.0-120	E	E	0.190	15

L1381858-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1381858-01 07/29/21 15:46 • (MS) R3686080-14 07/29/21 16:13 • (MSD) R3686080-15 07/29/21 16:26

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Chloride	50000	6150	56200	56500	100	101	1	80.0-120			0.418	15
Sulfate	50000	59300	107000	108000	96.1	97.7	1	80.0-120	E	E	0.715	15

GLOSSARY OF TERMS

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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
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.
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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).

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Company Name/Address:
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@evergy.c

Project Description:
KCPL - LaCygne Generating Station

City/State Collected: **LaCygne, KS**

Please Circle: PT MT (CT) ET

Phone: **913-681-0030**

Client Project #
27217233.21

Lab Project #
AQUAOPKS-LACYGNE

Collected by (print):
Whit Martin

Site/Facility ID #

P.O. #

Collected by (signature):
Whit Martin

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**

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

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SDG # 1581859

Ta D079

Acctnum: **AQUAOPKS**

Template: **T136292**

Prelogin: **P861444**

PM: **206 - Jeff Carr**

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Chloride 125mlHDPE-NoPres	Sulfate 125mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-704	Grab	GW		7/21/21	1055	1	X			-01
MW-704 MS/MSD	Grab	GW		7/21/21	1055	1	X			
DUPLICATE 1	Grab	GW		7/21/21	1055	1	X			-02
MW-706	Grab	GW		7/21/21	1005	1		X		-03
MW-707B	Grab	GW		7/21/21	1115	1		X		-04
TW-1	Grab	GW		7/21/21	1040	1		X		-05
TW-1 MS/MSD	Grab	GW		7/21/21	1040	1		X		
DUPLICATE 2	Grab	GW		7/21/21	1040	1		X		-06

* 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 # 5117 4431 1196

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: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Whit Martin	7/21/21	1445		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 23 °C Bottles Received: 8
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Heather Kems	Date: 7/22/21 Time: 0840

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Jared Morrison
December 16, 2022

ATTACHMENT 1-5

August 2021 Sampling Event Laboratory Report

ANALYTICAL REPORT

September 04, 2021

SCS Engineers - KS

Sample Delivery Group:	L1397261
Samples Received:	08/31/2021
Project Number:	27217233.21
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

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MW-704 L1397261-01 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 11:55 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1733452	1	09/02/21 01:27	09/02/21 01:27	ELN	Mt. Juliet, TN

DUPLICATE 1 L1397261-02 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 11:55 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1733452	5	09/02/21 02:06	09/02/21 02:06	ELN	Mt. Juliet, TN

MW-706 L1397261-03 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 11:45 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1733452	1	09/02/21 07:37	09/02/21 07:37	ELN	Mt. Juliet, TN

TW-1 L1397261-04 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 12:30 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1733452	1	09/02/21 02:33	09/02/21 02:33	ELN	Mt. Juliet, TN

DUPLICATE 2 L1397261-05 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 12:30 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1733452	5	09/02/21 03:52	09/02/21 03:52	ELN	Mt. Juliet, TN

CASE NARRATIVE

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

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	90400		379	1000	1	09/02/2021 01:27	WG1733452

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	89500		1900	5000	5	09/02/2021 02:06	WG1733452

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	17000		594	5000	1	09/02/2021 07:37	WG1733452

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	70800		594	5000	1	09/02/2021 02:33	WG1733452

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	64500		2970	25000	5	09/02/2021 03:52	WG1733452

Method Blank (MB)

(MB) R3699524-1 09/01/21 22:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Sulfate	U		594	5000

L1397235-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1397235-04 09/01/21 23:28 • (DUP) R3699524-3 09/01/21 23:41

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	41000	41000	1	0.216		15
Sulfate	68600	69000	1	0.676		15

L1397264-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1397264-02 09/02/21 04:45 • (DUP) R3699524-10 09/02/21 04:58

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6200	6040	1	2.61		15
Sulfate	58900	57100	1	3.01		15

Laboratory Control Sample (LCS)

(LCS) R3699524-2 09/01/21 22:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	39000	97.6	80.0-120	
Sulfate	40000	38800	96.9	80.0-120	

L1397261-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397261-01 09/02/21 01:27 • (MS) R3699524-4 09/02/21 01:40 • (MSD) R3699524-5 09/02/21 01:53

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	90400	135000	135000	88.9	88.7	1	80.0-120	E	E	0.0690	15

L1397261-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397261-04 09/02/21 02:33 • (MS) R3699524-6 09/02/21 02:46 • (MSD) R3699524-7 09/02/21 02:59

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	41700	88800	88900	94.2	94.3	1	80.0-120			0.0857	15
Sulfate	50000	70800	115000	115000	87.6	87.8	1	80.0-120	E	E	0.0973	15

L1397264-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397264-01 09/02/21 04:05 • (MS) R3699524-8 09/02/21 04:19 • (MSD) R3699524-9 09/02/21 04:32

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	6350	54100	54200	95.5	95.7	1	80.0-120			0.229	15
Sulfate	50000	61800	104000	104000	84.6	84.7	1	80.0-120	E	E	0.0645	15

L1397264-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397264-05 09/02/21 05:38 • (MS) R3699524-11 09/02/21 06:18 • (MSD) R3699524-12 09/02/21 06:31

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	30000	78100	77600	96.2	95.4	1	80.0-120			0.537	15
Sulfate	50000	24400	72200	71900	95.6	95.1	1	80.0-120			0.305	15

GLOSSARY OF TERMS

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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Company Name/Address:
SCS Engineers - KS

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

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

Pres Chk

Report to:
Jason Franks

Email To:
jfranks@scsengineers.com;jay.martin@evergy.c

Project Description:
KCPL - LaCygne Generating Station

City/State Collected: LaCygne, KS

Please Circle: PT MT (CT) ET

Phone: **913-681-0030**

Client Project #
27217233.21

Lab Project #
AQUAOPKS-LACYGNE

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Chloride 125mlHDPE-NoPres	Sulfate 125mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-704	GRAB	GW	—	8/30/21	1155	1	X			-01
MW-704 MS/MSD		GW	—		1155	1	X			
DUPLICATE 1		GW	—		1155	1	X			-02
MW-706		GW	—		1145	1		X		-03
TW-1		GW	—		1230	1		X		-04
TW-1 MS/MSD		GW	—		1230	1		X		
DUPLICATE 2		GW	—		1230	1		X		-05

Chain of Custody Page 1 of 1

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1397261

L-173

Acctnum: **AQUAOPKS**
Template: **T136292**
Prelogin: **P870716**
PM: **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 # 5217 3305 0258

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: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	8/30/21	1600		NA	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.3-1=3.2 °C Bottles Received: 7	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/31/21 Time: 1000	Hold: Condition: NCF / OK

ANALYTICAL REPORT

September 08, 2021

SCS Engineers - KS

Sample Delivery Group:	L1397235
Samples Received:	08/31/2021
Project Number:	27217233.21
Description:	Evergy - 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

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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MW-704 L1397235-01 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 11:55 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1734747	1	09/04/21 12:28	09/04/21 12:28	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1733452	5	09/01/21 22:48	09/01/21 22:48	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1733697	1	09/04/21 11:54	09/07/21 13:13	EL	Mt. Juliet, TN

MW-14R L1397235-02 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 14:25 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1734747	1	09/04/21 12:49	09/04/21 12:49	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1733452	5	09/01/21 23:01	09/01/21 23:01	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1733697	1	09/04/21 11:54	09/07/21 13:16	EL	Mt. Juliet, TN

MW-706 L1397235-03 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 11:45 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1734747	1	09/04/21 12:52	09/04/21 12:52	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1733452	10	09/01/21 23:15	09/01/21 23:15	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1733697	1	09/04/21 11:54	09/07/21 13:19	EL	Mt. Juliet, TN

TW-1 L1397235-04 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 12:30 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1734747	1	09/04/21 12:56	09/04/21 12:56	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1733452	1	09/01/21 23:28	09/01/21 23:28	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1733697	1	09/04/21 11:54	09/07/21 13:21	EL	Mt. Juliet, TN

MW-601 L1397235-05 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 13:25 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1734749	1	09/04/21 13:40	09/04/21 13:40	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1733452	10	09/01/21 23:54	09/01/21 23:54	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1733697	1	09/04/21 11:54	09/07/21 13:24	EL	Mt. Juliet, TN

MW-803 L1397235-06 GW

Collected by: Jason R Franks | Collected date/time: 08/30/21 13:15 | Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1734749	1	09/04/21 13:44	09/04/21 13:44	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1733452	1	09/02/21 07:10	09/02/21 07:10	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1733697	1	09/04/21 11:54	09/07/21 13:27	EL	Mt. Juliet, TN

MW-804 L1397235-07 GW

Collected by: Jason R Franks
Collected date/time: 08/30/21 13:55
Received date/time: 08/31/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1734749	1	09/04/21 13:48	09/04/21 13:48	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1733452	1	09/02/21 00:21	09/02/21 00:21	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1733697	1	09/04/21 11:54	09/07/21 13:29	EL	Mt. Juliet, TN

CASE NARRATIVE

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

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	816000		8450	20000	1	09/04/2021 12:28	WG1734747
Alkalinity,Carbonate	U		8450	20000	1	09/04/2021 12:28	WG1734747

Sample Narrative:

L1397235-01 WG1734747: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	154000		2970	25000	5	09/01/2021 22:48	WG1733452

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	20800		79.3	1000	1	09/07/2021 13:13	WG1733697
Magnesium	15400		85.3	1000	1	09/07/2021 13:13	WG1733697
Potassium	5390		261	2000	1	09/07/2021 13:13	WG1733697
Sodium	432000		504	3000	1	09/07/2021 13:13	WG1733697

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	492000		8450	20000	1	09/04/2021 12:49	WG1734747
Alkalinity,Carbonate	U		8450	20000	1	09/04/2021 12:49	WG1734747

Sample Narrative:

L1397235-02 WG1734747: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	53700		2970	25000	5	09/01/2021 23:01	WG1733452

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	52600		79.3	1000	1	09/07/2021 13:16	WG1733697
Magnesium	39000		85.3	1000	1	09/07/2021 13:16	WG1733697
Potassium	4270		261	2000	1	09/07/2021 13:16	WG1733697
Sodium	112000		504	3000	1	09/07/2021 13:16	WG1733697

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	780000		8450	20000	1	09/04/2021 12:52	WG1734747
Alkalinity,Carbonate	U		8450	20000	1	09/04/2021 12:52	WG1734747

Sample Narrative:

L1397235-03 WG1734747: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	236000		3790	10000	10	09/01/2021 23:15	WG1733452

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	23800		79.3	1000	1	09/07/2021 13:19	WG1733697
Magnesium	19400		85.3	1000	1	09/07/2021 13:19	WG1733697
Potassium	6290		261	2000	1	09/07/2021 13:19	WG1733697
Sodium	428000		504	3000	1	09/07/2021 13:19	WG1733697

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	878000		8450	20000	1	09/04/2021 12:56	WG1734747
Alkalinity,Carbonate	U		8450	20000	1	09/04/2021 12:56	WG1734747

Sample Narrative:

L1397235-04 WG1734747: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	41000		379	1000	1	09/01/2021 23:28	WG1733452

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	24200		79.3	1000	1	09/07/2021 13:21	WG1733697
Magnesium	57000		85.3	1000	1	09/07/2021 13:21	WG1733697
Potassium	7740		261	2000	1	09/07/2021 13:21	WG1733697
Sodium	299000		504	3000	1	09/07/2021 13:21	WG1733697

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	683000		8450	20000	1	09/04/2021 13:40	WG1734749
Alkalinity,Carbonate	U		8450	20000	1	09/04/2021 13:40	WG1734749

Sample Narrative:

L1397235-05 WG1734749: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	163000		3790	10000	10	09/01/2021 23:54	WG1733452

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	16800		79.3	1000	1	09/07/2021 13:24	WG1733697
Magnesium	10900		85.3	1000	1	09/07/2021 13:24	WG1733697
Potassium	4570		261	2000	1	09/07/2021 13:24	WG1733697
Sodium	351000		504	3000	1	09/07/2021 13:24	WG1733697

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	483000		8450	20000	1	09/04/2021 13:44	WG1734749
Alkalinity,Carbonate	U		8450	20000	1	09/04/2021 13:44	WG1734749

Sample Narrative:

L1397235-06 WG1734749: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	25400		594	5000	1	09/02/2021 07:10	WG1733452

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	39000		79.3	1000	1	09/07/2021 13:27	WG1733697
Magnesium	30800		85.3	1000	1	09/07/2021 13:27	WG1733697
Potassium	4920		261	2000	1	09/07/2021 13:27	WG1733697
Sodium	156000		504	3000	1	09/07/2021 13:27	WG1733697

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity,Bicarbonate	468000		8450	20000	1	09/04/2021 13:48	WG1734749
Alkalinity,Carbonate	U		8450	20000	1	09/04/2021 13:48	WG1734749

Sample Narrative:

L1397235-07 WG1734749: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	30200		379	1000	1	09/02/2021 00:21	WG1733452

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	64400		79.3	1000	1	09/07/2021 13:29	WG1733697
Magnesium	21700		85.3	1000	1	09/07/2021 13:29	WG1733697
Potassium	2710		261	2000	1	09/07/2021 13:29	WG1733697
Sodium	123000		504	3000	1	09/07/2021 13:29	WG1733697

Method Blank (MB)

(MB) R3700463-2 09/04/21 11:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1397163-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1397163-01 09/04/21 11:41 • (DUP) R3700463-3 09/04/21 11:44

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	73500	73800	1	0.528		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1397235-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1397235-01 09/04/21 12:28 • (DUP) R3700463-4 09/04/21 12:32

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	816000	818000	1	0.313		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3700478-2 09/04/21 13:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity,Bicarbonate	U		8450	20000
Alkalinity,Carbonate	U		8450	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1397363-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1397363-01 09/04/21 14:00 • (DUP) R3700478-3 09/04/21 14:04

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	132000	135000	1	2.06		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1397455-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1397455-01 09/04/21 14:37 • (DUP) R3700478-4 09/04/21 14:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	260000	261000	1	0.381		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3699524-1 09/01/21 22:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Sulfate	U		594	5000

L1397235-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1397235-04 09/01/21 23:28 • (DUP) R3699524-3 09/01/21 23:41

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	41000	41000	1	0.216		15
Sulfate	68600	69000	1	0.676		15

L1397264-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1397264-02 09/02/21 04:45 • (DUP) R3699524-10 09/02/21 04:58

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6200	6040	1	2.61		15
Sulfate	58900	57100	1	3.01		15

Laboratory Control Sample (LCS)

(LCS) R3699524-2 09/01/21 22:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	39000	97.6	80.0-120	
Sulfate	40000	38800	96.9	80.0-120	

L1397261-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397261-01 09/02/21 01:27 • (MS) R3699524-4 09/02/21 01:40 • (MSD) R3699524-5 09/02/21 01:53

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	90400	135000	135000	88.9	88.7	1	80.0-120	E	E	0.0690	15

L1397261-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397261-04 09/02/21 02:33 • (MS) R3699524-6 09/02/21 02:46 • (MSD) R3699524-7 09/02/21 02:59

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	41700	88800	88900	94.2	94.3	1	80.0-120			0.0857	15
Sulfate	50000	70800	115000	115000	87.6	87.8	1	80.0-120	E	E	0.0973	15

L1397264-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397264-01 09/02/21 04:05 • (MS) R3699524-8 09/02/21 04:19 • (MSD) R3699524-9 09/02/21 04:32

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	6350	54100	54200	95.5	95.7	1	80.0-120			0.229	15
Sulfate	50000	61800	104000	104000	84.6	84.7	1	80.0-120	E	E	0.0645	15

L1397264-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397264-05 09/02/21 05:38 • (MS) R3699524-11 09/02/21 06:18 • (MSD) R3699524-12 09/02/21 06:31

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	30000	78100	77600	96.2	95.4	1	80.0-120			0.537	15
Sulfate	50000	24400	72200	71900	95.6	95.1	1	80.0-120			0.305	15

Method Blank (MB)

(MB) R3701317-1 09/07/21 12:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Calcium	91.5	J	79.3	1000
Magnesium	U		85.3	1000
Potassium	U		261	2000
Sodium	U		504	3000

Laboratory Control Sample (LCS)

(LCS) R3701317-2 09/07/21 12:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	10000	9700	97.0	80.0-120	
Magnesium	10000	9830	98.3	80.0-120	
Potassium	10000	9750	97.5	80.0-120	
Sodium	10000	10000	100	80.0-120	

L1397157-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397157-02 09/07/21 12:38 • (MS) R3701317-4 09/07/21 12:43 • (MSD) R3701317-5 09/07/21 12:45

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 %
Calcium	10000	43500	53100	53500	95.3	99.4	1	75.0-125			0.777	20
Magnesium	10000	16800	26400	26500	96.6	97.6	1	75.0-125			0.360	20
Potassium	10000	3560	11800	12200	82.6	86.3	1	75.0-125			3.09	20
Sodium	10000	5230	14700	15000	94.7	97.3	1	75.0-125			1.79	20

GLOSSARY OF TERMS

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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
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
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.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Company Name/Address:
SCS Engineers - KS
8575 West 110th Street
Suite 100
Overland Park. KS 66210

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

Pres Chk

Report to: **Jason Franks**

Email To: **jfranks@scsengineers.com;jay.martin@evergy.c**

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

City/State Collected: LaCygne KS

Please Circle: PT MT (CT) ET

Phone: **913-681-0030**

Client Project # **27217233.21**

Lab Project # **AQUAOPKS-LACYGNE**

Collected by (print): JASON R FRANKS

Site/Facility ID #

P.O. #

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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALKBI, ALKCA 125mlHDPE-NoPres	Ca, K, Mg, Na - 6010 250mlHDPE-HNO3	Chloride - 9056 125mlHDPE-NoPres	SO4 - 9056 125mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-704	GRAB	GW	—	8/30/21	1155	3	X	X		X		-01
MW-14R		GW	—		1425	3	X	X		X		-02
MW-706		GW	—		1145	3	X	X	X			-03
TW-1		GW	—		1230	3	X	X	X			-04
MW-601		GW	—		1325	3	X	X	X			-05
MW-803		GW	—		1315	3	X	X		X		-06
MW-804		GW	—		1355	3	X	X	X			-07

* 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 # 5217 3305 0258

Relinquished by : (Signature) — Date: 8/30/21 — Time: 1600 — Received by: (Signature)

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

Relinquished by : (Signature) — Date: — Time: — Received for lab by: (Signature) Madelle Thies — Date: 8/31/21 — Time: 1000

Trip Blank Received: Yes / No — HCL / MeoH — TBR

Temp: 33-1/3.2 °C Bottles Received: 21

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
RAD Screen <0.5 mR/hr: Y __N

If preservation required by Login: Date/Time

Chain of Custody Page 1 of 1

Pace Analytical®

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

7235

SDG # L1397325 8/31/21

L-174

Acctnum: **AQUAOPKS**
Template: **T152974**
Prelogin: **P870720**
PM: **206 - Jeff Carr**
PB:
Shipped Via:

Jared Morrison
December 16, 2022

ATTACHMENT 1-6

November 2021 Sampling Event Laboratory Report

ANALYTICAL REPORT

December 30, 2021

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

SCS Engineers - KS

Sample Delivery Group:	L1434175
Samples Received:	11/20/2021
Project Number:	27217233.21-B
Description:	Evergy - 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

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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MW-6 L1434175-01 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 11:05 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780006	1	11/24/21 18:30	11/24/21 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 05:34	12/15/21 05:34	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	5	12/15/21 05:47	12/15/21 05:47	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793361	1	12/22/21 15:47	12/28/21 20:26	CCE	Mt. Juliet, TN

MW-7 L1434175-02 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 11:40 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780006	1	11/24/21 18:30	11/24/21 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 05:59	12/15/21 05:59	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793361	1	12/22/21 15:47	12/28/21 20:34	CCE	Mt. Juliet, TN

MW-11 L1434175-03 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 16:15 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780004	1	11/24/21 17:41	11/24/21 18:41	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 06:25	12/15/21 06:25	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	5	12/15/21 06:38	12/15/21 06:38	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793361	1	12/22/21 15:47	12/28/21 20:36	CCE	Mt. Juliet, TN

MW-701 L1434175-04 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 11:40 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780004	1	11/24/21 17:41	11/24/21 18:41	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 07:16	12/15/21 07:16	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793361	1	12/22/21 15:47	12/28/21 20:39	CCE	Mt. Juliet, TN

MW-702 L1434175-05 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 11:00 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780006	1	11/24/21 18:30	11/24/21 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 07:41	12/15/21 07:41	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793361	1	12/22/21 15:47	12/28/21 19:44	CCE	Mt. Juliet, TN

MW-703 L1434175-06 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 12:15 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780004	1	11/24/21 17:41	11/24/21 18:41	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 08:32	12/15/21 08:32	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	5	12/15/21 08:45	12/15/21 08:45	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793361	1	12/22/21 15:47	12/28/21 20:42	CCE	Mt. Juliet, TN

MW-704 L1434175-07 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 13:00 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780006	1	11/24/21 18:30	11/24/21 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 08:58	12/15/21 08:58	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	5	12/15/21 09:11	12/15/21 09:11	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793361	1	12/22/21 15:47	12/28/21 20:45	CCE	Mt. Juliet, TN

MW-705 L1434175-08 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 12:20 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780012	1	11/24/21 18:26	11/24/21 19:21	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 09:49	12/15/21 09:49	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	5	12/15/21 10:02	12/15/21 10:02	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793361	1	12/22/21 15:47	12/28/21 20:48	CCE	Mt. Juliet, TN

MW-706 L1434175-09 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 12:55 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780006	1	11/24/21 18:30	11/24/21 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 10:15	12/15/21 10:15	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	5	12/15/21 10:27	12/15/21 10:27	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793361	1	12/22/21 15:47	12/28/21 20:50	CCE	Mt. Juliet, TN

MW-707B L1434175-10 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 14:15 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780004	1	11/24/21 17:41	11/24/21 18:41	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 10:40	12/15/21 10:40	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	100	12/15/21 10:53	12/15/21 10:53	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793364	1	12/22/21 13:57	12/29/21 22:44	CCE	Mt. Juliet, TN

MW-708 L1434175-11 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 14:50 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780006	1	11/24/21 18:30	11/24/21 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788368	1	12/15/21 11:06	12/15/21 11:06	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793364	1	12/22/21 13:57	12/29/21 22:47	CCE	Mt. Juliet, TN

TW-1 L1434175-12 GW

Collected by: Whit Martin | Collected date/time: 11/18/21 13:30 | Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780006	1	11/24/21 18:30	11/24/21 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788925	1	12/14/21 19:36	12/14/21 19:36	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793364	1	12/22/21 13:57	12/29/21 22:50	CCE	Mt. Juliet, TN

DUPLICATE 1 L1434175-13 GW

Collected by: Whit Martin
Collected date/time: 11/18/21 11:00
Received date/time: 11/20/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780012	1	11/24/21 18:26	11/24/21 19:21	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788925	1	12/14/21 20:09	12/14/21 20:09	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1793364	1	12/22/21 13:57	12/29/21 22:53	CCE	Mt. Juliet, TN

CASE NARRATIVE

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	1090000		20000	1	11/24/2021 20:00	WG1780006

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	201000		1900	5000	5	12/15/2021 05:47	WG1788368
Fluoride	549		64.0	150	1	12/15/2021 05:34	WG1788368
Sulfate	115000		2970	25000	5	12/15/2021 05:47	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	1140		20.0	200	1	12/28/2021 20:26	WG1793361
Calcium	77800		79.3	1000	1	12/28/2021 20:26	WG1793361

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	864000		20000	1	11/24/2021 20:00	WG1780006

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	95900		379	1000	1	12/15/2021 05:59	WG1788368
Fluoride	1220		64.0	150	1	12/15/2021 05:59	WG1788368
Sulfate	2210	J	594	5000	1	12/15/2021 05:59	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1560		20.0	200	1	12/28/2021 20:34	WG1793361
Calcium	20300		79.3	1000	1	12/28/2021 20:34	WG1793361

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	946000		20000	1	11/24/2021 18:41	WG1780004

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	80900		379	1000	1	12/15/2021 06:25	WG1788368
Fluoride	514		64.0	150	1	12/15/2021 06:25	WG1788368
Sulfate	240000		2970	25000	5	12/15/2021 06:38	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	1050		20.0	200	1	12/28/2021 20:36	WG1793361
Calcium	60300		79.3	1000	1	12/28/2021 20:36	WG1793361

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	534000		10000	1	11/24/2021 18:41	WG1780004

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	47400		379	1000	1	12/15/2021 07:16	WG1788368
Fluoride	589		64.0	150	1	12/15/2021 07:16	WG1788368
Sulfate	86300		594	5000	1	12/15/2021 07:16	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	907		20.0	200	1	12/28/2021 20:39	WG1793361
Calcium	45300		79.3	1000	1	12/28/2021 20:39	WG1793361

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	541000	J3	10000	1	11/24/2021 20:00	WG1780006

Sample Narrative:

L1434175-05 WG1780006: Redo matches 1st run.

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	42200		379	1000	1	12/15/2021 07:41	WG1788368
Fluoride	1190		64.0	150	1	12/15/2021 07:41	WG1788368
Sulfate	1970	J	594	5000	1	12/15/2021 07:41	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1530		20.0	200	1	12/28/2021 19:44	WG1793361
Calcium	4610		79.3	1000	1	12/28/2021 19:44	WG1793361

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	840000		20000	1	11/24/2021 18:41	WG1780004

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	114000		1900	5000	5	12/15/2021 08:45	WG1788368
Fluoride	1460		64.0	150	1	12/15/2021 08:32	WG1788368
Sulfate	U		594	5000	1	12/15/2021 08:32	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	1790		20.0	200	1	12/28/2021 20:42	WG1793361
Calcium	17800		79.3	1000	1	12/28/2021 20:42	WG1793361

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1230000		20000	1	11/24/2021 20:00	WG1780006

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	88100		379	1000	1	12/15/2021 08:58	WG1788368
Fluoride	834		64.0	150	1	12/15/2021 08:58	WG1788368
Sulfate	170000		2970	25000	5	12/15/2021 09:11	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	2000		20.0	200	1	12/28/2021 20:45	WG1793361
Calcium	21900		79.3	1000	1	12/28/2021 20:45	WG1793361

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1000000		20000	1	11/24/2021 19:21	WG1780012

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	141000		1900	5000	5	12/15/2021 10:02	WG1788368
Fluoride	966		64.0	150	1	12/15/2021 09:49	WG1788368
Sulfate	38600		594	5000	1	12/15/2021 09:49	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	2120		20.0	200	1	12/28/2021 20:48	WG1793361
Calcium	28700		79.3	1000	1	12/28/2021 20:48	WG1793361

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1170000		20000	1	11/24/2021 20:00	WG1780006

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	245000		1900	5000	5	12/15/2021 10:27	WG1788368
Fluoride	1050		64.0	150	1	12/15/2021 10:15	WG1788368
Sulfate	16800		594	5000	1	12/15/2021 10:15	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	2050		20.0	200	1	12/28/2021 20:50	WG1793361
Calcium	24600		79.3	1000	1	12/28/2021 20:50	WG1793361

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	6140000		100000	1	11/24/2021 18:41	WG1780004

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	199000		37900	100000	100	12/15/2021 10:53	WG1788368
Fluoride	250		64.0	150	1	12/15/2021 10:40	WG1788368
Sulfate	6500000		59400	500000	100	12/15/2021 10:53	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	1940		20.0	200	1	12/29/2021 22:44	WG1793364
Calcium	431000		79.3	1000	1	12/29/2021 22:44	WG1793364

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	641000		13300	1	11/24/2021 20:00	WG1780006

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	46200		379	1000	1	12/15/2021 11:06	WG1788368
Fluoride	567		64.0	150	1	12/15/2021 11:06	WG1788368
Sulfate	12700		594	5000	1	12/15/2021 11:06	WG1788368

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	1370		20.0	200	1	12/29/2021 22:47	WG1793364
Calcium	30900		79.3	1000	1	12/29/2021 22:47	WG1793364

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	994000		20000	1	11/24/2021 20:00	WG1780006

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	40200		379	1000	1	12/14/2021 19:36	WG1788925
Fluoride	404		64.0	150	1	12/14/2021 19:36	WG1788925
Sulfate	70400		594	5000	1	12/14/2021 19:36	WG1788925

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	1450		20.0	200	1	12/29/2021 22:50	WG1793364
Calcium	25500		79.3	1000	1	12/29/2021 22:50	WG1793364

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	545000		10000	1	11/24/2021 19:21	WG1780012

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	41200		379	1000	1	12/14/2021 20:09	WG1788925
Fluoride	1170		64.0	150	1	12/14/2021 20:09	WG1788925
Sulfate	1810	J	594	5000	1	12/14/2021 20:09	WG1788925

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1550		20.0	200	1	12/29/2021 22:53	WG1793364
Calcium	4310		79.3	1000	1	12/29/2021 22:53	WG1793364

Method Blank (MB)

(MB) R3734918-1 11/24/21 18:41

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

L1433582-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1433582-05 11/24/21 18:41 • (DUP) R3734918-3 11/24/21 18:41

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2650000	2930000	1	10.0	J3	5

Sample Narrative:

OS: Redo confirmed 1st run.

L1433890-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1433890-02 11/24/21 18:41 • (DUP) R3734918-4 11/24/21 18:41

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	839000	864000	1	2.98		5

Laboratory Control Sample (LCS)

(LCS) R3734918-2 11/24/21 18:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8410000	95.6	77.4-123	

Method Blank (MB)

(MB) R3735081-1 11/24/21 20:00

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

L1434175-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1434175-05 11/24/21 20:00 • (DUP) R3735081-3 11/24/21 20:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	541000	299000000	1	199	J3	5

Sample Narrative:

OS: Redo matches 1st run.

L1434231-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1434231-04 11/24/21 20:00 • (DUP) R3735081-4 11/24/21 20:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2290000	10600000	1	129	J3	5

Sample Narrative:

OS: TDS reanalyzed out of hold due to QC failure. Results do not confirm. Reporting both results.

Laboratory Control Sample (LCS)

(LCS) R3735081-2 11/24/21 20:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8450000	96.0	77.4-123	

Method Blank (MB)

(MB) R3735209-1 11/24/21 19:21

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

L1434175-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1434175-13 11/24/21 19:21 • (DUP) R3735209-3 11/24/21 19:21

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	545000	538000	1	1.29		5

L1434231-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1434231-03 11/24/21 19:21 • (DUP) R3735209-4 11/24/21 19:21

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1180000	1180000	1	0.508		5

Laboratory Control Sample (LCS)

(LCS) R3735209-2 11/24/21 19:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8350000	94.9	77.4-123	

Method Blank (MB)

(MB) R3741042-1 12/14/21 23:30

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1434066-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1434066-09 12/15/21 01:11 • (DUP) R3741042-3 12/15/21 01:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	3440	3090	1	10.8		15
Fluoride	U	U	1	0.000		15
Sulfate	2840	2630	1	7.76	J	15

L1434093-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1434093-06 12/15/21 05:08 • (DUP) R3741042-5 12/15/21 05:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	53400	53900	1	0.811		15
Fluoride	3030	3080	1	1.51		15

Laboratory Control Sample (LCS)

(LCS) R3741042-2 12/14/21 23:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	40100	100	80.0-120	
Fluoride	8000	8260	103	80.0-120	
Sulfate	40000	40500	101	80.0-120	

L1434066-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1434066-09 12/15/21 01:11 • (MS) R3741042-4 12/15/21 01:36

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	3440	54400	102	1	80.0-120	
Fluoride	5000	U	5210	104	1	80.0-120	

L1434066-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1434066-09 12/15/21 01:11 • (MS) R3741042-4 12/15/21 01:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	50000	2840	53900	102	1	80.0-120	

L1434175-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1434175-05 12/15/21 07:41 • (MS) R3741042-6 12/15/21 07:54 • (MSD) R3741042-7 12/15/21 08:07

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	42200	91100	92900	97.8	101	1	80.0-120			1.97	15
Fluoride	5000	1190	6270	6470	102	106	1	80.0-120			3.15	15
Sulfate	50000	1970	51000	52900	98.1	102	1	80.0-120			3.62	15

QUALITY CONTROL SUMMARY

L1434175-12,13

Method Blank (MB)

(MB) R3740961-1 12/14/21 10:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Chloride	405	J	379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1434081-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1434081-01 12/14/21 14:08 • (DUP) R3740961-3 12/14/21 14:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	29600	29400	1	0.508		15
Sulfate	326000	326000	1	0.0639	E	15

L1437950-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1437950-02 12/14/21 22:20 • (DUP) R3740961-7 12/14/21 22:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	68800	68800	1	0.0169		15
Fluoride	195	192	1	1.50		15
Sulfate	912	899	1	1.38	J	15

Laboratory Control Sample (LCS)

(LCS) R3740961-2 12/14/21 10:53

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	39000	97.5	80.0-120	
Fluoride	8000	7950	99.4	80.0-120	
Sulfate	40000	39300	98.3	80.0-120	

L1434081-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1434081-01 12/14/21 14:08 • (MS) R3740961-5 12/14/21 14:41 • (MSD) R3740961-6 12/14/21 15:30

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	29600	77700	78300	96.2	97.5	1	80.0-120			0.791	15
Sulfate	50000	326000	328000	328000	3.73	3.80	1	80.0-120	E V	E V	0.0111	15

L1437950-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1437950-02 12/14/21 22:20 • (MS) R3740961-8 12/14/21 22:53

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	68800	116000	93.7	1	80.0-120	E
Fluoride	5000	195	5080	97.7	1	80.0-120	
Sulfate	50000	912	49300	96.7	1	80.0-120	

Method Blank (MB)

(MB) R3745857-1 12/28/21 19:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Boron	U		20.0	200
Calcium	U		79.3	1000

Laboratory Control Sample (LCS)

(LCS) R3745857-2 12/28/21 19:31

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	972	97.2	80.0-120	
Calcium	10000	9800	98.0	80.0-120	

L1434174-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1434174-07 12/28/21 19:34 • (MS) R3745857-4 12/28/21 19:39 • (MSD) R3745857-5 12/28/21 19:41

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	3110	3140	90.1	93.3	1	75.0-125			1.03	20
Calcium	10000	25600	35100	35400	94.8	97.8	1	75.0-125			0.859	20

L1434175-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1434175-05 12/28/21 19:44 • (MS) R3745857-6 12/28/21 19:47 • (MSD) R3745857-7 12/28/21 19:50

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	1530	2470	2460	94.1	93.1	1	75.0-125			0.420	20
Calcium	10000	4610	14100	14000	94.8	94.2	1	75.0-125			0.480	20

Method Blank (MB)

(MB) R3746187-1 12/29/21 22:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Boron	U		20.0	200
Calcium	U		79.3	1000

Laboratory Control Sample (LCS)

(LCS) R3746187-2 12/29/21 22:28

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	1000	100	80.0-120	
Calcium	10000	9960	99.6	80.0-120	

L1434440-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1434440-03 12/29/21 22:32 • (MS) R3746187-4 12/29/21 22:38 • (MSD) R3746187-5 12/29/21 22:41

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	550	1590	1560	104	101	1	75.0-125			1.98	20
Calcium	10000	183000	195000	189000	114	62.6	1	75.0-125		V	2.66	20

GLOSSARY OF TERMS

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.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

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.
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
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.
J3	The associated batch QC was outside the established quality control range for precision.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Company Name/Address:
SCS Engineers - KS
8575 West 110th Street
Suite 100
Overland Park. KS 66210

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

Pres Chk

Report to: **Jason Franks**

Email To: jfranks@scsengineers.com;jay.martin@evergy.c

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

City/State Collected: LaCygne, KS

Please Circle: PT MT CT ET

Phone: **913-681-0030**

Client Project # **27217233.21-B**

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

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-6	Grab	GW		11/18/21	1105	3	X	X	X									-01
MW-7	Grab	GW		11/18/21	1140	3	X	X	X									-03
MW-11	Grab	GW		11/18/21	1615	3	X	X	X									-04
MW-701	Grab	GW		11/18/21	1140	3	X	X	X									-05
MW-702	Grab	GW		11/18/21	1100	3	X	X	X									-06
MW-703	Grab	GW		11/18/21	1215	3	X	X	X									-07
MW-704	Grab	GW		11/18/21	1300	3	X	X	X									-08
MW-705	Grab	GW		11/18/21	1220	3	X	X	X									-09
MW-706	Grab	GW		11/18/21	1255	3	X	X	X									-10
MW-707B	Grab	GW		11/18/21	1415	3	X	X	X									-16

* 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 #

Relinquished by : (Signature) — Date: 11/19/21 — Time: 1045

Received by: (Signature) — 11-19-21 1300

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

Received by: (Signature)

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

Received for lab by: (Signature) — Date: 11/20/21 — Time: 930

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.2+3.2 °C Bottles Received: 42

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
RAD Screen <0.5 mR/hr: Y N

Chain of Custody Page 1 of 2

Pace Analytical®

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 14341175

H234

Acctnum: AQUAOPKS
Template: T150678
Prelogin: P885824
PM: 206 - Jeff Carr
PB:

Shipped Via: FedEX Ground

Pace Analytical®

12065 Lebanon Rd Mount Juliet, TN 37122

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Company Name/Address:
SCS Engineers - KS
8575 West 110th Street
Suite 100
Overland Park. KS 66210

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

Pres Chk

Report to: **Jason Franks**

Email To: jfranks@scsengineers.com;jay.martin@evergy.c

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

City/State Collected: LaCygne, KS

Please Circle: PT MT (CT) ET

Phone: **913-681-0030**

Client Project # **27217233.21-B**

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

SDG # 1434175

Table #

Acctnum: **AQUAOPKS**

Template: **T150678**

Prelogin: **P885824**

PM: **206 - Jeff Carr**

PB:

Shipped Via: **FedEX Ground**

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-708	Grab	GW		11/18/21	1450	3	X	X	X		-11
TW-1	Grab	GW		11/18/21	1330	3	X	X	X		-12
DUPLICATE 1	Grab	GW		11/18/21	1100	3	X	X	X		-13
702 MS/MSD	Grab	GW		11/18/21	1100	3	X	X	X		

* 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
RAD Screen <0.5 mR/hr:		Y N

	Date:	Time:		
Relinquished by : (Signature)	11/19/21	1045	Received by: (Signature)	11-19-21 1300
Relinquished by : (Signature)			Received by: (Signature)	
Relinquished by : (Signature)			Received for lab by: (Signature)	

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.2 to 3.2 °C Bottles Received: 42

Date: 11/20/21 Time: 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Jared Morrison
December 16, 2022

ATTACHMENT 2

Statistical Analyses

Jared Morrison
December 16, 2022

ATTACHMENT 2-1

Fall 2020 Semiannual Detection Monitoring Statistical Analyses

MEMORANDUM

March 24, 2021

To: La Cygne Generating Station
25166 East 2200 Road
La Cygne, Kansas 66040
Evergy Metro, Inc.

From: SCS Engineers

RE: Determination of Statistically Significant Increases –
Upper AQC Impoundment
Fall 2020 Semiannual Detection Monitoring 40 CFR 257.94

Statistical analysis of monitoring data from the groundwater monitoring system for the Upper 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 November 12, 2020. Review and validation of the results from the November 2020 Detection Monitoring Event was completed on December 24, 2020, 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 February 4, 2021 and March 3, 2021.

The completed statistical evaluation identified two Appendix III constituents above their respective prediction limits established for monitoring wells MW-704, MW-706 and TW-1.

Constituent/Monitoring Well	*UPL	Observation November 12, 2020	1st Verification February 4, 2021	2nd Verification March 3, 2021
Chloride				
MW-704	88.89	90.2	90.8	91.0
Sulfate				
MW-706	8.79	20.0	23.9	29.7
TW-1	67.15	73.8	68.3	74.4

*UPL – Upper Prediction Limit

Determination: A statistical evaluation was completed for all Appendix III detection monitoring constituents in accordance with the certified statistical method. The statistical evaluation identified three SSIs above the background prediction limit for chloride at MW-704, and sulfate at monitoring wells MW-706 and TW-1.

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 results, 1st verification re-sample results (when applicable), 2nd verification re-sample results (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

La Cygne Generating Station
Determination of Statistically Significant Increases
Upper AQC Impoundment
March 24, 2021

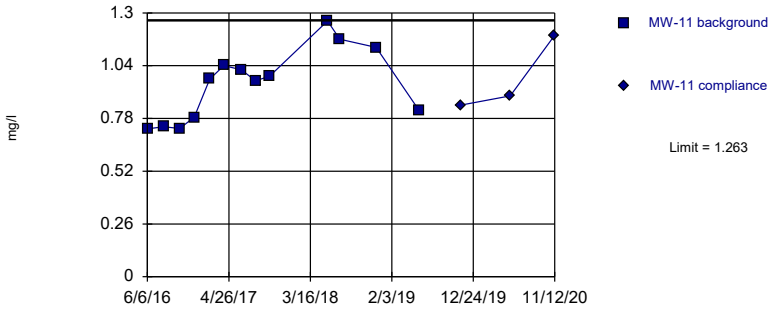
ATTACHMENT 1

Sanitas™ Output

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.95, Std. Dev.=0.1775, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9268, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

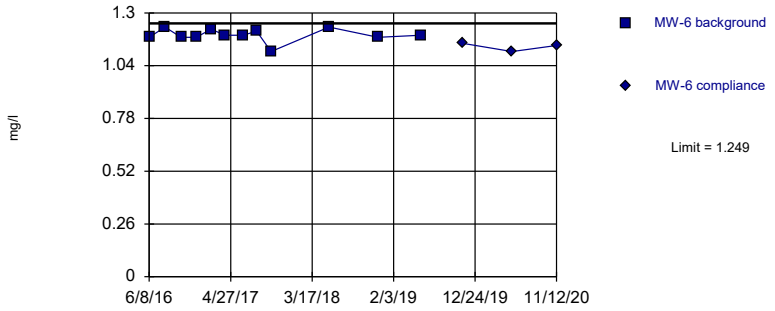
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.191, Std. Dev.=0.03204, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.84, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

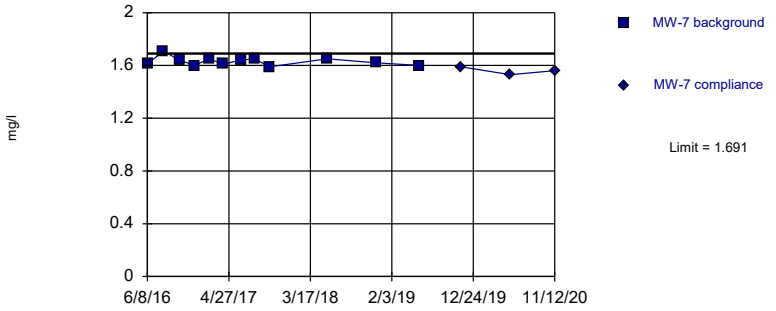
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.631, Std. Dev.=0.03315, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8907, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

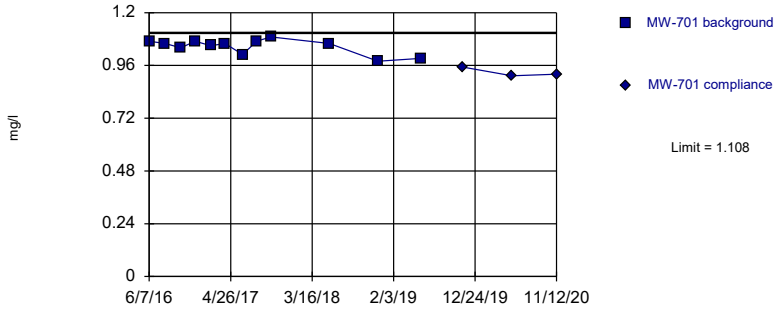
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.046, Std. Dev.=0.03438, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8717, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

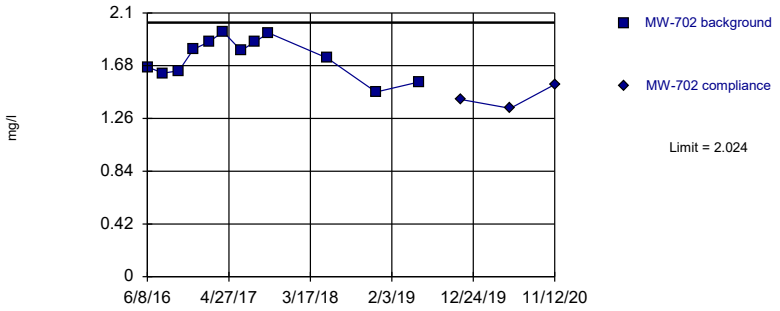
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	0.729							
6/7/2016							1.07	
6/8/2016			1.18		1.61			
8/9/2016							1.06	
8/10/2016			1.23		1.71			
8/11/2016	0.739							
10/11/2016							1.04	
10/12/2016	0.73							
10/13/2016			1.18		1.64			
12/6/2016							1.07	
12/9/2016	0.786							
12/12/2016			1.18		1.6			
2/7/2017							1.05	
2/8/2017					1.65			
2/9/2017	0.974		1.22					
4/4/2017							1.06	
4/5/2017			1.19		1.61			
4/6/2017	1.04							
6/13/2017							1.01	
6/15/2017	1.02		1.19		1.64			
8/8/2017							1.07	
8/9/2017			1.21		1.65			
8/10/2017	0.965							
10/3/2017							1.09	
10/5/2017	0.988		1.11		1.59			
5/23/2018	1.26		1.23		1.65			
5/24/2018							1.06	
7/11/2018	1.17							
12/3/2018	1.13						0.979	
12/4/2018			1.18		1.62			
5/23/2019	0.819		1.19		1.6		0.992	
11/7/2019		0.846		1.15		1.59		0.952
5/19/2020		0.891		1.11		1.53		0.913
11/12/2020		1.19		1.14		1.56		0.92

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.744, Std. Dev.=0.1551, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9541, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

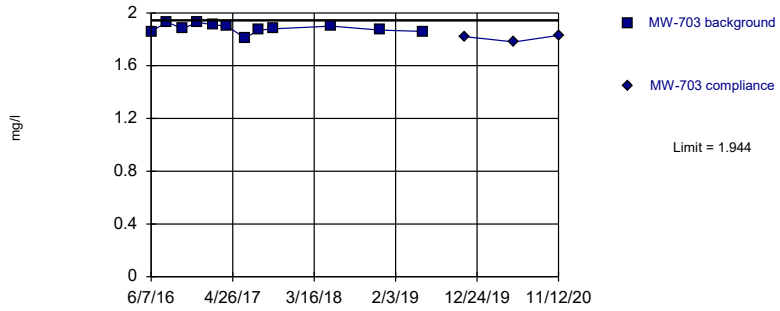
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.883, Std. Dev.=0.03367, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9397, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

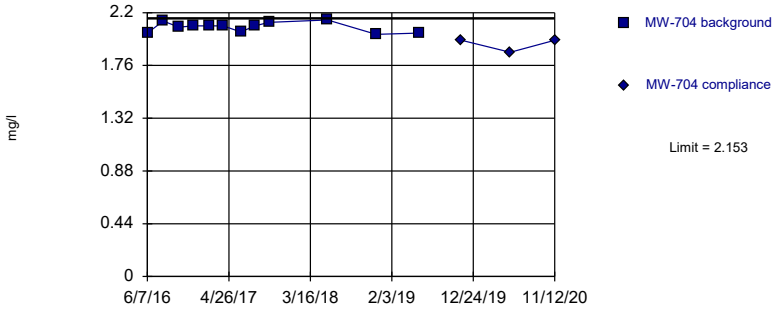
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.079, Std. Dev.=0.04078, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9087, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

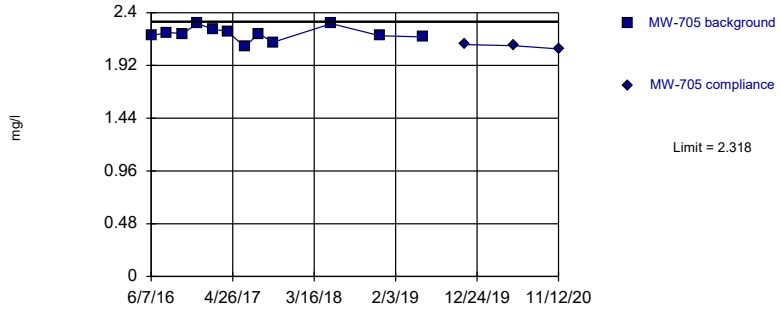
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.208, Std. Dev.=0.06088, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9524, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

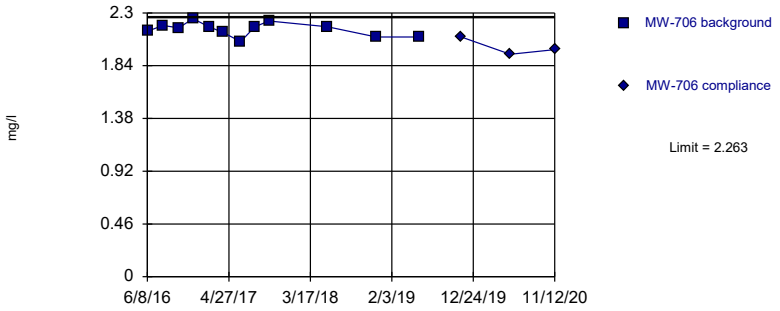
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			1.86		2.03		2.19	
6/8/2016	1.67							
8/9/2016	1.62		1.93		2.13		2.22	
10/11/2016	1.64		1.88		2.08		2.21	
12/6/2016			1.93		2.09			
12/7/2016							2.3	
12/8/2016	1.81							
2/7/2017			1.91		2.09			
2/8/2017	1.87							
2/9/2017							2.25	
4/4/2017			1.9		2.09			
4/5/2017	1.95							
4/6/2017							2.23	
6/13/2017					2.04		2.09	
6/14/2017			1.81					
6/15/2017	1.8							
8/8/2017					2.09			
8/9/2017	1.87						2.21	
8/10/2017			1.87					
10/3/2017	1.94				2.12		2.13	
10/5/2017			1.88					
5/24/2018	1.74		1.9		2.14		2.3	
12/3/2018	1.47		1.87		2.02			
12/4/2018							2.19	
5/23/2019	1.55		1.86		2.03		2.18	
11/7/2019		1.41		1.82		1.97		2.11
5/19/2020		1.34		1.78		1.87		2.1
11/12/2020		1.53		1.83		1.97		2.07

Within Limit

Prediction Limit

Intrawell Parametric



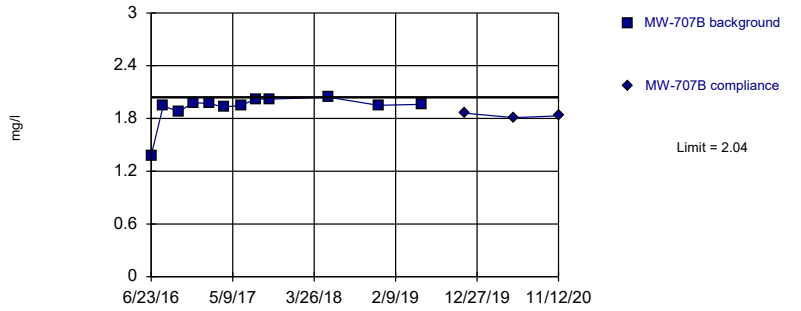
Background Data Summary: Mean=2.157, Std. Dev.=0.05898, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9577, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Non-parametric



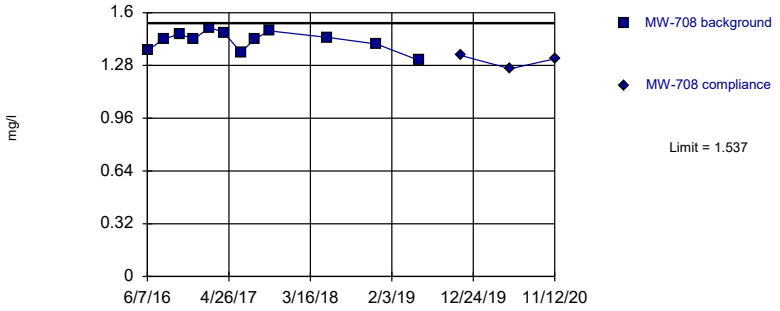
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 12 background values. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



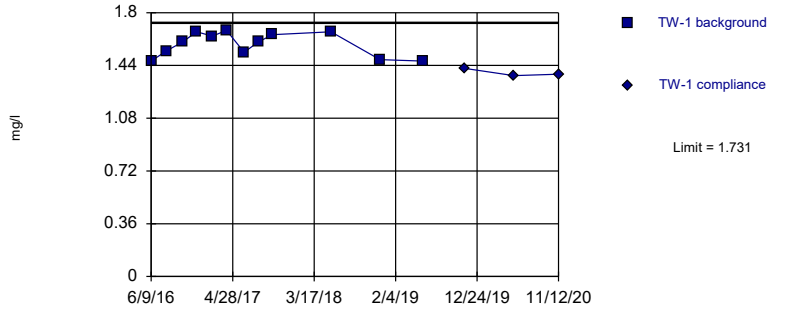
Background Data Summary: Mean=1.431, Std. Dev.=0.05885, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9376, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.583, Std. Dev.=0.08184, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.878, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 3/17/2021 11:51 AM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

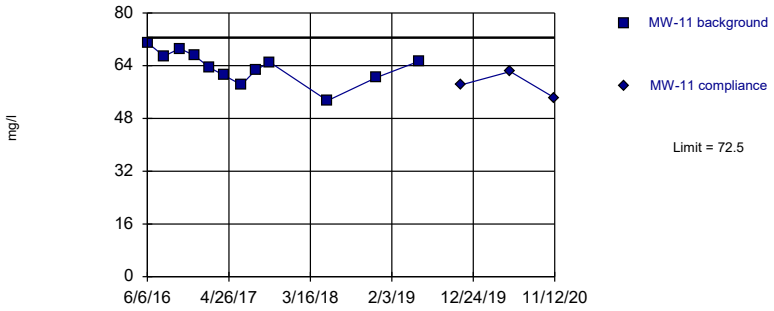
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					1.37			
6/8/2016	2.14							
6/9/2016							1.47	
6/23/2016			1.38					
8/9/2016	2.19		1.94				1.54	
8/10/2016					1.44			
10/11/2016	2.17		1.88				1.6	
10/12/2016					1.47			
12/6/2016	2.25		1.98				1.67	
12/9/2016					1.44			
2/7/2017	2.18		1.97				1.64	
2/9/2017					1.51			
4/4/2017	2.13		1.93				1.68	
4/6/2017					1.48			
6/13/2017	2.05		1.95				1.53	
6/14/2017					1.36			
8/8/2017			2.02		1.44		1.6	
8/9/2017	2.18							
10/3/2017			2.02				1.65	
10/4/2017	2.23				1.49			
5/23/2018					1.45			
5/24/2018	2.18		2.04				1.67	
12/4/2018	2.09		1.95		1.41		1.48	
5/23/2019	2.09		1.96		1.31		1.47	
11/7/2019		2.09		1.86		1.34		1.42
5/19/2020		1.94		1.81		1.26		1.37
11/12/2020		1.98		1.83		1.32		1.38

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=63.65, Std. Dev.=4.912, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.976, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

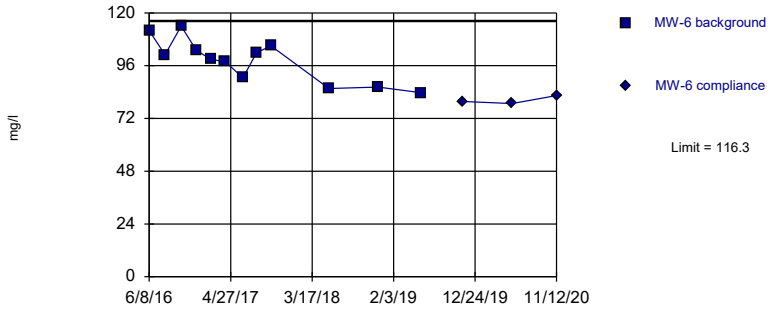
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=98.32, Std. Dev.=10.01, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.94, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

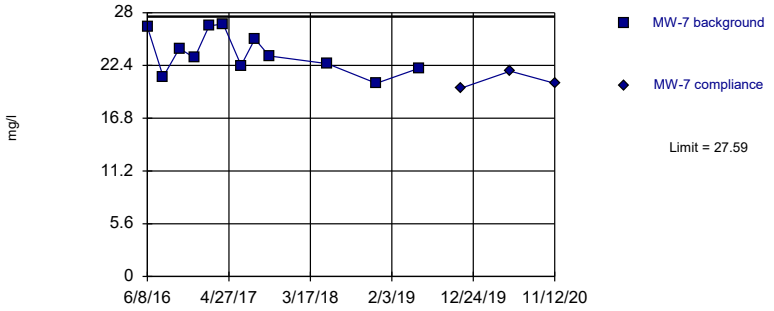
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=23.73, Std. Dev.=2.146, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9333, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

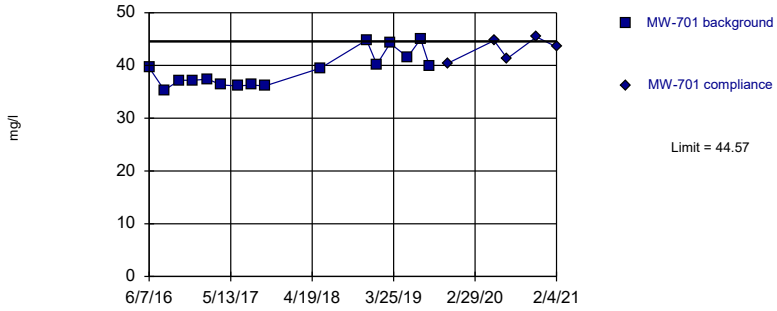
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=39.17, Std. Dev.=3.266, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8786, critical = 0.844. Kappa = 1.654 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

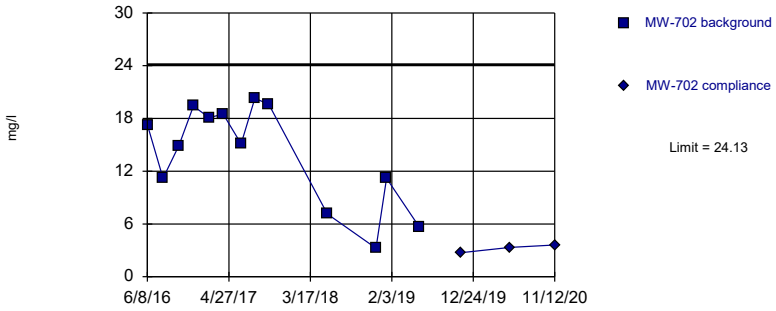
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701	
6/6/2016	71								
6/7/2016							39.6		
6/8/2016			112		26.5				
8/9/2016							35.3		
8/10/2016			101		21.2				
8/11/2016	66.9								
10/11/2016							37.2		
10/12/2016	69.2								
10/13/2016			114		24.2				
12/6/2016							37.2		
12/9/2016	67.1								
12/12/2016			103		23.2				
2/7/2017							37.4		
2/8/2017					26.6				
2/9/2017	63.4		98.8						
4/4/2017							36.3		
4/5/2017			97.9		26.8				
4/6/2017	61.1								
6/13/2017							36.1		
6/15/2017	58.2		90.5		22.4				
8/8/2017							36.3		
8/9/2017			102		25.2				
8/10/2017	62.6								
10/3/2017							36.1		
10/5/2017	65.1		105		23.4				
5/23/2018	53.4		85.6		22.6				
5/24/2018							39.5		
12/3/2018	60.4						44.8		
12/4/2018			86.3		20.5				
1/15/2019							40.2		
3/11/2019							44.2		
5/23/2019	65.4		83.7		22.1		41.6		
7/17/2019							45		
8/23/2019							39.9		
11/7/2019		58.2		79.7		20		40.4	
5/19/2020		62.2		78.8		21.8		44.7	
7/13/2020								41.3	1st Verification Sample
11/12/2020		54.2		82.4		20.5		45.4	
2/4/2021								43.5	1st Verification Sample

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=13.97, Std. Dev.=5.757, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8941, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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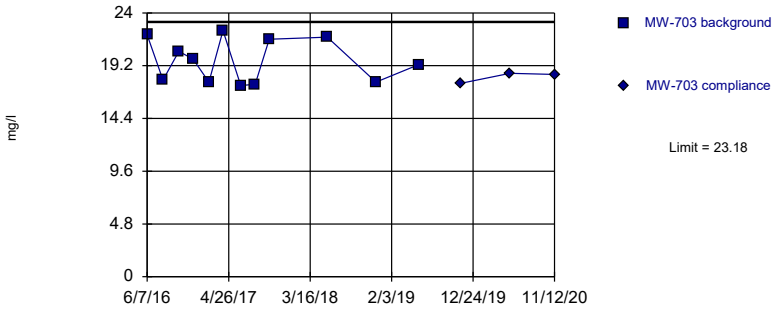
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=19.63, Std. Dev.=1.971, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8622, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

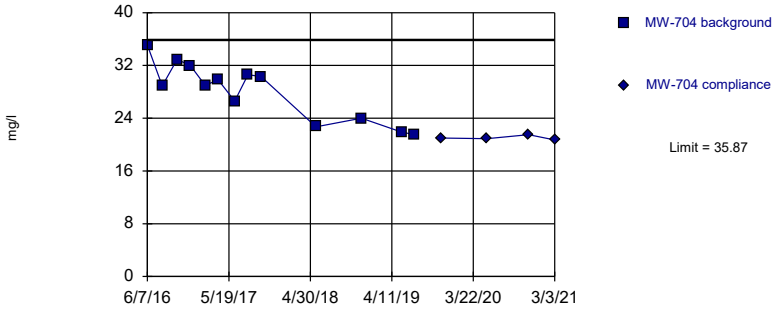
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=28.1, Std. Dev.=4.405, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9368, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

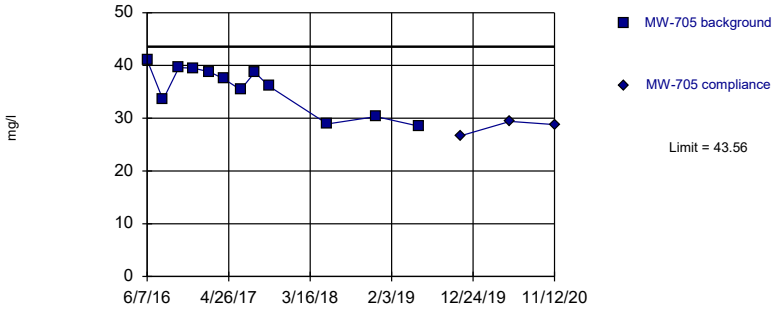
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=35.65, Std. Dev.=4.389, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.892, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

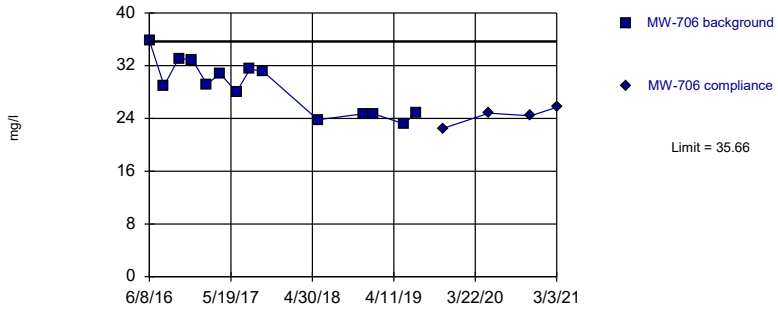
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			22		35.1		41	
6/8/2016	17.3							
8/9/2016	11.2		17.9		28.9		33.5	
10/11/2016	14.9		20.5		32.9		39.6	
12/6/2016			19.8		32			
12/7/2016							39.5	
12/8/2016	19.4							
2/7/2017			17.7		29			
2/8/2017	18.1							
2/9/2017							38.8	
4/4/2017			22.4		29.8			
4/5/2017	18.5							
4/6/2017							37.5	
6/13/2017					26.6		35.4	
6/14/2017			17.4					
6/15/2017	15.1							
8/8/2017					30.6			
8/9/2017	20.3						38.7	
8/10/2017			17.5					
10/3/2017	19.6				30.3		36.1	
10/5/2017			21.6					
5/24/2018	7.13		21.8		22.7		28.9	
12/3/2018	3.24		17.7		24			
12/4/2018							30.3	
1/14/2019	11.2							
5/23/2019	5.7		19.3		21.9		28.5	
7/17/2019					21.5			
11/7/2019		2.73		17.6		21		26.7
5/19/2020		3.33		18.5		20.9		29.4
11/12/2020		3.6		18.4		21.5		28.8
3/3/2021						20.7 Extra Sample		

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=28.76, Std. Dev.=3.997, n=14. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9349, critical = 0.825. Kappa = 1.728 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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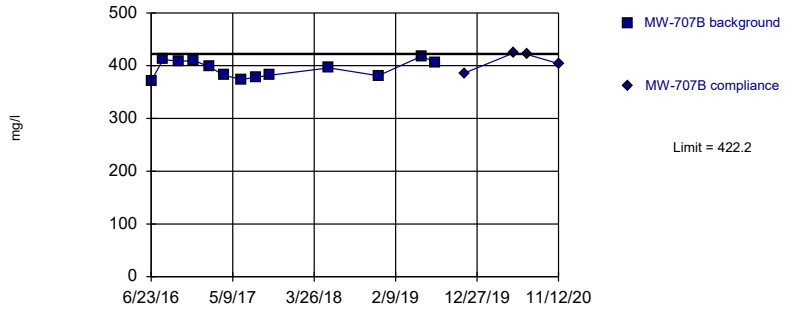
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=393.5, Std. Dev.=16.22, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9122, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

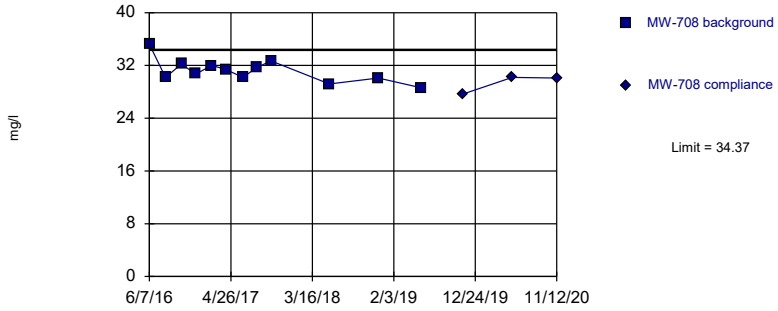
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=31.18, Std. Dev.=1.768, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9496, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

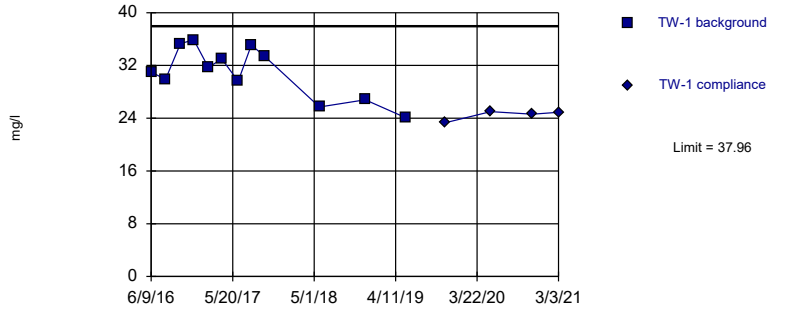
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=30.96, Std. Dev.=3.885, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9425, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

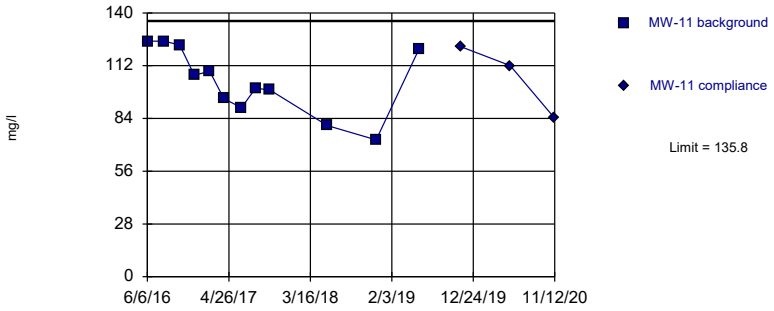
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					35.2			
6/8/2016	35.8							
6/9/2016							31	
6/23/2016			371					
8/9/2016	29		412				29.9	
8/10/2016					30.2			
10/11/2016	33.1		408				35.3	
10/12/2016					32.2			
12/6/2016	32.9		410				35.9	
12/9/2016					30.7			
2/7/2017	29.2		398				31.7	
2/9/2017					32			
4/4/2017	30.8		382				33	
4/6/2017					31.4			
6/13/2017	28		374				29.6	
6/14/2017					30.2			
8/8/2017			378		31.7		35.1	
8/9/2017	31.5							
10/3/2017			382				33.4	
10/4/2017	31.1				32.7			
5/23/2018					29.2			
5/24/2018	23.8		396				25.7	
12/4/2018	24.7		381		30.1		26.8	
1/15/2019	24.7							
5/23/2019	23.2		418		28.6		24.1	
7/17/2019	24.8		406					
11/7/2019		22.5		386		27.7		23.3
5/19/2020		24.8		424		30.2		25
7/13/2020				421	1st Verification Sample			
11/12/2020		24.4		404		30.1		24.6
3/3/2021		25.7 Extra Sample						24.9 Extra Sample

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=103.9, Std. Dev.=17.71, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.932, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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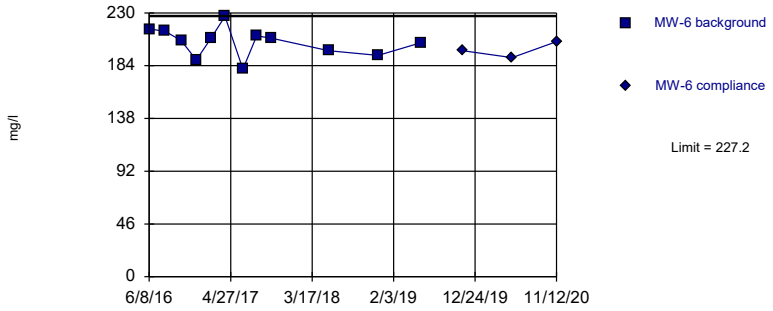
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=204.4, Std. Dev.=12.67, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9786, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

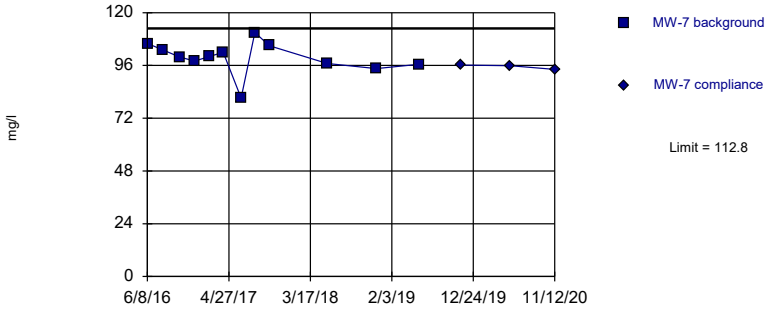
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=99.51, Std. Dev.=7.389, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9149, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

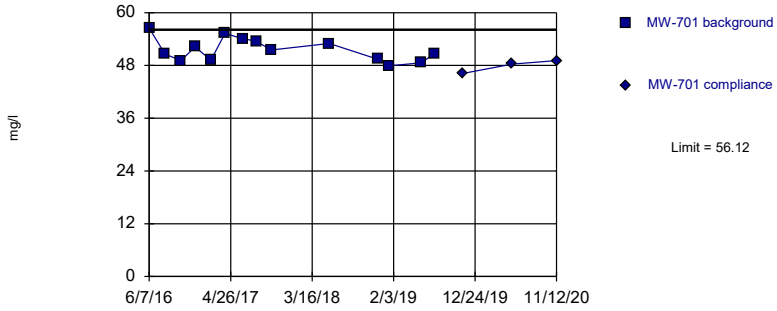
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=51.54, Std. Dev.=2.649, n=14. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9537, critical = 0.825. Kappa = 1.728 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

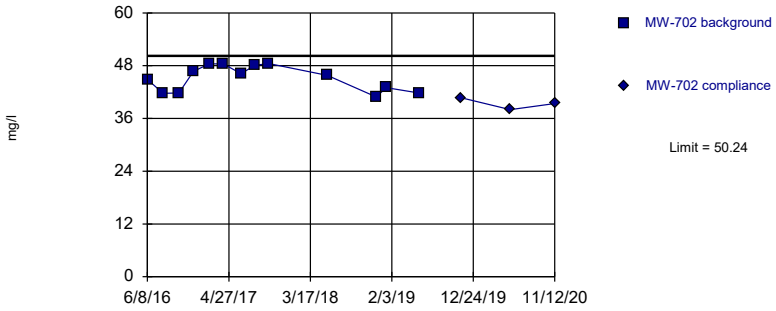
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	125							
6/7/2016							56.5	
6/8/2016			216		106			
8/9/2016							50.6	
8/10/2016			214		103			
8/11/2016	125							
10/11/2016							49.1	
10/12/2016	123							
10/13/2016			206		99.9			
12/6/2016							52.2	
12/9/2016	107							
12/12/2016			189		98			
2/7/2017							49.2	
2/8/2017					100			
2/9/2017	109		208					
4/4/2017							55.3	
4/5/2017			227		102			
4/6/2017	94.5							
6/13/2017							54.1	
6/15/2017	89.7		181		81.2			
8/8/2017							53.5	
8/9/2017			210		111			
8/10/2017	100							
10/3/2017							51.5	
10/5/2017	99.2		208		105			
5/23/2018	80.2		197		96.9			
5/24/2018							53	
12/3/2018	72.6						49.4	
12/4/2018			193		94.6			
1/15/2019							47.9	
5/23/2019	121		204		96.5		48.6	
7/17/2019							50.7	
11/7/2019		122		197		96.2		46.2
5/19/2020		112		191		95.9		48.3
11/12/2020		84.1		205		94.2		49.1

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=45.09, Std. Dev.=2.916, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8743, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

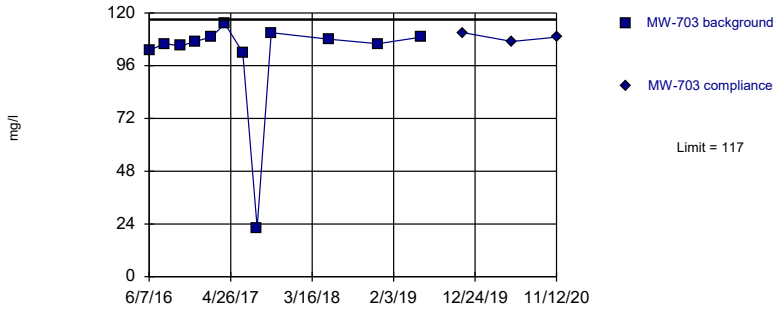
Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on x^5 transformation): Mean=1.3e10, Std. Dev.=4.8e9, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8112, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

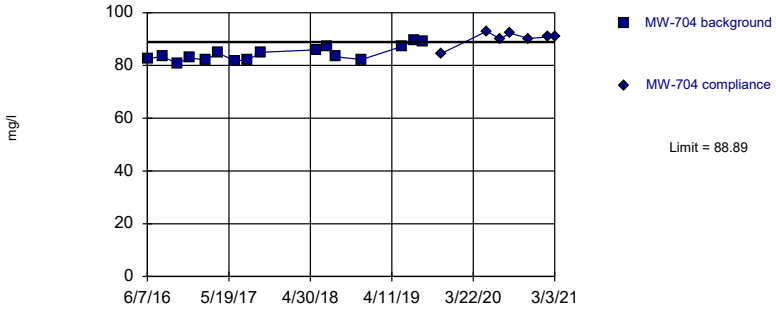
Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=84.36, Std. Dev.=2.74, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9076, critical = 0.844. Kappa = 1.654 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

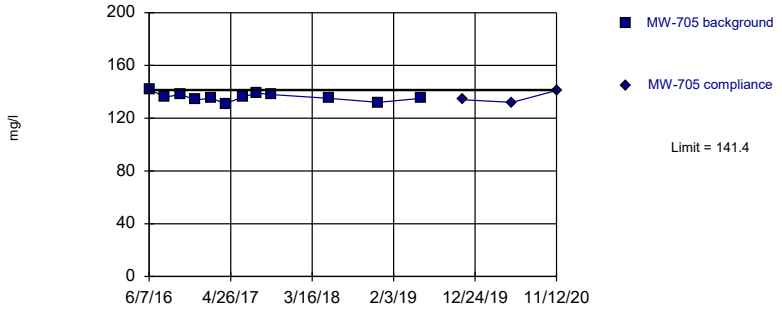
Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=135.9, Std. Dev.=3.029, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9687, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

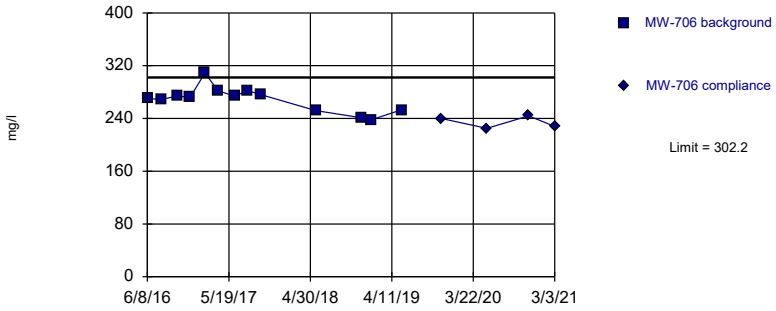
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			103		82.5		142	
6/8/2016	44.9							
8/9/2016	41.7		106		83.4		136	
10/11/2016	41.8		105		80.8		138	
12/6/2016			107		82.9			
12/7/2016							134	
12/8/2016	46.7							
2/7/2017			109		82			
2/8/2017	48.4							
2/9/2017							135	
4/4/2017			115		84.7			
4/5/2017	48.4							
4/6/2017							131	
6/13/2017					81.8		136	
6/14/2017			102					
6/15/2017	46.2							
8/8/2017					82.1			
8/9/2017	48.1						139	
8/10/2017			22.3					
10/3/2017	48.5				85		138	
10/5/2017			111					
5/24/2018	45.8		108		85.9		135	
7/11/2018					87.1			
8/16/2018					83.3			
12/3/2018	40.9		106		82.2			
12/4/2018							132	
1/14/2019	43							
5/23/2019	41.8		109		87.2		135	
7/17/2019					89.7			
8/23/2019					89.2			
11/7/2019		40.7		111		84.5		134
5/19/2020		38		107		93		132
7/13/2020						90.1	1st Verification Sample	
8/27/2020						92.2	2nd Verification Sample	
11/12/2020		39.4		109		90.2		141
2/4/2021						90.8	1st Verification Sample	
3/3/2021						91	2nd Verification Sample	

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=268.6, Std. Dev.=19.01, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9333, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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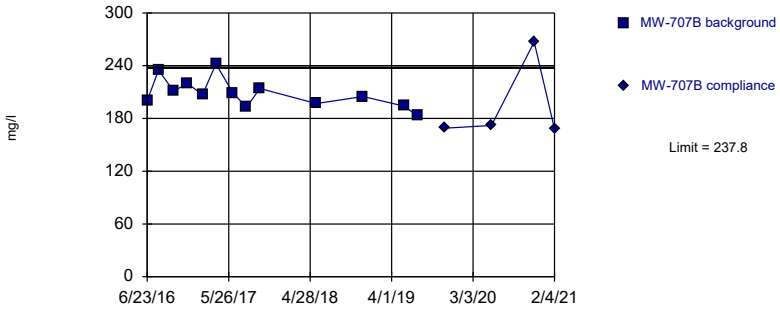
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=208.5, Std. Dev.=16.62, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9526, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

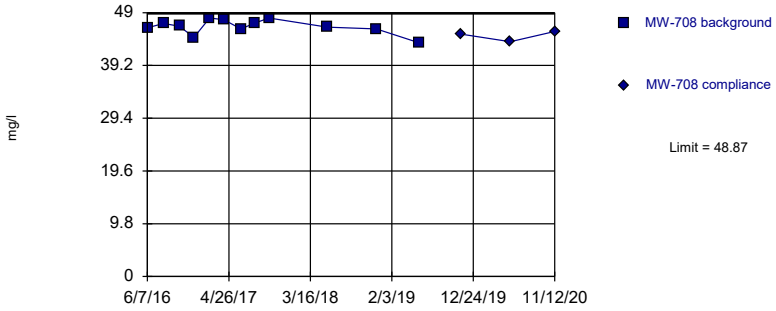
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=46.38, Std. Dev.=1.383, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9073, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 3/17/2021 11:51 AM View: Upper AQC III

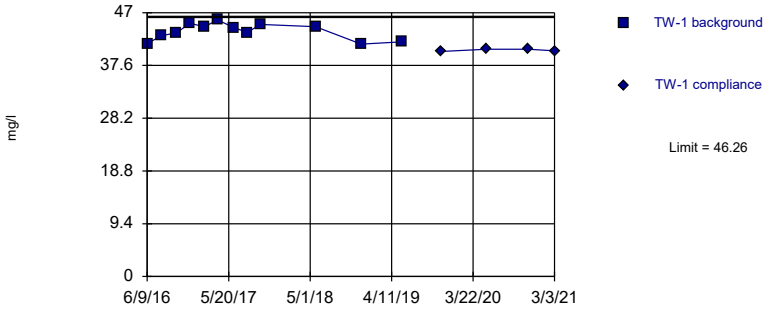
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=43.63, Std. Dev.=1.461, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9241, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

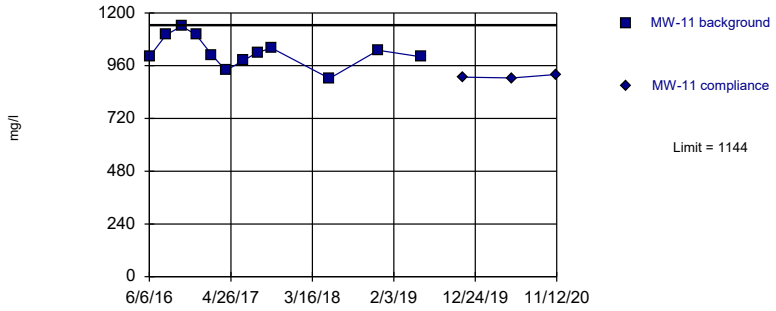
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					46.2			
6/8/2016	270							
6/9/2016							41.5	
6/23/2016			200					
8/9/2016	269		235				42.9	
8/10/2016					47			
10/11/2016	274		211				43.4	
10/12/2016					46.5			
12/6/2016	272		220				45.1	
12/9/2016					44.4			
2/7/2017	309		207				44.5	
2/9/2017					48			
4/4/2017	282		242				45.7	
4/6/2017					47.7			
6/13/2017	274		209				44.3	
6/14/2017					46			
8/8/2017			193		47.1		43.5	
8/9/2017	282							
10/3/2017			214				44.9	
10/4/2017	276				48			
5/23/2018					46.3			
5/24/2018	252		197				44.5	
12/4/2018	241		205		46		41.4	
1/15/2019	238							
5/23/2019	253		194		43.4		41.8	
7/17/2019			183					
11/7/2019		240		169		45		40.1
5/19/2020		225		172		43.6		40.5
11/12/2020		244		267		45.5		40.5
2/4/2021				168 1st Verification Sample				
3/3/2021		228 Extra Sample						40.2 Extra Sample

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1022, Std. Dev.=67.75, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9655, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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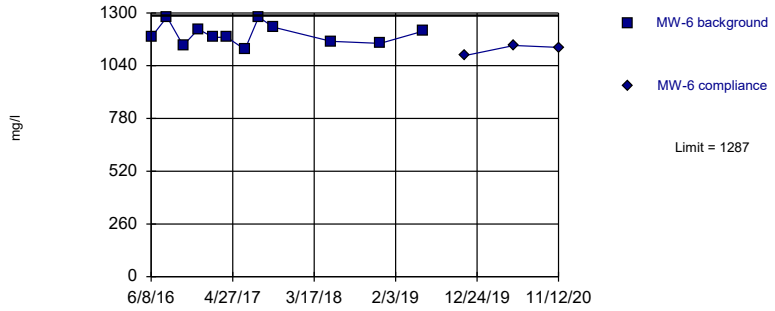
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1194, Std. Dev.=51.43, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9382, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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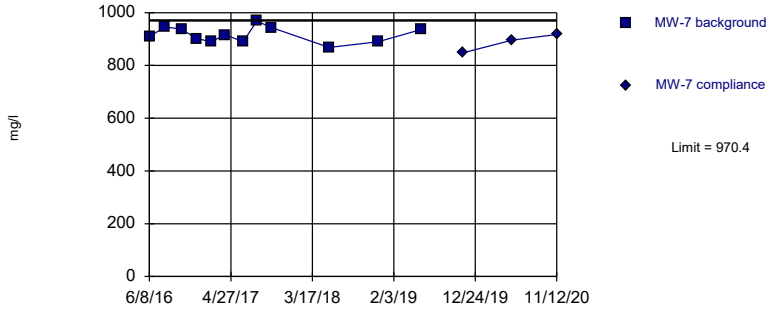
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=916.5, Std. Dev.=29.9, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9564, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

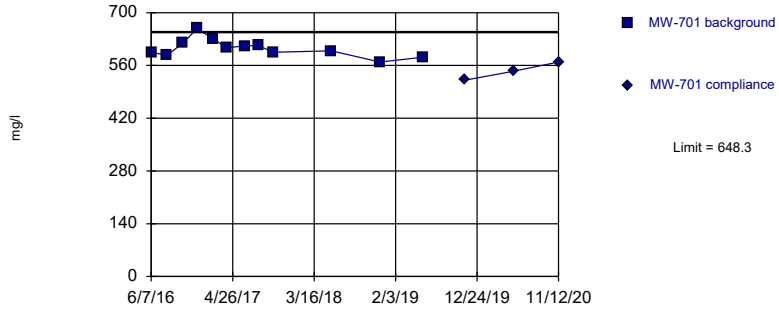
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=605.6, Std. Dev.=23.7, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9644, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

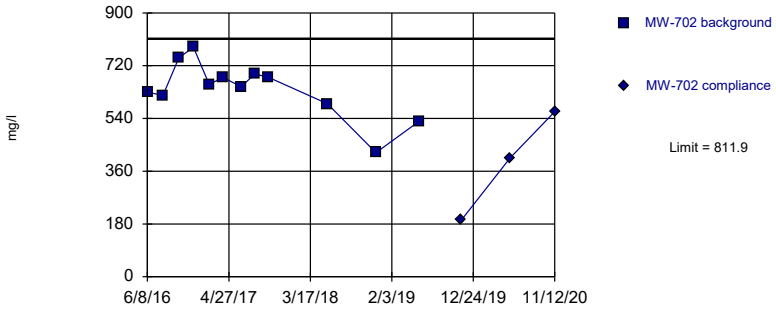
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	1000							
6/7/2016							595	
6/8/2016			1180		910			
8/9/2016							587	
8/10/2016			1280		946			
8/11/2016	1100							
10/11/2016							619	
10/12/2016	1140							
10/13/2016			1140		938			
12/6/2016							658	
12/9/2016	1100							
12/12/2016			1220		902			
2/7/2017							631	
2/8/2017					890			
2/9/2017	1010		1180					
4/4/2017							607	
4/5/2017			1180		916			
4/6/2017	938							
6/13/2017							612	
6/15/2017	984		1120		890			
8/8/2017							613	
8/9/2017			1280		968			
8/10/2017	1020							
10/3/2017							595	
10/5/2017	1040		1230		944			
5/23/2018	902		1160		868			
5/24/2018							599	
12/3/2018	1030						569	
12/4/2018			1150		890			
5/23/2019	1000		1210		936		582	
11/7/2019		908		1090		848		521
5/19/2020		904		1140		896		545
11/12/2020		920		1130		917		569

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=639.8, Std. Dev.=95.54, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9438, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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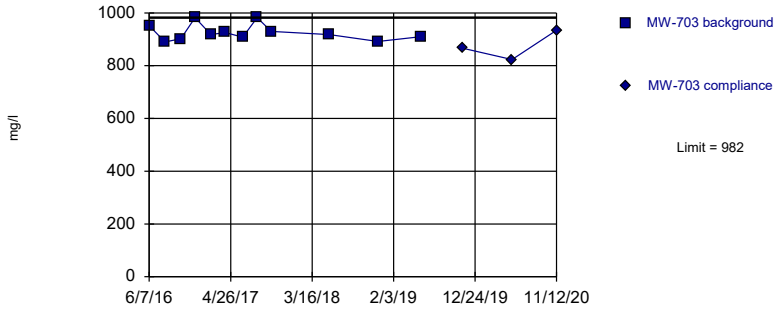
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=925.8, Std. Dev.=31.19, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8793, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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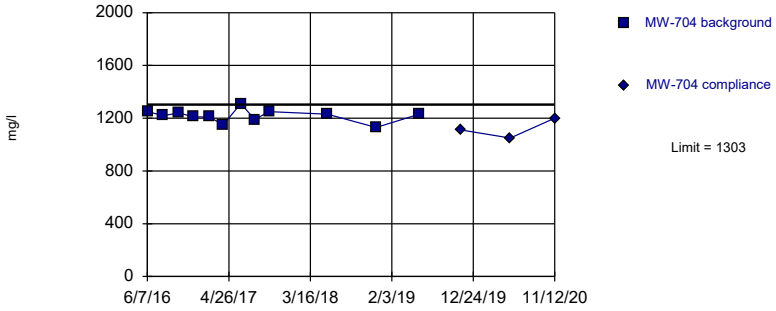
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1218, Std. Dev.=47.26, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9502, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

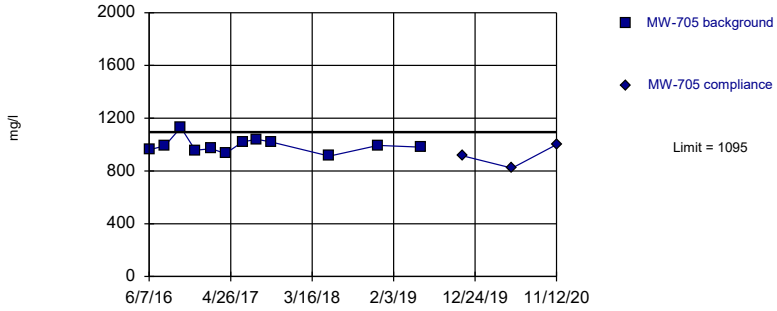
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=992.2, Std. Dev.=57.06, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9257, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:59 AM View: Upper AQC III

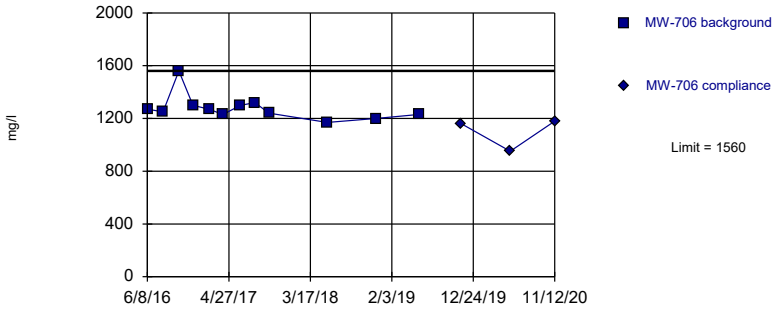
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			952		1250		960	
6/8/2016	629							
8/9/2016	619		890		1220		992	
10/11/2016	747		902		1240		1130	
12/6/2016			982		1210			
12/7/2016							958	
12/8/2016	783							
2/7/2017			918		1210			
2/8/2017	657							
2/9/2017							968	
4/4/2017			926		1150			
4/5/2017	680							
4/6/2017							932	
6/13/2017					1310		1020	
6/14/2017			908					
6/15/2017	648							
8/8/2017					1190			
8/9/2017	692						1040	
8/10/2017			982					
10/3/2017	680				1250		1020	
10/5/2017			930					
5/24/2018	590		918		1230		912	
12/3/2018	423		892		1130			
12/4/2018							994	
5/23/2019	530		910		1230		980	
11/7/2019		193		866		1110		914
5/19/2020		406		823		1050		822
11/12/2020		563		934		1200		1000

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 12 background values. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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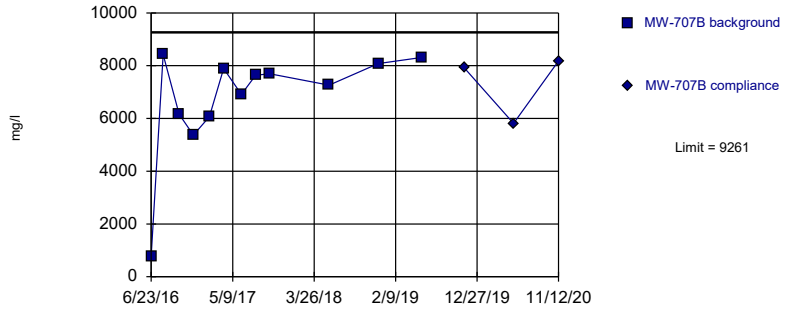
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=4.9e7, Std. Dev.=2.0e7, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8899, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

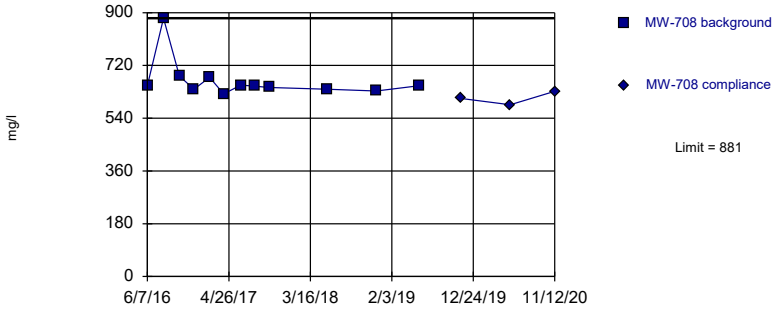
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 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 12 background values. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

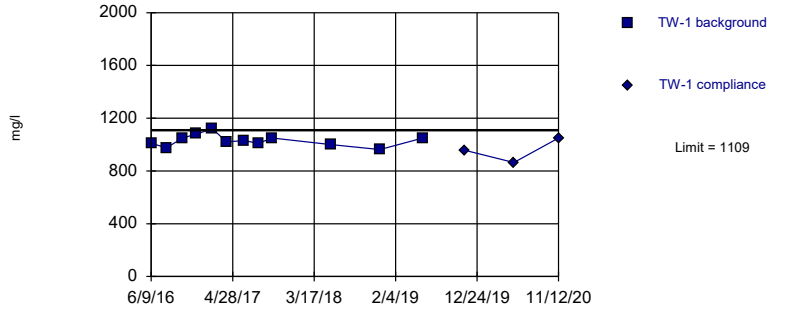
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1030, Std. Dev.=43.84, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9694, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

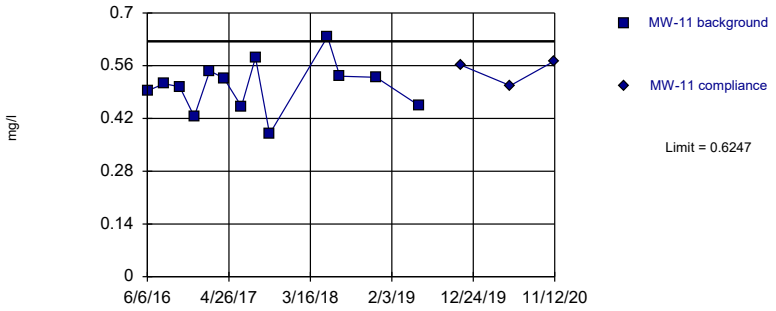
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					651			
6/8/2016	1270							
6/9/2016							1010	
6/23/2016			770					
8/9/2016	1250		8420				976	
8/10/2016					881			
10/11/2016	1560		6160				1050	
10/12/2016					684			
12/6/2016	1300		5370				1080	
12/9/2016					639			
2/7/2017	1270		6070				1120	
2/9/2017					679			
4/4/2017	1230		7890				1020	
4/6/2017					623			
6/13/2017	1300		6910				1030	
6/14/2017					653			
8/8/2017			7640		649		1010	
8/9/2017	1320							
10/3/2017			7690				1050	
10/4/2017	1240				645			
5/23/2018					639			
5/24/2018	1170		7260				1000	
12/4/2018	1200		8080		633		962	
5/23/2019	1230		8310		651		1050	
11/7/2019		1160		7920		607		956
5/19/2020		952		5810		586		864
11/12/2020		1180		8180		632		1050

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.5055, Std. Dev.=0.06751, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.981, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

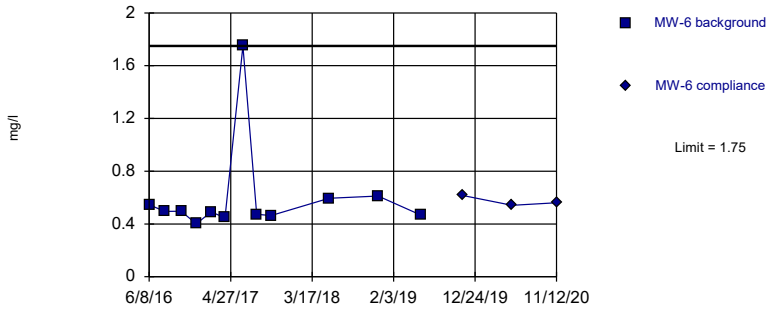
Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

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 12 background values. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

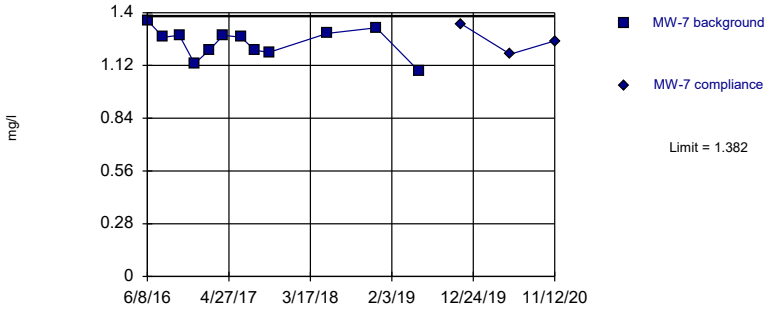
Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.24, Std. Dev.=0.07897, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9444, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

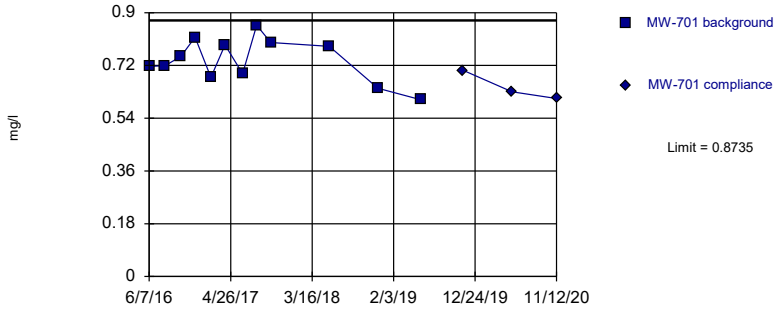
Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.7374, Std. Dev.=0.07554, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.977, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

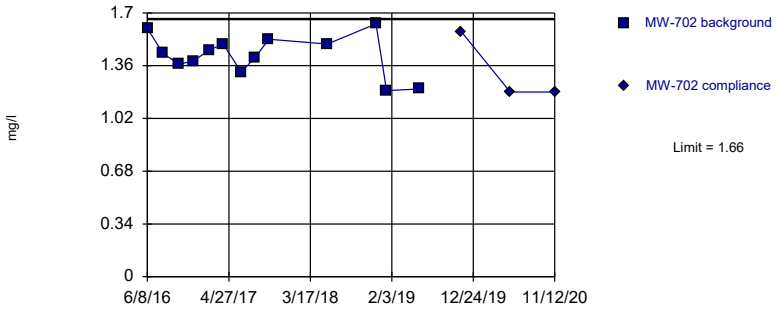
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	0.493							
6/7/2016							0.717	
6/8/2016			0.545		1.36			
8/9/2016							0.719	
8/10/2016			0.495		1.27			
8/11/2016	0.512							
10/11/2016							0.751	
10/12/2016	0.504							
10/13/2016			0.497		1.28			
12/6/2016							0.816	
12/9/2016	0.425							
12/12/2016			0.401		1.13			
2/7/2017							0.679	
2/8/2017					1.2			
2/9/2017	0.546		0.492					
4/4/2017							0.79	
4/5/2017			0.447		1.28			
4/6/2017	0.527							
6/13/2017							0.692	
6/15/2017	0.452		1.75		1.27			
8/8/2017							0.857	
8/9/2017			0.473		1.2			
8/10/2017	0.582							
10/3/2017							0.798	
10/5/2017	0.379		0.464		1.19			
5/23/2018	0.637		0.595		1.29			
5/24/2018							0.785	
7/11/2018	0.532							
12/3/2018	0.529						0.642	
12/4/2018			0.612		1.32			
5/23/2019	0.454		0.467		1.09		0.603	
11/7/2019		0.561		0.615		1.34		0.703
5/19/2020		0.507		0.541		1.18		0.63
11/12/2020		0.573		0.561		1.25		0.607

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.428, Std. Dev.=0.1319, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9609, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

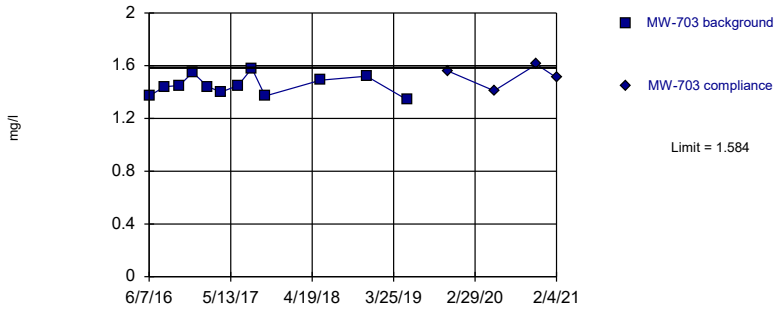
Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.45, Std. Dev.=0.07447, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9597, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

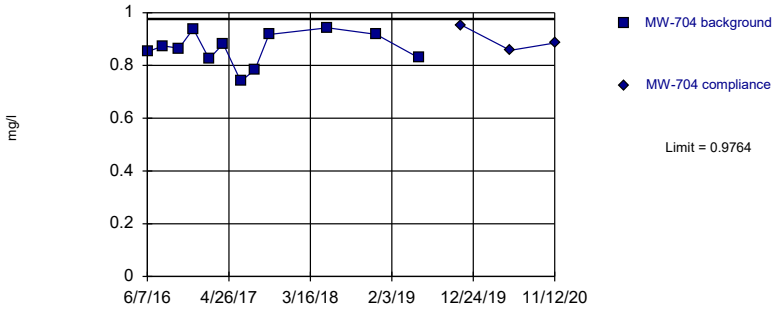
Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.8638, Std. Dev.=0.06246, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9508, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

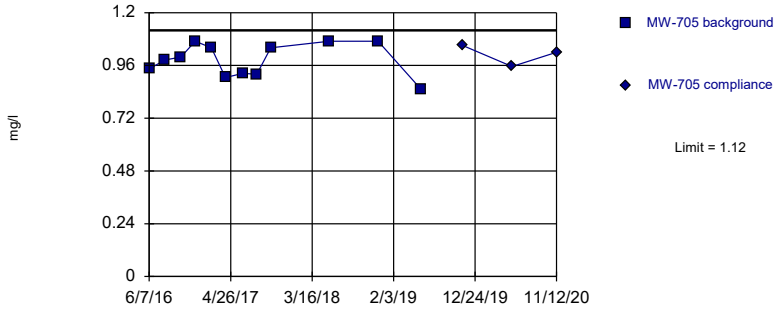
Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.9848, Std. Dev.=0.07484, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9122, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

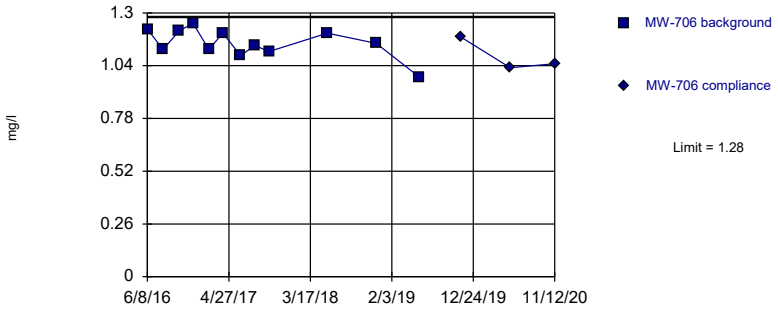
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			1.37		0.852		0.944	
6/8/2016	1.6							
8/9/2016	1.44		1.44		0.874		0.985	
10/11/2016	1.37		1.45		0.865		0.998	
12/6/2016			1.55		0.939			
12/7/2016							1.07	
12/8/2016	1.39							
2/7/2017			1.44		0.825			
2/8/2017	1.46							
2/9/2017							1.04	
4/4/2017			1.4		0.882			
4/5/2017	1.5							
4/6/2017							0.905	
6/13/2017					0.74		0.924	
6/14/2017			1.45					
6/15/2017	1.32							
8/8/2017					0.783			
8/9/2017	1.41						0.92	
8/10/2017			1.58					
10/3/2017	1.53				0.917		1.04	
10/5/2017			1.37					
5/24/2018	1.5		1.49		0.943		1.07	
12/3/2018	1.63		1.52		0.918			
12/4/2018							1.07	
1/14/2019	1.2							
5/23/2019	1.21		1.34		0.828		0.852	
11/7/2019		1.58		1.56		0.953		1.05
5/19/2020		1.19		1.41		0.857		0.955
11/12/2020		1.19		1.61		0.885		1.02
2/4/2021				1.51	1st Verification Sample			

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.15, Std. Dev.=0.0725, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.932, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

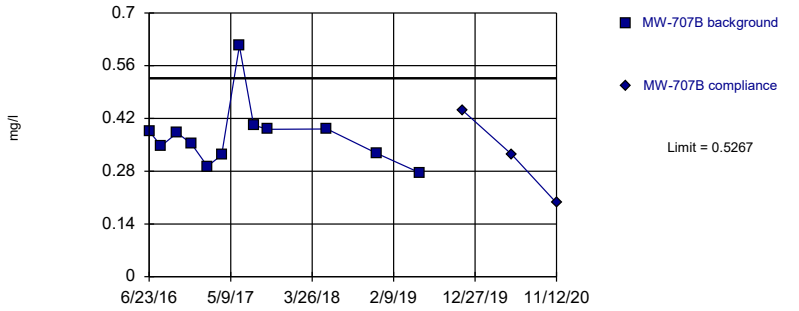
Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=0.6082, Std. Dev.=0.06525, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8325, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

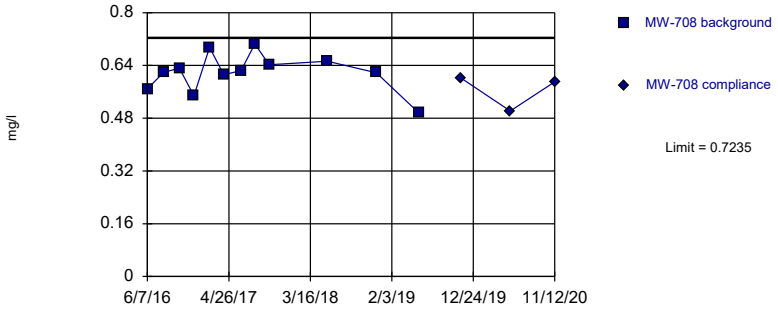
Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.6177, Std. Dev.=0.05877, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9478, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

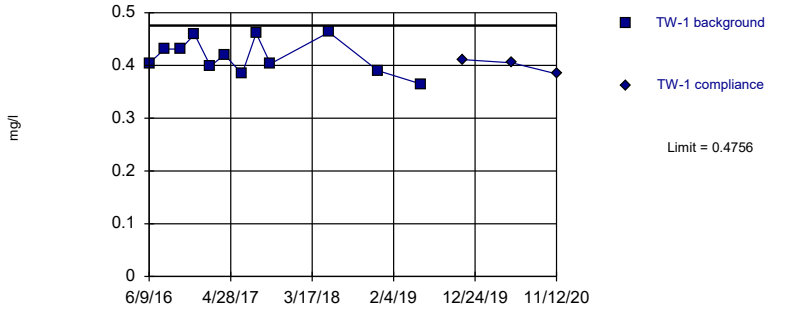
Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.4175, Std. Dev.=0.03223, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9393, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: FLUORIDE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

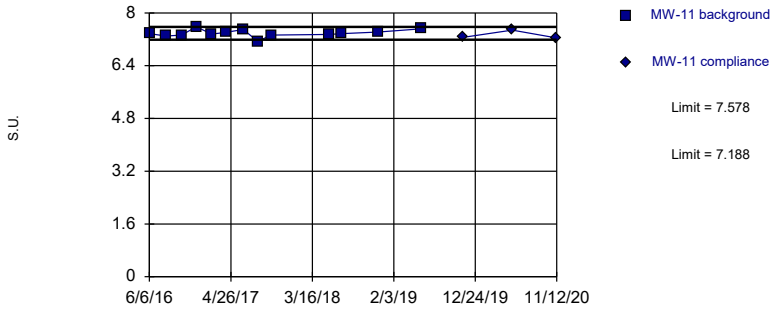
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					0.569			
6/8/2016	1.22							
6/9/2016							0.404	
6/23/2016			0.386					
8/9/2016	1.12		0.347				0.431	
8/10/2016					0.619			
10/11/2016	1.21		0.382				0.431	
10/12/2016					0.632			
12/6/2016	1.25		0.353				0.459	
12/9/2016					0.548			
2/7/2017	1.12		0.293				0.399	
2/9/2017					0.695			
4/4/2017	1.2		0.323				0.42	
4/6/2017					0.612			
6/13/2017	1.09		0.613				0.384	
6/14/2017					0.624			
8/8/2017			0.402		0.705		0.461	
8/9/2017	1.14							
10/3/2017			0.391				0.403	
10/4/2017	1.11				0.642			
5/23/2018					0.653			
5/24/2018	1.2		0.392				0.463	
12/4/2018	1.15		0.328		0.618		0.39	
5/23/2019	0.985		0.276		0.495		0.365	
11/7/2019		1.18		0.442		0.601		0.411
5/19/2020		1.03		0.325		0.502		0.405
11/12/2020		1.05		0.196		0.59		0.384

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.383, Std. Dev.=0.1106, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9444, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

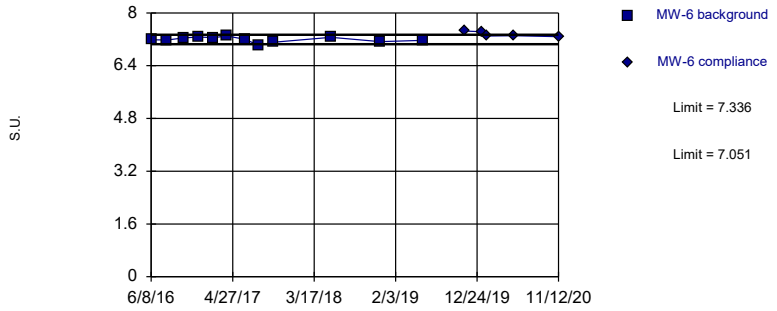
Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.193, Std. Dev.=0.07912, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9482, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

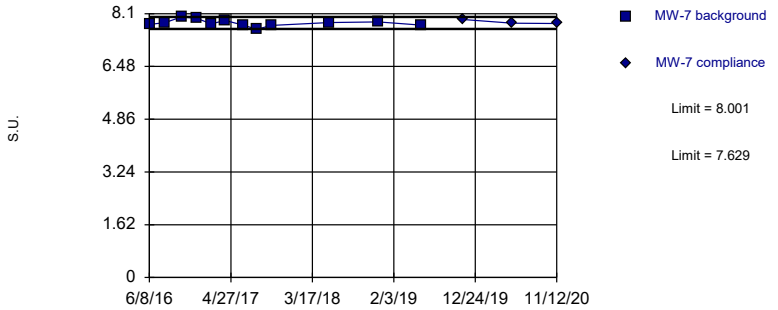
Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.815, Std. Dev.=0.1033, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9663, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

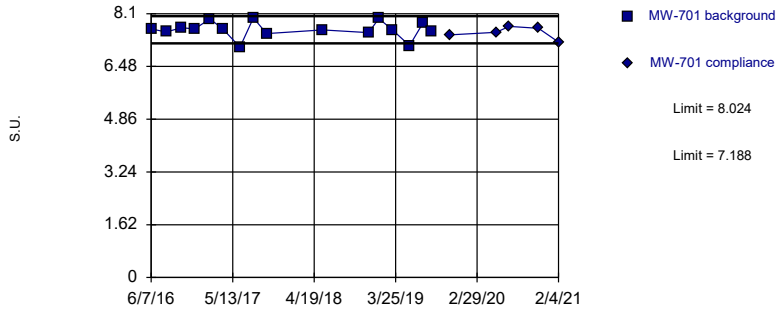
Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.606, Std. Dev.=0.2528, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8939, critical = 0.844. Kappa = 1.654 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

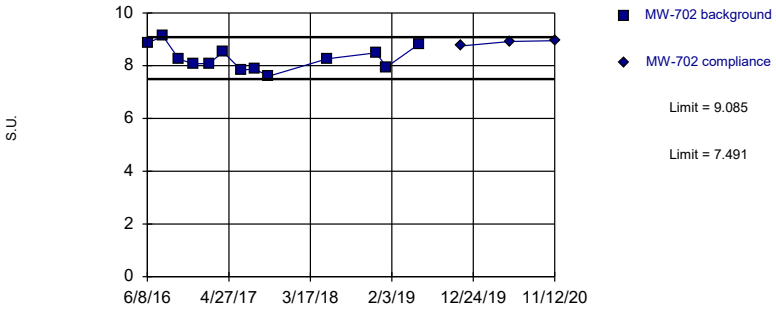
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	7.37							
6/7/2016							7.63	
6/8/2016			7.19		7.77			
8/9/2016							7.54	
8/10/2016			7.18		7.83			
8/11/2016	7.3							
10/11/2016							7.67	
10/12/2016	7.33							
10/13/2016			7.24		8			
12/6/2016							7.63	
12/9/2016	7.58							
12/12/2016			7.27		7.96			
2/7/2017							7.94	
2/8/2017					7.79			
2/9/2017	7.36		7.25					
4/4/2017							7.62	
4/5/2017			7.3		7.89			
4/6/2017	7.41							
6/13/2017							7.07	
6/15/2017	7.5		7.2		7.75			
8/8/2017							7.97	
8/9/2017			7.02		7.62			
8/10/2017	7.14							
10/3/2017							7.49	
10/5/2017	7.33		7.11		7.74			
5/23/2018	7.35		7.26		7.83			
5/24/2018							7.6	
7/11/2018	7.37							
12/3/2018	7.42						7.52	
12/4/2018			7.13		7.85			
1/15/2019							7.95	
3/11/2019							7.61	
5/23/2019	7.52		7.17		7.75		7.12	
7/17/2019							7.8	
8/23/2019							7.54	
11/7/2019		7.26		7.45		7.92		7.45
1/14/2020				7.43				
2/3/2020				7.3 1st Verification Sample				
5/19/2020		7.48		7.31		7.81		7.53 Extra Sample
7/13/2020								7.71 Extra Sample
11/12/2020		7.24		7.28		7.8		7.65
2/4/2021								7.23 Extra Sample

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=8.288, Std. Dev.=0.4518, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9627, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

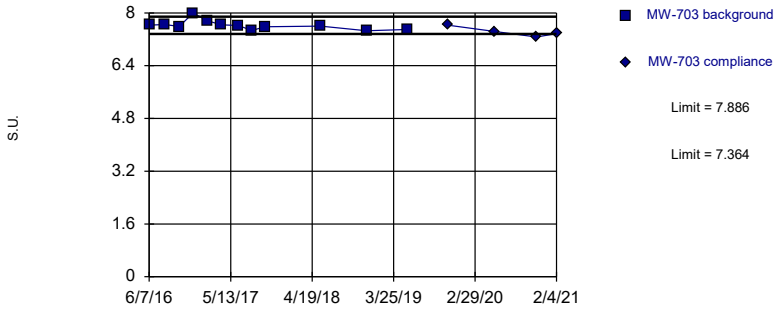
Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.625, Std. Dev.=0.1448, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8441, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

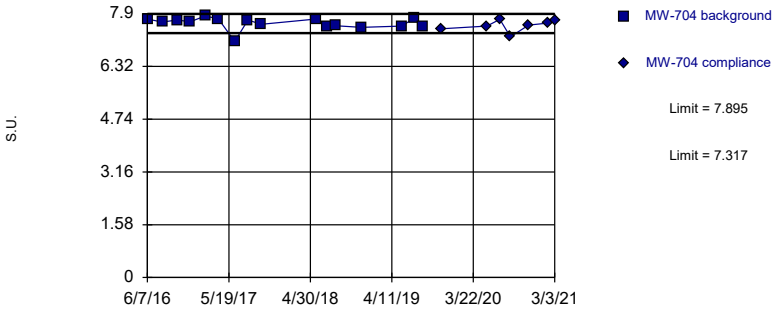
Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube transformation): Mean=441.9, Std. Dev.=30.33, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8534, critical = 0.844. Kappa = 1.654 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

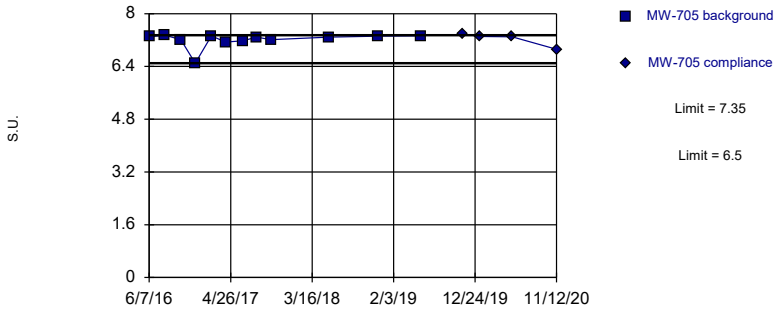
Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

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 12 background values. Well-constituent pair annual alpha = 0.008684. Individual comparison alpha = 0.004347 (1 of 3).

Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

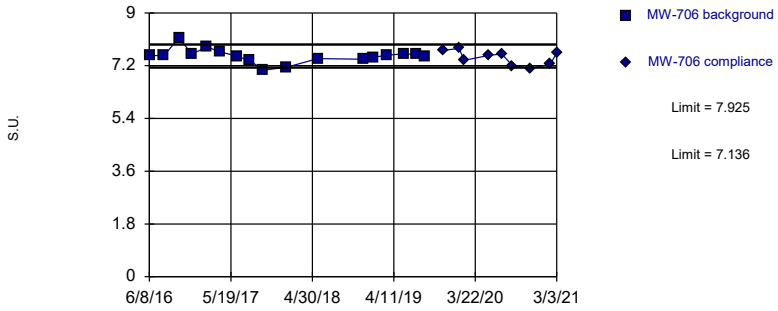
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			7.63		7.74		7.3	
6/8/2016	8.86							
8/9/2016	9.12		7.65		7.65		7.35	
10/11/2016	8.25		7.59		7.71		7.21	
12/6/2016					7.66			
12/7/2016			8				6.5	
12/8/2016	8.07							
2/7/2017			7.76		7.83			
2/8/2017	8.09							
2/9/2017							7.33	
4/4/2017			7.64		7.75			
4/5/2017	8.52							
4/6/2017							7.14	
6/13/2017					7.07		7.18	
6/14/2017			7.62					
6/15/2017	7.84							
8/8/2017					7.71			
8/9/2017	7.87						7.29	
8/10/2017			7.47					
10/3/2017	7.6				7.58		7.21	
10/5/2017			7.58					
5/24/2018	8.26		7.6		7.74		7.29	
7/11/2018					7.53			
8/16/2018					7.54			
12/3/2018	8.49		7.46		7.49			
12/4/2018							7.32	
1/14/2019	7.95							
5/23/2019	8.82		7.5		7.53		7.33	
7/17/2019					7.78			
8/23/2019					7.5			
11/7/2019		8.75		7.63		7.45		7.38
1/14/2020								7.31 Extra Sample
5/19/2020		8.92		7.44		7.53		7.3
7/13/2020						7.73 Extra Sample		
8/27/2020						7.21 Extra Sample		
11/12/2020		8.95		7.27		7.56		6.92
2/4/2021				7.37 1st Verification Sample		7.62 Extra Sample		
3/3/2021						7.69 Extra Sample		

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.531, Std. Dev.=0.2415, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9134, critical = 0.851. Kappa = 1.633 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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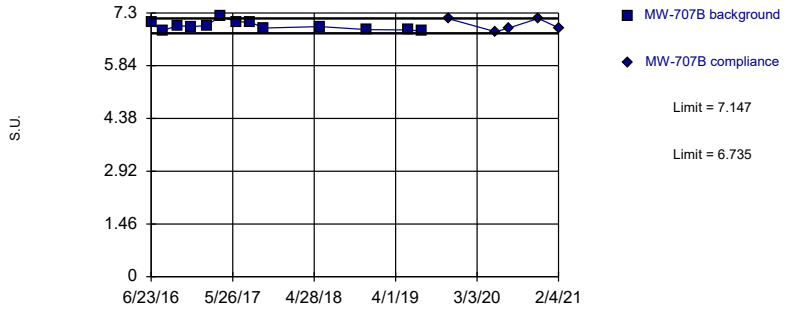
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.941, Std. Dev.=0.1167, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9309, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

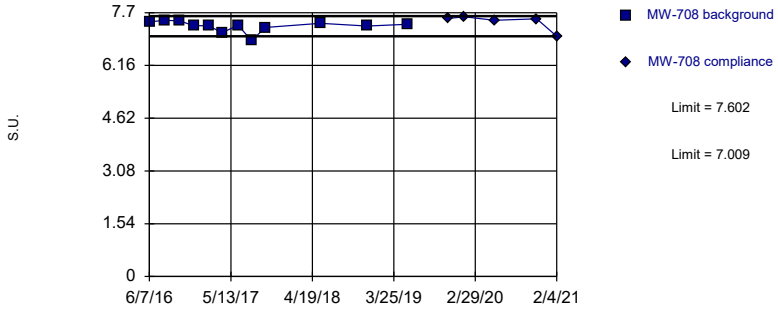
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.306, Std. Dev.=0.1645, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8257, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

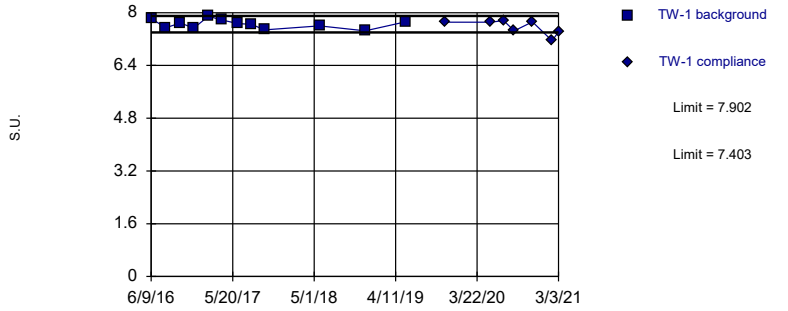
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.653, Std. Dev.=0.1387, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9714, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

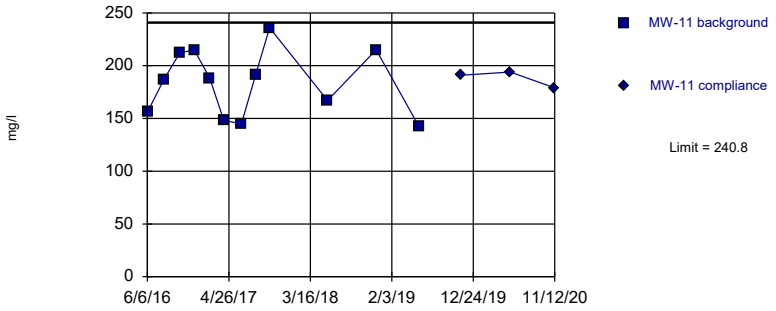
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					7.43			
6/8/2016	7.54							
6/9/2016							7.83	
6/23/2016			7.03					
8/9/2016	7.55		6.81				7.54	
8/10/2016					7.48			
10/11/2016	8.14		6.95				7.69	
10/12/2016					7.46			
12/6/2016	7.6		6.92				7.53	
12/9/2016					7.32			
2/7/2017	7.84		6.95				7.89	
2/9/2017					7.32			
4/4/2017	7.67		7.2				7.78	
4/6/2017					7.12			
6/13/2017	7.53		7.06				7.67	
6/14/2017					7.33			
8/8/2017			7.04		6.88		7.65	
8/9/2017	7.37							
10/3/2017			6.88				7.48	
10/4/2017	7.05				7.27			
1/9/2018	7.14							
5/23/2018					7.39			
5/24/2018	7.44		6.92				7.6	
12/4/2018	7.42		6.84		7.31		7.45	
1/15/2019	7.49							
3/11/2019	7.55							
5/23/2019	7.61		6.83		7.36		7.72	
7/17/2019	7.58		6.8					
8/23/2019	7.5							
11/7/2019		7.72		7.14		7.53		7.71
1/14/2020		7.79 Extra Sample				7.58		
2/3/2020		7.38 Extra Sample						
5/19/2020		7.55		6.78		7.48		7.71
7/13/2020		7.6 Extra Sample		6.88				7.76 Extra Sample
8/27/2020		7.2 Extra Sample						7.45 Extra Sample
11/12/2020		7.11		7.15		7.52		7.72
2/4/2021		7.25 Extra Sample		6.89		7.01		7.15 Extra Sample
3/3/2021		7.64 Extra Sample						7.42 Extra Sample

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=183.5, Std. Dev.=31.82, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9268, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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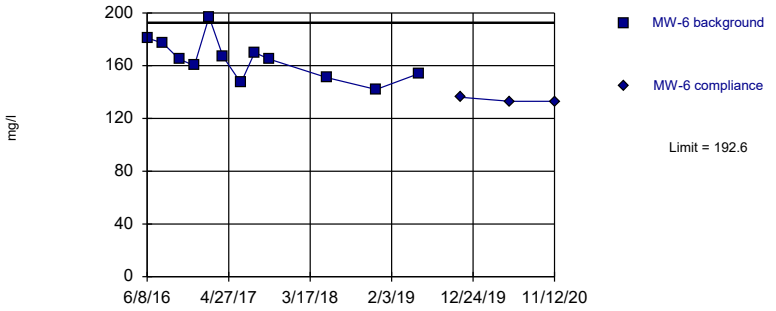
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=164.7, Std. Dev.=15.51, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9713, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 3/17/2021 11:52 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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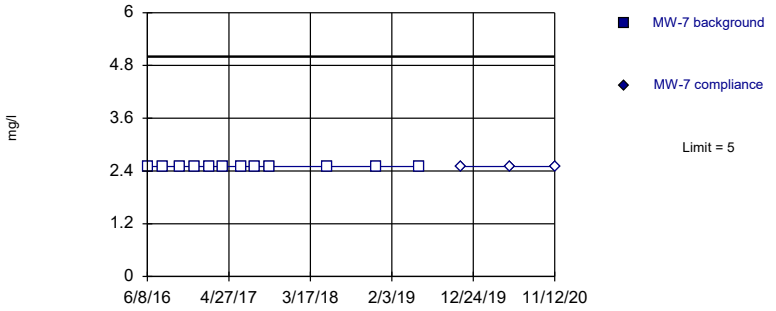
Hollow symbols indicate censored values.

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 = 12) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III

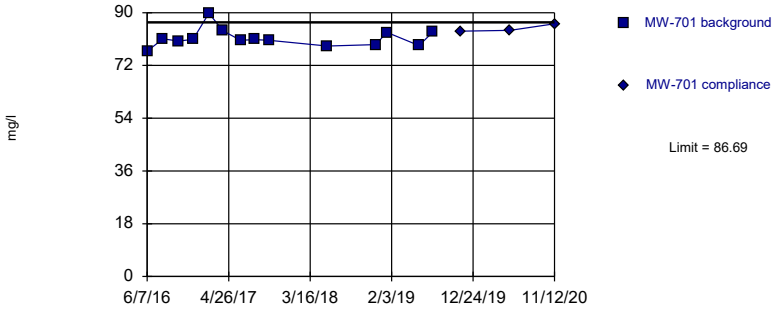
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=81.29, Std. Dev.=3.127, n=14. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8698, critical = 0.825. Kappa = 1.728 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

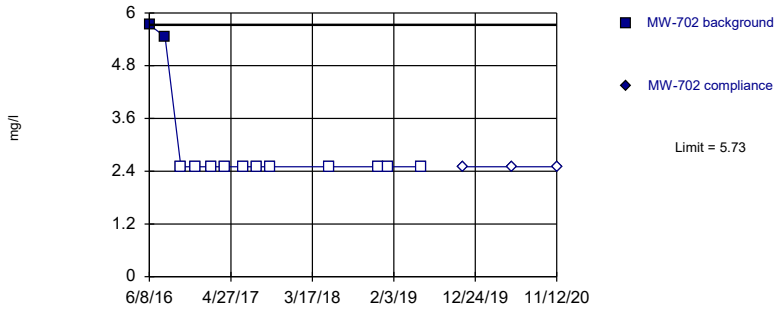
	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	156							
6/7/2016							76.9	
6/8/2016			181		<5			
8/9/2016							81.1	
8/10/2016			177		<5			
8/11/2016	187							
10/11/2016							80.3	
10/12/2016	212							
10/13/2016			165		<5			
12/6/2016							80.9	
12/9/2016	215							
12/12/2016			160		<5			
2/7/2017							89.8	
2/8/2017					<5			
2/9/2017	188		197					
4/4/2017							83.8	
4/5/2017			167		<5			
4/6/2017	148							
6/13/2017							80.6	
6/15/2017	145		147		<5			
8/8/2017							80.8	
8/9/2017			170		<5			
8/10/2017	191							
10/3/2017							80.6	
10/5/2017	236		165		<5			
5/23/2018	167		151		<5			
5/24/2018							78.6	
12/3/2018	215						79.1	
12/4/2018			142		<5			
1/15/2019							83.3	
5/23/2019	142		154		<5		78.8	
7/17/2019							83.4	
11/7/2019		191		136		<5		83.7
5/19/2020		194		133		<5		84
11/12/2020		179		133		<5		86.2

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 84.62% NDs. Well-constituent pair annual alpha = 0.003769. Individual comparison alpha = 0.001886 (1 of 3).

Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III

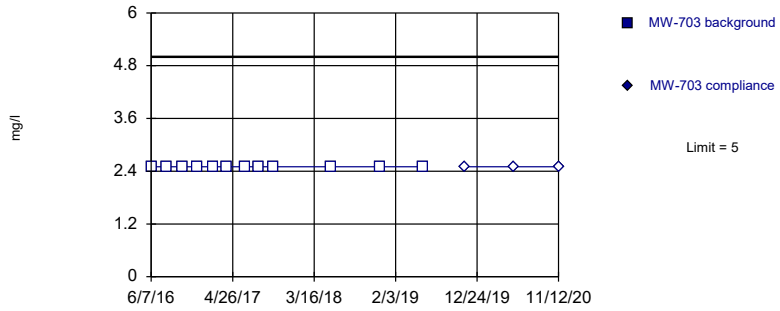
LaCygne Client: SCS Engineers Data: LaC GW Data

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 = 12) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

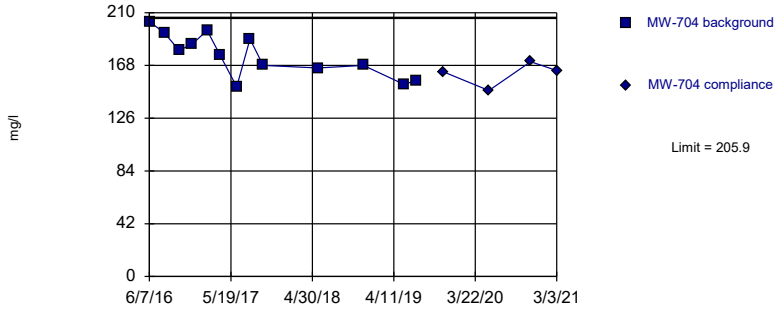
Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=175.8, Std. Dev.=17.08, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9535, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

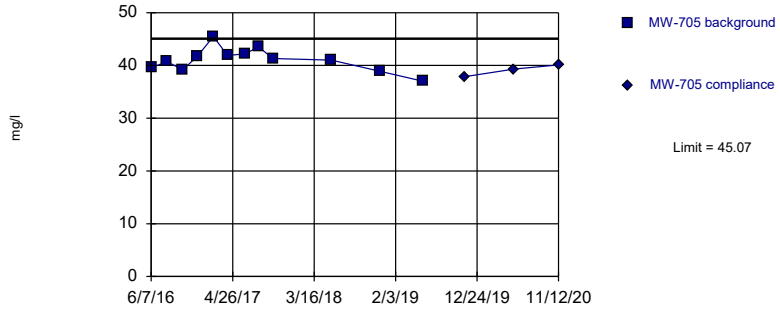
Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=41.04, Std. Dev.=2.236, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.983, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

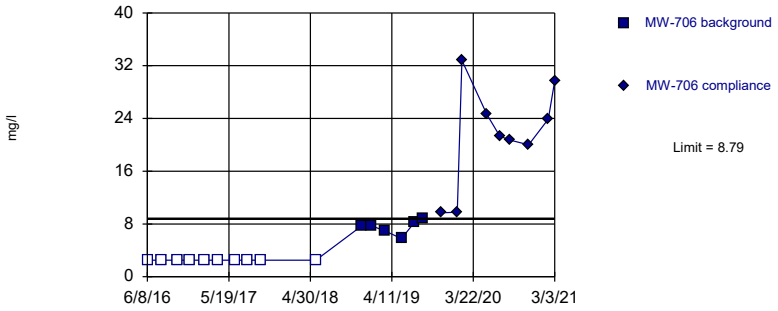
	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			<5		203		39.6	
6/8/2016	5.73							
8/9/2016	5.46		<5		194		40.7	
10/11/2016	<5		<5		180		39.2	
12/6/2016			<5		185			
12/7/2016							41.7	
12/8/2016	<5							
2/7/2017			<5		196			
2/8/2017	<5							
2/9/2017							45.5	
4/4/2017			<5		176			
4/5/2017	<5							
4/6/2017							41.9	
6/13/2017					151		42.2	
6/14/2017			<5					
6/15/2017	<5							
8/8/2017					189			
8/9/2017	<5						43.5	
8/10/2017			<5					
10/3/2017	<5				168		41.3	
10/5/2017			<5					
5/24/2018	<5		<5		166		41	
12/3/2018	<5		<5		168			
12/4/2018							38.9	
1/14/2019	<5							
5/23/2019	<5		<5		153		37	
7/17/2019					156			
11/7/2019		<5		<5		163		37.9
5/19/2020		<5		<5		148		39.3
11/12/2020		<5		<5		171		40.1
3/3/2021						164 Extra Sample		

Hollow symbols indicate censored values.

Exceeds Limit

Prediction Limit

Intrawell Non-parametric



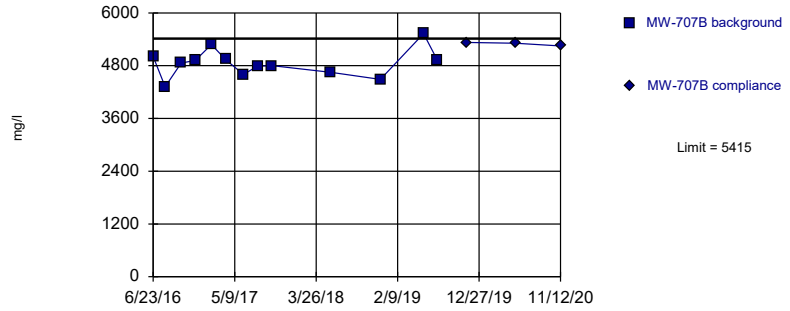
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.002051. Individual comparison alpha = 0.001026 (1 of 3).

Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



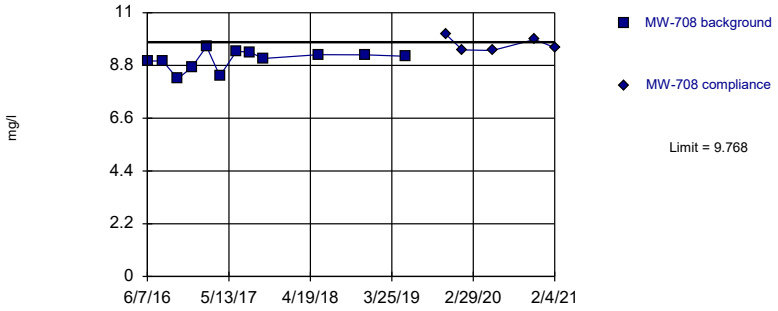
Background Data Summary: Mean=4855, Std. Dev.=317.5, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9647, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



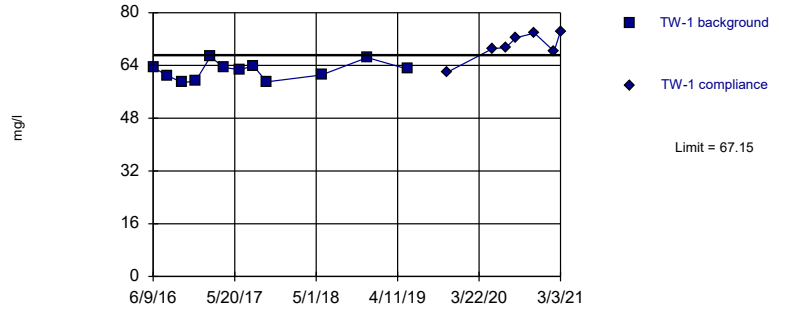
Background Data Summary: Mean=9.032, Std. Dev.=0.4086, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.916, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=62.38, Std. Dev.=2.648, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9322, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 3/17/2021 11:53 AM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE Analysis Run 3/17/2021 12:00 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					8.99			
6/8/2016	<5							
6/9/2016							63.4	
6/23/2016			5010					
8/9/2016	<5		4320				60.9	
8/10/2016					8.98			
10/11/2016	<5		4860				58.8	
10/12/2016					8.24			
12/6/2016	<5		4920				59.3	
12/9/2016					8.72			
2/7/2017	<5		5280				66.7	
2/9/2017					9.59			
4/4/2017	<5		4940				63.4	
4/6/2017					8.36			
6/13/2017	<5		4600				62.7	
6/14/2017					9.38			
8/8/2017			4790		9.36		63.9	
8/9/2017	<5							
10/3/2017			4800				59	
10/4/2017	<5				9.09			
5/23/2018					9.25			
5/24/2018	<5		4650				61.1	
12/4/2018	7.69		4490		9.24		66.4	
1/15/2019	7.73							
3/11/2019	6.96							
5/23/2019	5.78		5530		9.18		62.9	
7/17/2019	8.27		4920					
8/23/2019	8.79							
11/7/2019		9.68		5330		10.1		61.9
1/14/2020		9.78	1st Verification Sample			9.45	1st Verification Sample	
2/3/2020		32.8	2nd Verification Sample					
5/19/2020		24.6		5310		9.42		69.1
7/13/2020		21.3	1st Verification Sample					69.4 1st Verification Sample
8/27/2020		20.7	2nd Verification Sample					72.4 2nd Verification Sample
11/12/2020		20		5250		9.88		73.8
2/4/2021		23.9	1st Verification Sample			9.54	1st Verification Sample	68.3 1st Verification Sample
3/3/2021		29.7	2nd Verification Sample					74.4 2nd Verification Sample

Prediction Limit

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 3/17/2021, 12:00 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
BORON (mg/l)	MW-11	1.263	n/a	11/12/2020	1.19	No	13	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-6	1.249	n/a	11/12/2020	1.14	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-7	1.691	n/a	11/12/2020	1.56	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-701	1.108	n/a	11/12/2020	0.92	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-702	2.024	n/a	11/12/2020	1.53	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-703	1.944	n/a	11/12/2020	1.83	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-704	2.153	n/a	11/12/2020	1.97	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-705	2.318	n/a	11/12/2020	2.07	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-706	2.263	n/a	11/12/2020	1.98	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-707B	2.04	n/a	11/12/2020	1.83	No	12	0	n/a	0.002173	NP Intra (normality) ...
BORON (mg/l)	MW-708	1.537	n/a	11/12/2020	1.32	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	TW-1	1.731	n/a	11/12/2020	1.38	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-11	72.5	n/a	11/12/2020	54.2	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-6	116.3	n/a	11/12/2020	82.4	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-7	27.59	n/a	11/12/2020	20.5	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-701	44.57	n/a	2/4/2021	43.5	No	16	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-702	24.13	n/a	11/12/2020	3.6	No	13	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-703	23.18	n/a	11/12/2020	18.4	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-704	35.87	n/a	3/3/2021	20.7	No	13	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-705	43.56	n/a	11/12/2020	28.8	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-706	35.66	n/a	3/3/2021	25.7	No	14	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-707B	422.2	n/a	11/12/2020	404	No	13	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-708	34.37	n/a	11/12/2020	30.1	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	TW-1	37.96	n/a	3/3/2021	24.9	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-11	135.8	n/a	11/12/2020	84.1	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-6	227.2	n/a	11/12/2020	205	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-7	112.8	n/a	11/12/2020	94.2	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-701	56.12	n/a	11/12/2020	49.1	No	14	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-702	50.24	n/a	11/12/2020	39.4	No	13	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-703	117	n/a	11/12/2020	109	No	12	0	x^5	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	**MW-704**	**88.89**	**n/a**	**3/3/2021**	**91**	**Yes**	**16**	**0**	**No**	**0.000...**	**Param Intra 1 of 3**
CHLORIDE (mg/l)	MW-705	141.4	n/a	11/12/2020	141	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-706	302.2	n/a	3/3/2021	228	No	13	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-707B	237.8	n/a	2/4/2021	168	No	13	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-708	48.87	n/a	11/12/2020	45.5	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	TW-1	46.26	n/a	3/3/2021	40.2	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-11	1144	n/a	11/12/2020	920	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-6	1287	n/a	11/12/2020	1130	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-7	970.4	n/a	11/12/2020	917	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-701	648.3	n/a	11/12/2020	569	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-702	811.9	n/a	11/12/2020	563	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-703	982	n/a	11/12/2020	934	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-704	1303	n/a	11/12/2020	1200	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-705	1095	n/a	11/12/2020	1000	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-706	1560	n/a	11/12/2020	1180	No	12	0	n/a	0.002173	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	MW-707B	9261	n/a	11/12/2020	8180	No	12	0	x^2	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-708	881	n/a	11/12/2020	632	No	12	0	n/a	0.002173	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	TW-1	1109	n/a	11/12/2020	1050	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-11	0.6247	n/a	11/12/2020	0.573	No	13	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-6	1.75	n/a	11/12/2020	0.561	No	12	0	n/a	0.002173	NP Intra (normality) ...

Prediction Limit

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 3/17/2021, 12:00 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
FLUORIDE (mg/l)	MW-7	1.382	n/a	11/12/2020	1.25	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-701	0.8735	n/a	11/12/2020	0.607	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-702	1.66	n/a	11/12/2020	1.19	No	13	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-703	1.584	n/a	2/4/2021	1.51	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-704	0.9764	n/a	11/12/2020	0.885	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-705	1.12	n/a	11/12/2020	1.02	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-706	1.28	n/a	11/12/2020	1.05	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-707B	0.5267	n/a	11/12/2020	0.196	No	12	0	sqrt(x)	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-708	0.7235	n/a	11/12/2020	0.59	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	TW-1	0.4756	n/a	11/12/2020	0.384	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-11	7.578	7.188	11/12/2020	7.24	No	13	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-6	7.336	7.051	11/12/2020	7.28	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-7	8.001	7.629	11/12/2020	7.8	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-701	8.024	7.188	2/4/2021	7.23	No	16	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-702	9.085	7.491	11/12/2020	8.95	No	13	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-703	7.886	7.364	2/4/2021	7.37	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-704	7.895	7.317	3/3/2021	7.69	No	16	0	x^3	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-705	7.35	6.5	11/12/2020	6.92	No	12	0	n/a	0.004347	NP Intra (normality) ...
pH (S.U.)	MW-706	7.925	7.136	3/3/2021	7.64	No	17	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-707B	7.147	6.735	2/4/2021	6.89	No	13	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-708	7.602	7.009	2/4/2021	7.01	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	TW-1	7.902	7.403	3/3/2021	7.42	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-11	240.8	n/a	11/12/2020	179	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-6	192.6	n/a	11/12/2020	133	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-7	5	n/a	11/12/2020	2.5ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-701	86.69	n/a	11/12/2020	86.2	No	14	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-702	5.73	n/a	11/12/2020	2.5ND	No	13	84.62	n/a	0.001886	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-703	5	n/a	11/12/2020	2.5ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-704	205.9	n/a	3/3/2021	164	No	13	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-705	45.07	n/a	11/12/2020	40.1	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	**MW-706**	**8.79**	**n/a**	**3/3/2021**	**29.7**	**Yes**	**16**	**62.5**	**n/a**	**0.001026**	**NP Intra (NDs) 1 of 3**
SULFATE (mg/l)	MW-707B	5415	n/a	11/12/2020	5250	No	13	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-708	9.768	n/a	2/4/2021	9.54	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	**TW-1**	**67.15**	**n/a**	**3/3/2021**	**74.4**	**Yes**	**12**	**0**	**No**	**0.000...**	**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: i

Observations with flags containing the following characters will be deselected: 'i', 'l',

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
  - [x] 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
- [ ] 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

☐ Use Modified Alpha...

☑ Test Residuals For Normality (Parametric test only) using Shapiro-Wilk/Francia at Alpha = 0.01

☐ Continue Parametric if Unable to Normalize

Transformation (Parametric test only)

- ◉ Use Ladder of Powers
- ○ Natural Log or No Transformation
- ○ Never Transform
- ○ Use Specific Transformation:

☐ Use Best W Statistic

☐ Plot Transformed Values

Use Non-Parametric Test (Sen's Slope/Mann-Kendall) when Non-Detects Percent > 75

☐ Include 95. % Confidence Interval around Trend Line

☐ Automatically Remove Outliers (Parametric test only)

Note: there is no "Always Use Non-Parametric" checkbox on this tab because, for consistency with prior versions, Sen's Slope / Mann-Kendall (the non-parametric alternative) is available as a report in its own right, under Analysis->Intrawell->Trend.

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: 9

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...
- [ ] Combine Background Wells on Mann-Whitney...

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)

Jared Morrison
December 16, 2022

ATTACHMENT 2-2

Spring 2021 Semiannual Detection Monitoring Statistical Analyses

MEMORANDUM

October 5, 2021

To: La Cygne Generating Station
25166 East 2200 Road
La Cygne, Kansas 66040
Evergy Metro, Inc.

From: SCS Engineers

RE: Determination of Statistically Significant Increases –
Upper AQC Impoundment
Spring 2021 Semiannual Detection Monitoring 40 CFR 257.94

Statistical analysis of monitoring data from the groundwater monitoring system for the Upper 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 19, 2021. Review and validation of the results from the May 2021 Detection Monitoring Event was completed on July 8, 2021, 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 21, 2021 and August 30, 2021.

The completed statistical evaluation identified three Appendix III constituents above their respective prediction limits established for monitoring wells MW-704, MW-706 and TW-1.

Constituent/Monitoring Well	*UPL	Observation May 19, 2021	1st Verification July 21, 2021	2nd Verification August 30, 2021
MW-704				
Chloride	88.89	90.5	91.9	90.4
MW-706				
Sulfate	8.79	19.2	17.4	17.0
TW-1				
Sulfate	67.15	67.7	68.5	70.8

*UPL – Upper Prediction Limit

Determination: A statistical evaluation was completed for all Appendix III detection monitoring constituents in accordance with the certified statistical method. The statistical evaluation identified three SSIs above the background prediction limit. These included chloride at MW-704, and sulfate at monitoring wells MW-706 and TW-1.

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 results, 1st verification re-sample results (when applicable), 2nd verification re-sample results (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

La Cygne Generating Station
Determination of Statistically Significant Increases
Upper AQC Impoundment
October 5, 2021

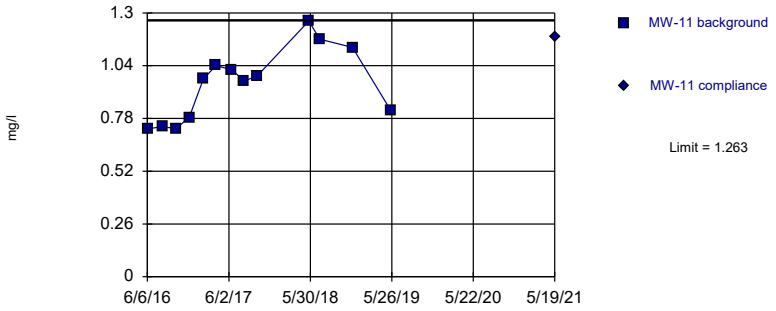
ATTACHMENT 1

Sanitas™ Output

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.95, Std. Dev.=0.1775, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9268, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

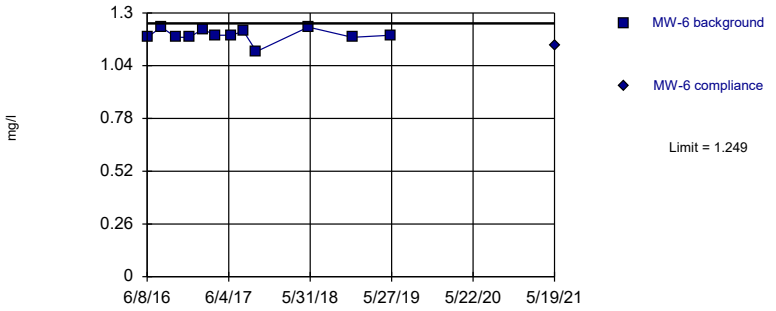
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.191, Std. Dev.=0.03204, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.84, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

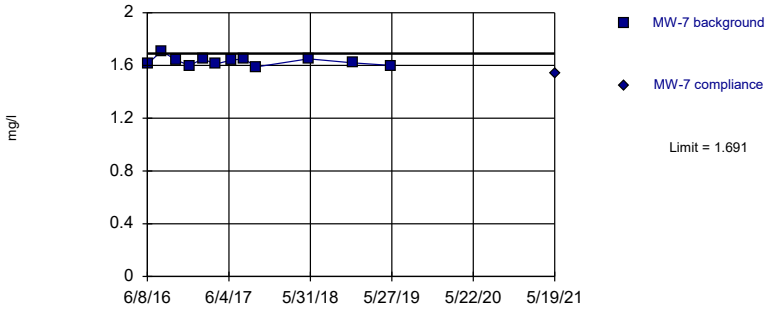
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.631, Std. Dev.=0.03315, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8907, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

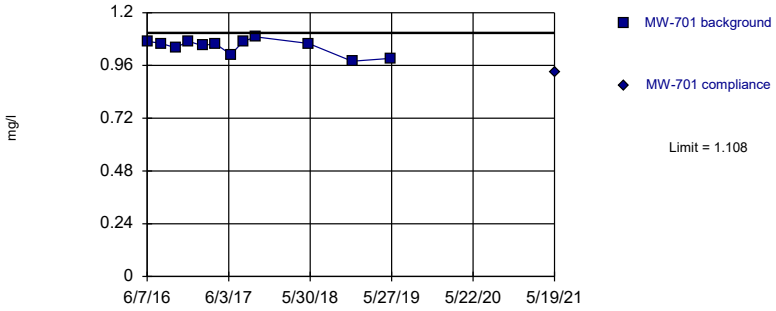
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.046, Std. Dev.=0.03438, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8717, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

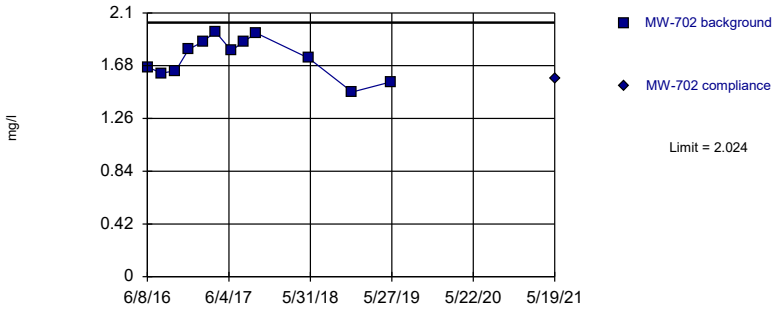
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	0.729							
6/7/2016							1.07	
6/8/2016			1.18		1.61			
8/9/2016							1.06	
8/10/2016			1.23		1.71			
8/11/2016	0.739							
10/11/2016							1.04	
10/12/2016	0.73							
10/13/2016			1.18		1.64			
12/6/2016							1.07	
12/9/2016	0.786							
12/12/2016			1.18		1.6			
2/7/2017							1.05	
2/8/2017					1.65			
2/9/2017	0.974		1.22					
4/4/2017							1.06	
4/5/2017			1.19		1.61			
4/6/2017	1.04							
6/13/2017							1.01	
6/15/2017	1.02		1.19		1.64			
8/8/2017							1.07	
8/9/2017			1.21		1.65			
8/10/2017	0.965							
10/3/2017							1.09	
10/5/2017	0.988		1.11		1.59			
5/23/2018	1.26		1.23		1.65			
5/24/2018							1.06	
7/11/2018	1.17							
12/3/2018	1.13						0.979	
12/4/2018			1.18		1.62			
5/23/2019	0.819		1.19		1.6		0.992	
5/19/2021		1.18		1.14		1.54		0.931

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.744, Std. Dev.=0.1551, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9541, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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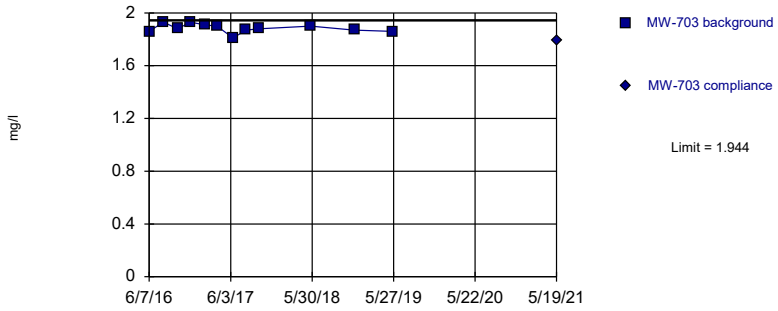
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.883, Std. Dev.=0.03367, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9397, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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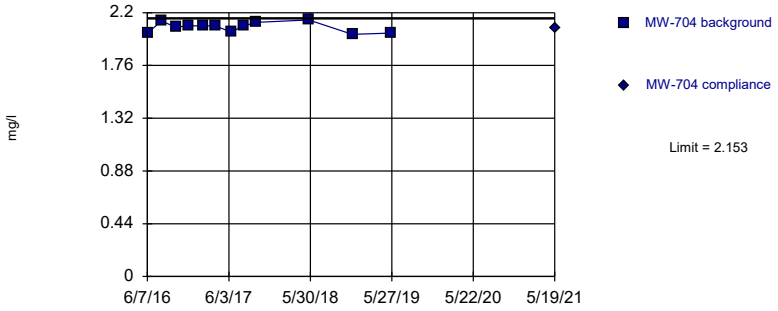
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.079, Std. Dev.=0.04078, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9087, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

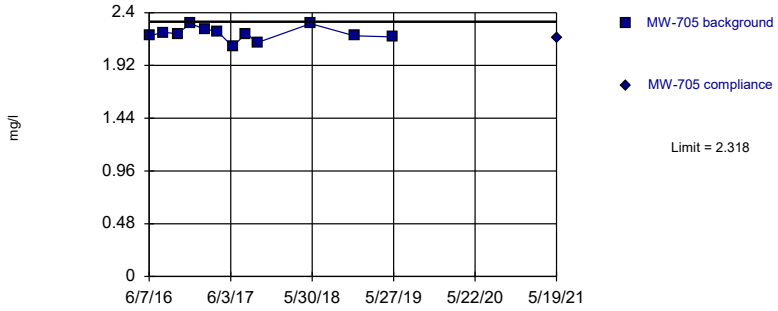
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.208, Std. Dev.=0.06088, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9524, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

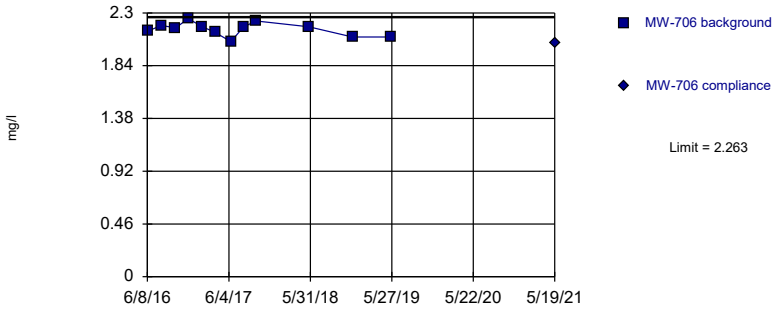
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			1.86		2.03		2.19	
6/8/2016	1.67							
8/9/2016	1.62		1.93		2.13		2.22	
10/11/2016	1.64		1.88		2.08		2.21	
12/6/2016			1.93		2.09			
12/7/2016							2.3	
12/8/2016	1.81							
2/7/2017			1.91		2.09			
2/8/2017	1.87							
2/9/2017							2.25	
4/4/2017			1.9		2.09			
4/5/2017	1.95							
4/6/2017							2.23	
6/13/2017					2.04		2.09	
6/14/2017			1.81					
6/15/2017	1.8							
8/8/2017					2.09			
8/9/2017	1.87						2.21	
8/10/2017			1.87					
10/3/2017	1.94				2.12		2.13	
10/5/2017			1.88					
5/24/2018	1.74		1.9		2.14		2.3	
12/3/2018	1.47		1.87		2.02			
12/4/2018							2.19	
5/23/2019	1.55		1.86		2.03		2.18	
5/19/2021		1.58		1.79		2.07		2.17

Within Limit

Prediction Limit

Intrawell Parametric



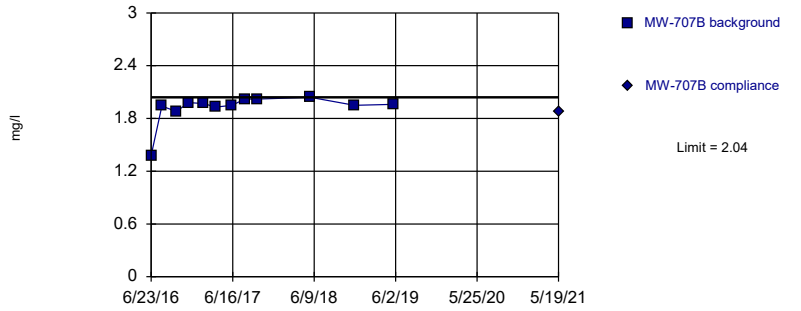
Background Data Summary: Mean=2.157, Std. Dev.=0.05898, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9577, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Non-parametric



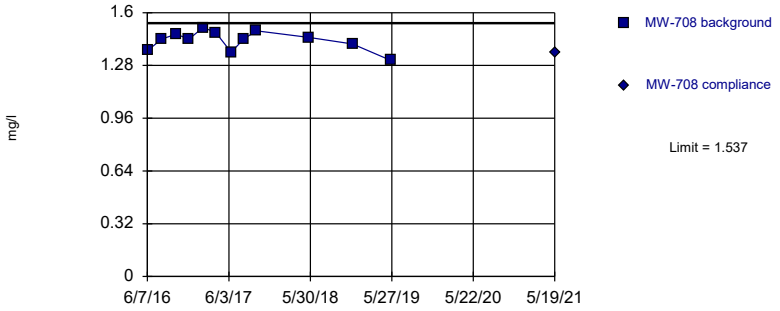
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 12 background values. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



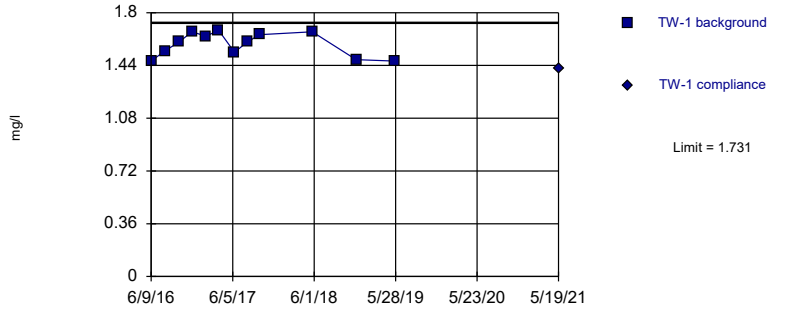
Background Data Summary: Mean=1.431, Std. Dev.=0.05885, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9376, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.583, Std. Dev.=0.08184, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.878, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: BORON Analysis Run 9/27/2021 1:14 PM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: BORON Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

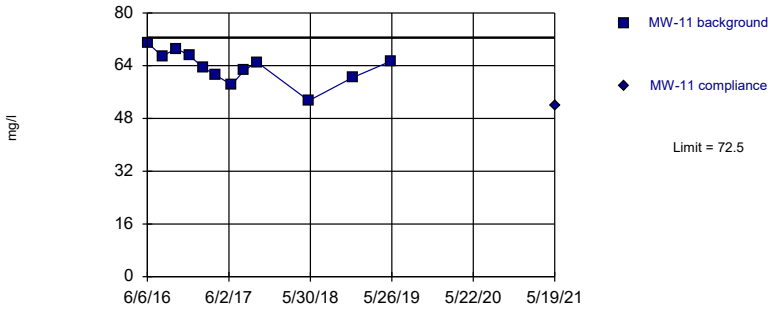
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					1.37			
6/8/2016	2.14							
6/9/2016							1.47	
6/23/2016			1.38					
8/9/2016	2.19		1.94				1.54	
8/10/2016					1.44			
10/11/2016	2.17		1.88				1.6	
10/12/2016					1.47			
12/6/2016	2.25		1.98				1.67	
12/9/2016					1.44			
2/7/2017	2.18		1.97				1.64	
2/9/2017					1.51			
4/4/2017	2.13		1.93				1.68	
4/6/2017					1.48			
6/13/2017	2.05		1.95				1.53	
6/14/2017					1.36			
8/8/2017			2.02		1.44		1.6	
8/9/2017	2.18							
10/3/2017			2.02				1.65	
10/4/2017	2.23				1.49			
5/23/2018					1.45			
5/24/2018	2.18		2.04				1.67	
12/4/2018	2.09		1.95		1.41		1.48	
5/23/2019	2.09		1.96		1.31		1.47	
5/19/2021		2.04		1.88		1.36		1.42

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=63.65, Std. Dev.=4.912, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.976, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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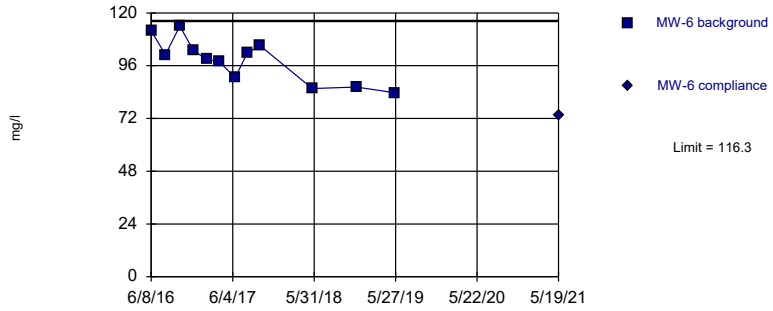
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=98.32, Std. Dev.=10.01, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.94, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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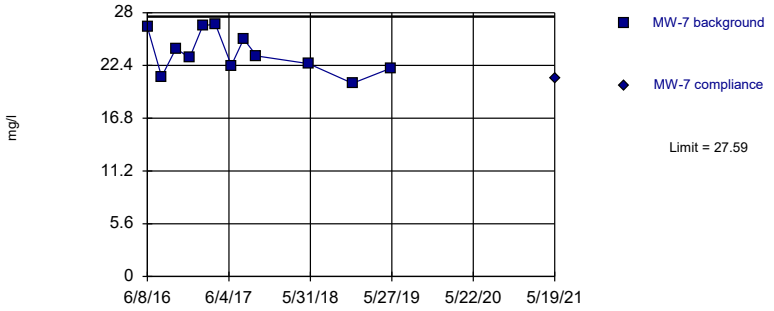
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=23.73, Std. Dev.=2.146, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9333, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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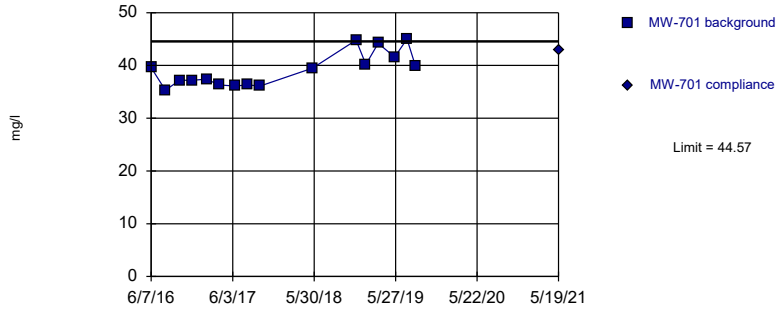
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=39.17, Std. Dev.=3.266, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8786, critical = 0.844. Kappa = 1.654 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

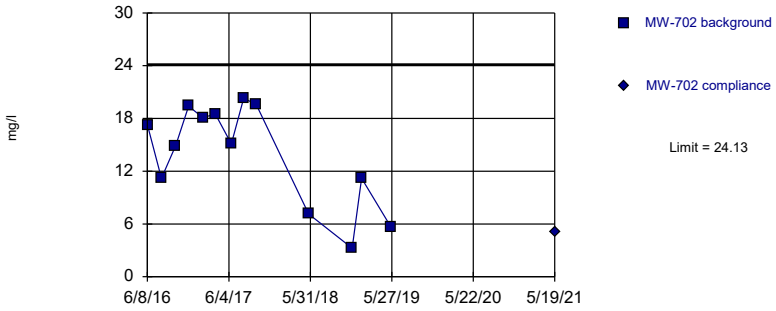
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	71							
6/7/2016							39.6	
6/8/2016			112		26.5			
8/9/2016							35.3	
8/10/2016			101		21.2			
8/11/2016	66.9							
10/11/2016							37.2	
10/12/2016	69.2							
10/13/2016			114		24.2			
12/6/2016							37.2	
12/9/2016	67.1							
12/12/2016			103		23.2			
2/7/2017							37.4	
2/8/2017					26.6			
2/9/2017	63.4		98.8					
4/4/2017							36.3	
4/5/2017			97.9		26.8			
4/6/2017	61.1							
6/13/2017							36.1	
6/15/2017	58.2		90.5		22.4			
8/8/2017							36.3	
8/9/2017			102		25.2			
8/10/2017	62.6							
10/3/2017							36.1	
10/5/2017	65.1		105		23.4			
5/23/2018	53.4		85.6		22.6			
5/24/2018							39.5	
12/3/2018	60.4						44.8	
12/4/2018			86.3		20.5			
1/15/2019							40.2	
3/11/2019							44.2	
5/23/2019	65.4		83.7		22.1		41.6	
7/17/2019							45	
8/23/2019							39.9	
5/19/2021		51.8		73.2		21		43

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=13.97, Std. Dev.=5.757, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8941, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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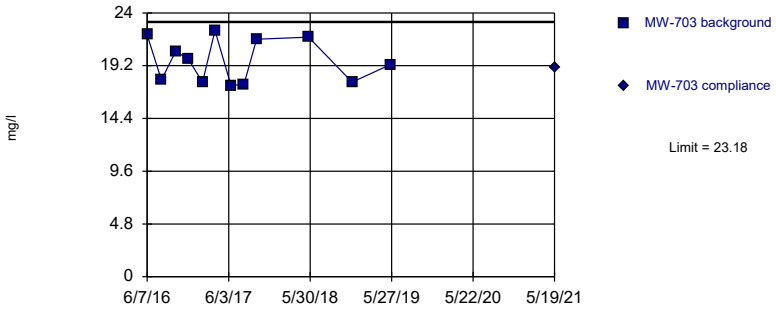
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=19.63, Std. Dev.=1.971, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8622, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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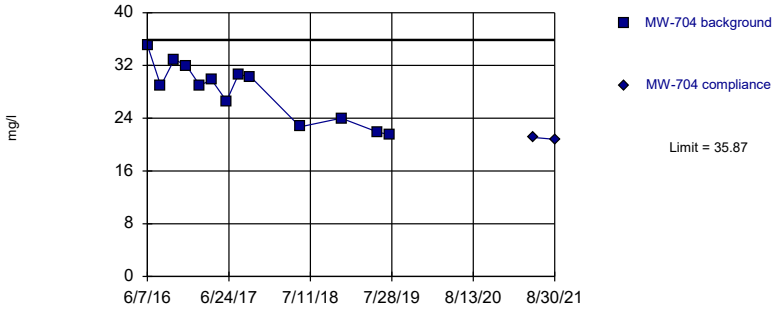
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=28.1, Std. Dev.=4.405, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9368, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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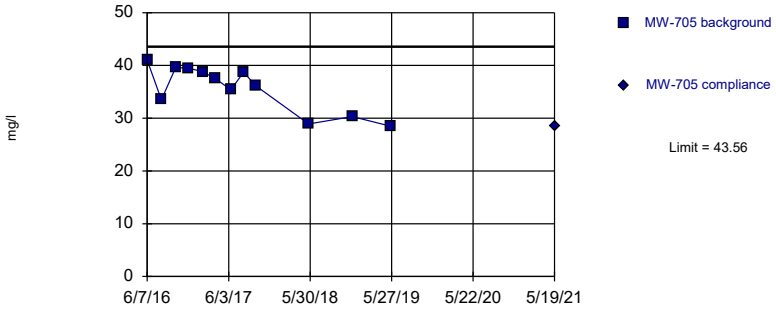
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=35.65, Std. Dev.=4.389, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.892, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

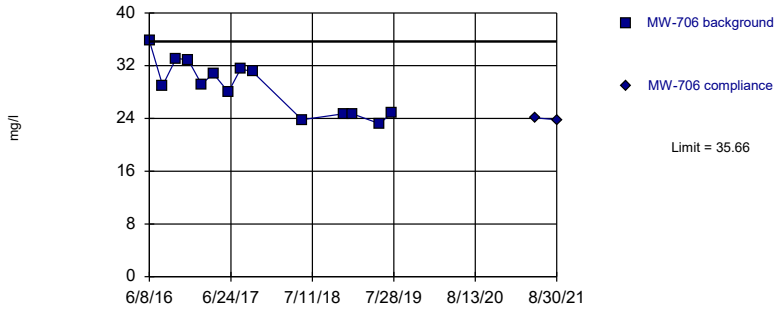
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			22		35.1		41	
6/8/2016	17.3							
8/9/2016	11.2		17.9		28.9		33.5	
10/11/2016	14.9		20.5		32.9		39.6	
12/6/2016			19.8		32			
12/7/2016							39.5	
12/8/2016	19.4							
2/7/2017			17.7		29			
2/8/2017	18.1							
2/9/2017							38.8	
4/4/2017			22.4		29.8			
4/5/2017	18.5							
4/6/2017							37.5	
6/13/2017					26.6		35.4	
6/14/2017			17.4					
6/15/2017	15.1							
8/8/2017					30.6			
8/9/2017	20.3						38.7	
8/10/2017			17.5					
10/3/2017	19.6				30.3		36.1	
10/5/2017			21.6					
5/24/2018	7.13		21.8		22.7		28.9	
12/3/2018	3.24		17.7		24			
12/4/2018							30.3	
1/14/2019	11.2							
5/23/2019	5.7		19.3		21.9		28.5	
7/17/2019					21.5			
5/19/2021		5.07		19		21.1		28.6
8/30/2021						20.8		

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=28.76, Std. Dev.=3.997, n=14. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9349, critical = 0.825. Kappa = 1.728 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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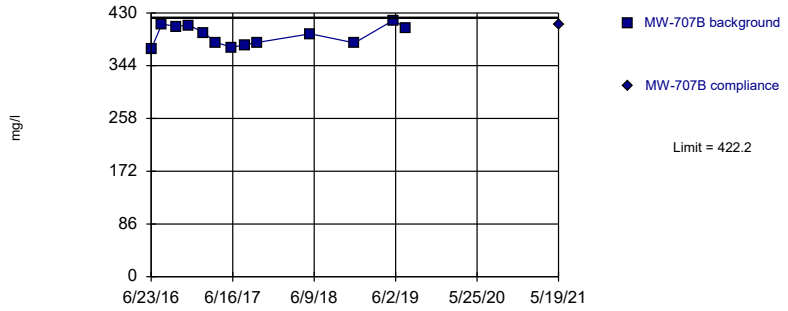
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=393.5, Std. Dev.=16.22, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9122, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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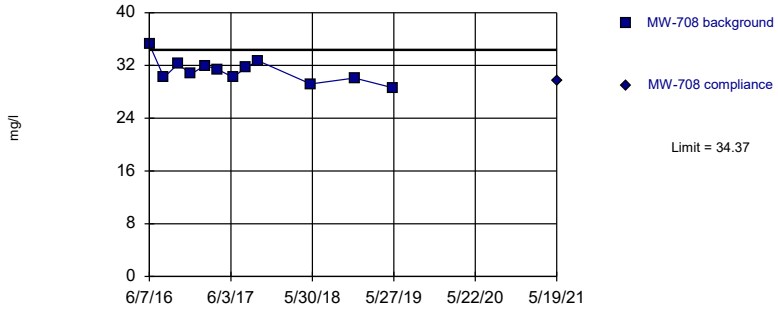
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=31.18, Std. Dev.=1.768, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9496, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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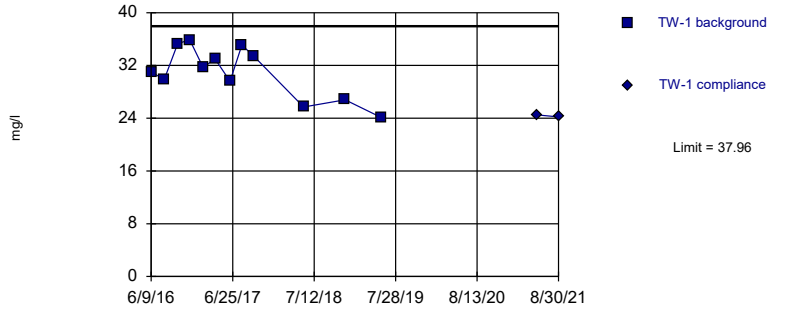
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=30.96, Std. Dev.=3.885, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9425, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CALCIUM Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CALCIUM Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

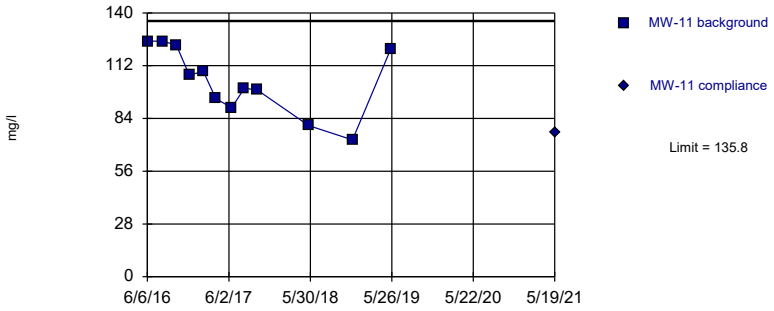
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					35.2			
6/8/2016	35.8							
6/9/2016							31	
6/23/2016			371					
8/9/2016	29		412				29.9	
8/10/2016					30.2			
10/11/2016	33.1		408				35.3	
10/12/2016					32.2			
12/6/2016	32.9		410				35.9	
12/9/2016					30.7			
2/7/2017	29.2		398				31.7	
2/9/2017					32			
4/4/2017	30.8		382				33	
4/6/2017					31.4			
6/13/2017	28		374				29.6	
6/14/2017					30.2			
8/8/2017			378		31.7		35.1	
8/9/2017	31.5							
10/3/2017			382				33.4	
10/4/2017	31.1				32.7			
5/23/2018					29.2			
5/24/2018	23.8		396				25.7	
12/4/2018	24.7		381		30.1		26.8	
1/15/2019	24.7							
5/23/2019	23.2		418		28.6		24.1	
7/17/2019	24.8		406					
5/19/2021		24.1		412		29.6		24.5
8/30/2021		23.8						24.2

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=103.9, Std. Dev.=17.71, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.932, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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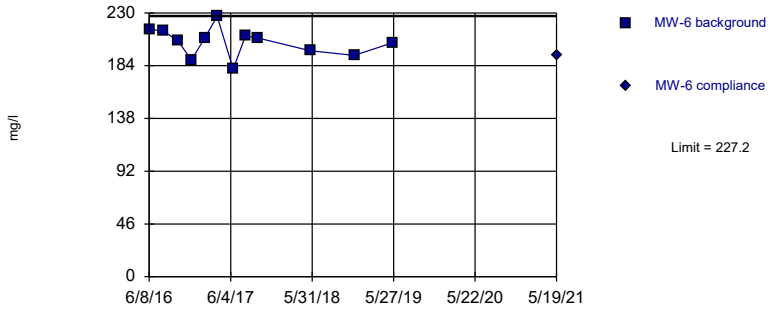
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=204.4, Std. Dev.=12.67, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9786, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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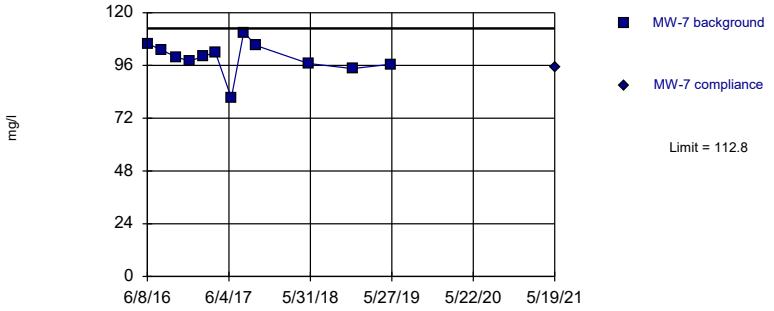
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=99.51, Std. Dev.=7.389, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9149, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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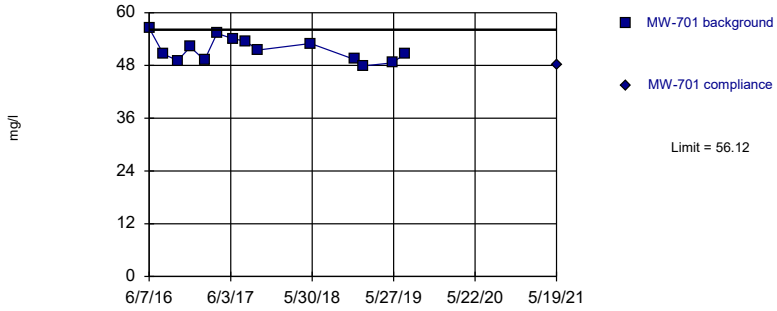
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=51.54, Std. Dev.=2.649, n=14. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9537, critical = 0.825. Kappa = 1.728 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

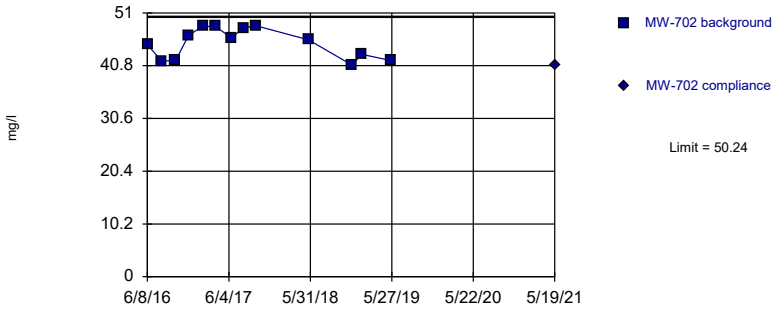
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	125							
6/7/2016							56.5	
6/8/2016			216		106			
8/9/2016							50.6	
8/10/2016			214		103			
8/11/2016	125							
10/11/2016							49.1	
10/12/2016	123							
10/13/2016			206		99.9			
12/6/2016							52.2	
12/9/2016	107							
12/12/2016			189		98			
2/7/2017							49.2	
2/8/2017					100			
2/9/2017	109		208					
4/4/2017							55.3	
4/5/2017			227		102			
4/6/2017	94.5							
6/13/2017							54.1	
6/15/2017	89.7		181		81.2			
8/8/2017							53.5	
8/9/2017			210		111			
8/10/2017	100							
10/3/2017							51.5	
10/5/2017	99.2		208		105			
5/23/2018	80.2		197		96.9			
5/24/2018							53	
12/3/2018	72.6						49.4	
12/4/2018			193		94.6			
1/15/2019							47.9	
5/23/2019	121		204		96.5		48.6	
7/17/2019							50.7	
5/19/2021		76.3		193		95.4		48.2

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=45.09, Std. Dev.=2.916, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8743, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

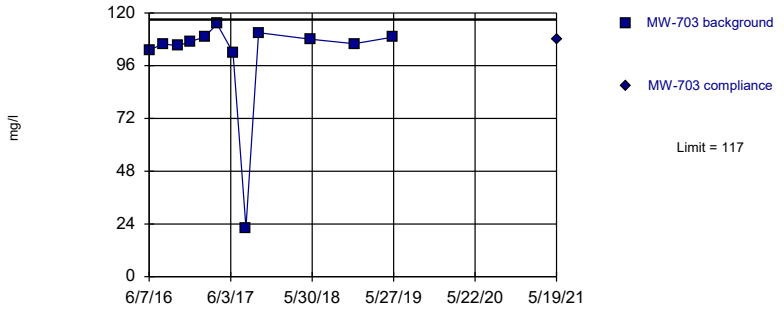
Constituent: CHLORIDE Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on x^5 transformation): Mean=1.3e10, Std. Dev.=4.8e9, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8112, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

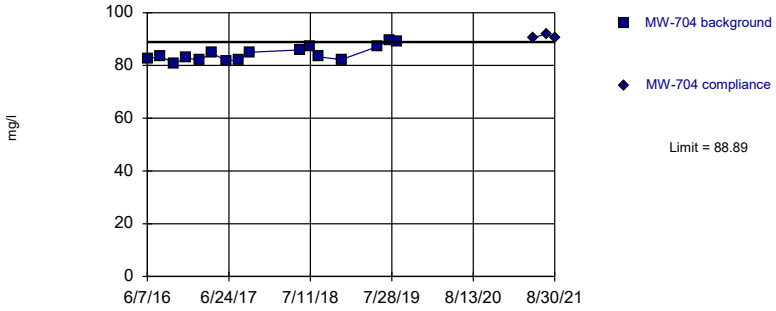
Constituent: CHLORIDE Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=84.36, Std. Dev.=2.74, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9076, critical = 0.844. Kappa = 1.654 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

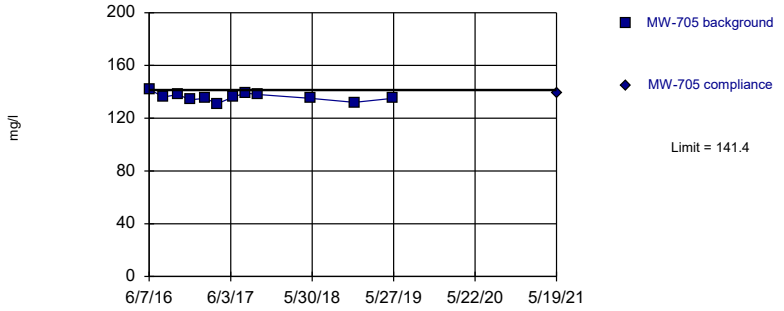
Constituent: CHLORIDE Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=135.9, Std. Dev.=3.029, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9687, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 9/27/2021 1:14 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

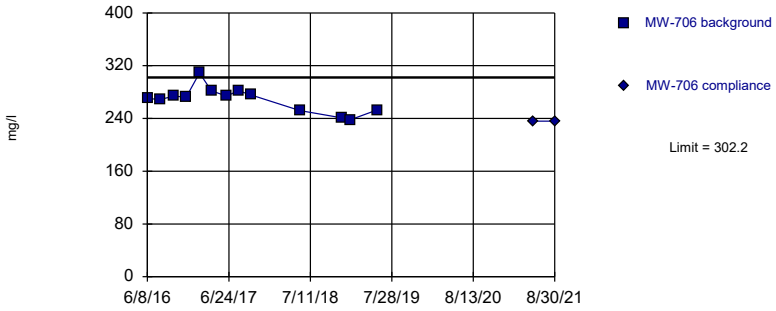
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			103		82.5		142	
6/8/2016	44.9							
8/9/2016	41.7		106		83.4		136	
10/11/2016	41.8		105		80.8		138	
12/6/2016			107		82.9			
12/7/2016							134	
12/8/2016	46.7							
2/7/2017			109		82			
2/8/2017	48.4							
2/9/2017							135	
4/4/2017			115		84.7			
4/5/2017	48.4							
4/6/2017							131	
6/13/2017					81.8		136	
6/14/2017			102					
6/15/2017	46.2							
8/8/2017					82.1			
8/9/2017	48.1						139	
8/10/2017			22.3					
10/3/2017	48.5				85		138	
10/5/2017			111					
5/24/2018	45.8		108		85.9		135	
7/11/2018					87.1			
8/16/2018					83.3			
12/3/2018	40.9		106		82.2			
12/4/2018							132	
1/14/2019	43							
5/23/2019	41.8		109		87.2		135	
7/17/2019					89.7			
8/23/2019					89.2			
5/19/2021		41		108		90.5		139
7/21/2021						91.9		
8/30/2021						90.4		

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=268.6, Std. Dev.=19.01, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9333, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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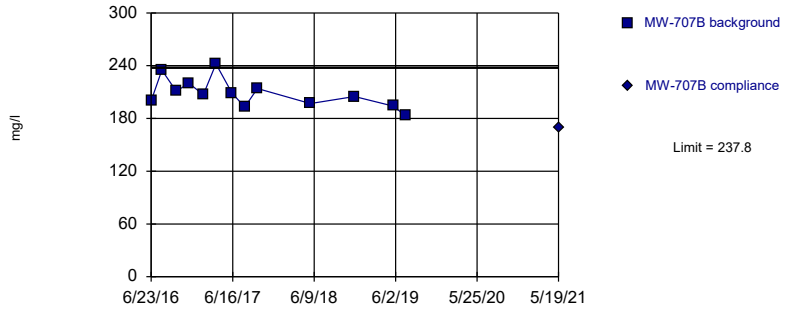
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=208.5, Std. Dev.=16.62, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9526, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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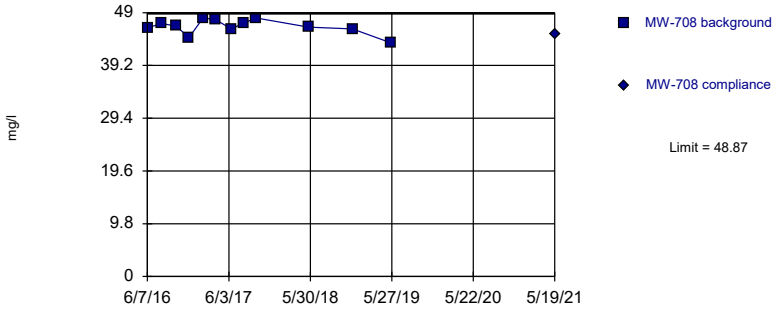
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=46.38, Std. Dev.=1.383, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9073, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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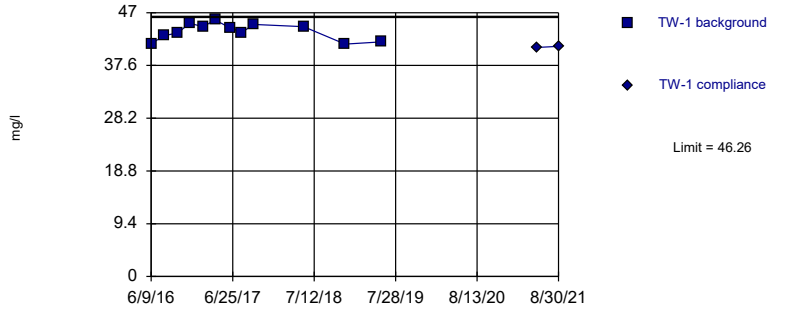
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=43.63, Std. Dev.=1.461, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9241, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: CHLORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: CHLORIDE Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

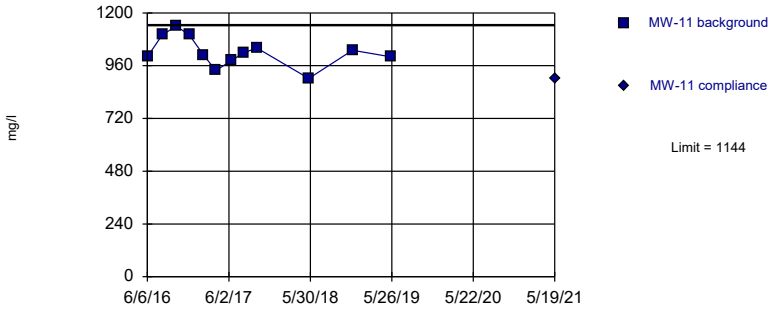
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					46.2			
6/8/2016	270							
6/9/2016							41.5	
6/23/2016			200					
8/9/2016	269		235				42.9	
8/10/2016					47			
10/11/2016	274		211				43.4	
10/12/2016					46.5			
12/6/2016	272		220				45.1	
12/9/2016					44.4			
2/7/2017	309		207				44.5	
2/9/2017					48			
4/4/2017	282		242				45.7	
4/6/2017					47.7			
6/13/2017	274		209				44.3	
6/14/2017					46			
8/8/2017			193		47.1		43.5	
8/9/2017	282							
10/3/2017			214				44.9	
10/4/2017	276				48			
5/23/2018					46.3			
5/24/2018	252		197				44.5	
12/4/2018	241		205		46		41.4	
1/15/2019	238							
5/23/2019	253		194		43.4		41.8	
7/17/2019			183					
5/19/2021		236		170		45		40.8
8/30/2021		236						41

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1022, Std. Dev.=67.75, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9655, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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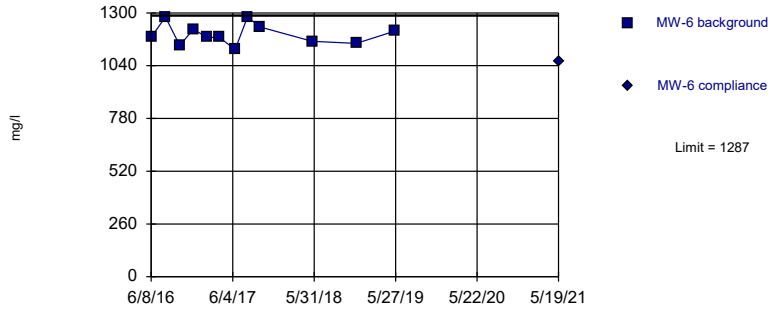
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1194, Std. Dev.=51.43, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9382, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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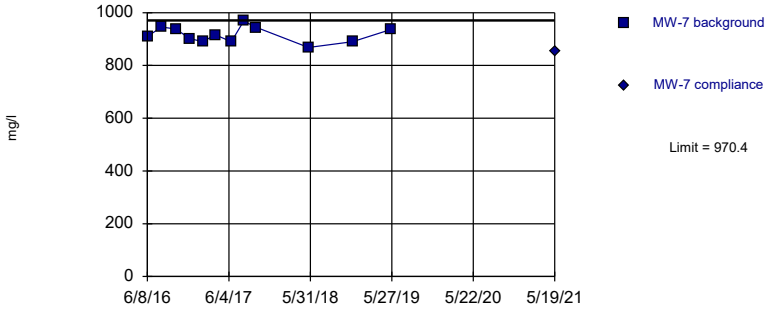
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=916.5, Std. Dev.=29.9, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9564, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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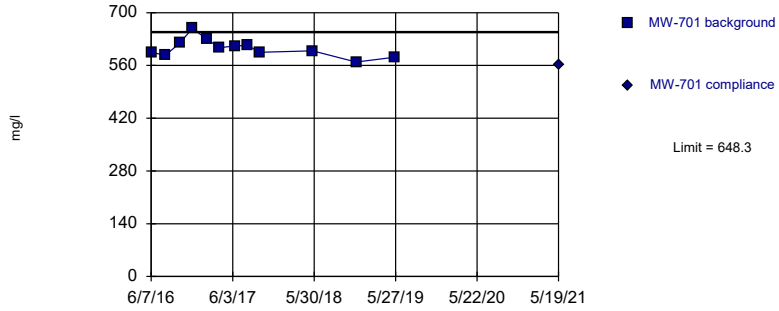
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=605.6, Std. Dev.=23.7, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9644, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

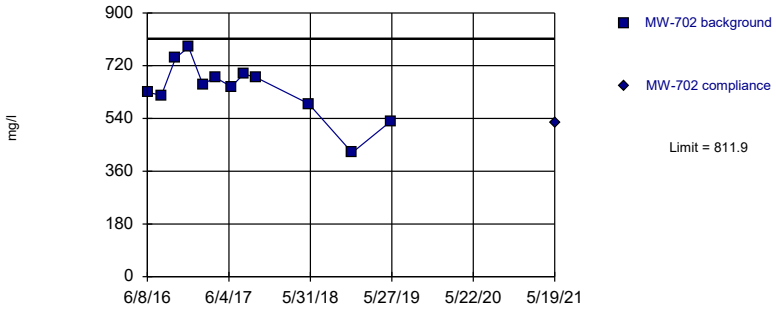
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	1000							
6/7/2016							595	
6/8/2016			1180		910			
8/9/2016							587	
8/10/2016			1280		946			
8/11/2016	1100							
10/11/2016							619	
10/12/2016	1140							
10/13/2016			1140		938			
12/6/2016							658	
12/9/2016	1100							
12/12/2016			1220		902			
2/7/2017							631	
2/8/2017					890			
2/9/2017	1010		1180					
4/4/2017							607	
4/5/2017			1180		916			
4/6/2017	938							
6/13/2017							612	
6/15/2017	984		1120		890			
8/8/2017							613	
8/9/2017			1280		968			
8/10/2017	1020							
10/3/2017							595	
10/5/2017	1040		1230		944			
5/23/2018	902		1160		868			
5/24/2018							599	
12/3/2018	1030						569	
12/4/2018			1150		890			
5/23/2019	1000		1210		936		582	
5/19/2021		900		1060		854		561

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=639.8, Std. Dev.=95.54, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9438, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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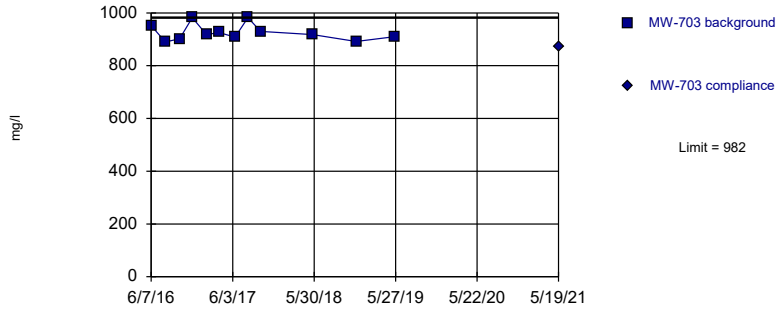
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=925.8, Std. Dev.=31.19, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8793, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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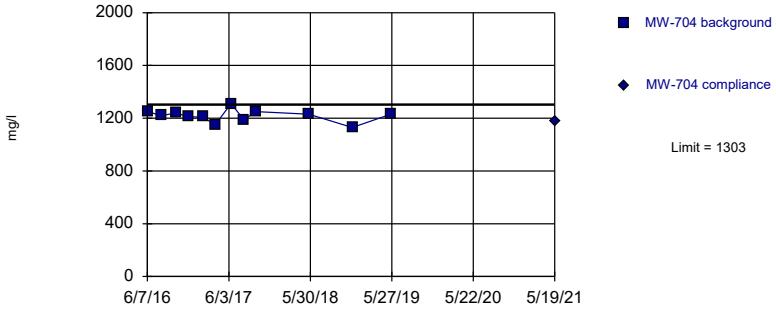
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1218, Std. Dev.=47.26, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9502, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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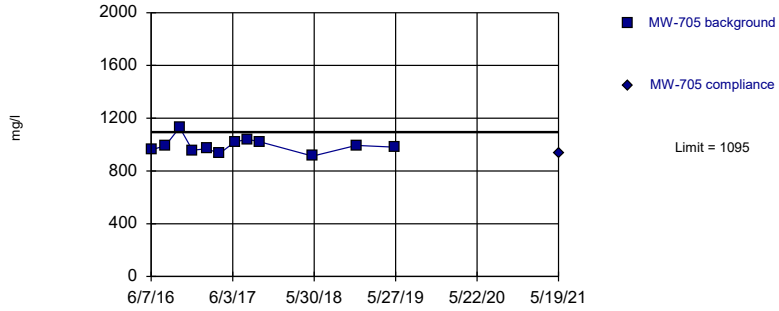
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=992.2, Std. Dev.=57.06, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9257, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

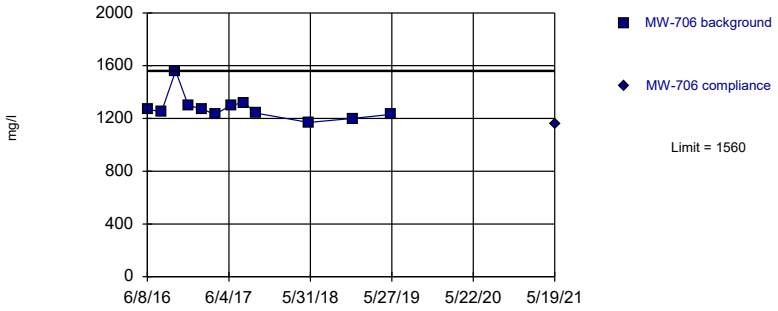
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			952		1250		960	
6/8/2016	629							
8/9/2016	619		890		1220		992	
10/11/2016	747		902		1240		1130	
12/6/2016			982		1210			
12/7/2016							958	
12/8/2016	783							
2/7/2017			918		1210			
2/8/2017	657							
2/9/2017							968	
4/4/2017			926		1150			
4/5/2017	680							
4/6/2017							932	
6/13/2017					1310		1020	
6/14/2017			908					
6/15/2017	648							
8/8/2017					1190			
8/9/2017	692						1040	
8/10/2017			982					
10/3/2017	680				1250		1020	
10/5/2017			930					
5/24/2018	590		918		1230		912	
12/3/2018	423		892		1130			
12/4/2018							994	
5/23/2019	530		910		1230		980	
5/19/2021		527		870		1180		932

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 12 background values. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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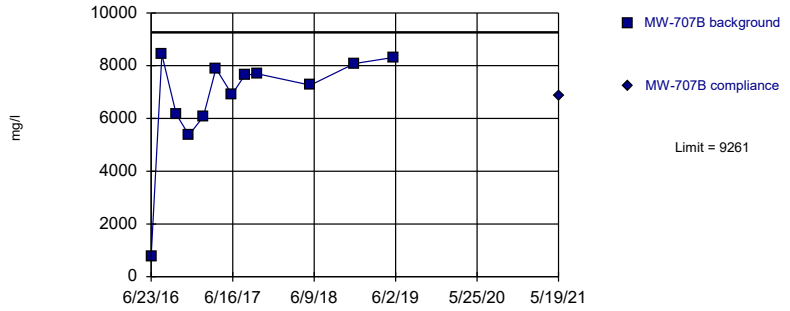
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=4.9e7, Std. Dev.=2.0e7, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8899, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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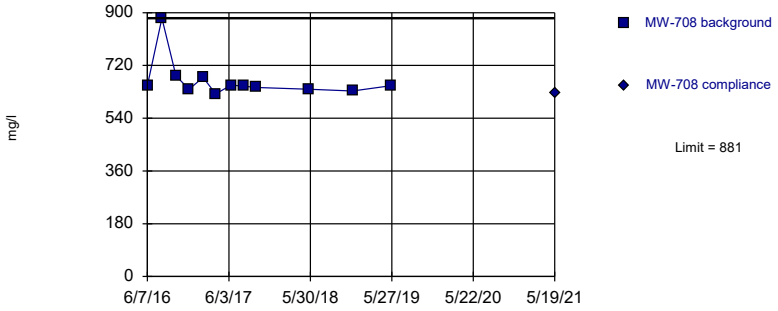
Within Limit

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 12 background values. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

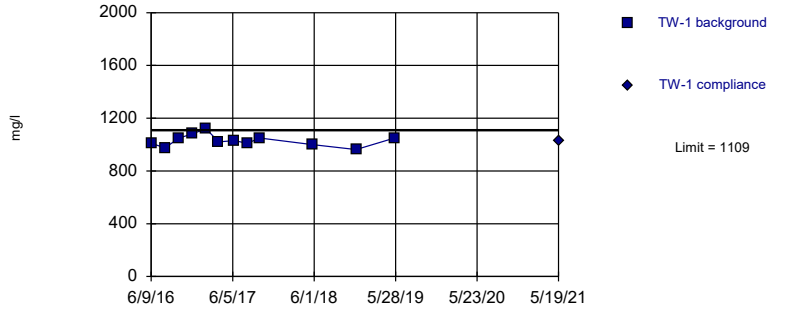
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1030, Std. Dev.=43.84, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9694, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: DISSOLVED SOLIDS Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

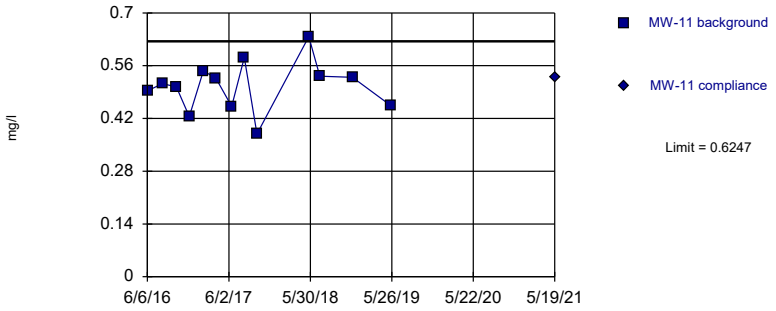
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					651			
6/8/2016	1270							
6/9/2016							1010	
6/23/2016			770					
8/9/2016	1250		8420				976	
8/10/2016					881			
10/11/2016	1560		6160				1050	
10/12/2016					684			
12/6/2016	1300		5370				1080	
12/9/2016					639			
2/7/2017	1270		6070				1120	
2/9/2017					679			
4/4/2017	1230		7890				1020	
4/6/2017					623			
6/13/2017	1300		6910				1030	
6/14/2017					653			
8/8/2017			7640		649		1010	
8/9/2017	1320							
10/3/2017			7690				1050	
10/4/2017	1240				645			
5/23/2018					639			
5/24/2018	1170		7260				1000	
12/4/2018	1200		8080		633		962	
5/23/2019	1230		8310		651		1050	
5/19/2021		1160		6860		624		1030

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.5055, Std. Dev.=0.06751, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.981, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

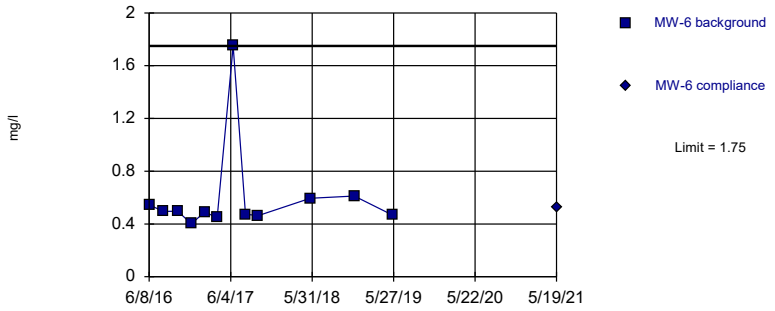
Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

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 12 background values. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

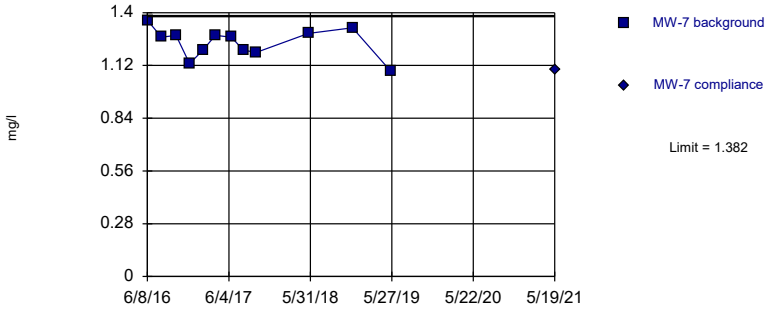
Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.24, Std. Dev.=0.07897, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9444, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

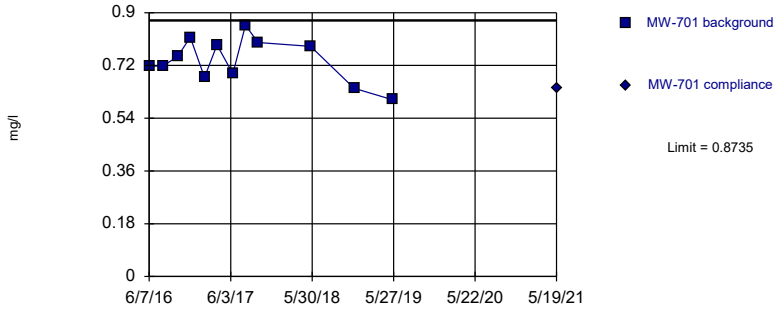
Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.7374, Std. Dev.=0.07554, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.977, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

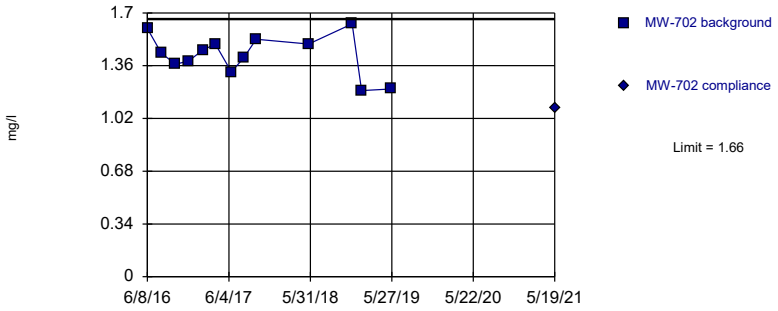
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	0.493							
6/7/2016							0.717	
6/8/2016			0.545		1.36			
8/9/2016							0.719	
8/10/2016			0.495		1.27			
8/11/2016	0.512							
10/11/2016							0.751	
10/12/2016	0.504							
10/13/2016			0.497		1.28			
12/6/2016							0.816	
12/9/2016	0.425							
12/12/2016			0.401		1.13			
2/7/2017							0.679	
2/8/2017					1.2			
2/9/2017	0.546		0.492					
4/4/2017							0.79	
4/5/2017			0.447		1.28			
4/6/2017	0.527							
6/13/2017							0.692	
6/15/2017	0.452		1.75		1.27			
8/8/2017							0.857	
8/9/2017			0.473		1.2			
8/10/2017	0.582							
10/3/2017							0.798	
10/5/2017	0.379		0.464		1.19			
5/23/2018	0.637		0.595		1.29			
5/24/2018							0.785	
7/11/2018	0.532							
12/3/2018	0.529						0.642	
12/4/2018			0.612		1.32			
5/23/2019	0.454		0.467		1.09		0.603	
5/19/2021		0.53		0.522		1.1		0.641

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.428, Std. Dev.=0.1319, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9609, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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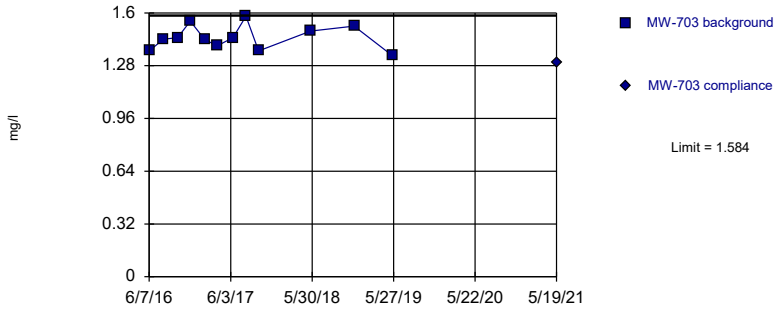
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.45, Std. Dev.=0.07447, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9597, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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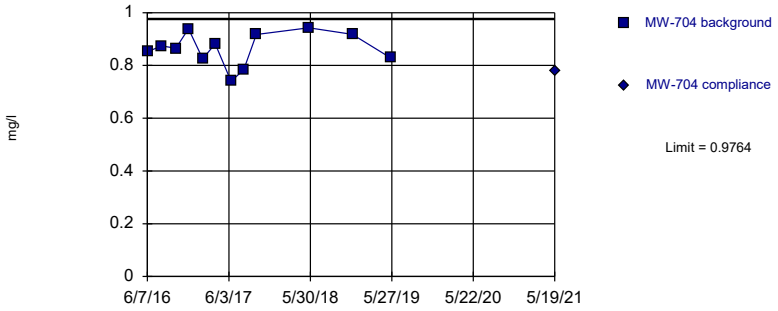
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.8638, Std. Dev.=0.06246, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9508, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

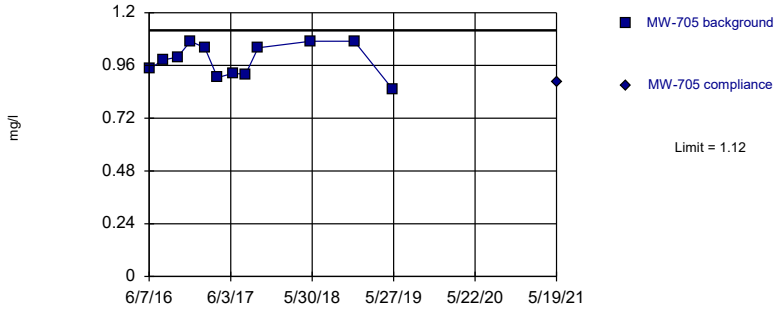
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.9848, Std. Dev.=0.07484, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9122, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

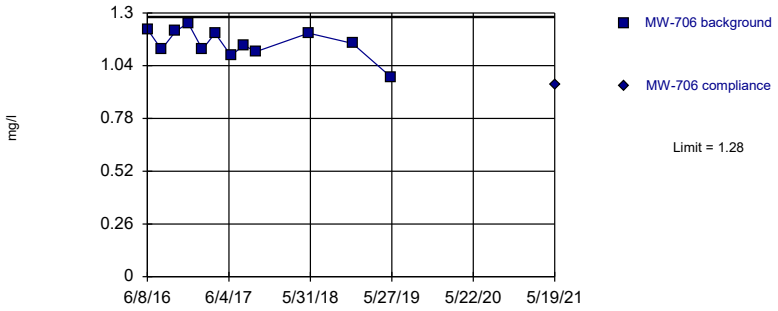
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			1.37		0.852		0.944	
6/8/2016	1.6							
8/9/2016	1.44		1.44		0.874		0.985	
10/11/2016	1.37		1.45		0.865		0.998	
12/6/2016			1.55		0.939			
12/7/2016							1.07	
12/8/2016	1.39							
2/7/2017			1.44		0.825			
2/8/2017	1.46							
2/9/2017							1.04	
4/4/2017			1.4		0.882			
4/5/2017	1.5							
4/6/2017							0.905	
6/13/2017					0.74		0.924	
6/14/2017			1.45					
6/15/2017	1.32							
8/8/2017					0.783			
8/9/2017	1.41						0.92	
8/10/2017			1.58					
10/3/2017	1.53				0.917		1.04	
10/5/2017			1.37					
5/24/2018	1.5		1.49		0.943		1.07	
12/3/2018	1.63		1.52		0.918			
12/4/2018							1.07	
1/14/2019	1.2							
5/23/2019	1.21		1.34		0.828		0.852	
5/19/2021		1.09		1.3		0.781		0.887

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.15, Std. Dev.=0.0725, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.932, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

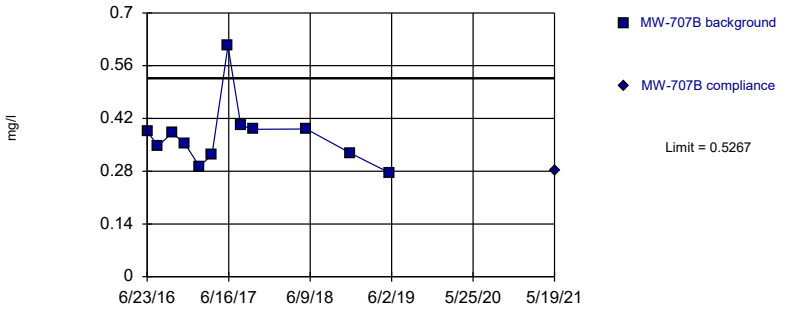
Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=0.6082, Std. Dev.=0.06525, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8325, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

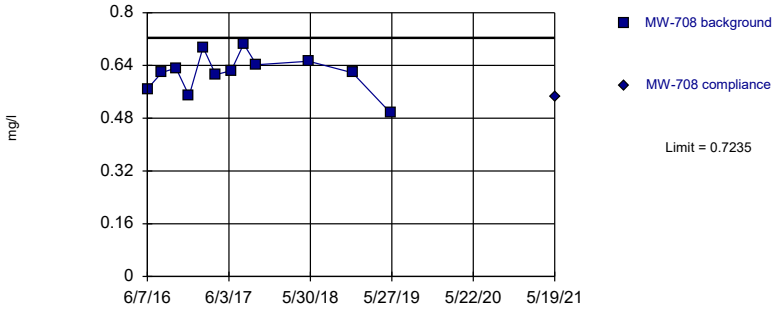
Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.6177, Std. Dev.=0.05877, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9478, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

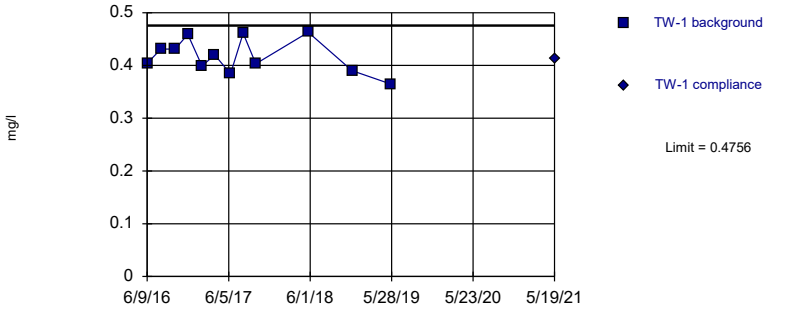
Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.4175, Std. Dev.=0.03223, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9393, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: FLUORIDE Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: FLUORIDE Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

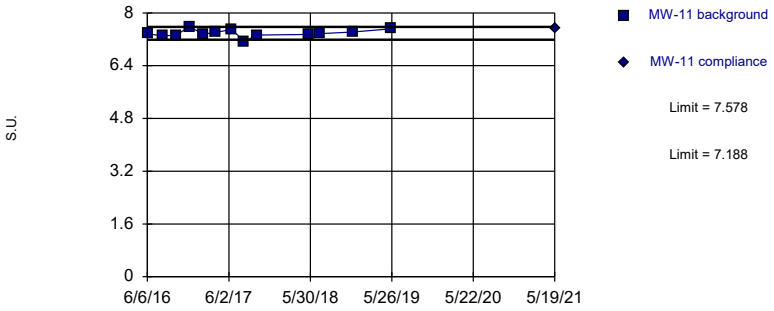
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					0.569			
6/8/2016	1.22							
6/9/2016							0.404	
6/23/2016			0.386					
8/9/2016	1.12		0.347				0.431	
8/10/2016					0.619			
10/11/2016	1.21		0.382				0.431	
10/12/2016					0.632			
12/6/2016	1.25		0.353				0.459	
12/9/2016					0.548			
2/7/2017	1.12		0.293				0.399	
2/9/2017					0.695			
4/4/2017	1.2		0.323				0.42	
4/6/2017					0.612			
6/13/2017	1.09		0.613				0.384	
6/14/2017					0.624			
8/8/2017			0.402		0.705		0.461	
8/9/2017	1.14							
10/3/2017			0.391				0.403	
10/4/2017	1.11				0.642			
5/23/2018					0.653			
5/24/2018	1.2		0.392				0.463	
12/4/2018	1.15		0.328		0.618		0.39	
5/23/2019	0.985		0.276		0.495		0.365	
5/19/2021		0.946		0.281		0.546		0.412

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.383, Std. Dev.=0.1106, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9444, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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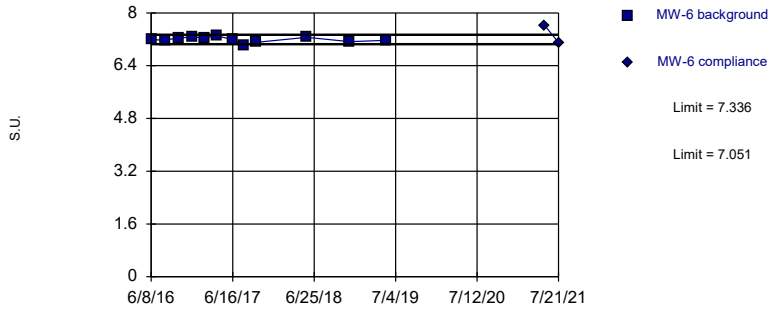
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.193, Std. Dev.=0.07912, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9482, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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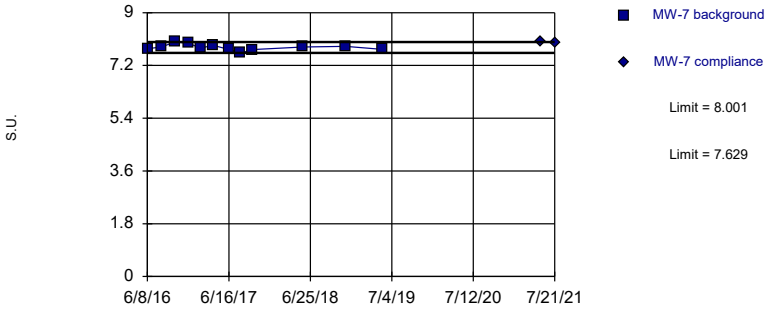
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.815, Std. Dev.=0.1033, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9663, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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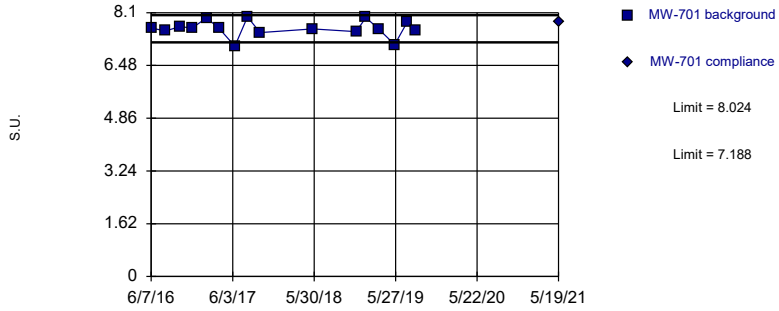
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.606, Std. Dev.=0.2528, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8939, critical = 0.844. Kappa = 1.654 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

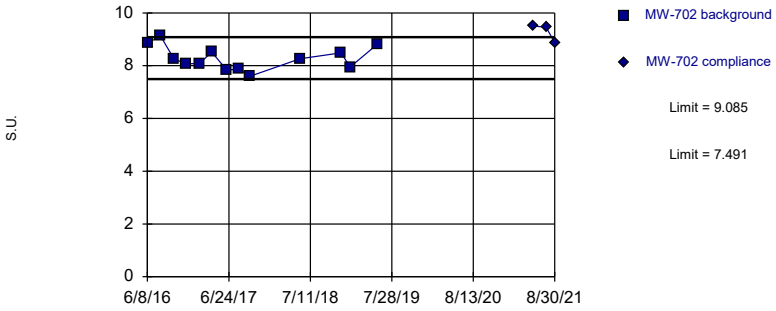
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	7.37							
6/7/2016							7.63	
6/8/2016			7.19		7.77			
8/9/2016							7.54	
8/10/2016			7.18		7.83			
8/11/2016	7.3							
10/11/2016							7.67	
10/12/2016	7.33							
10/13/2016			7.24		8			
12/6/2016							7.63	
12/9/2016	7.58							
12/12/2016			7.27		7.96			
2/7/2017							7.94	
2/8/2017					7.79			
2/9/2017	7.36		7.25					
4/4/2017							7.62	
4/5/2017			7.3		7.89			
4/6/2017	7.41							
6/13/2017							7.07	
6/15/2017	7.5		7.2		7.75			
8/8/2017							7.97	
8/9/2017			7.02		7.62			
8/10/2017	7.14							
10/3/2017							7.49	
10/5/2017	7.33		7.11		7.74			
5/23/2018	7.35		7.26		7.83			
5/24/2018							7.6	
7/11/2018	7.37							
12/3/2018	7.42						7.52	
12/4/2018			7.13		7.85			
1/15/2019							7.95	
3/11/2019							7.61	
5/23/2019	7.52		7.17		7.75		7.12	
7/17/2019							7.8	
8/23/2019							7.54	
5/19/2021		7.55		7.62		8.01		7.83
7/21/2021				7.1		7.97		

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=8.288, Std. Dev.=0.4518, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9627, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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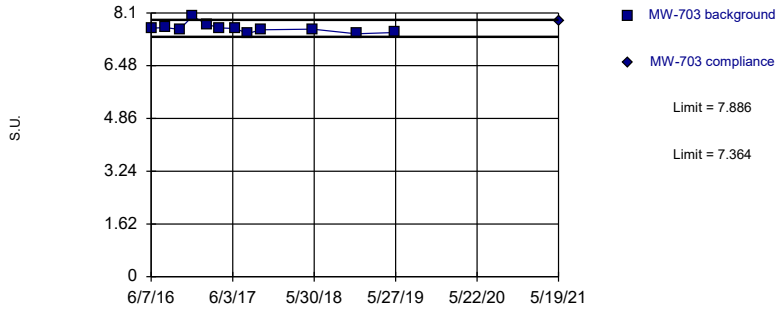
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.625, Std. Dev.=0.1448, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8441, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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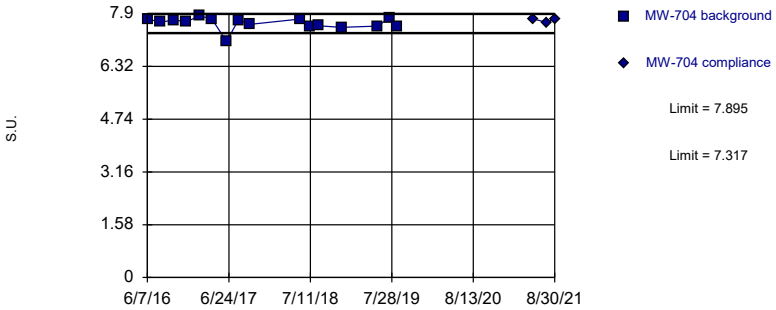
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube transformation): Mean=441.9, Std. Dev.=30.33, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8534, critical = 0.844. Kappa = 1.654 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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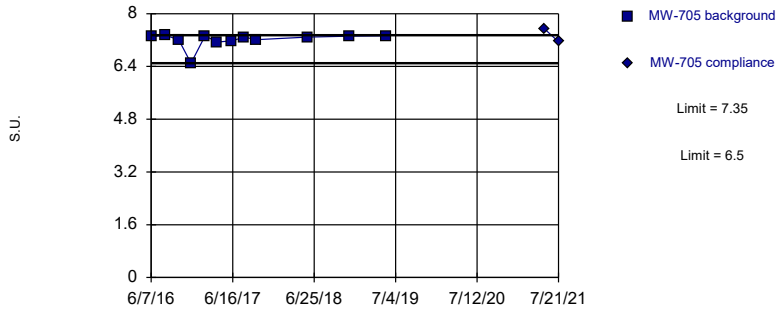
Within Limits

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 12 background values. Well-constituent pair annual alpha = 0.008684. Individual comparison alpha = 0.004347 (1 of 3).

Constituent: pH Analysis Run 9/27/2021 1:15 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

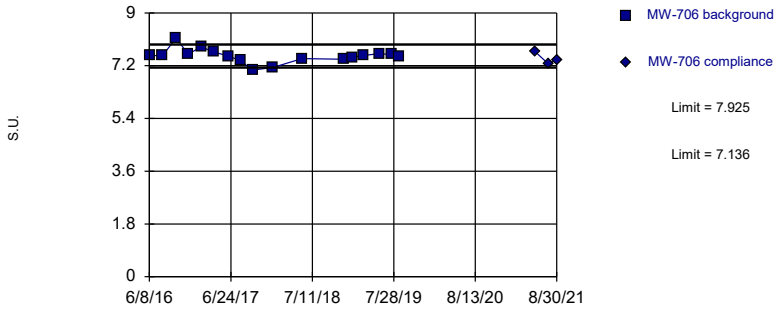
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			7.63		7.74		7.3	
6/8/2016	8.86							
8/9/2016	9.12		7.65		7.65		7.35	
10/11/2016	8.25		7.59		7.71		7.21	
12/6/2016					7.66			
12/7/2016			8				6.5	
12/8/2016	8.07							
2/7/2017			7.76		7.83			
2/8/2017	8.09							
2/9/2017							7.33	
4/4/2017			7.64		7.75			
4/5/2017	8.52							
4/6/2017							7.14	
6/13/2017					7.07		7.18	
6/14/2017			7.62					
6/15/2017	7.84							
8/8/2017					7.71			
8/9/2017	7.87						7.29	
8/10/2017			7.47					
10/3/2017	7.6				7.58		7.21	
10/5/2017			7.58					
5/24/2018	8.26		7.6		7.74		7.29	
7/11/2018					7.53			
8/16/2018					7.54			
12/3/2018	8.49		7.46		7.49			
12/4/2018							7.32	
1/14/2019	7.95							
5/23/2019	8.82		7.5		7.53		7.33	
7/17/2019					7.78			
8/23/2019					7.5			
5/19/2021		9.51		7.87		7.75		7.53
7/21/2021		9.45				7.64		7.15
8/30/2021		8.87				7.74		

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.531, Std. Dev.=0.2415, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9134, critical = 0.851. Kappa = 1.633 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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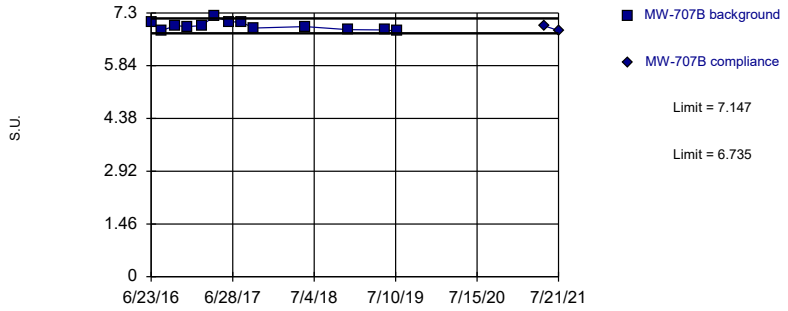
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.941, Std. Dev.=0.1167, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9309, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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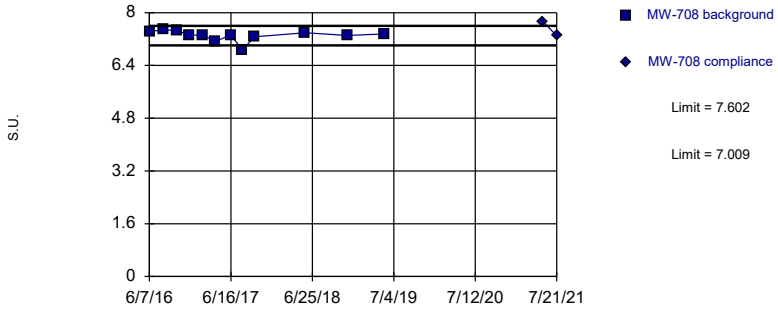
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.306, Std. Dev.=0.1645, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8257, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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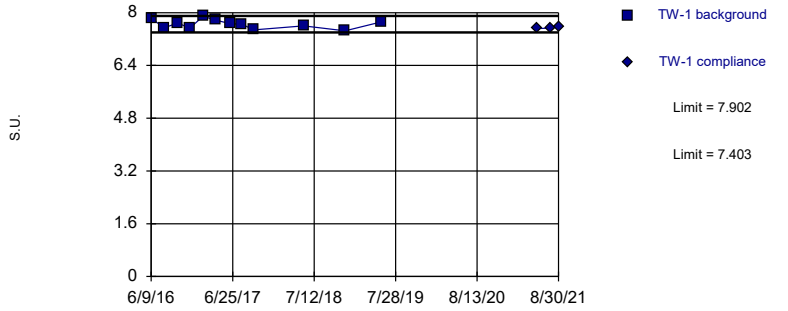
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=7.653, Std. Dev.=0.1387, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9714, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: pH Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: pH Analysis Run 9/27/2021 1:23 PM View: Upper AQC III

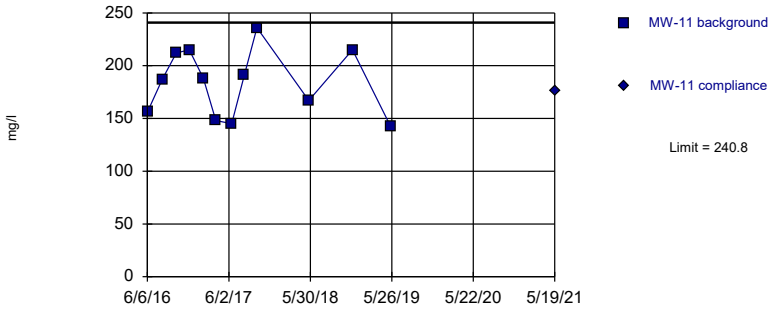
LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					7.43			
6/8/2016	7.54							
6/9/2016							7.83	
6/23/2016			7.03					
8/9/2016	7.55		6.81				7.54	
8/10/2016					7.48			
10/11/2016	8.14		6.95				7.69	
10/12/2016					7.46			
12/6/2016	7.6		6.92				7.53	
12/9/2016					7.32			
2/7/2017	7.84		6.95				7.89	
2/9/2017					7.32			
4/4/2017	7.67		7.2				7.78	
4/6/2017					7.12			
6/13/2017	7.53		7.06				7.67	
6/14/2017					7.33			
8/8/2017			7.04		6.88		7.65	
8/9/2017	7.37							
10/3/2017			6.88				7.48	
10/4/2017	7.05				7.27			
1/9/2018	7.14							
5/23/2018					7.39			
5/24/2018	7.44		6.92				7.6	
12/4/2018	7.42		6.84		7.31		7.45	
1/15/2019	7.49							
3/11/2019	7.55							
5/23/2019	7.61		6.83		7.36		7.72	
7/17/2019	7.58		6.8					
8/23/2019	7.5							
5/19/2021		7.69		6.94		7.73		7.52
7/21/2021		7.27		6.81		7.3		7.53
8/30/2021		7.4						7.59

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=183.5, Std. Dev.=31.82, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9268, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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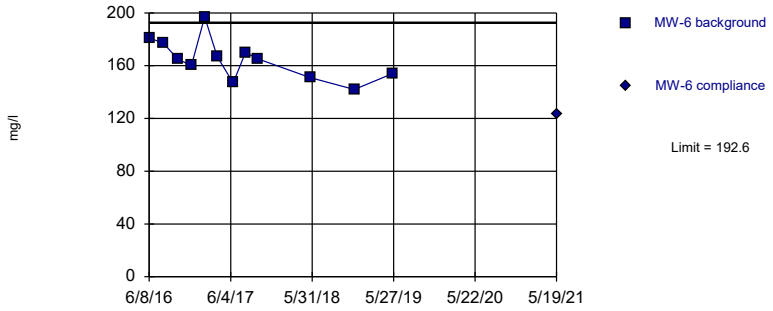
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=164.7, Std. Dev.=15.51, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9713, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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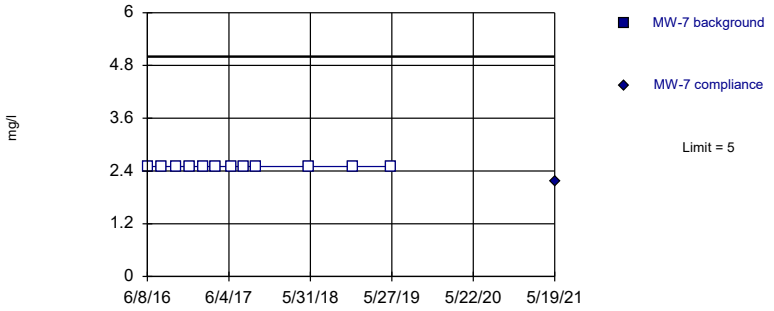
Hollow symbols indicate censored values.

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 = 12) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

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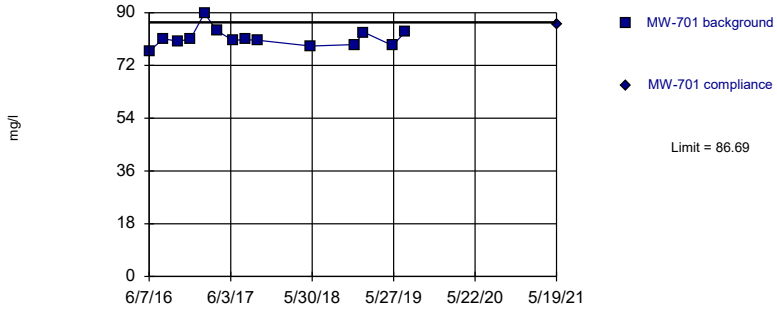
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=81.29, Std. Dev.=3.127, n=14. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8698, critical = 0.825. Kappa = 1.728 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE Analysis Run 9/27/2021 1:24 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-11	MW-11	MW-6	MW-6	MW-7	MW-7	MW-701	MW-701
6/6/2016	156							
6/7/2016							76.9	
6/8/2016			181		<5			
8/9/2016							81.1	
8/10/2016			177		<5			
8/11/2016	187							
10/11/2016							80.3	
10/12/2016	212							
10/13/2016			165		<5			
12/6/2016							80.9	
12/9/2016	215							
12/12/2016			160		<5			
2/7/2017							89.8	
2/8/2017					<5			
2/9/2017	188		197					
4/4/2017							83.8	
4/5/2017			167		<5			
4/6/2017	148							
6/13/2017							80.6	
6/15/2017	145		147		<5			
8/8/2017							80.8	
8/9/2017			170		<5			
8/10/2017	191							
10/3/2017							80.6	
10/5/2017	236		165		<5			
5/23/2018	167		151		<5			
5/24/2018							78.6	
12/3/2018	215						79.1	
12/4/2018			142		<5			
1/15/2019							83.3	
5/23/2019	142		154		<5		78.8	
7/17/2019							83.4	
5/19/2021		176		123		2.17		86.2

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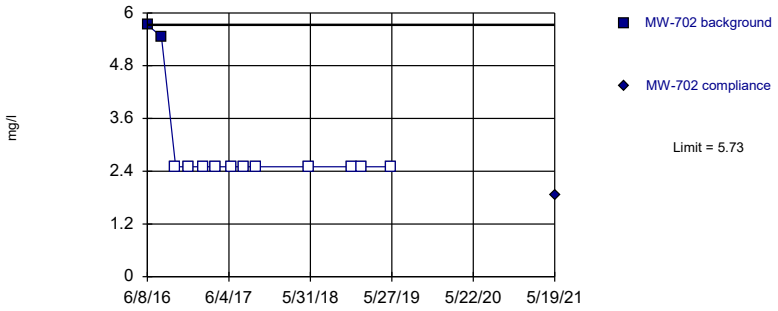
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 84.62% NDs. Well-constituent pair annual alpha = 0.003769. Individual comparison alpha = 0.001886 (1 of 3).

Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

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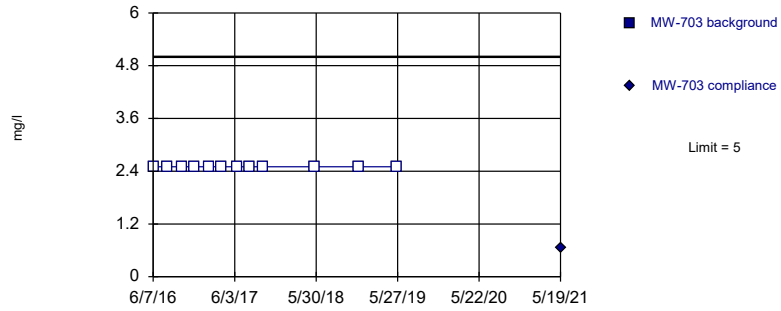
Hollow symbols indicate censored values.

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 = 12) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.004342. Individual comparison alpha = 0.002173 (1 of 3).

Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

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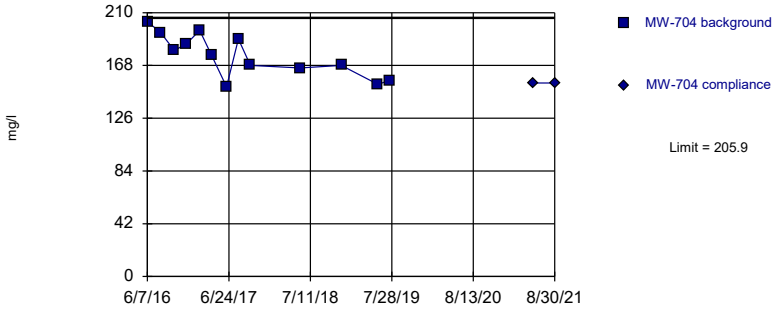
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=175.8, Std. Dev.=17.08, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9535, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

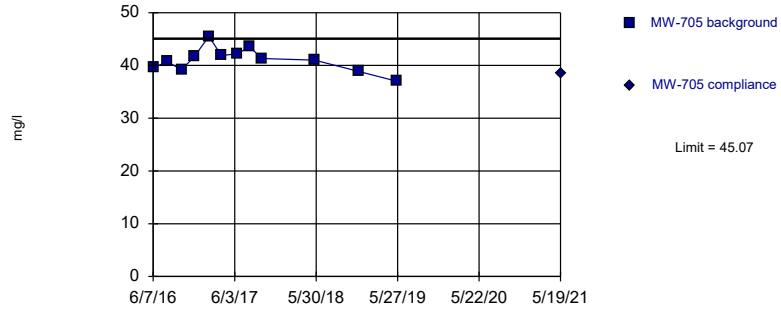
Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=41.04, Std. Dev.=2.236, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.983, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III
LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE Analysis Run 9/27/2021 1:24 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

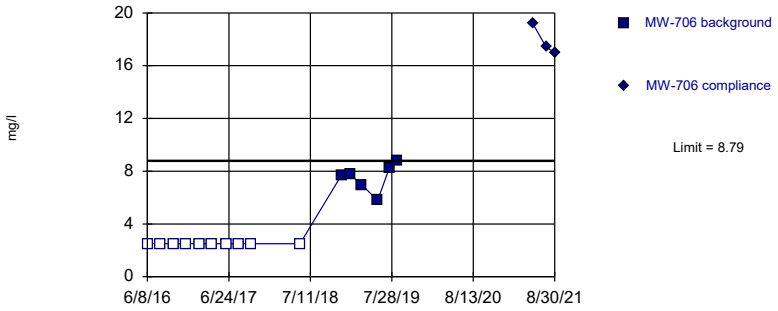
	MW-702	MW-702	MW-703	MW-703	MW-704	MW-704	MW-705	MW-705
6/7/2016			<5		203		39.6	
6/8/2016	5.73							
8/9/2016	5.46		<5		194		40.7	
10/11/2016	<5		<5		180		39.2	
12/6/2016			<5		185			
12/7/2016							41.7	
12/8/2016	<5							
2/7/2017			<5		196			
2/8/2017	<5							
2/9/2017							45.5	
4/4/2017			<5		176			
4/5/2017	<5							
4/6/2017							41.9	
6/13/2017					151		42.2	
6/14/2017			<5					
6/15/2017	<5							
8/8/2017					189			
8/9/2017	<5						43.5	
8/10/2017			<5					
10/3/2017	<5				168		41.3	
10/5/2017			<5					
5/24/2018	<5		<5		166		41	
12/3/2018	<5		<5		168			
12/4/2018							38.9	
1/14/2019	<5							
5/23/2019	<5		<5		153		37	
7/17/2019					156			
5/19/2021		1.85		0.657		154		38.6
8/30/2021						154		

Hollow symbols indicate censored values.

Exceeds Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.002051. Individual comparison alpha = 0.001026 (1 of 3).

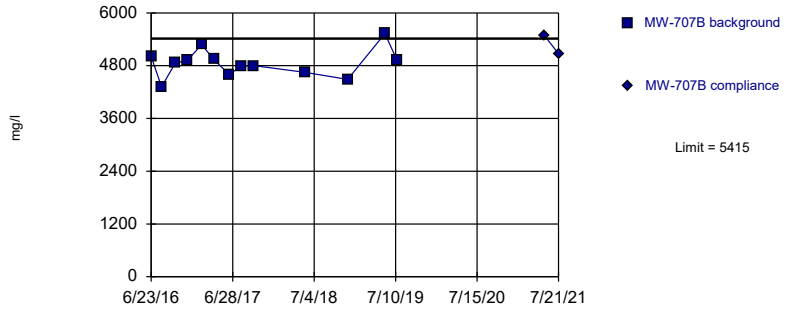
Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4855, Std. Dev.=317.5, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9647, critical = 0.814. Kappa = 1.765 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

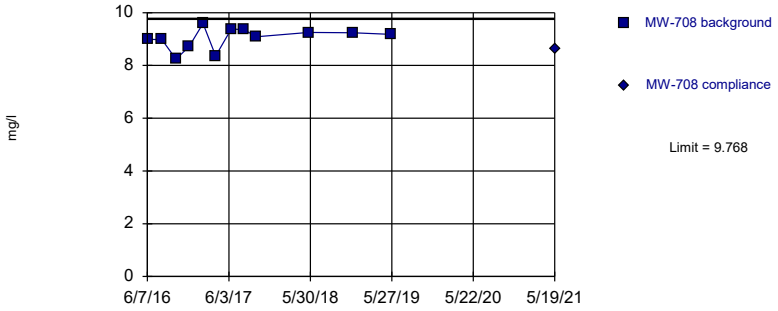
Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=9.032, Std. Dev.=0.4086, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.916, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

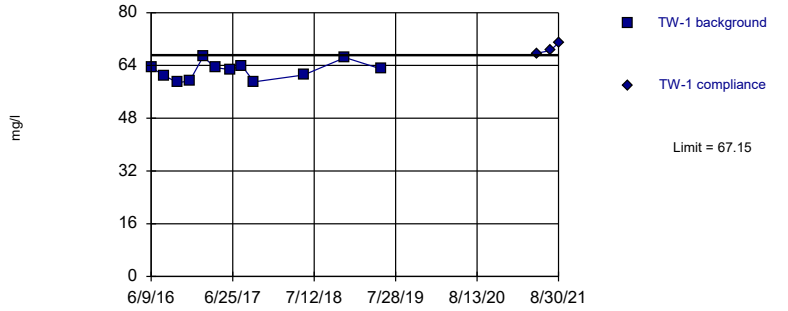
Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=62.38, Std. Dev.=2.648, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9322, critical = 0.805. Kappa = 1.802 (c=7, w=9, 1 of 3, event alpha = 0.05132). Report alpha = 0.0008358.

Constituent: SULFATE Analysis Run 9/27/2021 1:16 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

Prediction Limit

Constituent: SULFATE Analysis Run 9/27/2021 1:24 PM View: Upper AQC III

LaCygne Client: SCS Engineers Data: LaC GW Data

	MW-706	MW-706	MW-707B	MW-707B	MW-708	MW-708	TW-1	TW-1
6/7/2016					8.99			
6/8/2016	<5							
6/9/2016							63.4	
6/23/2016			5010					
8/9/2016	<5		4320				60.9	
8/10/2016					8.98			
10/11/2016	<5		4860				58.8	
10/12/2016					8.24			
12/6/2016	<5		4920				59.3	
12/9/2016					8.72			
2/7/2017	<5		5280				66.7	
2/9/2017					9.59			
4/4/2017	<5		4940				63.4	
4/6/2017					8.36			
6/13/2017	<5		4600				62.7	
6/14/2017					9.38			
8/8/2017			4790		9.36		63.9	
8/9/2017	<5							
10/3/2017			4800				59	
10/4/2017	<5				9.09			
5/23/2018					9.25			
5/24/2018	<5		4650				61.1	
12/4/2018	7.69		4490		9.24		66.4	
1/15/2019	7.73							
3/11/2019	6.96							
5/23/2019	5.78		5530		9.18		62.9	
7/17/2019	8.27		4920					
8/23/2019	8.79							
5/19/2021		19.2		5480		8.64		67.7
7/21/2021		17.4		5070				68.5
8/30/2021		17						70.8

Prediction Limit

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 9/27/2021, 1:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
BORON (mg/l)	MW-11	1.263	n/a	5/19/2021	1.18	No	13	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-6	1.249	n/a	5/19/2021	1.14	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-7	1.691	n/a	5/19/2021	1.54	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-701	1.108	n/a	5/19/2021	0.931	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-702	2.024	n/a	5/19/2021	1.58	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-703	1.944	n/a	5/19/2021	1.79	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-704	2.153	n/a	5/19/2021	2.07	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-705	2.318	n/a	5/19/2021	2.17	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-706	2.263	n/a	5/19/2021	2.04	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	MW-707B	2.04	n/a	5/19/2021	1.88	No	12	0	n/a	0.002173	NP Intra (normality) ...
BORON (mg/l)	MW-708	1.537	n/a	5/19/2021	1.36	No	12	0	No	0.000...	Param Intra 1 of 3
BORON (mg/l)	TW-1	1.731	n/a	5/19/2021	1.42	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-11	72.5	n/a	5/19/2021	51.8	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-6	116.3	n/a	5/19/2021	73.2	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-7	27.59	n/a	5/19/2021	21	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-701	44.57	n/a	5/19/2021	43	No	16	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-702	24.13	n/a	5/19/2021	5.07	No	13	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-703	23.18	n/a	5/19/2021	19	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-704	35.87	n/a	8/30/2021	20.8	No	13	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-705	43.56	n/a	5/19/2021	28.6	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-706	35.66	n/a	8/30/2021	23.8	No	14	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-707B	422.2	n/a	5/19/2021	412	No	13	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	MW-708	34.37	n/a	5/19/2021	29.6	No	12	0	No	0.000...	Param Intra 1 of 3
CALCIUM (mg/l)	TW-1	37.96	n/a	8/30/2021	24.2	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-11	135.8	n/a	5/19/2021	76.3	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-6	227.2	n/a	5/19/2021	193	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-7	112.8	n/a	5/19/2021	95.4	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-701	56.12	n/a	5/19/2021	48.2	No	14	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-702	50.24	n/a	5/19/2021	41	No	13	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-703	117	n/a	5/19/2021	108	No	12	0	x^5	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	**MW-704**	**88.89**	**n/a**	**8/30/2021**	**90.4**	**Yes**	**16**	**0**	**No**	**0.000...**	**Param Intra 1 of 3**
CHLORIDE (mg/l)	MW-705	141.4	n/a	5/19/2021	139	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-706	302.2	n/a	8/30/2021	236	No	13	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-707B	237.8	n/a	5/19/2021	170	No	13	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	MW-708	48.87	n/a	5/19/2021	45	No	12	0	No	0.000...	Param Intra 1 of 3
CHLORIDE (mg/l)	TW-1	46.26	n/a	8/30/2021	41	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-11	1144	n/a	5/19/2021	900	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-6	1287	n/a	5/19/2021	1060	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-7	970.4	n/a	5/19/2021	854	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-701	648.3	n/a	5/19/2021	561	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-702	811.9	n/a	5/19/2021	527	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-703	982	n/a	5/19/2021	870	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-704	1303	n/a	5/19/2021	1180	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-705	1095	n/a	5/19/2021	932	No	12	0	No	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-706	1560	n/a	5/19/2021	1160	No	12	0	n/a	0.002173	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	MW-707B	9261	n/a	5/19/2021	6860	No	12	0	x^2	0.000...	Param Intra 1 of 3
DISSOLVED SOLIDS (mg/l)	MW-708	881	n/a	5/19/2021	624	No	12	0	n/a	0.002173	NP Intra (normality) ...
DISSOLVED SOLIDS (mg/l)	TW-1	1109	n/a	5/19/2021	1030	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-11	0.6247	n/a	5/19/2021	0.53	No	13	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-6	1.75	n/a	5/19/2021	0.522	No	12	0	n/a	0.002173	NP Intra (normality) ...

Prediction Limit

LaCygne Client: SCS Engineers Data: LaC GW Data Printed 9/27/2021, 1:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
FLUORIDE (mg/l)	MW-7	1.382	n/a	5/19/2021	1.1	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-701	0.8735	n/a	5/19/2021	0.641	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-702	1.66	n/a	5/19/2021	1.09	No	13	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-703	1.584	n/a	5/19/2021	1.3	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-704	0.9764	n/a	5/19/2021	0.781	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-705	1.12	n/a	5/19/2021	0.887	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-706	1.28	n/a	5/19/2021	0.946	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-707B	0.5267	n/a	5/19/2021	0.281	No	12	0	sqrt(x)	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	MW-708	0.7235	n/a	5/19/2021	0.546	No	12	0	No	0.000...	Param Intra 1 of 3
FLUORIDE (mg/l)	TW-1	0.4756	n/a	5/19/2021	0.412	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-11	7.578	7.188	5/19/2021	7.55	No	13	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-6	7.336	7.051	7/21/2021	7.1	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-7	8.001	7.629	7/21/2021	7.97	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-701	8.024	7.188	5/19/2021	7.83	No	16	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-702	9.085	7.491	8/30/2021	8.87	No	13	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-703	7.886	7.364	5/19/2021	7.87	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-704	7.895	7.317	8/30/2021	7.74	No	16	0	x^3	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-705	7.35	6.5	7/21/2021	7.15	No	12	0	n/a	0.004347	NP Intra (normality) ...
pH (S.U.)	MW-706	7.925	7.136	8/30/2021	7.4	No	17	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-707B	7.147	6.735	7/21/2021	6.81	No	13	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	MW-708	7.602	7.009	7/21/2021	7.3	No	12	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	TW-1	7.902	7.403	8/30/2021	7.59	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-11	240.8	n/a	5/19/2021	176	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-6	192.6	n/a	5/19/2021	123	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-7	5	n/a	5/19/2021	2.17	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-701	86.69	n/a	5/19/2021	86.2	No	14	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-702	5.73	n/a	5/19/2021	1.85	No	13	84.62	n/a	0.001886	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-703	5	n/a	5/19/2021	0.657	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
SULFATE (mg/l)	MW-704	205.9	n/a	8/30/2021	154	No	13	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-705	45.07	n/a	5/19/2021	38.6	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	**MW-706**	**8.79**	**n/a**	**8/30/2021**	**17**	**Yes**	**16**	**62.5**	**n/a**	**0.001026**	**NP Intra (NDs) 1 of 3**
SULFATE (mg/l)	MW-707B	5415	n/a	7/21/2021	5070	No	13	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	MW-708	9.768	n/a	5/19/2021	8.64	No	12	0	No	0.000...	Param Intra 1 of 3
SULFATE (mg/l)	**TW-1**	**67.15**	**n/a**	**8/30/2021**	**70.8**	**Yes**	**12**	**0**	**No**	**0.000...**	**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: i

Observations with flags containing the following characters will be deselected: 'i', 'l',

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
  - [x] 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
- [ ] 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

☐ Use Modified Alpha...

☑ Test Residuals For Normality (Parametric test only) using Shapiro-Wilk/Francia at Alpha = 0.01

☐ Continue Parametric if Unable to Normalize

Transformation (Parametric test only)

- ◉ Use Ladder of Powers
- ○ Natural Log or No Transformation
- ○ Never Transform
- ○ Use Specific Transformation:

☐ Use Best W Statistic

☐ Plot Transformed Values

Use Non-Parametric Test (Sen's Slope/Mann-Kendall) when Non-Detects Percent > 75

☐ Include 95. % Confidence Interval around Trend Line

☐ Automatically Remove Outliers (Parametric test only)

Note: there is no "Always Use Non-Parametric" checkbox on this tab because, for consistency with prior versions, Sen's Slope / Mann-Kendall (the non-parametric alternative) is available as a report in its own right, under Analysis->Intrawell->Trend.

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: 9

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...
- [ ] Combine Background Wells on Mann-Whitney...

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...

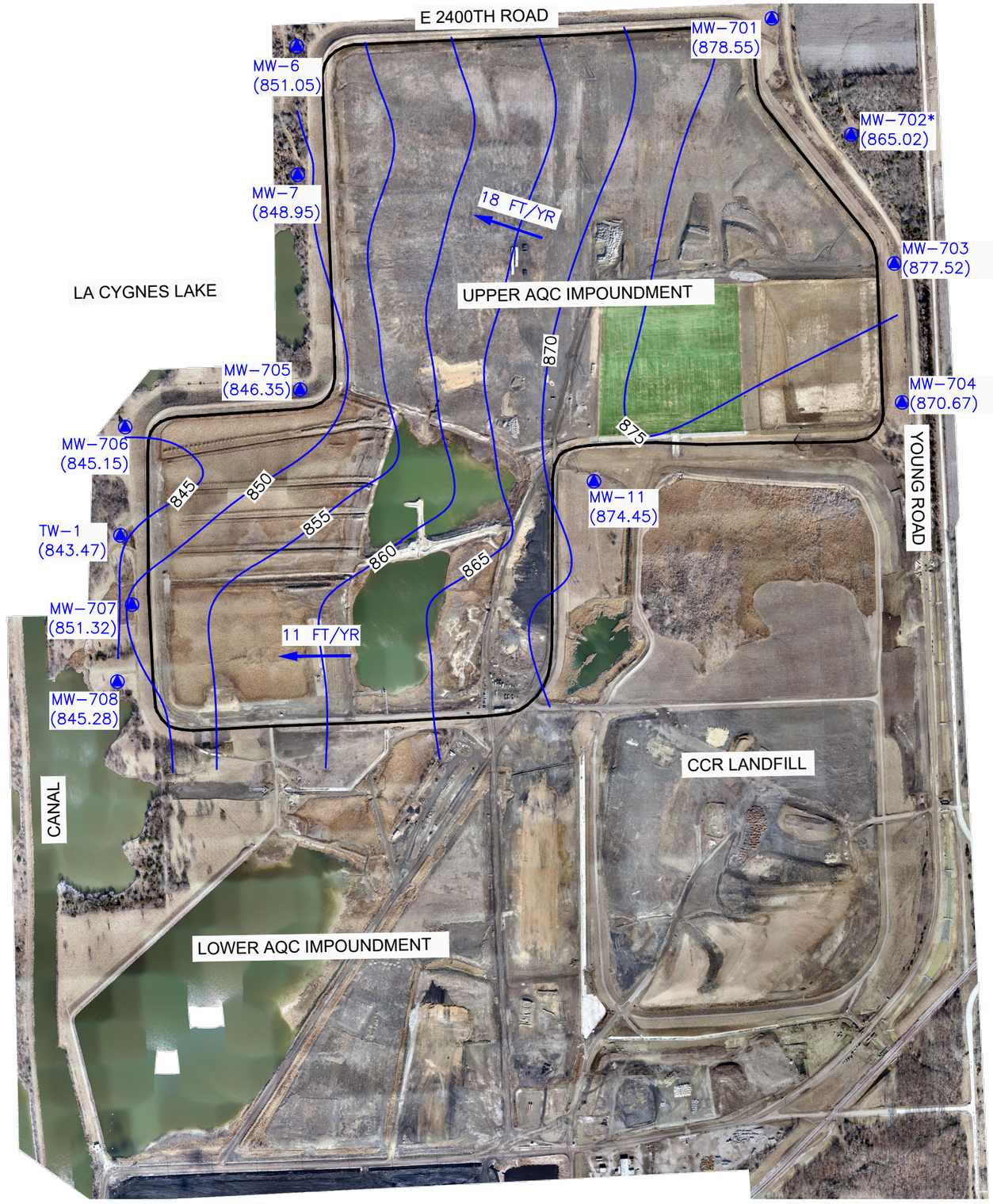
Piper, Stiff Diagram

- [ ] 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)

Jared Morrison
December 16, 2022

ATTACHMENT 3

Revised Groundwater Potentiometric Surface Maps



LEGEND

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS OF UNIT)
- MW-703 (877.00) — CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- —875— GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (REPRESENTATIVE FOR THIS UNIT)
- MW-702* — INDICATES WELL NOT USED IN POTENTIOMETRIC SURFACE MAP CREATION
- 18 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. DRONE IMAGE DATED JANUARY 2021. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.
4. WATER LEVEL MEASUREMENTS COMPLETED ON MAY 19, 2021.

800 0 800 1600

SCALE FEET

REV.	DATE	CK. BY
0	-	-
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-

SHEET TITLE
POTENTIOMETRIC SURFACE MAP (MAY 2021)
UAQC IMPOUNDMENT

PROJECT TITLE
2021 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

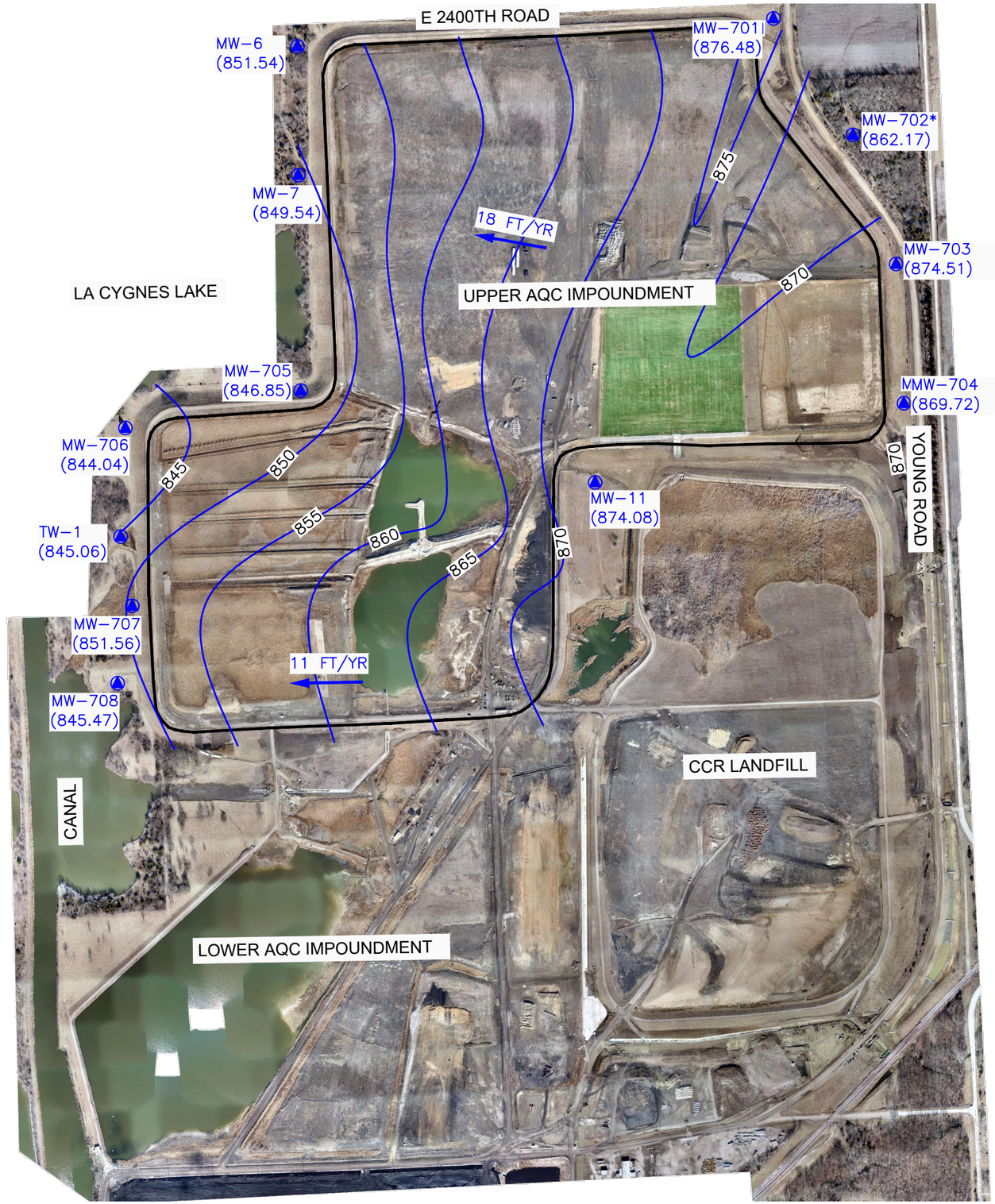
PROJ. NO. 27217233.21
DSN. BY: ALR
CHK. BY: JF
O/A MGR BY: JRR
PROJ. MGR: JRR
DSN. BY: DAW

CADD FILE:
LA CYGNE FIG 2_MAY2021 LOWER.DWG

DATE: 11/29/22

FIGURE NO.
2

N:\KCPL\Projects\Groundwater\DWG\La Cygne\CCR Annual Report\2021\La Cygne Fig 2_MAY2021 LOWER.dwg Nov 29, 2022 - 2:22pm Layout Name: Fig 1 Upper By: swyly



LEGEND

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS OF UPPER AQC IMPOUNDMENT)
- MW-703 (877.00) — CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- –875— GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (REPRESENTATIVE FOR THIS UNIT)
- MW-702* — INDICATES WELL NOT USED IN POTENTIOMETRIC SURFACE MAP CREATION
- 18 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 MARCH 2020. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITOR WELL LOCATIONS ARE PROVIDED BY AECOM.
4. WATER LEVEL MEASUREMENTS COMPLETED ON NOVEMBER 18, 2021.

800 0 800 1600
SCALE FEET

REV.	DATE	CK. BY
0	-	-
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-

SHEET TITLE
POTENTIOMETRIC SURFACE MAP (NOVEMBER 2021)
UAQC IMPOUNDMENT

PROJECT TITLE
2021 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY METRO, INC
LA CYGNE GENERATING STATION
LA CYGNE, KANSAS

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PROJ. NO.	DWN. BY:	Q/A REVIEW BY:
27217233.20	MBJ	JRR
DSN. BY:	CHK. BY:	PROJ. MGR
DAW	JF	JRR

CADD FILE:
LA CYGNE FIG 3_NOV_2021 LOWER.DWG

DATE:
11/29/22

FIGURE NO.
3