### 2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

### CCR LANDFILL IATAN GENERATING STATION PLATTE COUNTY, MISSOURI

Presented To: Evergy Metro, Inc.



27213167.21 | January 2022, Revised December 16, 2022

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#### CERTIFICATIONS

I, John R. Rockhold, being a qualified groundwater scientist and Registered Geologist in the State of Missouri, do hereby certify that the 2021 Annual Groundwater Monitoring and Corrective Action Report for the CCR Landfill at the latan Generating Station was prepared by me or under my direct supervision and fulfills the requirements of 40 CFR 257.90(e).



John R. Rockhold, R.G.

SCS Engineers

I, Douglas L. Doerr, being a qualified licensed Professional Engineer in the State of Missouri, do hereby certify that the 2021 Annual Groundwater Monitoring and Corrective Action Report for the CCR Landfill at the latan 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 Report.
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 CCR Landfill at the latan 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 Landfill 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 Landfill 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-10	Calcium	Successful
Fall 2020	MW-10	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, to the extent available:

#### 2.1 § 257.90(E)(1) SITE MAP

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

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

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

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

No new monitoring wells were installed and no wells were decommissioned as part of the CCR groundwater monitoring program for the CCR Landfill 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, verification sample data; and, the initial Fall 2021 semiannual detection monitoring data. The dates of sample collection 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, and
- g. initiation of the Fall 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. 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  $\S 257.90(e)$ .

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**:

CCR Groundwater Monitoring Alternative Source Demonstration Report November 2020 Groundwater Monitoring Event, CCR Landfill, Iatan Generating Station (May 2021).

#### 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 latan 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 latan Generating Station CCR Landfill. 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)



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#### APPENDIX B

#### TABLES

Table 1: Appendix III Detection Monitoring Results

Table 2: Detection Monitoring Field Measurements

#### Table 1 CCR Landfill Appendix III Detection Monitoring Results Evergy latan Generating Station

			Appendix III Constituents       n     Calcium (mg/L)     Chloride (mg/L)     Fluoride (mg/L)     pH (S.U.)     Sulfate (mg/L)     Total Dissolved Solids (mg/L)         **7.36      *484       00     137     5.59     0.257     7.34     33.3     500       00     152     6.48     0.314     6.89     35.4     537       00     167     6.45     0.316     7.05     126     611       00     165     6.68     0.371     6.80     114     595       *164       **6.97         *153       **7.15         *153       **6.97         *147     *1.56      **6.93     *31.6     *542(H)         ***6.99      **550       00     148     6.03     0.342     6.40     57.2     513							
NA ( - 11	Commite	Beren	Calaium	Chlorido	Flueride	-11	Sulfata	Total Dissolved		
weii	Sample	Boron	Calcium	Chioride	Fluoride	рн	Suitate	Solids		
Number	Date	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(S.U.)	(mg/L)	(mg/L)		
MW-1	02/02/21					**7.36		*484		
MW-1	05/20/21	<0.200	137	5.59	0.257	7.34	33.3	500		
MW-1	11/17/21	<0.200	152	6.48	0.314	6.89	35.4	537		
MW-2	05/20/21	<0.200	167	6.45	0.316	7.05	126	611		
MW-2	11/17/21	<0.200	165	6.68	0.371	6.80	114	595		
MW-6	02/02/21		*164			**6.97				
MW-6	03/01/21		*153			**7.15				
MW-6	05/20/21	<0.200	188	2.75	0.274	6.26	46.9	619		
MW-6	07/20/21		*147	*1.56		*6.93	*31.6	*542(H)		
MW-6	08/04/21					**6.99		*550		
MW-6	11/17/21	<0.200	147	2.12	0.344	7.08	32.2	508		
MW-7	05/20/21	<0.200	148	6.03	0.342	6.40	57.2	513		
MW-7	07/20/21					*7.54				
MW-7	11/17/21	<0.200	112	1.72	0.383	7.05	31.0	446		
MW-8	02/02/21			*8.22		**7.18		*518		
MW-8	05/20/21	<0.200	127	1.34	0.364	6.50	17.3	426		
MW-8	07/20/21					*7.87				
MW-8	11/17/21	<0.200	178	14.4	0.404	7.17	91.0	640		
MW-9	02/02/21		*106			**7.00				
MW-9	05/20/21	<0.200	98.4	<1.00	0.367	6.48	19.7	384		
MW-9	07/20/21					*7.33				
MW-9	11/17/21	<0.200	106	<1.00	0.440	7.04	19.2	394		
MW-10	02/02/21		*160			**7.08	*46.7			
MW-10	03/01/21		*160			**7.08	*48.4			
MW-10	05/20/21	<0.200	148	16.5	0.457	6.32	46.7	628		
MW-10	07/20/21					*6.93	*38.6			
MW-10	11/17/21	<0.200	131	17.6	0.629	7.01	35.7	491		

\* 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

--- Not Sampled

(H) Out of Hold Analysis

#### Table 2 CCR Landfill Detection Monitoring Field Measurements Evergy latan Generating Station

Well Number	Sample Date	рН (S.U.)	Specific Conductivity (µS)	Temperature (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Water Level (ft btoc)	Groundwater Elevation (ft NGVD)
MW-1	02/02/21	**7.36	800	11.6	4.3	-68	0.00	22.28	766.41
MW-1	05/20/21	7.34	880	14.33	2.9	-141	1.96	20.82	767.87
MW-1	11/17/21	6.89	938	13.88	3.9	-128	0.00	22.78	765.91
MW-2	05/20/21	7.05	1030	15.22	5.1	-143	3.44	22.32	767.29
MW-2	11/17/21	6.80	1040	14.07	5.0	-126	0.00	23.80	765.81
MW-6	02/02/21	**6.97	1050	14.26	0.0	-119	0.32	24.48	765.17
MW-6	03/01/21	**7.15	896	14.20	5.9	-118	2.53	25.26	764.39
MW-6	05/20/21	6.26	1140	16.00	0.0	-137	0.00	24.47	765.18
MW-6	07/20/21	*6.93	846	17.08	7.9	-119	0.42	23.53	766.12
MW-6	08/04/21	**6.99	843	17.11	4.5	-99	0.69	24.05	765.60
MW-6	11/17/21	7.08	921	14.96	2.1	-132	0.00	24.93	764.72
MW-7	05/20/21	6.40	786	15.84	0.0	-47	0.00	23.96	765.69
MW-7	07/20/21	*7.54	765	15.55	6.1	-59	0.00	23.34	766.31
MW-7	11/17/21	7.05	789	14.36	11.6	-57	1.76	24.75	764.90
MW-8	02/02/21	**7.18	964	14.00	8.8	-89	0.40	24.41	765.30
MW-8	05/20/21	6.50	885	15.81	0.0	-102	0.00	23.14	766.57
MW-8	07/20/21	*7.87	903	15.60	7.1	-137	0.00	23.15	766.56
MW-8	11/17/21	7.17	1050	14.52	3.7	-106	5.60	24.54	765.17
MW-9	02/02/21	**7.00	676	10.67	30.9	-84	0.00	23.84	766.06
MW-9	05/20/21	6.48	715	16.49	0.0	-131	0.00	22.32	767.58
MW-9	07/20/21	*7.33	684	17.86	38.1	-156	0.95	22.61	767.29
MW-9	11/17/21	7.04	747	13.87	13.9	-118	0.00	24.32	765.58
MW-10	02/02/21	**7.08	1060	11.79	3.3	-20	0.00	23.22	766.24
MW-10	03/01/21	**7.08	1080	14.59	17.2	-32	2.51	24.29	765.17
MW-10	05/20/21	6.32	1140	16.39	0.0	-85	0.00	22.67	766.79
MW-10	07/20/21	*6.93	948	16.36	0.0	-23	0.25	22.24	767.22
MW-10	11/17/21	7.01	1080	14.61	0.0	-78	0.00	23.84	765.62

\* Verification Sample obtained per certified statistical method and Statistical Analysis of Groundwater Monitoring Data

at RCRA Facilities, Unified Guidance, March 2009.

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

S.U. - Standard Units

μS - microsiemens

°C - Degrees Celsius

ft btoc - Feet Below Top of Casing

ft NGVD - National Geodetic Vertical Datum (NAVD 88)

NTU - Nephelometric Turbidity Unit

#### APPENDIX C

CCR Groundwater Monitoring Alternative Source Demonstration Report November 2020 Groundwater Monitoring Event, CCR Landfill, latan Generating Station (May 2021)

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

#### CCR LANDFILL

latan Generating Station Evergy Metro, Inc. Platte County, Missouri



May 2021 File No. 27213167.20

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

#### CERTIFICATIONS

I, John R. Rockhold, being a qualified groundwater scientist and Registered Geologist in the State of Missouri, do hereby certify the accuracy of the information in the CCR Groundwater Monitoring Alternative Source Demonstration Report for the CCR Landfill at the latan 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.



SCS Engineers

I, Douglas L. Doerr, being a qualified licensed Professional Engineer in the State of Missouri, do hereby certify the accuracy of the information in the CCR Groundwater Monitoring Alternative Source Demonstration Report for the CCR Landfill at the latan 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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#### 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 CCR Landfill at the latan Generating Station has been completed in substantial compliance with the "Statistical Method Certification by A Qualified Professional Engineer" dated October 12, 2017. Groundwater samples were collected on November 9, 2020. Review and validation of the results from the November 2020 Detection Monitoring Event was completed on December 18, 2020, which constitutes completion and finalization of detection monitoring laboratory analyses. 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 2, 2021 and March 1, 2021.

The completed statistical evaluation identified two Appendix III constituents above the prediction limits established for monitoring well MW-10.

Constituent/Monitoring Well	*UPL	Observation November 9, 2020	1st Verification February 2, 20201	2nd Verification March 1, 2021
Calcium				
MW-10	154.2	158	160	160
Sulfate				
MW-10	39.5	42.3	46.7	48.4

\*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 SSIs above the background prediction limits for calcium and sulfate at monitoring well MW-10.

#### 3 ALTERNATIVE SOURCE DEMONSTRATION

An Alternative Source Demonstration (ASD) is a means to provide supporting lines of evidence that something other than a release from a regulated CCR unit caused an SSI. For the above identified SSI for the CCR Landfill at the latan Generating Station, there are multiple lines of supporting evidence to indicate the above SSIs were not caused by a release from the CCR Landfill. Select multiple lines of supporting evidence are described as follows.

#### 3.1 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, 25<sup>th</sup> and 75<sup>th</sup> 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 for all of the groundwater monitoring system wells were prepared to allow comparison of the calcium and sulfate concentrations between MW-10 and the other monitoring wells both upgradient and downgradient. The calcium box and whiskers plot for MW-10 indicates the calcium concentrations at MW-10 are within or below the concentration ranges for the other wells. The sulfate box and whiskers plot for MW-10 indicates the sulfate concentrations at MW-10 are within or below the concentration ranges for the other wells. Box and whisker plots are provided in **Appendix A**. Additionally, MW-10 is located upgradient of the landfill for this sampling event as shown on the potentiometric surface map provided in **Appendix B**. This demonstrates that a source other than the CCR Landfill caused the SSI over background levels, or that the SSI resulted from natural variation in groundwater quality.

#### 3.2 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 (SO<sub>4</sub>), Carbonate ( $CO_3$ ), and Bicarbonate ( $HCO_3$ ).

A piper diagram generated for MW-10 and leachate is provided in **Appendix C** along with analytical results. The piper diagram indicates the groundwater from monitoring well MW-10 does not plot near where the leachate plots and is not trending toward the leachate over time. Therefore, the groundwater from MW-10 does not exhibit the same geochemical characteristics as the leachate. The groundwater and the leachate plot in totally different hydrochemical facies indicating there is no mixing of the two types of water (groundwater and leachate). This demonstrates that a source other than the CCR Landfill caused the SSI over background levels or that the SSI resulted from natural variation in groundwater quality.

#### 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 (i.e. "spikes"). 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.

The time series plot for calcium and sulfate at monitoring well MW-10 was compared to the time series plot for sulfate at the other monitoring wells both upgradient and downgradient. The sulfate time series plot for MW-10 indicates the sulfate concentrations in MW-10 are generally below the concentrations in the other wells both upgradient and downgradient. The sulfate time series plot for MW-10 indicates the sulfate concentrations in MW-10 are generally below the concentrations in the other wells both upgradient and downgradient. The sulfate time series plot for MW-10 indicates the sulfate concentrations in MW-10 are generally below the concentrations in the other wells both upgradient and downgradient. This demonstrates that a source other than the CCR Landfill caused the SSI over background levels, or that the SSI resulted from natural variation in groundwater quality. Time series plots 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 CCR Landfill caused the SSIs over background levels, or that the SSIs resulted from natural variation in groundwater quality. Based on the successful ASD, the owner or operator of the CCR Landfill 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 latan 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

**Box and Whiskers Plots** 



Box & Whiskers Plot

Constituent: Calcium Analysis Run 4/28/2021 8:10 AM View: CCR LF III Iatan Utility Waste LF Client: SCS Engineers Data: Iatan jrr

mg/L



Box & Whiskers Plot

Constituent: Sulfate Analysis Run 4/28/2021 8:10 AM View: CCR LF III Iatan Utility Waste LF Client: SCS Engineers Data: Iatan jrr

mg/L

#### Box & Whiskers Plot

	latan Utility Waste LF	Client: S	SCS Engineers	Data: latan jrr F	Printed 4/28/2021, 8	:12 AM			
<u>Constituent</u> <u>W</u>	Vell	N	Mean	Std. Dev.	Std. Err.	Median	<u>Min.</u>	Max.	<u>%NDs</u>
Calcium (mg/L) M	/W-1 (bg)	16	131.9	5.372	1.343	133	116	141	0
Calcium (mg/L) M	/W-10	22	136	16.85	3.593	134.5	109	160	0
Calcium (mg/L) N	/W-2 (bg)	17	166.4	6.509	1.579	167	146	177	0
Calcium (mg/L) M	/W-6	19	146.1	8.953	2.054	147	131	164	0
Calcium (mg/L) N	/W-7	20	149.3	27.33	6.112	139	116	199	0
Calcium (mg/L) M	/W-8	18	142.9	10.01	2.36	141	130	170	0
Calcium (mg/L) M	/W-9	17	110.7	7.577	1.838	110	97.2	123	0
Sulfate (mg/L) M	/W-1 (bg)	15	31.48	4.407	1.138	32.6	22.3	36.9	0
Sulfate (mg/L) M	/W-10	23	32.21	10.8	2.253	33	17.4	48.4	0
Sulfate (mg/L) M	/W-2 (bg)	16	136.6	24.1	6.026	145.5	81.5	172	0
Sulfate (mg/L) M	/W-6	17	28.84	5.89	1.428	30.2	20.1	37.6	0
Sulfate (mg/L) M	/W-7	19	80.61	61.89	14.2	54.4	16.2	186	0
Sulfate (mg/L) M	/W-8	16	41.38	16.28	4.069	41.85	23.3	85.8	0
Sulfate (mg/L) M	/W-9	15	21.44	3.34	0.8624	21.5	15.9	26.2	0

Appendix B

Potentiometric Surface Map



CK. BY	I	I	I	ı	ı	ı
SHEET TITLE REV DATE DATE		ROJECT TITLE IATAN GROUNDWATER 2020				
CLIENT	IATAN GENERATING STATION IATAN, MISSOURI					
CADD SC2 ENGINE FIGUR		0.01 8575 W. 110th St, Ste. 100	PH. (913) 681-0030 FAX. (913) 681-0012		27213167.20 MM. BII ALR WARNEN JRR	a psw. Bft TGW GMK. Bft Mrku. Midf
			CLIENT CONTRACTOR CLIENT SHEET TILE POTENTIOMETRIC SURFACE MAP POTENTIOMETRIC SURFACE MAP POTENTION STAR 100h Strate Action Stra	CLENT CLIENT	CLENT CLENT CLENT CLENT CONTRIPTED CONTRICTOR CONTRIPTED CONTRI CONTRINCO CONTRIPTED CONTRIPTED CONTRIPTED CONTRIP	CLENT CLENT SHEET THLE   CLENT CLENT SHEET THLE   SCS ENGINEERS EVERGY METRO, INC. POTENTIOMETRIC SURFACE MAP POTENTION   STOT ALL DEPARTMENT EVERGY METRO, INC. POTENTIOMETRIC SURFACE MAP (NOVEMBER 2020)   Stot ALL DEPARTMENT IATAN GROUND POLECT THLE   Stot ALL DEPARTMENT IATAN, MISSOURI PROJECT THLE   Stot ALL DEPARTMENT IATAN, MISSOURI PROJECT THLE   Stot ALL DEPARTMENT IATAN, MISSOURI PROJECT THLE

Appendix C

Piper Diagram Plots and Analytical Results



latan Utility Waste LF Client: SCS Engineers Data: latan jrr

#### Piper Diagram

Analysis Run 4/2/2021 4:19 PM View: CCR LF III

Iatan Utility Waste LF Client: SCS Engineers Data: Iatan jrr

Totals (ppm)	Na	K	Ca	Mg	Cl	SO4	HCO3	CO3
MW-10 8/18/2016	7.77	4.45	123	47.3	7.47	17.8	480	10
MW-10 11/9/2016	7.11	4.02	124	47.3	9.15	17.4	428	10
MW-10 2/3/2017	7.2	3.93	109	46.7	10.3	19.1	442	10
MW-10 1/10/2019	8.51	5.08	157	64.3	21	38	555	10
MW-10 7/11/2019	8.12	5.11	153	63.8	22.5	33	537	10
MW-10 11/4/2019	7.41	4.57	142	54.2	21.6	33.6	526	10
MW-10 8/25/2020	11.9	4.51	163	59.1	16.4	47.9	589	10
MW-10 3/1/2021	14.9	4.56	160	56.5	17.1	48.4	570	10
LEACHATE 8/18/2016	9250	689	573	4240	6990	28000	644	10
LEACHATE 11/9/2016	1230	90.7	334	398	876	3460	480	10
LEACHATE 2/3/2017	1880	121	560	671	1760	6070	505	10
LEACHATE 11/4/2019	1110	51.7	460	163	2340	5230	206	10

Appendix D

**Time Series Plots**
mg/L

**Time Series** 



Constituent: Calcium Analysis Run 4/28/2021 8:05 AM View: CCR LF III Iatan Utility Waste LF Client: SCS Engineers Data: Iatan jrr 200 MW-1 (bg) MW-10 160 MW-2 (bg) 120 MW-6 MW-7 80 **MW-8** MW-9 40 0 8/18/16 7/15/17 6/11/18 5/8/19 4/3/20 3/1/21

**Time Series** 

Constituent: Sulfate Analysis Run 4/28/2021 8:05 AM View: CCR LF III Iatan Utility Waste LF Client: SCS Engineers Data: Iatan jrr

mg/L

## ADDENDUM 1

## 2021 Annual Groundwater Monitoring and Corrective Action Report Addendum 1

## SCS ENGINEERS

December 16, 2022 File No. 27213167.21

Го:	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. CCR Landfill Iatan Generating Station – Platte County, Missouri

The CCR Landfill at the latan 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 CCR Landfill 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:

0

- February 2021 First verification sampling for the Fall 2020 detection monitoring event.
- March 2021 Second verification sampling for the Fall 2020 detection monitoring event.
- May 2021 Spring 2021 semiannual detection monitoring sampling event.
- July 2021 First 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 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



# ANALYTICAL REPORT

February 11, 2021

## **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description: L1313833 02/04/2021 27213167.19 Evergy - latan Generating Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210

Тс Ss Cn Sr Qc Gl AI Sc

## Entire Report Reviewed By:

Jubb law

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

## Pace Analytical National

12065 Lebanon Rd

Mount Juliet, TN 37122 615-758-5858 800-767-5859

www.pacenational.com

ACCOUNT: SCS Engineers - KS PROJECT: 27213167.19

SDG: L1313833 DATE/TIME: 02/11/21 14:13

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⁵Sr	
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<sup>7</sup> Gl	
<sup>8</sup> Al	

Sc

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## SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

\*

Ср

Tc

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Sc

MW-1 11313833-01 GW			Collected by G. Penaflor	Collected date/time 02/02/21 15:00	Received da 02/04/21 09	ite/time :00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1617190	1	02/05/21 16:04	02/05/21 19:18	MMF	Mt. Juliet, TN
MW-6 L1313833-02 GW			Collected by G. Penaflor	Collected date/time 02/02/21 15:25	Received da 02/04/21 09	te/time :00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG1617975	1	02/08/21 09:27	02/08/21 11:56	EL	Mt. Juliet, TN
MW-8 L1313833-03 GW			Collected by G. Penaflor	Collected date/time 02/02/21 14:45	Received da 02/04/21 09	ite/time :00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011 Wet Chemistry by Method 9056A	WG1617190 WG1618252	1 1	02/05/21 16:04 02/09/21 11:55	02/05/21 19:18 02/09/21 11:55	MMF ELN	Mt. Juliet, TN Mt. Juliet, TN
DUPLICATE1 L1313833-04 GW			Collected by G. Penaflor	Collected date/time 02/02/21 14:45	Received da 02/04/21 09	ite/time :00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011 Wet Chemistry by Method 9056A	WG1617190 WG1618252	1 1	02/05/21 16:04 02/09/21 12:34	02/05/21 19:18 02/09/21 12:34	MMF ELN	Mt. Juliet, TN Mt. Juliet, TN
MW-9 L1313833-05 GW			Collected by G. Penaflor	Collected date/time 02/02/21 14:20	Received da 02/04/21 09	te/time :00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG1617975	1	02/08/21 09:27	02/08/21 11:58	EL	Mt. Juliet, TN
MW-10 L1313833-06 GW			Collected by G. Penaflor	Collected date/time 02/02/21 15:40	Received da 02/04/21 09	te/time :00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A Metals (ICP) by Method 6010B	WG1618252 WG1617975	1 1	02/09/21 13:00 02/08/21 09:27	02/09/21 13:00 02/08/21 11:40	ELN EL	Mt. Juliet, TN Mt. Juliet, TN
DUPICATE 2 L1313833-07 GW			Collected by G. Penaflor	Collected date/time 02/02/21 15:45	Received da 02/04/21 09	ite/time :00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A Metals (ICP) by Method 6010B	WG1618252 WG1617975	1 1	02/09/21 14:06 02/08/21 09:27	02/09/21 14:06 02/08/21 11:26	ELN EL	Mt. Juliet, TN Mt. Juliet, TN

PROJECT: 27213167.19

SDG: L1313833 DATE/TIME: 02/11/21 14:13

## 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.

Jubb land

Jeff Carr Project Manager

Τс Ss Cn Sr Qc GI AI Sc

SDG: L1313833 DATE/TIME: 02/11/21 14:13

# SAMPLE RESULTS - 01



Τс

#### Gravimetric Analysis by Method 2540 C-2011

, , ,						
	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Dissolved Solids	484000		10000	1	02/05/2021 19:18	WG1617190

<sup>3</sup> Ss
<sup>4</sup> Cn
⁵Sr
<sup>6</sup> Qc
<sup>7</sup> Gl
<sup>8</sup> Al
⁰Sc

## Collected date/time: 02/02/21 15:25

# SAMPLE RESULTS - 02



Metals (ICP) by Method 6010B

	0100						Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		2
Calcium	164000		1000	1	02/08/2021 11:56	WG1617975	Tc



Chloride

Collected date/time: 02/02/21 14:45

# SAMPLE RESULTS - 03

\*

Qc

Gl

Â

Sc

## Gravimetric Analysis by Method 2540 C-2011

8220

	/						1 Cm
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Cp
Analyte	ug/l		ug/l		date / time		2
Dissolved Solids	518000		10000	1	02/05/2021 19:18	<u>WG1617190</u>	Tc
Wet Chemistry by Met	hod 9056A						 <sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		$^{4}$ Cn
			10.0.0		00/00/000444 55	11101010050	

1

02/09/2021 11:55

WG1618252

1000

# SAMPLE RESULTS - 04



Qc

Gl

Â

Sc

## Gravimetric Analysis by Method 2540 C-2011

eravine ine / marysis	o by method z						
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	ug/l		ug/l		date / time		2
Dissolved Solids	488000		10000	1	02/05/2021 19:18	WG1617190	Tc
Wet Chemistry by N	lethod 9056	4		<b>D</b> il 11			 <sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn
Chloride	8470		1000	1	02/09/2021 12:34	WG1618252	CII

SDG: L1313833

## Collected date/time: 02/02/21 14:20

# SAMPLE RESULTS - 05



Metals (ICP) by Method 6010B

0.02						1 Cm
Result	Qualifier	RDL	Dilution	Analysis	Batch	Cp
ug/l		ug/l		date / time		2
106000		1000	1	02/08/2021 11:58	WG1617975	Tc
	Result           ug/l           106000	Result <u>Qualifier</u> ug/l 106000	Result         Qualifier         RDL           ug/l         ug/l         1000         1000	Result         Qualifier         RDL         Dilution           ug/l         ug/l         100000         10000         1	Result         Qualifier         RDL         Dilution         Analysis           ug/l         ug/l         date / time           106000         1000         1         02/08/2021 11:58	Result         Qualifier         RDL         Dilution         Analysis         Batch           ug/l         ug/l         date / time         date / time         date / time           106000         1000         1         02/08/2021 11:58         WG1617975



SDG: L1313833 DATE/TIME: 02/11/21 14:13

#### SAMPLE RESULTS - 06 L1313833

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#### Wet Chemistry by Method 9056A

	Result	Qualifier	RDL	Dilution	Analysis	Batch	- [C
Analyte	ug/l		ug/l		date / time		2
Sulfate	46700		5000	1	02/09/2021 13:00	WG1618252	Tc
Metals (ICP) by M	lethod 6010B						<sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		$^{4}$ Cr
Calcium	160000	V	1000	1	02/08/2021 11:40	WG1617975	

# SAMPLE RESULTS - 07

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## Wet Chemistry by Method 9056A

	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		2
Sulfate	48000		5000	1	02/09/2021 14:06	WG1618252	Ťτ
Metals (ICP) by	Method 6010B						<sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		<sup>4</sup>
Calcium	161000		1000	1	02/08/2021 11:26	WG1617975	

## WG1617190

Gravimetric Analysis by Method 2540 C-2011

### QUALITY CONTROL SUMMARY L1313833-01,03,04

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#### Method Blank (MB)

(MB) R3620494-1 02/05	5/21 19:18			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
Dissolved Solids	U		2820	10000

### L1313833-03 Original Sample (OS) • Duplicate (DUP)

L1313833-03 Orig	ginal Sample	(OS) • Dup	olicate (	DUP)				<sup>4</sup> C
(OS) L1313833-03 02/0	05/21 19:18 • (DUP)	R3620494-4	02/05/21	19:18				Cn
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits		<sup>5</sup> Sr
Analyte	ug/l	ug/l		%		%		
Dissolved Solids	518000	518000	1	0.000		5		G

## Laboratory Control Sample (LCS)

(LCS) R3620494-2 02/	/05/21 19:18				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8540000	97.0	77.4-123	

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SDG: L1313833 DATE/TIME: 02/11/21 14:13

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## WG1618252

Wet Chemistry by Method 9056A

### QUALITY CONTROL SUMMARY L1313833-03,04,06,07

Method Dian					$^{1}$ Cr
(MB) R3621108-1	02/09/21 09:11				
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	Tc
Chloride	U		379	1000	
Sulfate	U		594	5000	355

### L1313833-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1313833-04 (	02/09/2112:34 • (DUF	) R3621108-5	02/09/21	12:47		
	Original Resul	t DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Chloride	8470	8260	1	2.58		15
Sulfate	69700	67900	1	2.64		15

## L1313779-04 Original Sample (OS) • Duplicate (DUP)

L1313779-04 Origi	nal Sample	(OS) • Dup	licate (l	DUP)				8	Ĺ			
(OS) L1313779-04 02/09/21 16:56 • (DUP) R3621108-8 02/09/21 17:09												
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits		9 SC	1			
Analyte	ug/l	ug/l		%		%		50				
Chloride	43400	43500	1	0.121		15						

### L1313779-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1313779-04 02/10/2	)S) L1313779-04 02/10/21 09:46 • (DUP) R3621108-11 02/10/21 09:59										
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits					
Analyte	ug/l	ug/l		%		%					
Sulfate	136000	132000	5	2.49		15					

## Laboratory Control Sample (LCS)

(LCS) R3621108-2 02/09/2	CS) R3621108-2 02/09/21 09:24											
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier							
Analyte	ug/l	ug/l	%	%								
Chloride	40000	40000	100	80.0-120								
Sulfate	40000	40700	102	80.0-120								

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⁺Cn

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Wet Chemistry by Method 9056A

### QUALITY CONTROL SUMMARY L1313833-03,04,06,07

## Ss Cn

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L1313833-03 Original	Sample (OS) •	Matrix Spike (MS) •	<ul> <li>Matrix Spike Duplicate</li> </ul>	(MSD)

(OS) L1313833-03 02/09/2	(OS) L1313833-03 02/09/21 11:55 • (MS) R3621108-3 02/09/21 12:08 • (MSD) R3621108-4 02/09/21 12:21											
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	8220	61200	59000	106	102	1	80.0-120			3.60	15
Sulfate	50000	67800	121000	118000	106	99.8	1	80.0-120	E	E	2.42	15

#### L1313833-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1313833-06 02/09/2	OS) L1313833-06 02/09/21 13:00 • (MS) R3621108-6 02/09/21 13:13 • (MSD) R3621108-7 02/09/21 13:26											
	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	17100	67900	68600	102	103	1	80.0-120			1.05	15
Sulfate	50000	46700	96800	97900	100	102	1	80.0-120			1.08	15

## L1313779-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1313779-05 02/09/2	OS) L1313779-05 02/09/21 17:22 • (MS) R3621108-9 02/09/21 17:35 • (MSD) R3621108-10 02/09/21 17:48												
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	108000	155000	160000	93.5	104	1	80.0-120	E	E	3.23	15	
Sulfate	50000	87300	136000	141000	97.6	107	1	80.0-120	E	E	3.41	15	

SDG: L1313833 DATE/TIME: 02/11/21 14:13

## WG1617975

Metals (ICP) by Method 6010B

# QUALITY CONTROL SUMMARY

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## Method Blank (MB)

(MB) R3620413-1 02/08/21 11:35					
	MB Result	MB Qualifier	MB MDL	MB RDL	
Analyte	ug/l		ug/l	ug/l	
Calcium	U		79.3	1000	

#### Laboratory Control Sample (LCS)

(LCS) R3620413-2 02/08/21 11:37							
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier		
Analyte	ug/l	ug/l	%	%			
Calaium	10000	0470	047	QO 0 120			

### L1313833-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

OS) L1313833-06 02/08/21 11:40 • (MS) R3620413-4 02/08/21 11:45 • (MSD) R3620413-5 02/08/21 11:47												
	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	%	%		%			%	%
Calcium	10000	160000	166000	167000	64.6	75.0	1	75.0-125	$\underline{\vee}$		0.621	20

ACCOUNT:	
SCS Engineers - KS	

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## GLOSSARY OF TERMS

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#### 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

MDI	Mathead Data stian 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).
V	The sample concentration is too high to evaluate accurate spike recoveries.

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## ACCREDITATIONS & LOCATIONS

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 productive, 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>14</sup>	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 <sup>5</sup>	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, C	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 Victor	ia, TX, 77901	
Texas	T104704328-20-18		

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

-	<sup>3</sup> Ss
-	<sup>4</sup> Cn
	⁵Sr
-	<sup>6</sup> Oc
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	<sup>8</sup> Al
	<sup>9</sup> Sc

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Company Name/Address:			Billing Infor	mation:			I	1		A	nalvsis /	Containe	r / Prese	ervative			Chain of Custody	Page of
SCS Engineers - KS 8575 W. 110th Street Overland Park, KS 66210			Accounts Payable 8575 W. 110th Street					2									Pace	Analytical°
			Overland	Overland Park, KS 66210													/ National Ca	enter for resting a innovatio
Report to: Jason Franks			Email To: jfranks@sc	sengineers	.com;jay.mar	tin@eve	rgy.c										12065 Lebanon Road M Phone: 615-758-5858 A Submitting a sample via constitutes acknowledg	It Juliet, TN 37122 JII: 800-767-5859 a this chain of custody gment and acceptance of the
Project Description: Evergy - latan Generating Station		City/State Collected:			PI PT	ease Circ	le: )ET										Pace Terms and Conditi https://info.pacelabs.co terms.pdf	ions found at: om/hubfs/pas-standard-
Phone: 913-681-0030	Client Project # 27213167.19		Lab Proje	ct # OPKS-IATAI			NO3	oPres	res	5						B1	09	
Collected by (print):	Site/Facility I	) #	#				1	IDPE-H	DPE-No	PE-Nof	NoPres						Acctnum: AQU	JAOPKS
Collected by (signature):	Rush? (I Same D Next Da Two Da	Lab MUST Be ay Five I ay 5 Day y 10 Da	Notified) Day (Rad Only) ay (Rad Only)	Quote #	e Results Need	led	No.	0 250mlF	2125mlHI	125mIHDI	ImiHDPE-						Prelogin: P82 PM: 206 - Jeff	5366 Carr
Packed on Ice N Y X	Comp/Grab	Matrix *	Depth	Da	złd te	ïme	of Cntrs	a - 601	hloride	ulfate	DS 250						Shipped Via: Remarks	Sample # (lab only)
MW-1	GRAB	GW		2/2/	21 15	00	1	0	0	s	X							-01
MW-6	1	GW		2/2	121 19	25	1	X										02
MW-8		GW		2/2/	21 14	45	2		X		X							03
DUPLICATE 1		GW		2/21	21 14	145	2		X	at the de	X							04
MW-8 MS/MSD		GW		2/2/	21 14	45	2		X		X							04
MW-9		GW		2121	121 16	120	1	x		- the second								de
MW-10		GW		19-1		:40	2	X		X								07
DUPICATE 2		GW			13	45	2	X		x								08
MW-10 MS/MSD	V	GW			15	50	2	x		X								09
	homorke						1.									Sampl	le Receipt C	hecklist
SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater	Nethalks.		¢.								pH Flow	v	Other		COC S COC S Bottle Corre	eal Pro igned/ es arr ct bot cient	esent/intact Accurate: ive intact: tles used: volume sent:	
DW - Drinking Water OT - Other	Samples returne	d via: xCourier Date:	الوك . Tim	A	Tracking #	: (Signati	ure)	1	• 3-	21	Trip Bla	ink Receiv	red: Te	3 NO	VOA Z Prese RAD S	ero He rvatio creen	If Applicat adspace: n Correct/Ch <0.5 mR/hr:	ecked: _Y _N
Relinquished by : (Signature)	ics i	02/03/	2/ / Tim	1400 ne:	Received b	Kd	Jon ure)	2	140	3	Pemp!	H	C Bottl	BR es Received:	- If pres	ervation	n required by Lo	gin: Date/Time
Relinquished by : (Signature)	[	Date:	Tim	ne:	Received fo	r lab by:	(Signa	iture)			1.2 - 0 Date;	2=10	Time	15	Hold:			Condition:

Jared Morrison December 16, 2022

## ATTACHMENT 1-2 March 2021 Sampling Event Laboratory Report



## Pace Analytical® ANALYTICAL REPORT March 10, 2021

## **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description:

L1322463 03/03/2021 27213167.20 Evergy - latan Generating Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210 Тс Ss Cn Sr ʹQc Gl AI Sc

### Entire Report Reviewed By:

Wubb land

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

## Pace Analytical National

12065 Lebanon Rd

Mount Juliet, TN 37122 615-758-5858 800-767-5859

www.pacenational.com

ACCOUNT: SCS Engineers - KS

PROJECT: 27213167.20

SDG: L1322463

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## SAMPLE SUMMARY

				Collected date/time	Received date/time		
MW-6 L1322463-01 GW			April Thompson	03/01/21 13:35	03/03/21 13:00		
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location	
			date/time	date/time			
Metals (ICP) by Method 6010B	WG1629877	1	03/08/21 13:22	03/09/21 09:35	KMG	Mt. Juliet, TN	
			Collected by	Collected date/time	Received da	te/time	
MW-10 L1322463-02 GW			April Thompson	03/01/21 15:23	03/03/2113:	00	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location	
			date/time	date/time			
Wet Chemistry by Method 9056A	WG1631305	1	03/09/21 04:09	03/09/21 04:09	MCG	Mt. Juliet, TN	
Metals (ICP) by Method 6010B	WG1629877	1	03/08/21 13:22	03/09/21 09:37	KMG	Mt. Juliet, TN	
			Collected by	Collected date/time	Received da	te/time	
DUPICATE 1 L1322463-03 GW			April Thompson	03/01/21 15:23	03/03/2113:	00	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location	
			date/time	date/time			
Wet Chemistry by Method 9056A	WG1631305	1	03/09/21 04:22	03/09/21 04:22	MCG	Mt. Juliet, TN	
Metals (ICP) by Method 6010B	WG1629877	1	03/08/2113:22	03/09/21 09:40	KMG	Mt. Juliet, TN	

SDG: L1322463 Ср

<sup>2</sup>Tc

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## 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.

ubb land

Jeff Carr Project Manager



PROJECT: 27213167.20

SDG: L1322463 DATE/TIME: 03/10/21 11:49 PAGE: 4 of 12

# SAMPLE RESULTS - 01

## Metals (ICP) by Method 6010B

							1'Cr
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		2
Calcium	153000		1000	1	03/09/2021 09:35	WG1629877	Tc

#### SAMPLE RESULTS - 02 L1322463

### Wet Chemistry by Method 9056A

Wet Chemistry by	Method 9056A	N					1
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		2
Sulfate	48400		5000	1	03/09/2021 04:09	WG1631305	Tc
Metals (ICP) by Me	thod 6010B						<sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn
Calcium	160000		1000	1	03/09/2021 09:37	WG1629877	CII

Qc

GI

ΆI

Sc

#### DUPICATE 1 Collected date/time: 03/01/21 15:23

#### SAMPLE RESULTS - 03 L1322463

## Wet Chemistry by Method 9056A

Wet Chemistry by	y Method 9056A	N					1
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		2
Sulfate	48500		5000	1	03/09/2021 04:22	WG1631305	Tc
Metals (ICP) by M	lethod 6010B						<sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn
Calcium	159000		1000	1	03/09/2021 09:40	WG1629877	СП

Qc

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## WG1631305

Wet Chemistry by Method 9056A

### QUALITY CONTROL SUMMARY L1322463-02,03

### Method Blank (MB)

ivietnod Biani	K (IVIB)					`
(MB) R3628675-1	03/08/21 10:36					.p
	MB Result	MB Qualifier	MB MDL	MB RDL	2	_
Analyte	ug/l		ug/l	ug/l		С
Sulfate	U		594	5000		_
					<sup>°</sup> S:	S

#### L1322458-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1322458-02 03/09/	/21 03:43 • (DUF	P) R3628675-5	5 03/09/2	1 03:56		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Sulfate	48300	48300	1	0.0213		15

⁺Cn

Sr

## L1323107-06 Original Sample (OS) • Duplicate (DUP)

L1323107-06 Origi	nal Sample	(OS) • Dup	olicate (	DUP)			<sup>7</sup> Gl
(OS) L1323107-06 03/09	/21 08:04 • (DUF	P) R3628675-6	6 03/09/2	1 08:17			
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	P RPD its	<sup>8</sup> Al
Analyte	ug/l	ug/l		%			
Sulfate	ND	ND	1	8.37			<sup>9</sup> Sc

#### Laboratory Control Sample (LCS)

(LCS) R3628675-2 03/08/2	21 10:49				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Sulfate	40000	40300	101	80.0-120	

## L1322448-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1322448-02 03/09/2	21 02:30 • (MS)	R3628675-3 (	03/09/21 02:43	• (MSD) R3628	3675-4 03/09/	21 02:56						
	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	107000	156000	156000	99.2	99.3	1	80.0-120	E	E	0.0530	15

## L1323107-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1323107-06 03/09/2	1 08:04 • (MS) F	3628675-7 0	3/09/21 08:30				
	Spike Amount	<b>Original Result</b>	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	ug/l	ug/l	ug/l	%		%	
Sulfate	50000	ND	53300	105	1	80.0-120	

ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
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## WG1629877

Metals (ICP) by Method 6010B

# QUALITY CONTROL SUMMARY

#### Method Blank (MB)

(MB) R3628905-1 03	3/09/21 08:53			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
Calcium	U		79.3	1000

### Laboratory Control Sample (LCS)

(LCS) R3628905-2 03/09/21 08:56						
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	
Analyte	ug/l	ug/l	%	%		
Calcium	10000	9500	95.0	80.0-120		

### L1322438-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1322438-01 03/09/21 08:58 • (MS) R3628905-4 03/09/21 09:03 • (MSD) R3628905-5 03/09/21 09:06												
	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	%	%		%			%	%
Calcium	10000	133000	140000	139000	73.7	65.0	1	75.0-125	$\underline{\vee}$	$\underline{\vee}$	0.621	20

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

V

The sample concentration is too high to evaluate accurate spike recoveries.

SDG: L1322463 Τс

Ss

Cn

Sr

Qc

GI

AI

Sc
# 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>14</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

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SDG: L1322463 DATE/TIME: 03/10/21 11:49

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<sup>2</sup> Cp <sup>2</sup> Tc <sup>3</sup> Ss <sup>4</sup> Cn <sup>5</sup> Sr <sup>6</sup> Qc <sup>7</sup> Gl <sup>8</sup> Al <sup>9</sup> Sc

Name/Address:			Billing Infor	mation:			T			Ar	nalvsis / Co	ntainer /	Preservati	ve		Chain of Custody	Page of
S Engineers - KS 75 W. 110th Street Pland Park, KS 66210			Accounts 8575 W. Overland	Payable 110th St Park, K	e treet S 6621	0	Pres Chk	5				•				- Pace A National Car	Analytical *
Port to: Franks			Email To: jfranks@sc	sengineers	s.com;ja	y.martin@e	vergy.c									12065 Lebanon Road Mt Phone: 615-758-5858 Al Submitting a sample via	Juliet, TN 37122 t: 800-767-5859 this chain of custody
oject Description: ojecty - latan Generating Station		City/State Collected:	vestor	nm	0	Please C PT MT (	ircle: CT ET									constitutes acknowledgn Pace Terms and Conditio https://info.pacelabs.con terms.odf	hent and acceptance ins found at: m/hubfs/pas-standar
hone: 913-681-0030	Client Project 27213167.	:# 20		Lab Proje	ect # OPKS-I/	ATAN		NO3	res						-	SDG # 01	72240
collegted by (print): April Thompson	Site/Facility I	D #		P.O. #				HDPE-H	PE-NoP					-		Acctnum: AQU	IAOPKS
collected by (signature):	Rush?         (	Lab MUST Be Day Five D ay 5 Day 10 Da	Notified) Day (Rad Only) v (Rad Only)	Quote #	# e Results	Needed	No	0 250ml	25mIHD							Prelogin: <b>P830</b> PM: <b>206 - Jeff C</b>	)695 Jarr
packed on Ice N Y Sample ID	Comp/Grab	Day Matrix *	Depth	Da	ite	Time	of Cntrs	ca - 601	ulfate 1							Shipped Via: Remarks	Sample # (la
MW-6	Grah	GW	1	31	1/21	1335	1	x									
MW-10	Girab	GW		3/1	121	1523	2	X	X								
DUPICATE 1	Gurab	GW		3/1	121	1523	5 2	X	X								
MW-10 MS/MSD		GW					-2-	X	_X_		~						
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay	Remarks:										pH	т с	emp	_	COC Seal COC Signe Bottles a Correct h	Present/Intact: d/Accurate: rrive intact:	
pW - Drinking Water of - Other	Samples returned UPSFedE	d via: kCourier			Trackin	ng #									Sufficien VOA Zero	t volume sent: <u>If Applicab</u> Headspace: ion Correct (Ch	Le X
Relinquished by : (Signature)	D	3/2/2	Time	214	Receiv	ed by: (Signa	son	13	-2-2	·/ 1	rip Blank	Received:	Yes No HCL/M TBR	leoH	RAD Scree	n <0.5 mR/hr:	F
Relinquished by : (Signature)	D	oate:	Time		Receiv	ed by: (Signa	ature)			0	remp. 73	~°C 202	Bottles Rece	lived:	If preservat	ion required by Log	in: Date/Tin
Relinquished by : (Signature)	D	ate:	Time	:	Receiv	ed for lab by	: (Signat	ture)	A		Bate: 12	61	Time:	ØD	Hold:		Condition



# Pace Analytical® ANALYTICAL REPORT March 10, 2021

### **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description:

L1322458 03/03/2021 27213167.20 Evergy latan Generating Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210

Тс Ss Cn Sr ʹQc Gl AI Sc

#### Entire Report Reviewed By:

Wubb land

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

# Pace Analytical National

12065 Lebanon Rd

Mount Juliet, TN 37122 615-758-5858 800-767-5859

www.pacenational.com

ACCOUNT: SCS Engineers - KS

PROJECT: 27213167.20

SDG: L1322458

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Ср

Ss

°Cn

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Qc

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# SAMPLE SUMMARY

			Collected by	Collected date/time	Received da	te/time
MW-6 L1322458-01 GW			A. Thompson	03/01/21 13:35	03/03/2113:0	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 2320 B-2011	WG1629824	1	03/05/21 07:06	03/05/21 07:06	SL	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1631305	1	03/09/21 03:22	03/09/21 03:22	MCG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1629877	1	03/08/21 13:22	03/09/21 09:30	KMG	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
MW-10 L1322458-02 GW			A. Thompson	03/01/21 15:23	03/03/2113:0	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 2320 B-2011	WG1629824	1	03/05/21 07:16	03/05/21 07:16	SL	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1631305	1	03/09/21 03:43	03/09/21 03:43	MCG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1629877	1	03/08/21 13.22	03/00/21 00.32	KMC	Mt Juliot TN

<sup>3</sup>Ss <sup>4</sup>Cn <sup>5</sup>Sr <sup>6</sup>Qc <sup>7</sup>Gl <sup>8</sup>Al

Ср

<sup>2</sup>Tc

DATE/TIME: 03/10/21 11:48

# 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.

ubb land

Jeff Carr Project Manager



PROJECT: 27213167.20

SDG: L1322458 DATE/TIME: 03/10/21 11:48

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### MW-6

### Collected date/time: 03/01/21 13:35

# SAMPLE RESULTS - 01

### Wet Chemistry by Method 2320 B-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch	 Ср
Analyte	ug/l		ug/l		date / time		2
Alkalinity,Bicarbonate	474000		20000	1	03/05/2021 07:06	WG1629824	Tc
Alkalinity,Carbonate	ND		20000	1	03/05/2021 07:06	WG1629824	

#### Sample Narrative:

L1322458-01 WG1629824: Endpoint pH 4.5 Headspace

#### Wet Chemistry by Method 9056A

							5
	Result	Qualifier	RDL	Dilution	Analysis	Batch	ຶSr
Analyte	ug/l		ug/l		date / time		
Chloride	1680		1000	1	03/09/2021 03:22	WG1631305	<sup>6</sup> Oc
Sulfate	32200		5000	1	03/09/2021 03:22	WG1631305	QC

#### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch	2
Analyte	ug/l		ug/l		date / time		ΪΑ
Magnesium	32400		1000	1	03/09/2021 09:30	WG1629877	
Potassium	4520		2000	1	03/09/2021 09:30	WG1629877	9 50
Sodium	5950		3000	1	03/09/2021 09:30	WG1629877	

Ss

Cn

<sup>7</sup>Gl

# MW-10

# Collected date/time: 03/01/21 15:23

#### SAMPLE RESULTS - 02 L1322458

### Wet Chemistry by Method 2320 B-2011

							I Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Cp
Analyte	ug/l		ug/l		date / time		2
Alkalinity,Bicarbonate	570000		20000	1	03/05/2021 07:16	WG1629824	Tc
Alkalinity,Carbonate	ND		20000	1	03/05/2021 07:16	WG1629824	

#### Sample Narrative:

L1322458-02 WG1629824: Endpoint pH 4.5 Headspace

#### Wet Chemistry by Method 9056A

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Chloride	17100		1000	1	03/09/2021 03:43	WG1631305

### Metals (ICP) by Method 6010B

Metals (ICP) by Me	ethod 6010B						<sup>7</sup> CL
	Result	Qualifier	RDL	Dilution	Analysis	Batch	G
Analyte	ug/l		ug/l		date / time		8
Magnesium	56500		1000	1	03/09/2021 09:32	WG1629877	٦A
Potassium	4560		2000	1	03/09/2021 09:32	WG1629877	
Sodium	14900		3000	1	03/09/2021 09:32	WG1629877	<sup>9</sup> Sc

Ss

Cn

Qc

### WG1629824

Wet Chemistry by Method 2320 B-2011

#### QUALITY CONTROL SUMMARY L1322458-01,02

### Method Blank (MB)

Method Biguk (M	в)				$^{1}$ Cn
(MB) R3627767-1 03/05	5/21 03:38				Ср
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	Tc
Alkalinity,Bicarbonate	U		8450	20000	
Alkalinity,Carbonate	U		8450	20000	<sup>3</sup> SS

#### Sample Narrative:

BLANK: Endpoint pH 4.5

### L1322190-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1322190-02 03/05/2	21 04:46 • (DUP	P) R3627767-2	03/05/21	04:59					
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits			
Analyte	ug/l	ug/l		%		%			
Alkalinity,Bicarbonate	145000	145000	1	0.147		20			
Alkalinity,Carbonate	ND	ND	1	0.000		20			

#### Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

### L1322687-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1322687-02 03/05/2	21 13:21 • (DUP)	R3627767-4 (	03/05/211	13:35					
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits			
Analyte	ug/l	ug/l		%		%			
Alkalinity,Bicarbonate	21300	20400	1	4.39		20			
Alkalinity,Carbonate	ND	ND	1	0.000		20			

#### Sample Narrative:

OS: Endpoint pH 4.5 Headspace DUP: Endpoint pH 4.5

ACCOUNT:	
SCS Engineers - KS	5

PROJECT: 27213167.20

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Sr

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## WG1631305

Wet Chemistry by Method 9056A

# QUALITY CONTROL SUMMARY

### Method Blank (MB)

method Blai					11
(MB) R3628675-1	03/08/21 10:36				
	MB Result	MB Qualifier	MB MDL	MB RDL	ſ
Analyte	ug/l		ug/l	ug/l	
Chloride	U		379	1000	
Sulfate	U		594	5000	

°Cn

Sr

Qc

GI

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Sc

### L1322458-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1322458-02 03/09/	'21 03:43 • (DUF	P) R3628675-5	5 03/09/2	1 03:56		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Chloride	17100	17100	1	0.0421		15
Sulfate	48300	48300	1	0.0213		15

### L1323107-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1323107-06 03/09/2	108:04 • (DUP)	) R3628675-6	03/09/21	08:1/		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Chloride	63100	63100	1	0.0518		15
Sulfate	ND	ND	1	8.37		15

### Laboratory Control Sample (LCS)

(LCS) R3628675-2 03/08/	/21 10:49				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Chloride	40000	40300	101	80.0-120	
Sulfate	40000	40300	101	80.0-120	

### L1322448-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1322448-02 03/09/2	21 02:30 • (MS)	R3628675-3 (	03/09/21 02:43	• (MSD) R3628	3675-4 03/09/	21 02:56						
	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	10400	63100	63100	105	105	1	80.0-120			0.0472	15
Sulfate	50000	107000	156000	156000	99.2	99.3	1	80.0-120	E	E	0.0530	15

ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
SCS Engineers - KS	27213167.20	L1322458	03/10/21 11:48	8 of 13

#### WG1631305 Wet Chemistry by Method 9056A

#### QUALITY CONTROL SUMMARY L1322458-01,02

### L1323107-06 Original Sample (OS) • Matrix Spike (MS)

L1323107-06 Origi	nai Sampie	$(05) \cdot Matri$	nx spike (r	VIS)				1 CD
(OS) L1323107-06 03/09/	/21 08:04 • (MS)	R3628675-7 (	03/09/21 08:30	C				Ср
	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier	2
Analyte	ug/l	ug/l	ug/l	%		%		Тс
Chloride	50000	63100	112000	98.0	1	80.0-120	E	
Sulfate	50000	ND	53300	105	1	80.0-120		<sup>3</sup> Ss

ACCOUNT:
SCS Engineers - KS

PROJECT: 27213167.20

SDG: L1322458

DATE/TIME: 03/10/21 11:48

PAGE: 9 of 13 ⁺Cn

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### WG1629877

Metals (ICP) by Method 6010B

# QUALITY CONTROL SUMMARY

### Method Blank (MB)

(MB) R3628905-1 03/09/21	1 08:53			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
Magnesium	U		85.3	1000
Potassium	U		261	2000
Sodium	U		504	3000

#### Laboratory Control Sample (LCS)

(LCS) R3628905-2 03/09	/21 08:56				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Magnesium	10000	9410	94.1	80.0-120	
Potassium	10000	8930	89.3	80.0-120	
Sodium	10000	9380	93.8	80.0-120	

### L1322438-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

DS) L1322438-01 03/09/21 08:58 • (MS) R3628905-4 03/09/21 09:03 • (MSD) R3628905-5 03/09/21 09:06												
	Spike Amount	<b>Original Result</b>	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	%	%		%			%	%
Magnesium	10000	7300	16400	16300	91.2	90.1	1	75.0-125			0.662	20
Potassium	10000	ND	11000	10900	92.3	90.9	1	75.0-125			1.23	20
Sodium	10000	50100	58900	58500	87.2	83.9	1	75.0-125			0.564	20

DATE/TIME: 03/10/21 11:48 Тс

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

Jbb g calibration (ICAL).

PROJECT: 27213167.20

SDG: L1322458

DATE/TIME: 03/10/21 11:48 Τс

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# 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>14</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

PROJECT: 27213167.20

SDG: L1322458 DATE/TIME: 03/10/21 11:48 <sup>1</sup> Cp <sup>2</sup> Tc <sup>3</sup> Ss <sup>4</sup> Cn <sup>5</sup> Sr <sup>6</sup> Qc <sup>7</sup> Gl <sup>8</sup> Al <sup>9</sup> Sc

Company Name/Address:			Billing Infor	mation:						A	nalvsis /	Contain	er / Pres	ervative		Chain	of Custody	Page of
SCS Engineers - KS		Accounts Payable 8575 W. 110th Street					Pres Chk			02						_/_	Pace A	nalytical <sup>®</sup>
Overland Park, KS 66210			Overland	Park, KS	66210													
Report to: Jason Franks			Email To: jfranks@scsengineers.com;jay.martin@ev				ergy.c		res oPres		oPres					12065 Li Phone: 6 Submitti	ebanon Road Mt . 615-758-5858 Alt: ing a sample via ti ites acknowledgm	uliet, TN 37122 800-767-5859 his chain of custody ent and acceptance of the
Project Description: Evergy latan Generating Station		City/State Collected:	Weston MO Please Cir PT MT C			rcle: T ET	res	HNO3		PE-N					Pace Ter https://i	rms and Condition info.pacelabs.com df	s found at: /hubfs/pas-standard-	
Phone: 913-681-0030	Client Project 27213167	.210	C Lab Project # AQUAOPKS-IATAN					PE-NoP	DPE-N	HDPE-I	SmIHD					SDG	# L   1097	520450
Collected by (print):	Site/Facility I	D #		P.O. #				MIHDE	25mlH	250mll	56 12					Acctn	um: AQU	AOPKS
Collected by (signature):	<b>Rush?</b> ( Same D Next D	Lab MUST Be Day Five ay 5 Da	e Notified) Day y (Rad Only)	Quote #	Results N	Needed		KCA 125	9056 1	- 6010	iride - 90					Preio PM: 2	gin: <b>P830</b> 206 - Jeff Ci	879 702 arr
Immediately Packed on Ice N Y	Two Da	ay 10 D Day	ay (Rad Only)				No. of	, AL	de .	, Na	Chlo					PB:		
Sample ID	Comp/Grab	Matrix *	Depth	Date		Time	Cntrs	ALKBI	Chlori	K, Mg	504, (					Shipp	Remarks	Sample # (lab only)
MW-6	Gab	GW	2526	3/11	21	1335	3	X		X	X							-01
/W-10	Grab	GW	25.5	3/12	.1	1523	3	x	X	X								00
							1											
							1											
							1											
							1											
* Matrix:	Remarks:		1	1			1	-			рН		Temp		COC Sea	Sample Red	ceipt Che /Intact:	Cklist
GW - Groundwater B - Bioassay WW - WasteWater											Flow		_ Other		COC Sig Bottles Correct	ned/Accur arrive i bottles	ate: ntact: used:	N N N
DW - Drinking Water OT - Other	Samples returned UPSFedE	d via: x Courier		Т	Fracking	#									Suffici VOA Zer	ent volum <u>If A</u> o Headspa	e sent: pplicabl ce:	
Relinquished by : (Signature)	C	ate: 3/2/	ZI II	R	Received	by: (Signat	loon	3.	2-2-2	21	Trip Blar	nk Receiv	ved: Yes	CL / MeoH	Preserv RAD Scr	een <0.5	mR/hr:	sked:
Relinquished by : (Signature)	C	Date:	Time	: R	Received	d by: (Signat	ure)		61	1	Temp:	Bri	C Bottle	s Received:	If preserv	vation requi	red by Logi	n: Date/Time
Relinquished by : (Signature)	C	Date:	Time	:: R	Received	for lab by	Signat	ure)	>	6	Date:	15-0	Time	2.0	Hold:			Condition: NCF / OK

.

# ATTACHMENT 1-3 May 2021 Sampling Event Laboratory Report



# Pace Analytical® ANALYTICAL REPORT June 08, 2021

## **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description:

L1356626 05/21/2021 27213167.21 Evergy - latan Generating Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210

### Entire Report Reviewed By:

Jubb land

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV/SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

# **Pace Analytical National**

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

ACCOUNT: SCS Engineers - KS PROJECT: 27213167.21

SDG: L1356626

DATE/TIME: 06/08/21 16:56

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

SDG: L1356626 DATE/TIME: 06/08/21 16:56

# SAMPLE SUMMARY

			Collected by	Collected date/time	Received da	te/time
MW-1 L1356626-01 GW			G. Panaflor	05/20/21 15:00	05/21/21 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1678535	1	05/27/21 13:16	05/27/21 14:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1682542	1	06/04/21 00:45	06/04/21 00:45	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1683965	1	06/07/2116:48	06/08/21 10:29	EL	Mt. Juliet, TN
MW-2 11356626-02 GW			Collected by G. Panaflor	Collected date/time 05/20/21 09:45	Received da 05/21/21 09:	te/time 30
Mathad	Patch	Dilution	Proparation	Applycic	Applyct	Location
method	Batch	Dilution	date/time	date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1678535	1	05/27/21 13:16	05/27/21 14:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1682542	1	06/04/21 00:58	06/04/21 00:58	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1682542	5	06/04/21 01:11	06/04/21 01:11	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1683965	1	06/07/2116:48	06/08/2110:38	EL	Mt. Juliet, TN
MW-6 11356626-03 GW			Collected by G. Panaflor	Collected date/time 05/20/21 09:35	Received da 05/21/21 09:	te/time 30
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
inculu	Daten	Dilution	date/time	date/time	Analyse	Location
Gravimetric Analysis by Method 2540 C-2011	WG1678535	1	05/27/21 13:16	05/27/21 14:31	MMF	Mt Juliet TN
Wet Chemistry by Method 9056A	WG1682542	1	06/04/21 01:24	06/04/21 01:24	FLN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1683965	1	06/07/2116:48	06/08/21 10:41	EL	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
MW-7 L1356626-04 GW			G. Panaflor	05/20/21 12:45	05/21/21 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1678535	1	05/27/21 13:16	05/27/21 14:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1682542	1	06/04/21 01:36	06/04/21 01:36	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1683965	1	06/07/2116:48	06/08/21 09:33	EL	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
MW-8 L1356626-05 GW			G. Panaflor	05/20/21 12:10	05/21/21 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1678535	1	05/27/21 13:16	05/27/21 14:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1682542	1	06/04/21 02:15	06/04/21 02:15	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1683965	1	06/07/2116:48	06/08/2110:44	EL	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
DUPLICATE L1356626-06 GW			G. Panaflor	05/20/21 12:50	05/21/21 09:	30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1678535	1	05/27/21 13:16	05/27/21 14:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1682542	1	06/04/21 02:54	06/04/21 02:54	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1683965	1	06/07/2116:48	06/08/2110:47	EL	Mt. Juliet, TN

ACCOUNT: SCS Engineers - KS PROJECT: 27213167.21

SDG: L1356626 DATE/TIME: 06/08/21 16:56 Ср

<sup>2</sup>Tc

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# 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.

ubb land

Jeff Carr Project Manager



PROJECT: 27213167.21

SDG: L1356626 DA<sup>-</sup> 06/0 PAGE: 4 of 17

#### SAMPLE RESULTS - 01 L1356626

#### Gravimetric Analysis by Method 2540 C-2011

	-						1 Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	500		10.0	1	05/27/2021 14:31	WG1678535	⁻Tc

#### Wet Chemistry by Method 9056A

Collected date/time: 05/20/21 15:00

Wet Chemistry by Method 9056A											
	Result	Qualifier	RDL	Dilution	Analysis	Batch					
Analyte	ug/l		ug/l		date / time			$^{4}$ Cn			
Chloride	5590		1000	1	06/04/2021 00:45	WG1682542		CII			
Fluoride	257		150	1	06/04/2021 00:45	WG1682542		5			
Sulfate	33300		5000	1	06/04/2021 00:45	WG1682542		Sr			

### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	06/08/2021 10:29	WG1683965
Calcium	137000		1000	1	06/08/2021 10:29	WG1683965

Qc

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#### SAMPLE RESULTS - 02 L1356626

#### Gravimetric Analysis by Method 2540 C-2011

· · · · · ·	· ·						l'Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	611		13.3	1	05/27/2021 14:31	WG1678535	Tc

#### Wet Chemistry by Method 9056A

Wet Chemistry by Method 9056A											
	Result	Qualifier	RDL	Dilution	Analysis	Batch					
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn				
Chloride	6450		1000	1	06/04/2021 00:58	WG1682542					
Fluoride	316		150	1	06/04/2021 00:58	WG1682542	5				
Sulfate	126000		25000	5	06/04/2021 01:11	WG1682542	Sr				

#### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	06/08/2021 10:38	WG1683965
Calcium	167000		1000	1	06/08/2021 10:38	WG1683965

Qc

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#### SAMPLE RESULTS - 03 L1356626

#### Gravimetric Analysis by Method 2540 C-2011

,	, , , , , , , , , , , , , , , , , , ,						l'Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	619	<u>J3</u>	13.3	1	05/27/2021 14:31	WG1678535	⁻Tc

#### Wet Chemistry by Method 9056A

Collected date/time: 05/20/21 09:35

Wet Chemistry by Method 9056A										
Result <u>Qualifier</u> RDL Dilution Analysis <u>Batch</u>										
Analyte	ug/l		ug/l		date / time			<sup>4</sup> Cn		
Chloride	2750		1000	1	06/04/2021 01:24	WG1682542				
Fluoride	274		150	1	06/04/2021 01:24	WG1682542		5		
Sulfate	46900		5000	1	06/04/2021 01:24	WG1682542		Sr		

#### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	06/08/2021 10:41	WG1683965
Calcium	188000		1000	1	06/08/202110:41	WG1683965

Qc

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#### SAMPLE RESULTS - 04 L1356626

#### Gravimetric Analysis by Method 2540 C-2011

							Cn.
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	513		10.0	1	05/27/2021 14:31	WG1678535	⁻Tc

#### Wet Chemistry by Method 9056A

Collected date/time: 05/20/21 12:45

Wet Chemistry by Method 9056A										
Result <u>Qualifier</u> RDL Dilution Analysis <u>Batch</u>										
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn			
Chloride	6030		1000	1	06/04/2021 01:36	WG1682542				
Fluoride	342		150	1	06/04/2021 01:36	WG1682542	5			
Sulfate	57200		5000	1	06/04/2021 01:36	WG1682542	Sr			

### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	06/08/2021 09:33	WG1683965
Calcium	148000	V	1000	1	06/08/2021 09:33	WG1683965

Qc

Gl

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#### SAMPLE RESULTS - 05 L1356626

#### Gravimetric Analysis by Method 2540 C-2011

,	,						Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	426		10.0	1	05/27/2021 14:31	WG1678535	Tc

#### Wet Chemistry by Method 9056A

Collected date/time: 05/20/21 12:10

Wet Chemistry by Method 9056A										
Result Qualifier RDL Dilution Analysis Batch										
Analyte	ug/l		ug/l		date / time			$^{4}$ Cn		
Chloride	1340		1000	1	06/04/2021 02:15	WG1682542		CII		
Fluoride	364		150	1	06/04/2021 02:15	WG1682542		5		
Sulfate	17300		5000	1	06/04/2021 02:15	WG1682542		Sr		

#### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	06/08/2021 10:44	WG1683965
Calcium	127000		1000	1	06/08/2021 10:44	WG1683965

Qc

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#### SAMPLE RESULTS - 06 L1356626

#### Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch	 Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	432		10.0	1	05/27/2021 14:31	WG1678535	Tc

#### Wet Chemistry by Method 9056A

Wet Chemistry by Method 9056A										
Result <u>Qualifier</u> RDL Dilution Analysis <u>Batch</u>										
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn			
Chloride	1290		1000	1	06/04/2021 02:54	WG1682542				
Fluoride	357		150	1	06/04/2021 02:54	WG1682542	5			
Sulfate	16800		5000	1	06/04/2021 02:54	WG1682542	Sr			

#### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	06/08/2021 10:47	WG1683965
Calcium	126000		1000	1	06/08/2021 10:47	WG1683965

Qc

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# WG1678535

Gravimetric Analysis by Method 2540 C-2011

#### QUALITY CONTROL SUMMARY L1356626-01,02,03,04,05,06

#### Method Blank (MB)

(MB) R3661820-1 05/27/2114:31										
	MB Result	MB Qualifier	MB MDL	MB RDL		2				
Analyte	mg/l		mg/l	mg/l		Tc				
Dissolved Solids	U		10.0	10.0						
						<sup>3</sup> Ss				

#### L1356626-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1356626-02 05/27/21 14:31 • (DUP) R3661820-3 05/27/21 14:31										
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits				
Analyte	mg/l	mg/l		%		%				
Dissolved Solids	611	605	1	0.878		5				

### L1356626-03 Original Sample (OS) • Duplicate (DUP)

L1356626-03 Original Sample (OS) • Duplicate (DUP)												
(OS) L1356626-03 05/27/	'21 14:31 • (DUP)	R3661820-4	05/27/21	14:31								
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	<sup>8</sup> Al					
Analyte	mg/l	mg/l		%		%						
Dissolved Solids	619	660	1	6.46	<u>J3</u>	5	<sup>9</sup> Sc					

### Laboratory Control Sample (LCS)

(LCS) R3661820-2 05/27/	/21 14:31				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8690	98.8	77.4-123	

DATE/TIME: 06/08/21 16:56 Cn

Sr

Qc

# WG1682542

Wet Chemistry by Method 9056A

#### QUALITY CONTROL SUMMARY L1356626-01,02,03,04,05,06

### Method Blank (MB)

(MR) P3663230 1 06/03/2113:04

(IVIB) R3663230-1 06/03/2	21 13:04				
	MB Result	MB Qualifier	MB MDL	B RDL	2
Analyte	ug/l		ug/l	/	Tc
Chloride	U		379	00	
Fluoride	U		64.0	0	<sup>3</sup> Ss
Sulfate	U		594	000	00

#### L1356541-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1356541-01 06/03	(21 22:11 • (DUP) F	R3663230-3 (	06/03/212	22:24					
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits			
Analyte	ug/l	ug/l		%		%			
Chloride	17100	17000	1	0.123		15			
Fluoride	194	190	1	1.98		15			
Sulfate	11100	11200	1	1.32		15			

### L1356626-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1356626-06 06/04/21 02:54 • (DUP) R3663230-7 06/04/21 03:06												
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits						
Analyte	ug/l	ug/l		%		%						
Chloride	1290	1270	1	0.891		15						
Fluoride	357	350	1	2.09		15						
Sulfate	16800	16900	1	0.833		15						

### Laboratory Control Sample (LCS)

(LCS) R3663230-2 06/03/2113:17												
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier							
Analyte	ug/l	ug/l	%	%								
Chloride	40000	39300	98.2	80.0-120								
Fluoride	8000	8230	103	80.0-120								
Sulfate	40000	40000	99.9	80.0-120								

ACCOUNT:	
SCS Engineers - KS	5

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# QUALITY CONTROL SUMMARY

### L1356541-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1356541-02 06/03/21 22:37 • (MS) R3663230-4 06/03/21 22:49													
	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier						
Analyte	ug/l	ug/l	ug/l	%		%							
Chloride	50000	70600	118000	94.2	1	80.0-120	Ē						
Fluoride	5000	218	5210	99.9	1	80.0-120							
Sulfate	50000	5270	56300	102	1	80.0-120							

### L1356626-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356626-04 06/04/21 01:36 • (MS) R3663230-5 06/04/21 01:49 • (MSD) R3663230-6 06/04/21 02:02													
	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	6030	57100	58300	102	104	1	80.0-120			2.01	15	
Fluoride	5000	342	5510	5630	103	106	1	80.0-120			2.19	15	
Sulfate	50000	57200	108000	109000	102	104	1	80.0-120	E	E	0.889	15	

### WG1683965

Metals (ICP) by Method 6010B

#### QUALITY CONTROL SUMMARY L1356626-01,02,03,04,05,06

### Method Blank (MB)

Method Diam	K (IVID)				$^{1}$ Cp $^{1}$
(MB) R3664572-1	06/08/21 09:28				СР
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	Tc
Boron	U		20.0	200	
Calcium	U		79.3	1000	<sup>3</sup> Ss

### Laboratory Control Sample (LCS)

(LCS) R3664572-2 06/08/	21 09:30					-
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	⁵Sr
Analyte	ug/l	ug/l	%	%		
Boron	1000	973	97.3	80.0-120		<sup>6</sup>
Calcium	10000	9870	98.7	80.0-120		

### L1356626-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356626-04 06/08/2	21 09:33 • (MS)	R3664572-4	06/08/21 09:39	9 • (MSD) R366	4572-5 06/08	/21 09:42							Å
	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	%	%		%			%	%	9
Boron	1000	ND	1080	1080	99.6	99.1	1	75.0-125			0.394	20	Sc
Calcium	10000	148000	154000	154000	64.5	63.4	1	75.0-125	V	$\underline{\vee}$	0.0726	20	

ACCOUNT:
SCS Engineers - KS

DATE/TIME: 06/08/21 16:56 ⁺Cn

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

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

PROJECT: 27213167.21

SDG: L1356626 Τс

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# 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
ldaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>14</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

SDG: L1356626 DATE/TIME: 06/08/21 16:56

SCS Engineers - KS						1 mil		1	1	Inda						
8575 W. 110th Street Overland Park, KS 66210		Account: 8575 W. Overland	ccounts Payable 575 W. 110th Street Overland Park, KS 66210				22						- Pac	- Pace Analytical*		
Report to: Jason Franks		Email To: jfranks@scsengineers.com;jay.martin@ev				Pres			1				12065 Lebanon Rd Mi Submitting a sample v constitutes acknowled	ount Juliet, TN 37122 Ia this chain of custody gment and acceptance of the		
Project Description: Evergy - latan Generating Station		City/State Collected:		Please Cit PT MT C		IoN-3							Pace Terms and Condi https://info.pacelabs.o terms.pdf	tions found at: :om/hubfs/pas-standard-		
Phone: 913-681-0030	Client Project # 27213167.21		Lab Project # AQUAOPKS		ct # PKS-IATAN		INHDPI	HN03						SDG # U	38662 114	
Collected by (print):	Site/Facility ID #		P.O. #				1) 125r	I) 125r HDPE-						Acctnum: AQ	Acctnum: AQUAOPKS	
Collected by (signature): Collected by (sign		ush? (Lab MUST Be Notified) Same Day Five Day			Quote #			DPE-N	HDPE-N	Ure-i				Template: <b>T13</b> Prelogin: <b>P84</b>	Template: <b>T136059</b> Prelogin: <b>P846714</b> PM4.206	
		Next Day 5 Day (Rad Only) Two Day 10 Day (Rad Only) Three Day		Date Results Needed		No. of	s (Cld	s (Cld - 6010	Soml					PB: TN	PB:TN 5-11-21	
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Anior	a, Ca	rds 2					Shipped Via: F Remarks	Sample # (lab only)	
/W-1	GAAB	GW		5/20/2	1 1600	) 3	X	X	X						-21	
/W-2		GW	1 and	11	0945	3	X	X	X						-22	
ИW-6		GW	A		0935	3	X	x	X						-77	
иw-7		GW			1245	3	X	X	X					dia 4	-24	
иพ-8		GW			1210	3	X	x	X	1000					-15	
иW7 MS/MSD		GW			1255	3	X	X	X			- the second			-44	
DUPLICATE	V	GW		V	1250	3	X	x	X		THE .	n d			ele	
															The film	
								196								
Matrix: b	emarke:				1	<u> </u>			144.55					ample Perceint Ch	hanklist	
S - Soil AIR - Air F - Filter SW - Groundwater B - Bioassay WW - WasteWater	emarks:						pH Temp Flow Other					COC Seal COC Signe Bottles	COC Scal Present/Intact: V N COC Signed/Accurate: N Bottles arrive intact: N Correct bottles used: V N			
DW - Drinking Water	amples returned via: UPSFedExCourier										Correct bottles used:    YN       Sufficient volume sent:    YN       If Applicable    Y_N       VOA Zero Headspace:    Y_N					
Relinguished by : (Sternature)		te: /20/2	: Reci	Received by: (Signatu					Trip Blank Received: Yes / No HCL / MeoH			RAD Scree	Preservation Correct/Checked:N RAD Screen <0.5 mR/hr:N			
Relinquished by : (Signature)	Da	te:	Time	Rec	eived by: (Signat	ure)				Temp: °C Bottles Received:			If preservation required by Login: Date/Time			
Relinquished by : (Signature)	Da	te:	Time	Rec	eived for lab by:	(Signat	ure)			Date:	21-2	Time:	Hold:	The second	Condition: NCF / OK	



# Pace Analytical® ANALYTICAL REPORT June 10, 2021

## **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description:

L1356622 05/21/2021 27213167.21-A Evergy - latan Generating Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210

Тс Ss Cn Śr ʹQc Gl A Sc

### Entire Report Reviewed By:

Jubb land

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

# **Pace Analytical National**

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

ACCOUNT: SCS Engineers - KS

PROJECT: 27213167.21-A

SDG: L1356622

DATE/TIME: 06/10/21 14:47 PAGE: 1 of 13

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# SAMPLE SUMMARY

		Сс		Collected date/time	Received date/time		
MW-9 L1356622-01 GW			G. Paneflor	05/20/21 11:25	05/21/21 09:30		
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location	
			date/time	date/time			
Gravimetric Analysis by Method 2540 C-2011	WG1678535	1	05/27/21 13:16	05/27/21 14:31	MMF	Mt. Juliet, TN	
Wet Chemistry by Method 9056A	WG1682542	1	06/04/21 00:19	06/04/21 00:19	ELN	Mt. Juliet, TN	
Metals (ICP) by Method 6010B	WG1685453	1	06/10/21 02:56	06/10/21 09:39	EL	Mt. Juliet, TN	
			Collected by	Collected date/time	Received da	te/time	
MW-10 L1356622-02 GW			G. Paneflor	05/20/21 10:40	05/21/21 09:	30	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location	
			date/time	date/time			
Gravimetric Analysis by Method 2540 C-2011	WG1678535	1	05/27/21 13:16	05/27/21 14:31	MMF	Mt. Juliet, TN	
Wet Chemistry by Method 9056A	WG1682542	1	06/04/21 00:32	06/04/21 00:32	ELN	Mt. Juliet, TN	
Metals (ICP) by Method 6010B	WC100E4E2	1	00/10/21 02:50	00/10/01 00:41	<b>E1</b>	MA LUBRA TH	

Ср

<sup>2</sup>Tc

Ss

DATE/TIME: 06/10/21 14:47
### 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.

ubb land

Jeff Carr Project Manager



PROJECT: 27213167.21-A

SDG: L1356622

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### SAMPLE RESULTS - 01 L1356622

### Gravimetric Analysis by Method 2540 C-2011

							Cp
	Result	Qualifier	RDL	Dilution	Analysis	Batch	-1-
Analyte	mg/l		mg/l		date / time		 2
Dissolved Solids	384		10.0	1	05/27/2021 14:31	WG1678535	⁻Tc

### Wet Chemistry by Method 9056A

Collected date/time: 05/20/21 11:25

Wet Chemistry by Method 9056A															
	Result	Qualifier	RDL	Dilution	Analysis	Batch									
Analyte	ug/l		ug/l		date / time			<sup>4</sup> Cn							
Chloride	ND		1000	1	06/04/2021 00:19	WG1682542									
Fluoride	367		150	1	06/04/2021 00:19	WG1682542		5							
Sulfate	19700		5000	1	06/04/2021 00:19	WG1682542		Sr							

### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	06/10/2021 09:39	WG1685453
Calcium	98400		1000	1	06/10/2021 09:39	WG1685453

Qc

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### SAMPLE RESULTS - 02 L1356622

### Gravimetric Analysis by Method 2540 C-2011

							(Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		 2
Dissolved Solids	628		13.3	1	05/27/2021 14:31	WG1678535	⁻Tc

### Wet Chemistry by Method 9056A

Wet Chemistry by Method 9056A													
	Result	Qualifier	RDL	Dilution	Analysis	Batch							
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn						
Chloride	16500		1000	1	06/04/2021 00:32	WG1682542							
Fluoride	457		150	1	06/04/2021 00:32	WG1682542	5						
Sulfate	46700		5000	1	06/04/2021 00:32	WG1682542	Sr						

### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	06/10/2021 09:41	WG1685453
Calcium	148000		1000	1	06/10/2021 09:41	WG1685453

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### WG1678535

Gravimetric Analysis by Method 2540 C-2011

### QUALITY CONTROL SUMMARY L1356622-01,02

### Method Blank (MB)

Method Blank (	MB)				$^{1}$ Cp
(MB) R3661820-1 05/	27/21 14:31				Ср
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	mg/l		mg/l	mg/l	Tc
Dissolved Solids	U		10.0	10.0	
					<sup>3</sup> Ss

### L1356626-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1356626-02 05/27/	21 14:31 • (DUP)	R3661820-3	05/27/211	14:31		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	611	605	1	0.878		5

### L1356626-03 Original Sample (OS) • Duplicate (DUP)

L1356626-03 Orig	1356626-03 Original Sample (OS) • Duplicate (DUP)							
(OS) L1356626-03 05/27	//21 14:31 • (DUP)	R3661820-4	05/27/211	4:31				
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	<sup>8</sup> Al	
Analyte	mg/l	mg/l		%		%		
Dissolved Solids	619	660	1	6.46	<u>J3</u>	5	°Sc	

### Laboratory Control Sample (LCS)

(LCS) R3661820-2 05/27/	/21 14:31				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8690	98.8	77.4-123	

DATE/TIME: 06/10/21 14:47 Cn

Sr

Qc

### WG1682542

Wet Chemistry by Method 9056A

### QUALITY CONTROL SUMMARY L1356622-01,02

### Method Blank (MB) (MAD) D2662220 1 06/03/2112:04

(MB) R3663230-1	06/03/2113:04	

(IVID) K3003230-1 00/03/2	2115.04				
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	Tc
Chloride	U		379	1000	
Fluoride	U		64.0	150	<sup>3</sup> Ss
Sulfate	U		594	5000	

### L1356541-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1356541-01 06/03/2	SS) L1356541-01 06/03/21 22:11 • (DUP) R3663230-3 06/03/21 22:24											
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits						
Analyte	ug/l	ug/l		%		%						
Chloride	17100	17000	1	0.123		15						
Fluoride	194	190	1	1.98		15						
Sulfate	11100	11200	1	1.32		15						

### L1356626-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1356626-06 06/04/2	JS) L1356626-06 06/04/21 02:54 • (DUP) R3663230-7 06/04/21 03:06											
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits						
Analyte	ug/l	ug/l		%		%						
Chloride	1290	1270	1	0.891		15						
Fluoride	357	350	1	2.09		15						
Sulfate	16800	16900	1	0.833		15						

### Laboratory Control Sample (LCS)

.CS) R3663230-2 06/03/2113:17												
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier							
Analyte	ug/l	ug/l	%	%								
Chloride	40000	39300	98.2	80.0-120								
Fluoride	8000	8230	103	80.0-120								
Sulfate	40000	40000	99.9	80.0-120								

ACCOUNT:
SCS Engineers - KS

PROJECT: 27213167.21-A

SDG: L1356622

DATE/TIME: 06/10/21 14:47

PAGE: 8 of 13 Ср

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# QUALITY CONTROL SUMMARY

### L1356541-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1356541-02 06/03/2	(OS) L1356541-02 06/03/21 22:37 • (MS) R3663230-4 06/03/21 22:49												
	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier						
Analyte	ug/l	ug/l	ug/l	%		%							
Chloride	50000	70600	118000	94.2	1	80.0-120	Ē						
Fluoride	5000	218	5210	99.9	1	80.0-120							
Sulfate	50000	5270	56300	102	1	80.0-120							

### L1356626-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356626-04 06/04/	(OS) L1356626-04 06/04/21 01:36 • (MS) R3663230-5 06/04/21 01:49 • (MSD) R3663230-6 06/04/21 02:02												
	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	6030	57100	58300	102	104	1	80.0-120			2.01	15	
Fluoride	5000	342	5510	5630	103	106	1	80.0-120			2.19	15	
Sulfate	50000	57200	108000	109000	102	104	1	80.0-120	E	E	0.889	15	

### WG1685453

Metals (ICP) by Method 6010B

# QUALITY CONTROL SUMMARY

### Method Blank (MB)

MB) R3665552-1 06/10/21 09:22									
	MB Result	MB Qualifier	MB MDL	MB RDL	2				
Analyte	ug/l		ug/l	ug/l	T				
Boron	U		20.0	200					
Calcium	U		79.3	1000	<sup>3</sup> C				

### Laboratory Control Sample (LCS)

(LCS) R3665552-2 06/10/21 09:24												
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier							
Analyte	ug/l	ug/l	%	%								
Boron	1000	939	93.9	80.0-120								
Calcium	10000	9630	96.3	80.0-120								

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

The associated batch QC was outside the established quality control range for precision.

JЗ

SDG: L1356622 Τс

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### 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>14</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

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SCS Engineers - KS 8575 W. 110th Street Overland Park, KS 66210 Report to: Jason Franks			Accounts Payable 8575 W. 110th Street Overland Park, KS 66210					22								Pac	e Analytical			
			Email To: jfranks@s	csengineers.com;ja	y.martin@ev	vergy.c	Pres									12065 Lebanon Rd Moi Submitting a sample via constitutes acknowledg	unt Juliet, TN 37122 a this chain of custody ment and acceptance of the			
Project Description: Evergy - latan Generating Station		City/State Collected:		Please Circ PT MT CT		T ET	E-Nol	~								Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard- terms.pdf				
Phone: 913-681-0030	Client Project 27213167.	# 21-A		Lab Project # AQUAOPKS-I	ATAN		nIHDF	ONH									56622			
Collected by (print):	Site/Facility ID # P.O. #			P.O. #					oPres							Acctnum: AQU	JAOPKS			
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r - Other	UPS FedEx	via: Courier te:	Time	Trackin	g # ed by: (Signat	ure)			5	rip Blank F	Receive	t: Yes //	2	VOA Ze Preser	ero He	<u>If Applicabl</u> adspace: n Correct/Che	cked:			
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elinquished by : (Signature)	Date:		Time: Received by: (S		ed by: (Signat	gnature)				Temp; T °C Bottles Received:				If preservation required by Login: Date/Time						
Relinquished by : (Signature)	Dat	te:	Time	Receive	ed for lab by:	(Signatu	Tett	6-	1	Date: 5-21	-21	Time:	0	Hold:			Condition: NCF / OK)			

<u>出会の取</u>具。

## ATTACHMENT 1-4 July 2021 Sampling Event Laboratory Report



# Pace Analytical® ANALYTICAL REPORT

August 01, 2021

### **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description:

L1381302 07/21/2021 27213167.21 - L KCP&L latan Generating Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210

Entire Report Reviewed By:

Jubb land

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

### **Pace Analytical National**

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

ACCOUNT: SCS Engineers - KS

PROJECT: 27213167.21 - L

L1381302

SDG:

DATE/TIME: 08/01/21 08:29 PAGE: 1 of 13

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	Sc: Sample Chain of Custody	13

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### SAMPLE SUMMARY

			Collected by	Collected date/time	Received da	te/time
MW-6 L1381302-01 GW			Whit Martin	07/20/21 09:50	07/21/21 08:	30
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 9056A	WG1710983	1	07/27/21 19:17	07/27/21 19:17	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1712952	1	07/30/21 07:17	07/30/21 14:12	CCE	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
DUPLICATE L1381302-02 GW			Whit Martin	07/20/21 09:50	07/21/21 08:	30
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 9056A	WG1710983	1	07/27/21 21:28	07/27/21 21:28	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1712952	1	07/30/21 07:17	07/30/21 15:27	CCE	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
MW-10 L1381302-03 GW			Whit Martin	07/20/21 09:10	07/21/21 08:	30
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 9056A	WG1710983	1	07/27/21 22:01	07/27/21 22:01	ELN	Mt. Juliet, TN

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### 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.

Jubb land

Jeff Carr Project Manager



SDG: L1381302 DATE/TIME: 08/01/21 08:29 PAGE: 4 of 13

### SAMPLE RESULTS - 01 L1381302

### Wet Chemistry by Method 9056A

Wet Chemistry by	Net Chemistry by Method 9056A										
	Result	Qualifier	RDL	Dilution	Analysis	Batch		Ср			
Analyte	ug/l		ug/l		date / time			2			
Chloride	1560		1000	1	07/27/2021 19:17	WG1710983		Tc			
Sulfate	31600		5000	1	07/27/2021 19:17	WG1710983					
								<sup>3</sup> Ss			

### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch	$^{4}$ Cn
Analyte	ug/l		ug/l		date / time		
Calcium	147000	V	1000	1	07/30/2021 14:12	WG1712952	5

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### DUPLICATE Collected date/time: 07/20/21 09:50

### SAMPLE RESULTS - 02 L1381302

### Wet Chemistry by Method 9056A

	Result	Qualifier	RDL	Dilution	Analysis	Batch	(
Analyte	ug/l		ug/l		date / time		2
Chloride	1590		1000	1	07/27/2021 21:28	WG1710983	2
Sulfate	31700		5000	1	07/27/2021 21:28	<u>WG1710983</u>	
							3

### Metals (ICP) by Method 6010B

	Result	Qualifier	RDL	Dilution	Analysis	Batch	$^{4}$ Cn
Analyte	ug/l		ug/l		date / time		
Calcium	148000		1000	1	07/30/2021 15:27	WG1712952	5

Sr

Qc

GI

Â

# SAMPLE RESULTS - 03

### Wet Chemistry by Method 9056A

								Cr
	Re	esult Qu	ualifier R	DL	Dilution	Analysis	Batch	
Analyte	ug	/1	Ц	ıg/l		date / time		2
Sulfate	38	600	5	000	1	07/27/2021 22:01	WG1710983	Tc

### WG1710983

Wet Chemistry by Method 9056A

### QUALITY CONTROL SUMMARY L1381302-01,02,03

### Method Blank (MB)

	<b>X Y</b>					Cn l			
(MB) R3684603-1	MB) R3684603-1 07/27/21 09:56								
	MB Result	MB Qualifier	MB MDL	MB RDL		2			
Analyte	ug/l		ug/l	ug/l		⁻Tc			
Chloride	U		379	1000					
Sulfate	U		594	5000		<sup>3</sup> Ss			

⁺Cn

Sr

Qc

GI

### L1381290-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1381290-04 07/27/21 15:27 • (DUP) R3684603-3 07/27/21 15:43										
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits				
Analyte	ug/l	ug/l		%		%				
Chloride	22400	22000	10	1.75		15				
Sulfate	88300	85600	10	3.15		15				

### L1381302-01 Original Sample (OS) • Duplicate (DUP)

LI38I302-01 Orig	Isaisuz-ur Original sample (US) • Duplicate (DUP)								
(OS) L1381302-01 07/27/21 19:17 • (DUP) R3684603-6 07/27/21 19:33									
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits		9 S C	
Analyte	ug/l	ug/l		%		%		50	
Chloride	1560	1580	1	1.20		15			
Sulfate	31600	31600	1	0.154		15			

### Laboratory Control Sample (LCS)

(LCS) R3684603-2 07/27/	_CS) R3684603-2 07/27/2110:12									
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier					
Analyte	ug/l	ug/l	%	%						
Chloride	40000	40600	101	80.0-120						
Sulfate	40000	40800	102	80.0-120						

### L1381290-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1381290-04 07/27/21 15:27 • (MS) R3684603-4 07/27/21 16:00 • (MSD) R3684603-5 07/27/21 16:16												
	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	22400	69200	69400	93.7	94.1	10	80.0-120			0.235	15
Sulfate	50000	88300	132000	132000	87.7	87.8	10	80.0-120			0.0573	15

ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
SCS Engineers - KS	27213167.21 - L	L1381302	08/01/21 08:29	8 of 13

Wet Chemistry by Method 9056A

# QUALITY CONTROL SUMMARY

### L1381302-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1381302-01 07/27/21 19:17 • (MS) R3684603-7 07/27/21 19:50 • (MSD) R3684603-8 07/27/21 20:39													
	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	1560	52500	50100	102	97.1	1	80.0-120			4.73	15	
Sulfate	50000	31600	83400	80900	104	98.7	1	80.0-120			2.95	15	

PROJECT: 27213167.21 - L SDG: L1381302 DATE/TIME: 08/01/21 08:29

**PAGE**: 9 of 13

### WG1712952

Metals (ICP) by Method 6010B

# QUALITY CONTROL SUMMARY

### Method Blank (MB)

(MB) R3686095-1 07/30/2114:06						
	MB Result	MB Qualifier	MB MDL	MB RDL		
Analyte	ug/l		ug/l	ug/l		
Calcium	U		79.3	1000		

### Laboratory Control Sample (LCS)

(LCS) R3686095-2 07/30	LS) R3686095-2 07/30/2114:09									
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier					
Analyte	ug/l	ug/l	%	%						
Calcium	10000	9980	99.8	80.0-120						

### L1381302-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1381302-01 07/30/21 14:12 • (MS) R3686095-4 07/30/21 14:18 • (MSD) R3686095-5 07/30/21 14:20												
	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	%	%		%			%	%
Calcium	10000	147000	154000	155000	70.6	76.1	1	75.0-125	V		0.355	20

ACCOUNT:							
SCS Engineers - KS							

DATE/TIME: 08/01/21 08:29

Тс

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Sr

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### **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

V

The sample concentration is too high to evaluate accurate spike recoveries.

PROJECT: 27213167.21 - L

SDG: L1381302

DATE/TIME: 08/01/21 08:29 Τс

Ss

Cn

Sr

Qc

GI

AI

### 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
ldaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>14</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

SDG: L1381302

Company Name/Address:			Dilling Info	rmation		T	1			Analusia	ICanta	nor / Dr	aconuctiu				Chain of Custod	Page of
SCS Engineers - KS 8575 W. 110th Street Overland Park, KS 66210			Account 8575 W. Overlan	ts Payable . 110th Stree d Park, KS 6	et 6210	Pres Chk	07				Conta	ner / Pr	eservativ	<u>/e</u>		Pace And		e Analytical
Report to: Jason Franks			Email To: jfranks@s	csengineers.co	m;jay.martin@e	vergy.c	-	Pres									12065 Lebanon Rd Mc Submitting a sample vi constitutes acknowled	unt Juliet, TN 37122 a this chain of custody ment and acceptance of t
Project Description: KCP&L latan Generating Station		City/State Collected:	Weston	, MO	Please C PT MT	irele: ET		PE-No	s								Pace Terms and Condit https://info.pacelabs.c terms.pdf	ions found at: pm/hubfs/pas-standard-
Phone: 913-681-0030	Client Proj 2721316	ect # 7.21 - L		Lab Project a	# KS-IATAN	j.	NO3	SmIHD	NoPre								SDG # 5	8/302
Collected by (print): Whit Martin	Site/Facilit	y ID #		P.O. #			DPE-H	56 125	HDPE-								Acctnum: AQ	JAOPKS
Collected by (signature): What Marts Immediately Packed on Ice N Y X	Rusha Sam Next Two Thre	Clab MUST Be e Day Five Day 5 Da Day 10 D e Day	e Notified) Day y (Rad Only) Day (Rad Only)	e Results Needed		010 250mlH	de, SO4 - 90	0056 125ml								Template: <b>T12</b> Prelogin: <b>P86</b> PM: <b>206 - Jeff</b> PB:	9786 1401 Carr	
Sample ID	Comp/Gra	ab Matrix *	Depth	Date	Time	Cntrs	- 6(	lori	14 - 1					1			Shipped Via:	Sample # (lab.on)
MW-6	Grad	GW		7/20/2	0950	2	C X	C X	SC								nemarks	
MW-6 MS/MSD	Grab	GW		7/20/2	1 0950	2	x	X										
DUPLICATE	Grat	GW		7/20/	0950	2	X	X				·		-				-02
MW-10.	Grak	GW		7/20/2	1 0910	1			X									-03
* Matrix:	Remarks:					I				DH		Tem			COC Se	Sampl	e Receipt Ch	ecklist
GW - Groundwater B - Bioassay WW - WasteWater						1				Flow		Othe	er		COC Si Bottle Correc	lgned/A es arri et bott	Accurate: Lve intact: Lles used:	555
OT - Other	Samples return UPSFed	ed via: ExCourier		Tra	Tracking # 9883 0084				+	1003					VOA Ze	ero Hea	If Applicab adspace:	Le $-\frac{Y}{1}$
Relinquished by : (Signature)		Date:	121 15	15 Re	ceived by: (Signa	ture)				Trip Blai	the Recei	1 1	HCL/ Me	оН	RAD SC	reen <	(0.5 mR/hr:	¥ _
Relinquished by : (Signature)		Date:	Time	e: Re	ceived by: (Signa	ture)				Templ 31	ote	E Bott	les Receiv	7	If prese	ervation	required by Log	in: Date/Time
Relinquished by : (Signature)		Date:	Time	e: Re	teather	(Signat	ture)	15		Date: 7/2	1121	Tim	e: 830	>	Hold:			Condition: NCF / OK



# Pace Analytical® ANALYTICAL REPORT

August 09, 2021

### **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description:

L1385413 07/21/2021 27213167.21 - L KCP&L latan Generating Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210

Entire Report Reviewed By:

Jubb land

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

### **Pace Analytical National**

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

ACCOUNT: SCS Engineers - KS

PROJECT: 27213167.21 - L

SDG: L1385413

DATE/TIME: 08/09/21 07:30

PAGE:

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DUPLICATE L1385413-02	6
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GI: Glossary of Terms	8
Al: Accreditations & Locations	9
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SDG: L1385413

### SAMPLE SUMMARY

			Collected by	Collected date/time	Received dat	te/time
MW-6 L1385413-01 GW			Whit Martin	07/20/21 09:50	07/21/21 08:3	30
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Gravimetric Analysis by Method 2540 C-2011	WG1716521	1	08/03/21 14:35	08/03/21 15:24	VRP	Mt. Juliet, TN
			Collected by	Collected date/time	Received dat	te/time
DUPLICATE L1385413-02 GW			Whit Martin	07/20/21 09:50	07/21/21 08:3	30
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Gravimetric Analysis by Method 2540 C-2011	WG1716521	1	08/03/21 14:35	08/03/2115:24	VRP	Mt. Juliet, TN

Ср

SDG: L1385413 DATE/TIME: 08/09/21 07:30

### 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.

ubb law

Jeff Carr Project Manager



SDG: L1385413 DATE/TIME: 08/09/21 07:30

# SAMPLE RESULTS - 01

### Gravimetric Analysis by Method 2540 C-2011

							I Cr
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	542	Q	11.1	1	08/03/2021 15:24	WG1716521	Tc

# SAMPLE RESULTS - 02

### Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ct
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	534	Q	10.0	1	08/03/2021 15:24	WG1716521	Τc

### WG1716521

Gravimetric Analysis by Method 2540 C-2011

### QUALITY CONTROL SUMMARY L1385413-01,02

### Method Blank (MB)

(MB) R3689154-1 08/03/21 15:24							
	MB Result	MB Qualifier	MB MDL	MB RDL			
Analyte	mg/l		mg/l	mg/l			
Dissolved Solids	U		10.0	10.0			

### L1384494-23 Original Sample (OS) • Duplicate (DUP)

Original Result DUP Result Dilution DUP RPD DUP Qualifier DI Li   Analyte mg/l mg/l % %										
	DUP Qualifier	DUP RPD Limits								
Analyte	mg/l	mg/l		%		%				
Dissolved Solids	631	632	1	0.211		5				

### L1384900-05 Original Sample (OS) • Duplicate (DUP)

L1384900-05 Orig	inal Sample	e (OS) • Du	plicate	(DUP)			<sup>7</sup> Gl
(OS) L1384900-05 08/03	8/21 15:24 • (DUF	9) R3689154-4	08/03/21	15:24			
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	<sup>8</sup> Al
Analyte	mg/l	mg/l		%		%	
Dissolved Solids	994	998	1	0.402		5	<sup>9</sup> Sc

### Laboratory Control Sample (LCS)

(LCS) R3689154-2 08/03/21 15:24								
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier			
Analyte	mg/l	mg/l	%	%				
Dissolved Solids	8800	8400	95 5	77 4-123				

DATE/TIME: 08/09/21 07:30 PAGE: 7 of 11

Ср

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### GLOSSARY OF TERMS

### Guide to Reading and Understanding Your Laboratory Report

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SDG	Sample Delivery Group.
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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

Q

Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.

PROJECT: 27213167.21 - L

SDG: L1385413

DATE/TIME: 08/09/21 07:30 Τс

Ss

Cn

Sr

Qc

GI

AI

### 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
ldaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1 4</sup>	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		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

SDG: L1385413

Company Name/Address:	THE REAL PROPERTY AND		Billing Info	armation:		1	1				And And	Steph of Solid State				-
SCS Engineers - KS 8575 W. 110th Street Overland Park, KS 66210	Account 8575 W. Overlan	Accounts Payable 8575 W. 110th Street Overland Park, KS 66210						Analysis / Conta	iner / Preservat	lye	Chain (	Pace	Page L of L			
Report to: Jason Franks				Email To: jfranks@scsengineers.com;jay.martin@ev				res					12065 Le Submitta	65 Lebason Rd Mount Juliet, TN 37122 mitting a sample via this chain of custody		2425
Project Description: KCP&L latan Generating Station		City/State Collected:	Weston	MO	Please C PT MT	ITELE:		E-Nof					constitut Pace Ten https://w terms.pd	es acknowledgmi ms and Condition the pacelabs.com f	ent and acceptance of the s found at: /hubfs/pas-standard-	
Phone: 913-681-0030	One: 913-681-0030 Client Project #   27213167.21 - L   Ilected by (print): Site/Facility ID #   With Martin Site/Facility ID #			Lab Project #	-IATAN		103	mIHDP	oPres				SDG A	1302	1 NV 8/3/21	
Collected by (print): Whit Martin				P.O. #	#		DPE-HA	56 125	HDPE-A				Acctn	Um: AQU	25V13	1
Collected by (signature): When Martin mmediately Packed on ice N y X Collected by (signature): Rush? (Lab MUST Be N Same Day Five Da Next Day 5 Day ( Two Day 10 Day Three Day		Notified) Day y (Rad Only) ay (Rad Only)	Quote # Date Resu	Date Results Needed		10 250mlHI	le, SO4 - 90	056 125mlt				Template: <b>T129786</b> Prelogin: <b>P861401</b> PM: 206 - Jeff Carr PB:				
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	a - 60	hlorid	04 - 9				Shippe	ed Via: emarks	Sample # (lab only)	
MW-6	Grab	GW		7/20/21	0950	2	X	X	S						-at	10
NW-6 MS/MSD	Grab	GW		7/20/21	0950	2	x	X								
UPLICATE	Grab	GW	Contraction of the second	7/20/21	0950	2	X	X	Cite Cite						-02	5
/W-10.	Grab	GW	-	7/20/21	0910	1			X					in nen val Angel van	103	
		Contraction of the second														
	States and states	No. of Concession	No.			1		1991								
Matrix: S - Soil AIR - Air F - Filter IW - Groundwater B - Bioassay VW - WasteWater	Remarks:		- Altern		The line					pH	Temp Other	COC COC Bott	Sample Rec Seal Present/ Signed/Accura Les arrive in	eipt Che Intact: te: tact:	NP R	
OW - Drinking Water OT - Other	Samples returned	via: Courier		Tracki	ns# 988	33	33 0084			1003			icient volume If Ar	N N		
Relinquished by : (Signature)	Da	nte: 7/20/:	z1 15	15 Receiv	ved by: (Signati	ure)				Trip Blank Recei	ved: (Yes? No 1 (C) Mi	eoH	Sero Readspec srvation Corr screen <0.5 m	e: ect/Chec R/hr:	ked:	
Relinquished by : (Signature)	Da	ite:	Time:	Receiv	ved by: (Signati	ure)				Si Gh	Bottles Recei	Ved: If pre	servation require	ed by Login	: Date/Time	
Relinquished by : (Signature)	Da	ite:	Time:	Receiv	ather	(Signatu	ire)	15	1	Date: 7/21/21	Time: 0830	Hold:			Condition NCF / OK	

 $R_5$ 

# AQUAOPKS L1381302-01 and -02 relog for TDS

Firefox

Per client request, please relog AQUAOPKS samples L1381302-01 and -02 for TDS. Client is aware that the samples are OOH and may require dilutions.

NOTICE-- The contents of this email and any attachments may contain confidential, privileged, and/or legally protected information and are for the sole use of the addressee(s). Any review or distribution by

others is strictly prohibited. If you are not the intended recipient, please contact the sender immediately

P Please consider the environment before printing this email

Time spent: oh Time estimate: oh Members

Jeffrey A. Carr (responsible)

f 1



# Pace Analytical® ANALYTICAL REPORT

August 09, 2021

### **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description:

L1386668 08/05/2021 27213167.21 Evergy latan Gen Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210 Тс Ss Cn Śr ʹQc Gl A Sc

Entire Report Reviewed By:

Jubb law

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

### **Pace Analytical National**

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

ACCOUNT: SCS Engineers - KS PROJECT: 27213167.21

SDG: L1386668

DATE/TIME: 08/09/21 07:08

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SDG: L1386668

## SAMPLE SUMMARY

			Collected by	Collected date/time	Received date	e/time
MW-6 L1386668-01 GW			Jason R. Franks	08/04/2110:25	08/05/21 09:0	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1718421	1	08/05/2119:35	08/05/21 19:39	VRP	Mt. Juliet, TN
			Collected by	Collected date/time	Received date	e/time
DUPLICATE L1386668-02 GW			Jason R. Franks	08/04/2110:25	08/05/21 09:0	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Gravimetric Analysis by Method 2540 C-2011	WG1718421	1	08/05/21 19:35	08/05/21 19:39	VRP	Mt. Juliet, TN

Sc

Ср

SDG: L1386668 DATE/TIME: 08/09/21 07:08

## 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.

ubb land

Jeff Carr Project Manager



PROJECT: 27213167.21

SDG: L1386668

] 30 PAGE: 4 of 10

## SAMPLE RESULTS - 01

## Gravimetric Analysis by Method 2540 C-2011

							 I'Cr
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	mg/l		mg/l		date / time		 2
Dissolved Solids	550		10.0	1	08/05/2021 19:39	WG1718421	⁻Tc

SDG: L1386668

## SAMPLE RESULTS - 02

## Gravimetric Analysis by Method 2540 C-2011

							1 Cr
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	546		10.0	1	08/05/2021 19:39	WG1718421	Tc

SDG: L1386668 DATE/TIME: 08/09/21 07:08

Gravimetric Analysis by Method 2540 C-2011

## QUALITY CONTROL SUMMARY L1386668-01,02

## Method Blank (MB)

Method Blank	(MB)					
(MB) R3689182-1 08	/05/21 19:39					р
	MB Result	MB Qualifier	MB MDL	MB RDL	2	_
Analyte	mg/l		mg/l	mg/l	Tc	С
Dissolved Solids	U		10.0	10.0		
					<sup>3</sup> Ss	S

#### L1386668-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1386668-01 08/05/	(OS) L1386668-01 08/05/21 19:39 • (DUP) R3689182-3 08/05/21 19:39							
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits		
Analyte	mg/l	mg/l		%		%		
Dissolved Solids	550	537	1	2.39		5		

## Laboratory Control Sample (LCS)

(LCS) R3689182-2 08	8/05/21 19:39				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8320	94.5	77.4-123	

DATE/TIME: 08/09/21 07:08 Cn

Sr

Qc

GI

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## 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

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

PROJECT: 27213167.21

SDG: L1386668 DATE/TIME: 08/09/21 07:08

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## 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
daho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
owa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
ouisiana	AI30792	Tennessee <sup>14</sup>	2006
ouisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Vinnesota	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

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

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

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SCS Engineers		Billing Info	Billing Information: Jason Franks SCS Engineers				Analysis / Container / Preservative					Chain of Custody	Page of
		SCS Eng										2	
												Pace Al National Cente	nalytical®
Report to: Jason Franks		Email To: jfranks@	scsengineers.	com								12065 Lebanon Rd Mount Juliet, TN 3712 Phone: 615-758-5858	
Project Description: Evergy latan Gen Station		City/State V Collected:	Veston, MO	Please PT MT	Circle: CT ET							Phone: 800-767-5859 Fax: 615-758-5859	
Phone: 9133023238	Client Project # 27213167.21		Lab Project #			6						SDG # 1.58	053
Collected by (print):	Site/Facility ID #		P.O. #		р F	nPre						Table Acctnum:	
Collected by (signature):	Rush? (Lab !	MUST Be Notified)	Quote #			nl No						Template:	
Immediately Packed on Ice N Y	Same Day Next Day X Two Day Three Day	Five Day 5 Day (Rad Only) 10 Day (Rad Only)	Date Res 2 Day	ults Needed	No.	- 500n						PM: PB:	
Sample ID	Comp/Gra	ab Matrix* [	Depth Dat	e Time	Cntrs	TDS						Shipped Via: Remarks	Sample # (lab only)
MVV-6	Grab	GW	08/4/2	21 1025	1	×							61
Duplicate	Grab	GW	8/4/2	1 1025	- 1.	×							R
				_									
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay	Remarks:						1	pH	Te	emp	COC Ser COC Si Bottle	Sample Receipt Che al Present/Intact: gned/Accurate: s arrive intact:	NP Y N
WW - WasteWater	Samples returned	d via:						Flow	0	ther	Correc	t bottles used: ient volume sent:	Y NN
OT - Other	UPSFedEx	Courier	Т	racking # 98	83	01	084 0	989			VOA Ze	If Applicabl ro Headspace:	<u>e</u> YN
Relinguished by : (Signature)	D	8/4/21	Time: R	eceived by: (Sign	ature)			Trip Blan	k Received:	Yes No HCL / MeoH TBR	Preser RAD Sc	vation Correct/Che reen <0.5 mR/hr:	cked: $\underline{Y}_{Y}_{N}$
Relinquished by : (Signature)	D	patę:	Time: R	eceived by: (Sign	ature)		0	Temp:	-28	Bottles Received:	If prese	rvation required by Log	in: Date/Time
Relinquished by : (Signature)	D	pate:	Time: R	eceived for labo	y: (Signa	ature)	In	Date:	5/21	Time: 0900	Hold:		Condition: NCF / OK

Jared Morrison December 16, 2022

## ATTACHMENT 1-5 November 2021 Sampling Event Laboratory Report



# Pace Analytical® ANALYTICAL REPORT

December 16, 2021

## **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description:

L1433083 11/18/2021 27213167.21-A Evergy - latan Generating Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210

## Entire Report Reviewed By:

Jubb land

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

## **Pace Analytical National**

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

ACCOUNT: SCS Engineers - KS

PROJECT: 27213167.21-A

SDG:

L1433083

DATE/TIME: 12/16/21 10:45

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

## SAMPLE SUMMARY

MW-1 L1433083-01 GW			Collected by Whit Martin	Collected date/time 11/17/21 10:45	Received da 11/18/21 15:00	te/time D
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779725	1	11/24/21 11:14	11/24/21 16:11	BRG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1787688	1	12/11/21 15:24	12/11/21 15:24	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788314	1	12/13/21 14:16	12/15/21 03:29	CCE	Mt. Juliet, TN
MW-2 L1433083-02 GW			Collected by Whit Martin	Collected date/time 11/17/21 09:55	Received da 11/18/21 15:00	te/time )
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1780105	1	11/24/21 20:07	11/24/21 20:11	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1787688	1	12/11/21 15:36	12/11/21 15:36	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788873	5	12/14/21 16:23	12/14/21 16:23	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788842	1	12/14/21 10:31	12/14/21 19:03	CCE	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
MW-6 L1433083-03 GW			Whit Martin	11/17/21 13:30	11/18/21 15:00	)
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779332	1	11/23/21 18:00	11/23/21 19:01	MEU	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1787688	1	12/11/21 15:48	12/11/21 15:48	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788842	1	12/14/21 10:31	12/14/21 19:11	CCE	Mt. Juliet, TN
MW-7 L1433083-04 GW			Collected by Whit Martin	Collected date/time 11/17/21 12:25	Received da 11/18/21 15:00	te/time )
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779332	1	11/23/21 18:00	11/23/21 19:01	MEU	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1787688	1	12/11/21 15:59	12/11/21 15:59	LBR	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788226	9	12/15/21 13:12	12/16/21 04:35	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788848	1	12/14/21 15:00	12/15/21 02:05	CCE	Mt. Juliet, TN
MW-8 L1433083-05 GW			Collected by Whit Martin	Collected date/time 11/17/21 11:35	Received da 11/18/21 15:00	te/time D
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779332	1	11/23/21 18:00	11/23/21 19:01	MEU	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788153	1	12/12/21 22:20	12/12/21 22:20	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788842	1	12/14/21 10:31	12/14/21 19:14	CCE	Mt. Juliet, TN
			Collected by Whit Martin	Collected date/time 11/17/21 12:25	Received da 11/18/21 15:00	te/time )
Method	Batch	Dilution	Preparation	Δnalveis	Analyst	Location
	DatCH	DilutiOII	date/time	date/time	Anaiyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1779725	1	11/24/21 11:14	11/24/21 16:11	BRG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788153	1	12/12/21 22:33	12/12/21 22:33	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788842	1	12/14/21 10:31	12/14/21 19:16	CCE	Mt. Juliet, TN

PROJECT: 27213167.21-A

SDG: L1433083 DATE/TIME: 12/16/21 10:45 **PAGE**: 3 of 25 Ср

<sup>2</sup>Tc

Ss

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## 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.

ubb land

Jeff Carr Project Manager



PROJECT: 27213167.21-A

SDG: L1433083 DA<sup>-</sup> 12/16 PAGE: 4 of 25

#### SAMPLE RESULTS - 01 L1433083

## Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	537		10.0	1	11/24/2021 16:11	WG1779725	⁻Tc

## Wet Chemistry by Method 9056A

Collected date/time: 11/17/21 10:45

Wet Chemistry by Method 9056A								
	Result	Qualifier	RDL	Dilution	Analysis	Batch		
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn	
Chloride	6480		1000	1	12/11/2021 15:24	WG1787688	CII	
Fluoride	314		150	1	12/11/2021 15:24	WG1787688	5	
Sulfate	35400		5000	1	12/11/2021 15:24	WG1787688	Sr	

#### Metals (ICP) by Method 6010D

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	12/15/2021 03:29	WG1788314
Calcium	152000		1000	1	12/15/2021 03:29	WG1788314

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#### SAMPLE RESULTS - 02 L1433083

## Gravimetric Analysis by Method 2540 C-2011

							1 Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	595		10.0	1	11/24/2021 20:11	WG1780105	⁻Tc

## Wet Chemistry by Method 9056A

Wet Chemistry by Method 9056A								
	Result	Qualifier	RDL	Dilution	Analysis	Batch		
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn	
Chloride	6680		1000	1	12/11/2021 15:36	WG1787688		
Fluoride	371		150	1	12/11/2021 15:36	WG1787688	5	
Sulfate	114000		25000	5	12/14/2021 16:23	WG1788873	Sr	

#### Metals (ICP) by Method 6010D

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	12/14/2021 19:03	WG1788842
Calcium	165000		1000	1	12/14/2021 19:03	WG1788842

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#### SAMPLE RESULTS - 03 L1433083

## Gravimetric Analysis by Method 2540 C-2011

,	-						(Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		 2
Dissolved Solids	508		10.0	1	11/23/2021 19:01	WG1779332	⁻Tc

## Wet Chemistry by Method 9056A

Collected date/time: 11/17/21 13:30

Wet Chemistry by Method 9056A								
	Result	Qualifier	RDL	Dilution	Analysis	Batch		
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn	
Chloride	2120		1000	1	12/11/2021 15:48	WG1787688		
Fluoride	344		150	1	12/11/2021 15:48	WG1787688	5	
Sulfate	32200		5000	1	12/11/2021 15:48	WG1787688	Sr	

#### Metals (ICP) by Method 6010D

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	12/14/2021 19:11	WG1788842
Calcium	147000		1000	1	12/14/2021 19:11	WG1788842

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#### SAMPLE RESULTS - 04 L1433083

#### Gravimetric Analysis by Method 2540 C-2011

· · · · · ·	· ·						Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	446		10.0	1	11/23/2021 19:01	WG1779332	⁻Tc

## Wet Chemistry by Method 9056A

Wet Chemistry by Method 9056A									
	Result	Qualifier	RDL	Dilution	Analysis	Batch		_	
Analyte	ug/l		ug/l		date / time		4	`n	
Chloride	1720		1000	1	12/11/2021 15:59	WG1787688			
Fluoride	383		150	1	12/11/2021 15:59	WG1787688	5		
Sulfate	31000		5000	1	12/11/2021 15:59	WG1787688	Ī S	r	

#### Metals (ICP) by Method 6010D

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	12/15/2021 02:05	WG1788848
Calcium	112000		9000	9	12/16/2021 04:35	WG1788226

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#### SAMPLE RESULTS - 05 L1433083

## Gravimetric Analysis by Method 2540 C-2011

							l'Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Cp
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	640		10.0	1	11/23/2021 19:01	WG1779332	Tc

## Wet Chemistry by Method 9056A

Collected date/time: 11/17/21 11:35

Wet Chemistry by Metho	d 9056A						<sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		 <sup>4</sup> Cn
Chloride	14400		1000	1	12/12/2021 22:20	WG1788153	CII
Fluoride	404		150	1	12/12/2021 22:20	WG1788153	5
Sulfate	91000		5000	1	12/12/2021 22:20	WG1788153	Sr

#### Metals (ICP) by Method 6010D

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	12/14/2021 19:14	WG1788842
Calcium	178000		1000	1	12/14/2021 19:14	WG1788842

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#### SAMPLE RESULTS - 06 L1433083

## Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	452		10.0	1	11/24/2021 16:11	WG1779725	Tc

## Wet Chemistry by Method 9056A

Wet Chemistry b	y Method 9056	4					<sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	L
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn
Chloride	1520		1000	1	12/12/2021 22:33	WG1788153	
Fluoride	379		150	1	12/12/2021 22:33	WG1788153	5
Sulfate	30700		5000	1	12/12/2021 22:33	<u>WG1788153</u>	ِ Sr

#### Metals (ICP) by Method 6010D

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	12/14/2021 19:16	WG1788842
Calcium	130000		1000	1	12/14/2021 19:16	WG1788842

Qc

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Gravimetric Analysis by Method 2540 C-2011

## QUALITY CONTROL SUMMARY L1433083-03,04,05

## Method Blank (MB)

(MB) R3734175-1 11/23/21	19:01			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

## L1432776-12 Original Sample (OS) • Duplicate (DUP)

L1432776-12 Origin	ai Sample (	(OS) • Dup	licate (L				$^{4}$ Cn
(OS) L1432776-12 11/23/21	19:01 • (DUP) R	3734175-3 11/2	23/21 19:01				
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	⁵Sr
Analyte	mg/l	mg/l		%		%	
Dissolved Solids	1210	1280	1	5.94	<u>13</u>	5	<sup>6</sup> Qc

## L1432898-10 Original Sample (OS) • Duplicate (DUP)

L1432898-10 Ori	ginal Sampl	e (OS) • Dup	olicate (	DUP)			<sup>7</sup> Gl
(OS) L1432898-10 11/2	3/21 19:01 • (DUF	) R3734175-4 11/	/23/21 19:0	1			
	Original Res	ult DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	<sup>8</sup> Al
Analyte	mg/l	mg/l		%		%	
Dissolved Solids	1310	1450	1	9.86	<u>J3</u>	5	<sup>9</sup> Sc

## Laboratory Control Sample (LCS)

(LCS) R3734175-2 11/23/21 19:01						
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	
Analyte	mg/l	mg/l	%	%		
Dissolved Solids	8800	8050	91.5	77.4-123		

DATE/TIME: 12/16/21 10:45 Тс

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Gravimetric Analysis by Method 2540 C-2011

## QUALITY CONTROL SUMMARY L1433083-01,06

## Method Blank (MB)

(MB) R3734296-1 11/24/21	1 16:11			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

## L1432898-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1432898-05 11/24/2	:1 16:11 • (DUP) R	3734296-3 11	/24/21 16:1	1		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	1460	1480	1	1.53		5

## L1432898-06 Original Sample (OS) • Duplicate (DUP)

L1432898-06 Original Sample (OS) • Duplicate (DUP)										
(OS) L1432898-06 11/24/2	21 16:11 • (DUP) F	3734296-4 11	1/24/21 16:′	11						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits		<sup>8</sup> Al		
Analyte	mg/l	mg/l		%		%				
Dissolved Solids	1650	1650	1	0.152		5		°Sc		

## Laboratory Control Sample (LCS)

(LCS) R3734296-2 11/24/2	CS) R3734296-2 11/24/21 16:11								
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier				
Analyte	mg/l	mg/l	%	%					
Dissolved Solids	8800	8570	97.4	77.4-123					

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Gravimetric Analysis by Method 2540 C-2011

## QUALITY CONTROL SUMMARY L1433083-02

## Method Blank (MB)

INIEthod Blank (INIE	5)				$^{1}$ Cn				
(MB) R3734313-1 11/24/21 20:11									
	MB Result	MB Qualifier	MB MDL	MB RDL	2				
Analyte	mg/l		mg/l	mg/l	Tc				
Dissolved Solids	U		10.0	10.0					
					³Ss				

## L1432977-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1432977-03 11/24/21 20:11 • (DUP) R3734313-4 11/24/2	1 20:11
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· /	Original Resul	t DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	278	271	1	2.55		5

## Laboratory Control Sample (LCS)

(LCS) R3734313-3 11/2	24/21 20:11				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	7980	90.7	77.4-123	

DATE/TIME: 12/16/21 10:45 ⁺Cn

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Wet Chemistry by Method 9056A

## QUALITY CONTROL SUMMARY L1433083-01,02,03,04

## Method Blank (MB)

(MR) 03740460 1 12/11/21 00:07

(IVID) R3740400-1 12/11/21	09.07				
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	Tc
Chloride	U		379	1000	
Fluoride	U		64.0	150	<sup>3</sup> Ss
Sulfate	U		594	5000	

## L1433083-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1433083-04 12/11/21 15:59 • (DUP) R3740460-3 12/11/21 16:11

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits		
Analyte	ug/l	ug/l		%		%		
Chloride	1720	1560	1	9.75		15		
Fluoride	383	382	1	0.235		15		
Sulfate	31000	30900	1	0.500		15		

## L1432919-23 Original Sample (OS) • Duplicate (DUP)

OS) L1432919-23 12/11/21 17:56 • (DUP) R3740460-6 12/11/21 18:08												
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits						
Analyte	ug/l	ug/l		%		%						
Chloride	ND	ND	1	0.000		15						
Fluoride	ND	ND	1	0.000		15						
Sulfate	ND	ND	1	0.000		15						

## Laboratory Control Sample (LCS)

(LCS) R3740460-2 12/11/21 09:19										
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier					
Analyte	ug/l	ug/l	%	%						
Chloride	40000	39500	98.7	80.0-120						
Fluoride	8000	7990	99.9	80.0-120						
Sulfate	40000	39400	98.5	80.0-120						

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Wet Chemistry by Method 9056A

## QUALITY CONTROL SUMMARY

## L1433083-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

OS) L1433083-04 12/11/21 15:59 • (MS) R3740460-4 12/11/21 16:23 • (MSD) R3740460-5 12/11/21 16:34												
	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	%	%		%			%	%
Chloride	50000	1720	52700	52700	102	102	1	80.0-120			0.0449	15
Fluoride	5000	383	5530	5530	103	103	1	80.0-120			0.125	15
Sulfate	50000	31000	78400	78500	94.7	94.9	1	80.0-120			0.102	15

## L1432919-23 Original Sample (OS) • Matrix Spike (MS)

JS) L1432919-23 12/11/21 17:56 • (MS) R3740460-7 12/11/21 18:20										
	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier			
Analyte	ug/l	ug/l	ug/l	%		%				
Chloride	50000	ND	50500	101	1	80.0-120				
Fluoride	5000	ND	5170	103	1	80.0-120				
Sulfate	50000	ND	49900	99.8	1	80.0-120				

ACCOUNT:	
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PAGE: 15 of 25 Cp <sup>2</sup>Tc <sup>3</sup>Ss <sup>4</sup>Cn <sup>5</sup>Sr <sup>6</sup>Qc <sup>7</sup>Gl <sup>8</sup>Al <sup>9</sup>Sc

Wet Chemistry by Method 9056A

## QUALITY CONTROL SUMMARY L1433083-05,06

## Method Blank (MB)

(MB) R3740144-1	12/12/21 18:06
(IVIB) R3740144-1	12/12/21 18:06

(IVIB) R3740144-1 12/12/21	18.06				
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	Tc
Chloride	U		379	1000	
Fluoride	U		64.0	150	<sup>3</sup> Ss
Sulfate	U		594	5000	00

## L1433083-06 Original Sample (OS) • Duplicate (DUP)

SS) L1433083-06 12/12/21 22:33 • (DUP) R3740144-3 12/12/21 22:46									
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits			
Analyte	ug/l	ug/l		%		%			
Chloride	1520	1610	1	5.45		15			
Fluoride	379	399	1	5.24		15			
Sulfate	30700	32600	1	5.88		15			

## L1433678-04 Original Sample (OS) • Duplicate (DUP)

JS) L1433678-04 12/13/21 04:20 • (DUP) R3740144-8 12/13/21 04:33									
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits			
Analyte	ug/l	ug/l		%		%			
Chloride	3760	3830	1	1.84		15			
Fluoride	ND	ND	1	24.9	<u>P1</u>	15			
Sulfate	ND	ND	1	1.02		15			

## Laboratory Control Sample (LCS)

LCS) R3740144-2 12/12/2118:19									
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier				
Analyte	ug/l	ug/l	%	%					
Chloride	40000	38900	97.2	80.0-120					
Fluoride	8000	7820	97.7	80.0-120					
Sulfate	40000	39200	98.1	80.0-120					

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Wet Chemistry by Method 9056A

## QUALITY CONTROL SUMMARY

## L1433105-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433105-02 12/12/21	23:12 • (MS) R3	3/40144-4 12/12	2/21 23:24 • (M	SD) R3/40144-	5 12/12/21 23:3	57						
	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	17600	68400	70400	102	106	1	80.0-120			2.79	15
Fluoride	5000	629	5660	5860	101	105	1	80.0-120			3.37	15
Sulfate	50000	35700	85000	87000	98.7	103	1	80.0-120			2.29	15

## L1433458-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

OS) L1433458-08 12/13/21 02:25 • (MS) R3740144-6 12/13/21 03:03 • (MSD) R3740144-7 12/13/21 03:16												
	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	2440	51300	53300	97.8	102	1	80.0-120			3.68	15
Fluoride	5000	174	5140	5340	99.3	103	1	80.0-120			3.89	15
Sulfate	50000	ND	48900	50800	97.8	102	1	80.0-120			3.93	15

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Wet Chemistry by Method 9056A

## QUALITY CONTROL SUMMARY L1433083-02

## Method Blank (MB)

Method Blan	ik (MB)					_
(MB) R3741161-1 1	2/14/21 09:45					Ρ
	MB Result	MB Qualifier	MB MDL	MB RDL	2	_
Analyte	ug/l		ug/l	ug/l	Тс	С
Sulfate	U		594	5000		
					<sup>3</sup> Ss	S

## L1441672-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1441672-01 12/14/21 1	S) L1441672-01 12/14/21 14:14 • (DUP) R3741161-3 12/14/21 14:26									
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD — Limits				
Analyte	ug/l	ug/l		%		%				
Sulfate	ND	ND	1	0.290		15				

⁴Cn

Sr

## L1441475-01 Original Sample (OS) • Duplicate (DUP)

L1441475-01 Origin	1441475-01 Original Sample (OS) • Duplicate (DUP)											
OS) L1441475-01 12/14/21 18:31 • (DUP) R3741161-6 12/14/21 18:43												
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	<sup>8</sup> Al					
Analyte	ug/l	ug/l		%		%						
Sulfate	9910	10500	1	5.61		15	<sup>9</sup> Sc					

## Laboratory Control Sample (LCS)

(LCS) R3741161-2 12/14/21 C	9:57				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Sulfate	40000	39800	99.5	80.0-120	

## L1441672-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1441672-01 12/14/21 14:14 • (MS) R3741161-4 12/14/21 14:37 • (MSD) R3741161-5 12/14/21 14:49												
Spike Amount Original Result MS Result MSD Result MS Rec. MSD Rec. Dilution Rec. Limits MS Qualifier MSD Qualifier RPD RPD Limits												RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Sulfate	50000	ND	54700	54700	100	100	1	80.0-120			0.139	15

## L1441475-01 Original Sample (OS) • Matrix Spike (MS)

DS) L1441475-01 12/14/21 18:31 • (MS) R3741161-7 12/14/21 18:55									
	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier		
Analyte	ug/l	ug/l	ug/l	%		%			
Sulfate	50000	9910	60700	102	1	80.0-120			

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Metals (ICP) by Method 6010D

## QUALITY CONTROL SUMMARY L1433083-04

## Method Blank (MB)

Method Blank	(MB)					$^{1}$ Cp				
(MB) R3741328-1 12/16/21 03:44										
	MB Result	MB Qualifier	MB MDL	MB RDL		2				
Analyte	ug/l		ug/l	ug/l		Tc				
Calcium	U		79.3	1000						
						<sup>3</sup> Ss				

## Laboratory Control Sample (LCS)

(LCS) R3741328-2 12/16/2	CS) R3741328-2 12/16/21 03:47								
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier				
Analyte	ug/l	ug/l	%	%					
Calcium	10000	9580	95.8	80.0-120					

## L1431579-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1431579-01 12/16/21 03:49 • (MS) R3741328-4 12/16/21 03:54 • (MSD) R3741328-5 12/16/21 03:57												
Spike Amount Original Result MS Result MS Result MS Rec. MSD Rec. Dilution Rec. Limits MS Qualifier MSD Qualifier RPD RPD Limits												RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Calcium	10000	3150	13100	12800	99.3	96.7	1	75.0-125			2.05	20

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Metals (ICP) by Method 6010D

## QUALITY CONTROL SUMMARY L1433083-01

## Method Blank (MB)

	D)				$^{1}$ Cp
(MB) R3740935-1 12/15	/21 03:08				Ср
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	Tc
Boron	U		20.0	200	
Calcium	U		79.3	1000	<sup>3</sup> Ss
					00

## Laboratory Control Sample (LCS)

(LCS) R3740935-2 12/15/2	1 03:10					-
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	⁵Sr
Analyte	ug/l	ug/l	%	%		
Boron	1000	1000	100	80.0-120		<sup>6</sup>
Calcium	10000	10300	103	80.0-120		

## L1439833-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

		· · · · ·		· · · · · · · · · · · · · · · · · · ·		•	1						
(OS) L1439833-05 12/15/2	8) L1439833-05 12/15/21 03:13 • (MS) R3740935-4 12/15/21 03:18 • (MSD) R3740935-5 12/15/21 03:21												- <sup>8</sup> Al
Spike Amount Original Result MS Result MS Result MS Rec. MSD Rec. Dilution Rec. Limits MS Qualifier MSD Qualifier RPD RPD Limits													
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%	9
Boron	1000	ND	1030	1040	103	104	1	75.0-125			1.12	20	Sc
Calcium	10000	8550	18900	18800	103	102	1	75.0-125			0.467	20	

ACCOUNT:	
SCS Engineers - KS	ŝ

SDG: L1433083

DATE/TIME: 12/16/21 10:45

PAGE: 20 of 25 °Cn

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Metals (ICP) by Method 6010D

## QUALITY CONTROL SUMMARY L1433083-02,03,05,06

## Method Blank (MB)

MB) R3740819-1 12/14/21 18:39												
	MB Result	MB Qualifier	MB MDL	MB RDL		2						
Analyte	ug/l		ug/l	ug/l		Tc						
Boron	U		20.0	200								
Calcium	U		79.3	1000		<sup>3</sup> SS						

## Laboratory Control Sample (LCS)

(LCS) R3740819-2 12/14/2	1 18:41				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Boron	1000	991	99.1	80.0-120	
Calcium	10000	10000	100	80.0-120	

## L1433073-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433073-01 12/14/21	18:44 • (MS) R3	740819-4 12/14	4/21 18:50 • (MS	SD) R3740819-5	5 12/14/21 18:53	3						
	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	%	%		%			%	%
Boron	1000	ND	1080	1080	98.2	98.6	1	75.0-125			0.404	20
Calcium	10000	353000	349000	350000	0.000	0.000	1	75.0-125	$\underline{\vee}$	$\underline{\vee}$	0.275	20

## L1433184-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433184-07 12/14/21	18:55 • (MS) R3	740819-6 12/14	4/21 18:58 • (MS	SD) R3740819-7	7 12/14/21 19:00	)						
	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	%	%		%			%	%
Boron	1000	1640	2630	2610	98.3	96.8	1	75.0-125			0.594	20
Calcium	10000	85300	95500	94300	102	89.8	1	75.0-125			1.32	20

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Metals (ICP) by Method 6010D

## QUALITY CONTROL SUMMARY L1433083-04

## Method Blank (MB)

Method Blan	Method Blank (MB)										
MB) R3740827-4 12/15/21 07:22											
	MB Result	MB Qualifier	MB MDL	MB RDL		2					
Analyte	ug/l		ug/l	ug/l		Tc					
Boron	U		20.0	200							
						<sup>3</sup> Ss					

## Laboratory Control Sample (LCS)

(LCS) R3740827-5 12/15/2	1 07:24				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Boron	1000	960	96.0	80.0-120	

## L1433083-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433083-04 12/15/21	1 02:05 • (MS) F	R3740827-2 12	2/15/21 02:10 • (	MSD) R374082	27-3 12/15/21 0	2:13						
	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	%	%		%			%	%
Boron	1000	ND	1070	1070	97.5	97.3	1	75.0-125			0.226	20

DATE/TIME: 12/16/21 10:45 Cn

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<sup>°</sup>Qc

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## 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

MDI	Method Detection Limit
	Not detected at the Reporting Limit (or MDL where applicable)
PDI	Penorted Detection Limit
ROL	
RPD	Palative Percent Difference
SDG	Sample Delivery Group
11	Not detected at the Reporting Limit (or MDL where applicable)
0	The name of the particular compound or analysis performed. Some Analysis and Methods will have multiple analysis
Analyte	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

J3	The associated batch QC was outside the established quality control range for precision.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

	ໍSs
	<sup>4</sup> Cn
	<sup>5</sup> Sr
	<sup>6</sup> Qc
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PROJECT: 27213167.21-A

SDG: L1433083 DATE/TIME: 12/16/21 10:45

## 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>14</sup>	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		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

SDG: L1433083 Τс

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Company Name/Address:			Billin	ng Inform	mation:		•			1		Analysis /	Contain	er / Pre	servativ	e	1	C	Chain of Custody	Page of _
SCS Engineers - KS 8575 W. 110th Street Overland Park, KS 66210			Acce 857 Ove	Accounts Payable 8575 W. 110th Street Overland Park, KS 66210			Pres Chk		12				- 3					Pac	e Analytica	
Report to: Jason Franks			Emai jfran	il To: hks@scs	engineers	.com;ja	y.martin@ev	/ergy.c	res									11	2065 Lebanon Rd Mot Submitting a sample via	unt Juliet, TN 37122 this chain of custody ment and acceptance of 1
Project Description: Evergy - latan Generating Station		City/S Collec	ate ted: We	stion.	MO		Please Ci PT MT	TTET	E-Nol									Fh	Pace Terms and Conditi https://info.pacelabs.co erms.pdf	ons found at: om/hubfs/pas-standard-
Phone: 913-681-0030	Client P 27213	roject # 167.21-A			Lab Proje	ct # PKS-I	ATAN		MIHDP	-HNO3								-	C2	11 55005
Collected by (print): Wait Martin	Site/Fac	ility ID #			P.O. #				4) 1251	IHDPE	VoPres							Ā	Acctnum: AQL	JAOPKS
Collected by (signature):	Ru:	ch? (Lab MU ame Day lext Day wo Day	ST Be Notifi _ Five Day _ 5 Day (Rad C _ 10 Day (Rad	ied) Only) I Only)	Quote # Date	Results	s Needed	Nc.	(Cld, F, SO	6010 250m	OmiHDPE-1							T P F	emplate: <b>T13</b> Prelogin: <b>P88</b> PM: <b>206 - Jeff (</b> PB:	6059 5751 Carr
Sample ID	Comp/	Grab Mat	rix * De	epth	Dat	e	Time	Critrs	Anions	3, Ca - I	rDS 25							S	hipped Via: <b>Fe</b> Remarks	Sample # (lab on
MW-1	Gra	b G	w		11/17	1/21	1045	3/	X	X	X									-0
MW-2	1	G	w			1	0955	3	X	X	X									- 0
MW-6		G	w .			-	1330	3	X	X	X									-0
MW-7		G	w				1225	3	X	x	X									- (
MW-8		G	w		Series 1		1135	3	X	x	X				g-bend					
MW-7MS/MSD		G	w.				1225	3	X	x	X									
DUPLICATE	1	G	W	С. н.			1225	3 .	X	x	X									-0
* Matrix	Romarks																	Sample	Receipt Ch	ecklist
SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater								I	6	-	0.11	pH _	6.1	Other		-	COC Se COC Si Bottle Correc	al Pres gned/Ac s arriv t bottl	ent/Intact: curate: e intact: es used:	NP Y
OT - Other	Samples ret	urned via: edExCo	urier			Trackin	ig #		ØI	-41.	04.8	s d	2-81	0-	25	B	VOA Ze	ro Head	f Applicabl	eY_
Relinquished by : (Signature)		Date:	/21	Time:	610	Receive	ed by: (Signat	ure)	A	.(		Trip Blank	Receiv	ed: Ye	HCL / Med	н	Preser RAD Sc	vation reen <0	Correct/Che .5 mR/hr:	cked: Y
Relinquished by : (Signature)		Date:		Time:		Receive	ed by: (Signat	ure)	1400			Temp: F	.0-3	Bottl	es Receive	ed:	If prese	rvation re	equired by Log	in: Date/Time
Relinquished by : (Signature)		Date:		Time:		Receive	ed for lab by:	(Signat	ure)	~		9019.01	X	Time	1571	5	Hold:			Condition: NCF / OK



# Pace Analytical® ANALYTICAL REPORT

December 16, 2021

## **SCS Engineers - KS**

Sample Delivery Group: Samples Received: Project Number: Description:

L1433105 11/18/2021 27213167.21-A Evergy - latan Generating Station

Report To:

Jason Franks 8575 W. 110th Street Overland Park, KS 66210

Entire Report Reviewed By:

Jubb land

Jeff Carr Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

## **Pace Analytical National**

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

ACCOUNT: SCS Engineers - KS

PROJECT: 27213167.21-A

SDG: L1433105

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# SAMPLE SUMMARY

			Collected by	Collected date/time	Received dat	te/time
MW-9 L1433105-01 GW			Whit Martin	11/17/21 12:25	11/18/21 15:00	)
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Gravimetric Analysis by Method 2540 C-2011	WG1779725	1	11/24/21 11:14	11/24/21 16:11	BRG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1788153	1	12/12/21 22:59	12/12/21 22:59	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788842	1	12/14/21 10:31	12/14/21 19:19	CCE	Mt. Juliet, TN
			Collected by	Collected date/time	Received dat	te/time
MW/ 10 1 1/22105 02 CW/			Whit Mortin	11/17/21 11:45	11/10/01 15.00	
1VIV-10 L1433105-02 GVV			WITH WIGHTIN	11/17/21 11.45	11/18/21 15:00	)
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Method Gravimetric Analysis by Method 2540 C-2011	Batch WG1779725	Dilution 1	Preparation date/time 11/24/21 11:14	Analysis date/time 11/24/21 16:11	Analyst BRG	Location Mt. Juliet, TN
Method Gravimetric Analysis by Method 2540 C-2011 Wet Chemistry by Method 9056A	Batch WG1779725 WG1788153	Dilution 1 1	Preparation date/time 11/24/21 11:14 12/12/21 23:12	Analysis date/time 11/24/21 16:11 12/12/21 23:12	Analyst BRG ELN	Location Mt. Juliet, TN Mt. Juliet, TN
Method Gravimetric Analysis by Method 2540 C-2011 Wet Chemistry by Method 9056A Metals (ICP) by Method 6010D	Batch WG1779725 WG1788153 WG1788859	Dilution 1 1 1	Preparation date/time 11/24/21 11:14 12/12/21 23:12 12/14/21 14:59	Analysis date/time 11/24/21 16:11 12/12/21 23:12 12/15/21 07:14	Analyst BRG ELN CCE	Location Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN

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<sup>2</sup>Tc

DATE/TIME: 12/16/21 13:40

# 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.

Jubb land

Jeff Carr Project Manager



DATE/TIME: 12/16/21 13:40

#### SAMPLE RESULTS - 01 L1433105

#### Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	394		10.0	1	11/24/2021 16:11	WG1779725	⁻Tc

#### Wet Chemistry by Method 9056A

Collected date/time: 11/17/21 12:25

Wet Chemistry by Metho	d 9056A						<sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l		date / time		<sup>4</sup> Cn
Chloride	ND		1000	1	12/12/2021 22:59	WG1788153	
Fluoride	440		150	1	12/12/2021 22:59	WG1788153	5
Sulfate	19200		5000	1	12/12/2021 22:59	WG1788153	Sr

#### Metals (ICP) by Method 6010D

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	12/14/2021 19:19	WG1788842
Calcium	106000		1000	1	12/14/2021 19:19	WG1788842

DATE/TIME: 12/16/21 13:40 Qc

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#### SAMPLE RESULTS - 02 L1433105

### Gravimetric Analysis by Method 2540 C-2011

							1 Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Dissolved Solids	491		10.0	1	11/24/2021 16:11	WG1779725	⁻Tc

#### Wet Chemistry by Method 9056A

Wet Chemistry by Metho	d 9056A							<sup>3</sup> Ss
	Result	Qualifier	RDL	Dilution	Analysis	Batch	[	
Analyte	ug/l		ug/l		date / time		[	$^{4}$ Cn
Chloride	17600		1000	1	12/12/2021 23:12	WG1788153		CII
Fluoride	629		150	1	12/12/2021 23:12	WG1788153		5
Sulfate	35700		5000	1	12/12/2021 23:12	WG1788153		Sr

#### Metals (ICP) by Method 6010D

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l		date / time	
Boron	ND		200	1	12/15/2021 07:14	WG1788859
Calcium	131000		1000	1	12/15/2021 22:15	WG1788859

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## WG1779725

Gravimetric Analysis by Method 2540 C-2011

#### QUALITY CONTROL SUMMARY L1433105-01,02

#### Method Blank (MB)

(MB) R3734296-1 11/24/21	16:11			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

#### L1432898-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1432898-05 11/24/2	1 16:11 • (DUP) R	3734296-3 11	/24/21 16:1	1		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	1460	1480	1	1.53		5

## L1432898-06 Original Sample (OS) • Duplicate (DUP)

L1432898-06 Origi	nal Sample	(OS) • Du	plicate	(DUP)			7	<sup>′</sup> GI
(OS) L1432898-06 11/24/2	:1 16:11 • (DUP) R	3734296-4 11	/24/21 16:1	1				
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits	8	<sup>3</sup> Al
Analyte	mg/l	mg/l		%		%	L	
Dissolved Solids	1650	1650	1	0.152		5	ç	Sc

## Laboratory Control Sample (LCS)

(LCS) R3734296-2 11/24/2	21 16:11				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8570	97.4	77.4-123	

DATE/TIME: 12/16/21 13:40

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# WG1788153

Wet Chemistry by Method 9056A

#### QUALITY CONTROL SUMMARY L1433105-01,02

## Method Blank (MB)

(MB) R3740144-1	12/12/21 18:06

(1010) 1(3) +01++1 12/12/21	10.00				<u> </u>
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	⁻Tc
Chloride	U		379	1000	
Fluoride	U		64.0	150	<sup>3</sup> Ss
Sulfate	U		594	5000	

### L1433083-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1433083-06 12/12/2	1 22:33 • (DUP)	R3740144-3 1	2/12/21 22	:46		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Chloride	1520	1610	1	5.45		15
Fluoride	379	399	1	5.24		15
Sulfate	30700	32600	1	5.88		15

## L1433678-04 Original Sample (OS) • Duplicate (DUP)

JS) L1433678-04 12/13/21 04:20 • (DUP) R3740144-8 12/13/21 04:33											
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits					
Analyte	ug/l	ug/l		%		%					
Chloride	3760	3830	1	1.84		15					
Fluoride	ND	ND	1	24.9	<u>P1</u>	15					
Sulfate	ND	ND	1	1.02		15					

## Laboratory Control Sample (LCS)

(LCS) R3740144-2 12/12/21	_CS) R3740144-2 12/12/21 18:19												
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier								
Analyte	ug/l	ug/l	%	%									
Chloride	40000	38900	97.2	80.0-120									
Fluoride	8000	7820	97.7	80.0-120									
Sulfate	40000	39200	98.1	80.0-120									

ACCOUNT:
SCS Engineers - KS

PROJECT: 27213167.21-A

SDG: L1433105

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PAGE: 8 of 14 Ср

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Wet Chemistry by Method 9056A

# QUALITY CONTROL SUMMARY

## L1433105-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433105-02 12/12/21	JS) L1433105-02 12/12/21 23:12 • (MS) R3/40144-4 12/12/21 23:24 • (MSD) R3/40144-5 12/12/21 23:37											
	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	17600	68400	70400	102	106	1	80.0-120			2.79	15
Fluoride	5000	629	5660	5860	101	105	1	80.0-120			3.37	15
Sulfate	50000	35700	85000	87000	98.7	103	1	80.0-120			2.29	15

## L1433458-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433458-08 12/13/21 02:25 • (MS) R3740144-6 12/13/21 03:03 • (MSD) R3740144-7 12/13/21 03:16												
	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	2440	51300	53300	97.8	102	1	80.0-120			3.68	15
Fluoride	5000	174	5140	5340	99.3	103	1	80.0-120			3.89	15
Sulfate	50000	ND	48900	50800	97.8	102	1	80.0-120			3.93	15

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PAGE: 9 of 14 <sup>2</sup> Cp <sup>2</sup> Tc <sup>3</sup> Ss <sup>4</sup> Cn <sup>5</sup> Sr <sup>6</sup> Qc <sup>7</sup> Gl <sup>8</sup> Al <sup>9</sup> Sc

## WG1788842

Metals (ICP) by Method 6010D

## QUALITY CONTROL SUMMARY L1433105-01

## Method Blank (MB)

Method Blank	(IVIB)				$^{1}Cp$
(MB) R3740819-1 12	2/14/21 18:39				Ср
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	Тс
Boron	U		20.0	200	
Calcium	U		79.3	1000	<sup>3</sup> Ss

#### Laboratory Control Sample (LCS)

(LCS) R3740819-2 12/14/21 18:41												
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier							
Analyte	ug/l	ug/l	%	%								
Boron	1000	991	99.1	80.0-120								
Calcium	10000	10000	100	80.0-120								

## L1433073-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433073-01 12/14/21 18:44 • (MS) R3740819-4 12/14/21 18:50 • (MSD) R3740819-5 12/14/21 18:53												
	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	%	%		%			%	%
Boron	1000	ND	1080	1080	98.2	98.6	1	75.0-125			0.404	20
Calcium	10000	353000	349000	350000	0.000	0.000	1	75.0-125	$\underline{\vee}$	$\underline{\vee}$	0.275	20

## L1433184-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433184-07 12/14/21 18:55 • (MS) R3740819-6 12/14/21 18:58 • (MSD) R3740819-7 12/14/21 19:00												
	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	%	%		%			%	%
Boron	1000	1640	2630	2610	98.3	96.8	1	75.0-125			0.594	20
Calcium	10000	85300	95500	94300	102	89.8	1	75.0-125			1.32	20

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## WG1788859

Metals (ICP) by Method 6010D

### QUALITY CONTROL SUMMARY L1433105-02

### Method Blank (MB)

Method Blank (MB)								
(MB) R3740937-1	12/15/21 07:09					Ср		
	MB Result	MB Qualifier	MB MDL	MB RDL		2		
Analyte	ug/l		ug/l	ug/l		Tc		
Boron	U		20.0	200				
						<sup>³</sup> Ss		

## Method Blank (MB)

(MB) R3741432-1 12/	(MB) R3741432-1 12/15/21 22:09									
	MB Result	MB Qualifier	MB MDL	MB RDL						
Analyte	ug/l		ug/l	ug/l						
Calcium	2490		79.3	1000						

## Laboratory Control Sample (LCS)

Laboratory Control Sample (LCS)										
(LCS) R3740937-2 12/15/21 07:11										
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier					
Analyte	ug/l	ug/l	%	%		<sup>8</sup> Al				
Boron	1000	989	98.9	80.0-120						

### Laboratory Control Sample (LCS)

(LCS) R3741432-2 12/15/21 22:12									
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier				
Analyte	ug/l	ug/l	%	%					
Calcium	10000	11700	117	80.0-120					

## L1433105-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1433105-02 12/15/21	OS) L1433105-02 12/15/21 07:14 • (MS) R3740937-4 12/15/21 07:20 • (MSD) R3740937-5 12/15/21 07:22											
Spike Amount Original Result MS Result MS Result MS Rec. MSD Rec. Dilution Rec. Limits MS Qualifier MSD Qualifier RPD RPD Limits												
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	ND	1110	1090	98.8	97.4	1	75.0-125			1.30	20

ACCOUNT:	PROJECT:
SCS Engineers - KS	27213167.21-A

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# 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.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.
Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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PROJECT: 27213167.21-A

The sample concentration is too high to evaluate accurate spike recoveries.

SDG: L1433105 DATE/TIME: 12/16/21 13:40

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# 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>14</sup>	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		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

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Phone: 913-681-0030	Client Project 27213167.	# 21-A		Lab Project # AQUAOPKS-I	IATAN		MIHDP	ONH-			•					SDG # (	12
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Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	nions	Ca -	DS 25				12			Shipped Via: For Remarks	Sample # (lab only)
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* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other	marks: mples returned UPS FedEx	l via: Courier		Trackin	ng # 🛞 \	842	pole	tz		PH Flow A77 (CH	+2.	Temp_ Other_ S+ C 8 + - C	2-2.5	COC S COC S Bott Corre Suff	Samp Seal Pr Signed/ les arr ect bot icient Zero He	le Receipt Ch esent/Intact: Accurate: ive intact: tles used: volume sent: If Applicabl adspace:	ecklist NP Y N Y N Y N e
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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 17, 2021

To: latan Generating Station 20250 State Route 45 N Platte County, Missouri Evergy Metro, Inc.

From: SCS Engineers



### RE: Determination of Statistically Significant Increases - CCR Landfill Fall 2020 Semiannual Detection Monitoring 40 CFR 257.94

Statistical analysis of monitoring data from the groundwater monitoring system for the CCR Landfill at the latan Generating Station has been completed in substantial compliance with the "Statistical Method Certification by A Qualified Professional Engineer" dated October 12, 2017. Groundwater samples were collected on November 9, 2020. Review and validation of the results from the November 2020 Detection Monitoring Event was completed on December 18, 2020, which constitutes completion and finalization of detection monitoring laboratory analyses. 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 2, 2021 and March 1, 2021.

The completed statistical evaluation identified two Appendix III constituents above the prediction limits established for monitoring well MW-10.

Constituent/Monitoring Well	*UPL	Observation November 9, 2020	1st Verification February 2, 20201	2nd Verification March 1, 2021
Calcium				
MW-10	154.2	158	160	160
Sulfate				
MW-10	39.5	42.3	46.7	48.4

\*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 SSIs above the background prediction limits for calcium and sulfate at monitoring well MW-10.

Attached to this memorandum are the following backup information:

Attachment 1: Sanitas<sup>™</sup> Output:

Statistical evaluation output from Sanitas<sup>™</sup> for the prediction limit analysis. This includes prediction limit plots, prediction limit background data, detection sample results,

latan Generating Station Determination of Statistically Significant Increases CCR Landfill March 17, 2021 Page 2 of 2

1<sup>st</sup> verification re-sample results (when applicable), 2<sup>nd</sup> 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<sup>™</sup> Configuration Settings:

Screen shots of the applicable Sanitas<sup>™</sup> 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

latan Generating Station Determination of Statistically Significant Increases CCR Landfill March 17, 2021

# ATTACHMENT 1

Sanitas<sup>™</sup> Output

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG Hollow symbols indicate censored values.



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). Insufficient data to test for seasonality: data were not deseasonalized.

> Constituent: Boron Analysis Run 3/10/2021 2:38 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Prediction Limit Within Limit Intrawell Non-parametric 0.3 MW-10 background 0.24 MW-10 compliance 0.18 mg/L Limit = 0.20.12 -000--0000--0--0  $\diamond$ 0.06 0 8/18/16 6/22/17 4/27/18 3/2/19 1/5/20 11/9/20

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

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). Insufficient data to test for seasonality: data were not deseasonalized.

> Constituent: Boron Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG Hollow symbols indicate censored values.

Within Limit

Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. 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). Insufficient data to test for seasonality: data were not deseasonalized.



0 8/18/16 6/22/17 4/27/18 3/2/19 1/5/20 11/9/20

MW-6 compliance

Limit = 0.2

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). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Constituent: Boron Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Constituent: Boron Analysis Run 3/10/2021 2:44 PM View: CCR LF III

1	MW-1	MW-1	MW-10	MW-10	MW-2	MW-2	MW-6	MW-6
8/18/2016	<0.2		<0.2		<0.2		<0.2	
9/29/2016	<0.2		<0.2		<0.2		<0.2	
11/9/2016	<0.2		<0.2		<0.2		<0.2	
12/21/2016	<0.2		<0.2		<0.2		<0.2	
2/3/2017	<0.2		<0.2		<0.2		<0.2	
5/24/2017	<0.2		<0.2		<0.2		<0.2	
7/5/2017	<0.2		<0.2		<0.2		<0.2	
8/17/2017	<0.2		<0.2		<0.2		<0.2	
10/5/2017	<0.2		<0.2		<0.2		<0.2	
5/21/2018	<0.2		<0.2		<0.2		<0.2	
11/12/2018	<0.2		<0.2		<0.2		<0.2	
5/20/2019	<0.2		<0.2		<0.2		<0.2	
5/20/2020		<0.2		<0.2		<0.2		<0.2
11/9/2020		<0.2		<0.2		<0.2		<0.2

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG Hollow symbols indicate censored values.



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). Insufficient data to test for seasonality: data were not deseasonalized.

> Constituent: Boron Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Prediction Limit Within Limit Intrawell Non-parametric 0.3 MW-8 background 0.24 MW-8 compliance 0.18 mg/L Limit = 0.20.12 -000--0000--0--0  $\diamond$ 0.06 0 8/18/16 6/22/17 4/27/18 3/2/19 1/5/20 11/9/20

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). Insufficient data to test for seasonality: data were not deseasonalized.

> Constituent: Boron Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG Hollow symbols indicate censored values. Within Limit

Prediction Limit Intrawell Non-parametric



Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=131.8, Std. Dev.=5.97, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8766, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron, Calcium Analysis Run 3/10/2021 2:44 PM View: CCR LF III

1	MW-7	I MW-7	MW-8	I MW-8	MW-9	MW-9	MW-1	MW-1
8/18/2016	<0.2		<0.2		<0.2		134	
9/29/2016	<0.2		<0.2		<0.2		134	
11/9/2016	<0.2		<0.2		<0.2		136	
12/21/2016	<0.2		<0.2		<0.2		134	
2/3/2017	<0.2		<0.2		<0.2		116	
5/24/2017	<0.2		<0.2		<0.2		128	
7/5/2017	<0.2		<0.2		<0.2		129	
8/17/2017	<0.2		<0.2		<0.2		134	
10/5/2017	<0.2		<0.2		<0.2		141	
11/14/2017							130	
5/21/2018	<0.2		<0.2		<0.2		131	
11/12/2018	<0.2		<0.2		<0.2		137	
5/20/2019	<0.2		<0.2		<0.2		130	
5/20/2020		<0.2		<0.2		<0.2		131
11/9/2020		<0.2		<0.2		<0.2		134

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Background Data Summary: Mean=130.7, Std. Dev.=15.04, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8963, critical = 0.851. Kappa = 1.561 (c=7, w=7, 1 of 3, event alpha = 0.05123). Report alpha = 0.001075.

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Prediction Limit



Background Data Summary: Mean=166.4, Std. Dev.=7.175, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8366, critical = 0.825. Kappa = 1.648 (c=7, we7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

Constituent: Calcium Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Calcium Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=144.7, Std. Dev.=7.032, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9678, critical = 0.825. Kappa = 1.648 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=12.15, Std. Dev.=1.12, n=17. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8573, critical = 0.851. Kappa = 1.561 (c=7, wer7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Calcium Analysis Run 3/10/2021 2:44 PM View: CCR LF III

Т	MW-10	MW-10	MW-2	MW-2	MW-6	MW-6	MW-7	MW-7
8/18/2016	123		170		142		145	
9/29/2016	118		169		139		144	
11/9/2016	124		169		142		146	
12/21/2016	123		166		146		138	
2/3/2017	109		146		136		116	
5/24/2017	125		166		150		123	
7/5/2017	120		165		147		125	
8/17/2017	122		168		150		133	
10/5/2017	131		177		157		135	
11/14/2017	119		161		151		125	
5/21/2018	115		164		150		123	
11/12/2018	138		166		147		192	
1/10/2019	157						185	
3/14/2019	151						132	
5/20/2019	151		167		131		184	
7/11/2019	153		175		138		199	
8/20/2019	143						183	
5/20/2020		150		164		138		140
11/9/2020		158		167		160		132
2/2/2021		160 1st Verification	n			164 1st Verificati	on	
3/1/2021		160 2nd Verificat	ion			153 2nd Verificat	lion	

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Background Data Summary: Mean=142, Std. Dev.=10.21, n=15. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8744, critical = 0.835. Kappa = 1.615 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit



Background Data Summary: Mean=109.9, Std. Dev.=7.272, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9797, critical = 0.814. Kappa = 1.682 (c3r, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

Constituent: Calcium Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Calcium Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit



Background Data Summary: Mean=5.966, Std. Dev.=0.4435, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.011, calculated = 0.9436, critical = 0.825. Kappa = 1.648 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit



Background Data Summary: Mean=15.12, Std. Dev=5.1, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9286, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Calcium, Chloride Analysis Run 3/10/2021 2:44 PM View: CCR LF III

Iatan Utility Waste LF Client: SCS Engineers Data: Iatan jrr

				-	-	-		
Т	MW-8	I MW-8	MW-9	MW-9	MW-1	MW-1	MW-10	MW-10
8/18/2016	136		119		5.93		7.47	
9/29/2016	132		102		6.07		7.83	
11/9/2016	135		103		5.95		9.15	
12/21/2016	139		116		5.97		9.84	
2/3/2017	133		105		6		10.3	
5/24/2017	138		108		5.61		12.6	
7/5/2017	142		97.2		5.78		15.9	
8/17/2017	145		110		6.13		17.6	
10/5/2017	155		113		6.75		19.7	
11/14/2017	145		113		6.73		17.6	
12/29/2017					6.27			
5/21/2018	130		105		5.63		14.1	
11/12/2018	170		122		5.04		15.1	
1/10/2019	149						21	
3/14/2019	140							
5/20/2019	141		115		5.66		21	
7/11/2019							22.5	
8/20/2019							20.3	
5/20/2020		144		105		5.6		16.4
11/9/2020		158		123		5.24		16.7
2/2/2021				106				
3/1/2021								17.1 Extra Sample

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Background Data Summary: Mean=8.253, Std. Dev.=1.076, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8719, critical = 0.825. Kappa = 1.648 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075. Sanitas™ v.9.6.28 Sanitas software licensed to SCS Engineers. UG



Prediction Limit





Background Data Summary (based on square root transformation): Mean=1.216, Std. Dev.=0.1104, n=15. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8387, critical = 0.835. Kappa = 1.615 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Chloride Analysis Run 3/10/2021 2:39 PM View: CCR LF III Iatan Utility Waste LF Client: SCS Engineers Data: Iatan jrr Constituent: Chloride Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit



Background Data Summary (based on square root transformation): Mean=3.057, Std. Dev.=1.629, n=17. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8683, critical = 0.851. Kappa = 1.551 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=1.907, Std. Dev.=0.5992, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk@alpha = 0.01, calculated = 0.8695, critical = 0.855. Kappa = 1.615 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Chloride Analysis Run 3/10/2021 2:44 PM View: CCR LF III

						,			
1	MW-2	MW-2	MW-6	I MW-6	MW-7	MW-7	MW-8	MW-8	
8/18/2016	8.26		1.31		12.3		1.5		
9/29/2016	8.79		1.46		13.9		1.42		
11/9/2016	8.76		1.29		11.1		1.76		
12/21/2016	8.24		1.72		6.64		1.89		
2/3/2017	8.17		1.4		3.32		4.02		
5/24/2017	9.54		1.49		1.76		3.63		
7/5/2017	8.99		1.54		1.81		4.44		
8/17/2017	8.98		1.32		2		3.53		
10/5/2017	9.23		2.09		3.32		4.55		
11/14/2017	8.97		2.12		2.58		4.86		
12/29/2017			1.45						
5/21/2018	8.14		1.45		1.54		1.5		
11/12/2018	5.79		1.31		26.4		12.1		
1/10/2019					23.3		5.63		
3/14/2019					4.77		4.79		
5/20/2019	7.18		1.21		26		3.98		
7/11/2019	6.5		1.2		31.9				
8/20/2019					28.7				
5/20/2020		7.28		1.55		8.49		4.89	
11/9/2020		7.03		1.6		3.18		9.92	
2/2/2021								8.22	1st Verification Sample
3/1/2021				1.68 Extra Sample					

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Background Data Summary (after Aitchison's Adjustment): Mean=1.151, Std. Dev.=1.028, n=13, 30.77% NDs. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8333, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.













Intrawell Parametric

Background Data Summary: Mean=488.6, Std. Dev.=13.34, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9663, critical = 0.805. Kappa = 1.716 (c=7, we7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

Constituent: Dissolved Solids Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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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). Insufficient data to test for seasonality: data were not deseasonalized.

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Prediction Limit Intrawell Parametric



Background Data Summary: Mean=663.3, Std. Dev.=33.46, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9501, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Dissolved Solids Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Constituent: Chloride, Dissolved Solids Analysis Run 3/10/2021 2:44 PM View: CCR LF III

1	MW-9	MW-9	MW-1	MW-1	MW-10	MW-10	MW-2	MW-2
8/18/2016	1.95		513		532		696	
9/29/2016	<1		486		502		651	
11/9/2016	<1		484		516		711	
12/21/2016	1.66		493		497		636	
2/3/2017	1.16		506		531		661	
5/24/2017	1.07		477		1760		690	
7/5/2017	1.06		481		474		638	
8/17/2017	<1		500		539		690	
10/5/2017	3.57		472		539		683	
11/14/2017	1.82							
5/21/2018	<1		496		509		648	
11/12/2018	1.1		485		554		590	
5/20/2019	1.57		470		697		666	
5/20/2020		<1		507		585		659
11/9/2020		1.3		520		645		640
2/2/2021				484 1st Verification	on			

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Background Data Summary: Mean=515.5, Std. Dev.=23.66, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9399, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075. 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 16 background values. Well-constituent pair annual alpha = 0.002051. Individual comparison alpha = 0.001026 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Dissolved Solids Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Dissolved Solids Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit



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Prediction Limit Intrawell Parametric



Background Data Summary: Mean=429.7, Std. Dev.=28.65, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9417, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Background Data Summary: Mean=500.3, Std. Dev.=28.83, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9252, critical = 0.814. Kappa = 1.682 (c3 - w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

Constituent: Dissolved Solids Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Dissolved Solids Analysis Run 3/10/2021 2:39 PM View: CCR LF III Iatan Utility Waste LF Client: SCS Engineers Data: Iatan jrr

Constituent: Dissolved Solids Analysis Run 3/10/2021 2:44 PM View: CCR LF III

	MW-6	MW-6	MW-7	MW-7	MW-8	MW-8	MW-9	MW-9
8/18/2016	522		560		494		475	
9/29/2016	498		554		517		398	
11/9/2016	506		538		471		476	
12/21/2016	519		492		493		415	
2/3/2017	527		487		515		442	
5/24/2017	544		462		485		415	
7/5/2017	508		445		500		386	
8/17/2017	542		466		504		431	
10/5/2017	528		459		505		414	
5/21/2018	540		439		437		412	
11/12/2018	484		681		563		435	
1/10/2019			724		502			
3/14/2019			472					
5/20/2019	468		737		518		457	
7/11/2019			761					
8/20/2019			743					
5/20/2020		491		525		516		385
11/9/2020		548		453		571		475
2/2/2021						518 1st Verificati	on	

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Background Data Summary: Mean=0.278, Std. Dev.=0.02501, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9534, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit

Intrawell Parametric

Background Data Summary (based on square transformation): Mean=0.3525, Std. Dev.=0.1011, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8795, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Fluoride Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Fluoride Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=0.3379, Std. Dev.=0.02721, n=15. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9262, critical = 0.835. Kappa = 1.615 (c=7, w=7, 1 of 3, event alpha = 0.05123). Report alpha = 0.001075.

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mg/L

Prediction Limit



Background Data Summary: Mean=0.3279, Std. Dev.=0.02554, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9487, critical = 0.825. Kappa = 1.648 (c=7, w=7, 1 of 3, event alpha = 0.001075.

Constituent: Fluoride Analysis Run 3/10/2021 2:44 PM View: CCR LF III

				-	•			
	MW-1	MW-1	MW-10	MW-10	MW-2	MW-2	MW-6	MW-6
8/18/2016	0.234		0.584		0.303		0.298	
9/29/2016	0.292		0.622		0.356		0.343	
11/9/2016	0.274		0.642		0.331		0.324	
12/21/2016	0.241		0.538		0.292		0.293	
2/3/2017	0.288		0.521		0.342		0.348	
5/24/2017	0.272		0.591		0.327		0.297	
7/5/2017	0.275		0.582		0.334		0.317	
8/17/2017	0.276		0.682		0.332		0.313	
10/5/2017	0.273		0.312		0.326		0.312	
5/21/2018	0.327		0.654		0.383		0.354	
6/26/2018	0.263				0.32			
11/12/2018	0.288		0.68		0.327		0.325	
5/20/2019	0.311		0.623		0.373		0.366	
7/11/2019					0.389		0.373	
8/20/2019					0.333		0.328	
5/20/2020		0.24		0.517		0.286		0.264
11/9/2020		0.271		0.476		0.313		0.308

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Background Data Summary: Mean=0.3603, Std. Dev.=0.03685, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9559, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.001075.

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mg/L

Prediction Limit





Background Data Summary: Mean=0.4189, Std. Dev.=0.02467, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8902, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Fluoride Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr



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Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=0.3653, Std. Dev.=0.05978, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8122, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05123). Report alpha = 0.001075.

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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 15 background values. Well-constituent pair annual alpha = 0.005248. Individual comparison alpha = 0.002625 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Fluoride, pH Analysis Run 3/10/2021 2:44 PM View: CCR LF III

	MW-7	MW-7	MW-8	MW-8	MW-9	MW-9	MW-1	MW-1	
8/18/2016	0.366		0.438		0.338		6.89		
9/29/2016	0.395		0.439		0.415		7.24		
11/9/2016	0.333		0.415		0.383		6.74		
12/21/2016	0.284		0.461		0.344		6.86		
2/3/2017	0.337		0.407		0.327		6.91		
5/24/2017	0.391		0.391		0.387		7.41		
7/5/2017	0.378		0.391		0.364		7.54		
8/17/2017	0.326		0.406		0.39		6.98		
10/5/2017	0.341		0.396		0.204		7.03		
11/14/2017							6.93		
12/29/2017							6.98		
5/21/2018	0.414		0.441		0.426		6.93		
6/26/2018							6.99		
11/12/2018	0.369		0.396		0.39		6.99		
5/20/2019	0.389		0.446		0.415		6.93		
5/20/2020		0.291		0.336		0.389		6.81	
11/9/2020		0.288		0.357		0.324		7.34	
2/2/2021								7.36 Extra Sample	
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Background Data Summary: Mean=7.157, Std. Dev.=0.18, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9096, critical = 0.851. Kappa = 1.561 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.





Within Limits

Prediction Limit



Background Data Summary: Mean=7.048, Std. Dev.=0.2096, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8784, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

> Constituent: pH Analysis Run 3/10/2021 2:39 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limits

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=7.243, Std. Dev.=0.2171, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9298, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit



Background Data Summary: Mean=7.244, Std. Dev.=0.2706, n=17. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @aipha = 0.01, calculated = 0.916, critical = 0.851. Kappa = 1.561 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

Constituent: pH Analysis Run 3/10/2021 2:44 PM View: CCR LF III

				-	-	-			
	MW-10	MW-10	MW-2	MW-2	MW-6	MW-6	MW-7	MW-7	
8/18/2016	7.06		6.9		7.18		6.97		
9/29/2016	7.31		7.45		6.97		7.25		
11/9/2016	6.93		6.79		7.72		7.87		
12/21/2016	6.96		6.85		6.99		6.88		
2/3/2017	6.99		7.08		7.1		7.01		
5/24/2017	7.51		7.35		7.49		7.67		
7/5/2017	7.31		7.33		7.46		7.36		
8/17/2017	7.1		6.97		7.47		7.15		
10/5/2017	7.05		7		7.2		7.15		
11/14/2017	7.09		6.91		7.14		7.13		
12/29/2017					7.02				
5/21/2018	7.04		6.9		7.08		7.04		
6/26/2018			6.99						
11/12/2018	7.19		7.15		7.27		7.18		
1/10/2019	7.36						7.42		
3/14/2019	7.27						7.24		
5/20/2019	7.05		6.92		7.43		7.21		
7/11/2019	7.46		7.33		7.29		7.63		
8/20/2019	6.99		6.85		7.07		6.99		
5/20/2020		6.92		6.81		6.83		6.82	
7/13/2020		6.96 Extra Sam	ple			6.84 Extra Sampl	e	6.87	Extra Sample
8/25/2020		7 Extra Sam	ple			7.15 Extra Sampl	e		
11/9/2020		7.02		7.26		7.09		7.45	Extra Sample
2/2/2021		7.08 Extra Samp	le			6.97 Extra Sampl	e		
3/1/2021		7.08 Extra Samp	le			7.15 Extra Sampl	e		

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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 15 background values. Well-constituent pair annual alpha = 0.005248. Individual comparison alpha = 0.002625 (1 of 3). Seasonality was not detected with 95% confidence.







Prediction Limit



Background Data Summary: Mean=7.185, Std. Dev.=0.1795, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.895, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

> Constituent: pH Analysis Run 3/10/2021 2:40 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit Intrawell Parametric



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Prediction Limit Intrawell Parametric



Background Data Summary: Mean=26.95, Std. Dev.=7.937, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9063, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

Background Data Summary: Mean=32.62, Std. Dev.=3.775, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8898, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: pH, Sulfate Analysis Run 3/10/2021 2:44 PM View: CCR LF III

	MW-8	MW-8	MW-9	MW-9	MW-1	MW-1	MW-10	MW-10	)
8/18/2016	7.1		7.02		32.4		17.8		
9/29/2016	7.32		7.28		35.3		19.7		
11/9/2016	8.24		6.99		33.2		17.4		
12/21/2016	7.1		7.02		36.2		17.7		
2/3/2017	7.13		7.05		36.9		19.1		
5/24/2017	7.66		7.61		27.4		22.4		
7/5/2017	7.44		7.37		34.2		24.7		
8/17/2017	7.27		7.13		35.2		26.5		
10/5/2017	7.25		7.35		34.5		26.4		
11/14/2017	7.24		7.19						
5/21/2018	7.17		7.05		32.6		23.6		
11/12/2018	7.15		7.21		24.6		32.9		
1/10/2019	7.57						38		
3/14/2019	7.38						40.1		
5/20/2019	7.11		7.13		28.9		37.3		
7/11/2019							33		
8/20/2019							34.6		
5/20/2020		6.98		7.02		27.6		43.1	
7/13/2020								47.7	1st Verification
8/25/2020		7.23 Extra Sampl	e					47.9	2nd Verification
11/9/2020		7.52		7		30.9		42.3	
2/2/2021		7.18 Extra Samp	le	7				46.7	1st Verification
3/1/2021								48.4	2nd Verification

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Background Data Summary: Mean=141, Std. Dev.=23.93, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8552, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.





Prediction Limit



Background Data Summary: Mean=30.21, Std. Dev.=5.456, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9209, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Sulfate Analysis Run 3/10/2021 2:40 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Sulfate Analysis Run 3/10/2021 2:40 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=8.273, Std. Dev=3.445, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8729, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit Intrawell Parametric



Background Data Summary: Mean=40.07, Std. Dev.=17.39, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8273, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Sulfate Analysis Run 3/10/2021 2:44 PM View: CCR LF III

1	MW-2	MW-2	MW-6	MW-6	MW-7	MW-7	MW-8	MW-8
8/18/2016	142		30.2		70.2		23.3	
9/29/2016	151		33.5		70.6		24.2	
11/9/2016	155		31.4		62.6		23.8	
12/21/2016	155		28.6		50		25.5	
2/3/2017	150		28.5		41.9		39.6	
5/24/2017	172		32.7		16.2		42.8	
7/5/2017	158		37.2		19.5		54.8	
8/17/2017	149		37.6		34.1		43	
10/5/2017	151		34.5		24.3		43.4	
5/21/2018	137		30.9		23.8		25.4	
11/12/2018	81.5		27.3		149		85.8	
1/10/2019					159		48.4	
3/14/2019					33.9			
5/20/2019	119		20.2		166		40.9	
7/11/2019	112		20.1		186			
8/20/2019					166			
5/20/2020		126		20.4		54.4		45
11/9/2020		129		24.8		34		58.5
3/1/2021				32.2 Extra Sampl	e			

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Constituent: Sulfate Analysis Run 3/10/2021 2:40 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Constituent: Sulfate Analysis Run 3/10/2021 2:44 PM View: CCR LF III

		1	
		MW-9	MW-9
8/18/	2016	16.7	
9/29/	2016	26.2	
11/9/	2016	23	
12/21	1/2016	22.2	
2/3/2	017	21.1	
5/24/	2017	15.9	
7/5/2	017	24.8	
8/17/	2017	19.8	
10/5/	2017	21.5	
5/21/	2018	18.3	
11/12	2/2018	25.8	
5/20/	2019	22.8	
5/20/	2020		20.7
11/9/	2020		17.4

latan Utility Waste LF Client: SCS Engineers Data: latan jrr Printed 3/10/2021, 2:44 PM

<u>Constituent</u>	Well	Upper Lim.	Lower Lim.	<u>Date</u>	Observ.	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	Method
Boron (mg/L)	MW-1	0.2	n/a	11/9/2020	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-10	0.2	n/a	11/9/2020	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-2	0.2	n/a	11/9/2020	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-6	0.2	n/a	11/9/2020	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-7	0.2	n/a	11/9/2020	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-8	0.2	n/a	11/9/2020	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-9	0.2	n/a	11/9/2020	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Calcium (mg/L)	MW-1	141.9	n/a	11/9/2020	134	No	13	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-10	154.2	n/a	3/1/2021	160	Yes	17	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-2	178.2	n/a	11/9/2020	167	No	14	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-6	156.3	n/a	3/1/2021	153	No	14	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-7	193.1	n/a	11/9/2020	132	No	17	0	sqrt(x)	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-8	158.5	n/a	11/9/2020	158	No	15	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-9	122.1	n/a	2/2/2021	106	No	13	0	No	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-1	6.697	n/a	11/9/2020	5.24	No	14	0	No	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-10	23.19	n/a	3/1/2021	17.1	No	16	0	No	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-2	10.03	n/a	11/9/2020	7.03	No	14	0	No	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-6	1.945	n/a	3/1/2021	1.68	No	15	0	sqrt(x)	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-7	31.35	n/a	11/9/2020	3.18	No	17	0	sqrt(x)	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-8	8.265	n/a	2/2/2021	8.22	No	15	0	sqrt(x)	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-9	2.881	n/a	11/9/2020	1.3	No	13	30.77	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-1	511.5	n/a	2/2/2021	484	No	12	0	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-10	1760	n/a	11/9/2020	645	No	12	0	n/a	0.002173	NP Intra (normality)
Dissolved Solids (mg/l)	MW-2	720.7	n/a	11/9/2020	640	No	12	0	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-6	556.1	n/a	11/9/2020	548	No	12	0	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-7	761	n/a	11/9/2020	453	No	16	0	n/a	0.001026	NP Intra (normality)
Dissolved Solids (mg/l)	MW-8	548.8	n/a	2/2/2021	518	No	13	0	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-9	478.8	n/a	11/9/2020	475	No	12	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-1	0.3201	n/a	11/9/2020	0.271	No	13	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-10	0.7252	n/a	11/9/2020	0.476	No	12	0	x^2	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-2	0.3818	n/a	11/9/2020	0.313	No	15	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-6	0.37	n/a	11/9/2020	0.308	No	14	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/l)	MW-7	0 4235	n/a	11/9/2020	0.288	No	12	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-8	0.4612	n/a	11/9/2020	0.357	No	12	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-9	0 4678	n/a	11/9/2020	0.324	No	12	0	No	0.001075	Param Intra 1 of 3
nH(S I )	MW-1	7 54	6 74	2/2/2021	7.36	No	15	0	n/a	0.002625	NP Intra (normality)
pH (SU)	MW-10	7 438	6 876	3/1/2021	7.08	No	17	0	No	0.000	Param Intra 1 of 3
pH (SU)	MW-2	7 379	6 717	11/9/2020	7.26	No	16	0	No	0.000	Param Intra 1 of 3
pH (SU)	MW-6	7 586	6 899	3/1/2021	7 15	No	16	0	No	0.000	Param Intra 1 of 3
pH (SU)	MW-7	7 666	6 822	11/9/2020	7 45	No	17	0	No	0.000	Param Intra 1 of 3
pH (SU)	MW-8	8 24	7 1	2/2/2021	7.18	No	15	0	n/a	0.002625	NP Intra (normality)
pH (S.U.)	M\W/_9	7 487	6.883	2/2/2021	7	No	13	0	No	0.002020	Param Intra 1 of 3
Sulfate (mg/L)	M\A/_1	30.1	0.000 n/a	11/0/2020	30.0	No	12	0	No	0.0000	Param Intra 1 of 3
Sulfate (mg/L)	MW-10	39.5	n/a	3/1/2021	<b>18 /</b>	Vee	16	0	No	0.001075	Param Intra 1 of 3
Sulfate (mg/L)	MIN/ 2	181.0	n/a	11/0/2020	120	No	12	0	No	0.001075	Param Intra 1 of 2
Sulfate (mg/L)	MIN 6	30 20	n/a	3/1/2020	32.2	No	12	0	No	0.001075	Param Intra 1 of 2
Sulfate (mg/L)	M\A/ 7	39.39 188 2	n/a	11/0/2020	34	No	16	0	eart(x)	0.001075	Param Intra 1 of 2
Sulfate (mg/L)		60.22	n/a	11/0/2020	54	No	10	0	syri(x)	0.001075	Derem Intra 1 of 2
Suilate (IIIY/L)		09.33	n/a n/a	11/9/2020		INO	10	0		0.001075	
Suilate (IIIg/L)	10100-9	21.20	n/a	11/9/2020	17.4	INO	12	U	INO	0.001075	Falam mua 1 01 3

latan Generating Station Determination of Statistically Significant Increases CCR Landfill March 17, 2021

## ATTACHMENT 2

Sanitas<sup>™</sup> Configuration Settings

Data	Output	Trend Test	Control Cht	Prediction Lim	Tolerance Lim	Conf/Tol Int	ANOVA	Welchs	Other Tests
Exclud	le data flag	s: i							
Data	Reading O	ptions							
🔘 In	ndividual Ob	oservations							
$\bigcirc$ M	lean of Eac	:h:	O Month						
$\bigcirc$ M	ledian of Ea	ach:	Seasor	n					
Non-I Setup	Detect / Tri Seasons omatically F	ace Handling. Process Resa							

Data	Output	Trend Test	Control Cht	Prediction Lim	Tolerance Lim	Conf/Tol Int	ANOVA	Welchs	Other Tests
<ul> <li>Bla</li> <li>Fou</li> <li>Fou</li> <li>Fou</li> <li>Fou</li> <li>Tou</li> <li>Dra</li> <li>Dra</li> <li>Dra</li> <li>Enl</li> <li>Enl</li> <li>Enl</li> <li>Wid</li> <li>Use</li> <li>Tru</li> <li>Inc</li> <li>Sho</li> <li>Setup</li> </ul>	ick and Whi ur Plots Per Always Com Include Tick Use Constit aw Border A large/Reduc de Margins ( arge/Reduc de Margins ( e CAS# (No incate File N dude Limit Li ow Deselect ow Deselect o Symbols ar	te Output Page abine Data Pa & Marks on D uent Name fo round Text Re ce Fonts (Grap ce Fonts (Grap ce Fonts (Grap ce Fonts (Data (on reports with t Const. Name Names to 20 nes when fou ted Data on a ted Data on a nd Colors	iges ata Page r Graph Title eports and Da ohs): a/Text Report chout explicit s e) Characters ind in Databas fime Series III Data Pages	ta Pages 100% s): 100% etting) se ighter ✓	<ul> <li>Pro</li> <li>Rou</li> <li>Use</li> <li>Indi</li> <li>Sho</li> <li>Thic</li> <li>Zoo</li> <li>Output</li> <li>Les</li> <li>No</li> <li>Mo</li> </ul>	mpt to Overwrit und Limits to er-Set Scale icate Backgrou ow Exact Dates ck Plot Lines om Factor: 20 Decimal Precision mal Precision ire Precision	te/Append S 2 Sig. Digits and Data s 00% ~	ummary Ta (when not	ables set in data file)
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Printer:	Adobe PD	F							<ul> <li>Printers</li> </ul>

Data Output	Trend Test	Control Cht	Prediction Lim	Tolerance Lim	Conf/Tol Int	ANOVA	Welchs	Other Tests		
Use Modified	Alpha (	).02								
Test Residuals For Normality (Parametric test only) using Shapiro-Wilk/Francia v at Alpha = 0.01 v										
Continue	Parametric if l	Jnable to Nom	nalize							
Transformation	Transformation (Parametric test only)   Use Ladder of Powers  Natural Log or No Transformation  Never Transform  Use Specific Transformation:  Use Best W Statistic									
Use Non-Parame	tric Test (Sen'	's Slope/Mann	-Kendall) when I	Non-Detects Perc	cent > 75					
Include 95.	% Confidence	e Interval arou	und 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 Use Use Aito Optio	for Normal Non-Paran chison's Ad onal Furthe Poisson Pr	ity using Sh netric Test wh justment ~ r Refinement: ediction Limit	apiro-Wilk/Fra nen Non-Dete when Non-De Use	encia  Cts Percent >  E etects Percent > w etects Percent >	at Alpha = 0.01 50 15 then NDs % >	t Alpha = 0.01       Image: Constraint of the second					
Deseat	sonalize (Ir Seasonality Seasonality ways (Whe	ntra- and Inter y Is Detected y Is Detected en Sufficient [	Well) Or Insufficien Data)	t to Test Never	IntraWell Ot Stop if Plot Ba Override St	her Background Tr ckground Data andard Deviati	rend Detect	ed at Alpha	a = 0.05 ∨		
And Facility Statistic Constitu Downg Samplir Comp 1 ( 0 2 (	ways Use I cal Evaluat uents Anal gradient (Co ng Plan aring Ind of 1 C of 4 ("Modi	Non-Parametr tions per Year yzed: ompliance) W ividual Obsen ) 1 of 2 ( ified California	ic r: ells: vations 1 of 3 ''')	2 7 7 0 1 of 4	Override D	F: ( tically Remove d Test Mode Deselected Dat etric Limit = etric Limit when t/Second High ecent PQL if a ecent Backgro	Override Ka Backgroun a Lighter lighest Bac n 100% Non est Backgro vailable, or pund Value	ppa: d Outliers kground Va -Detects: ound Value MDL (subst. meth	ilue 🗸		

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Rank Von Neumann, Wilcoxon Rank Sum / Mann-Whitney									
Use Modified Alpha	Combine Background Wells on Mann-Whitney								
Outlier Tests									
<ul> <li>EPA 1989 Outlier Screening (fixed alpha of 0.05)</li> </ul>									
• Dixon's at $\alpha = 0.05 \lor$ or if n > 22 $\lor$ Rosner's at $\alpha = 0.01 \lor$	Use EPA Screening to establish Suspected Outlier								
O Tukey's Outlier Screening, with IQR Multiplier = 3.0 Use	Ladder of Powers to achieve Best W Stat								
✓ Test For Normality using Shapiro-Wilk/Francia ∨ at Alpha = 0.1	~								
Stop if Non-Normal									
O Continue with Parametric Test if Non-Normal									
O Tukey's if Non-Normal, with IQR Multiplier = 3.0 Use	Ladder of Powers to achieve Best W Stat								
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	✓ Label Constituents								
Combine Dates	☑ Label Axes								
Use Default Constituent Names	Note Cation-Anion Balance (Piper only)								
Use Constituent Definition File Edit									

## ATTACHMENT 2-2

Spring 2021 Semiannual Detection Monitoring Statistical Analyses

#### MEMORANDUM

October 5, 2021

To: latan Generating Station 20250 State Route 45 N Platte County, Missouri Evergy Metro, Inc.



#### From: SCS Engineers

### RE: Determination of Statistically Significant Increases - CCR Landfill Spring 2021 Semiannual Detection Monitoring 40 CFR 257.94

Statistical analysis of monitoring data from the groundwater monitoring system for the CCR Landfill at the latan Generating Station has been completed in substantial compliance with the "Statistical Method Certification by A Qualified Professional Engineer" dated October 12, 2017. Groundwater samples were collected on May 20, 2021. Review and validation of the results from the May 2021 Detection Monitoring Event was completed on July 27, 2021, which constitutes completion and finalization of detection monitoring laboratory analyses. 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 20, 2021 and August 4, 2021.

# Determination: A statistical evaluation was completed for all Appendix III detection monitoring constituents in accordance with the certified statistical method. The statistical evaluation did not identify any SSIs above background.

Attached to this memorandum are the following backup information:

#### Attachment 1: Sanitas<sup>™</sup> Output:

Statistical evaluation output from Sanitas<sup>™</sup> for the prediction limit analysis. This includes prediction limit plots, prediction limit background data, detection sample results, 1<sup>st</sup> verification re-sample results (when applicable), 2<sup>nd</sup> 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<sup>™</sup> Configuration Settings:

Screen shots of the applicable Sanitas<sup>™</sup> configuration settings for the statistical prediction limit analysis. This includes data configuration, output configuration, prediction limit configuration and other tests configuration.

latan Generating Station Determination of Statistically Significant Increases CCR Landfill October 5, 2021 Page 2 of 2

Revision Number	Revision Date	Attachment Revised	Summary of Revisions

Iatan Generating Station Determination of Statistically Significant Increases CCR Landfill October 5, 2021

## ATTACHMENT 1

Sanitas<sup>™</sup> Output

Sanitas  $^{\rm vw}$  v.9.6.31 Sanitas software licensed to SCS Engineers. UG Hollow symbols indicate censored values.

Prediction Limit Within Limit Intrawell Non-parametric 0.3 MW-1 background 0.24 MW-1 compliance 0.18 ng/L Limit = 0.20.12 -0--0 0.06 0 8/18/16 7/31/17 7/13/18 6/25/19 6/6/20 5/20/21

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). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/16/2021 12:29 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr



Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

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). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/16/2021 12:29 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Sanitas<sup>™</sup> v.9.6.31 Sanitas software licensed to SCS Engineers. UG Hollow symbols indicate censored values.

Within Limit

Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. 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). Insufficient data to test for seasonality: data were not deseasonalized.



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). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/16/2021 12:34 PM View: CCR LF III

	MW-1	MW-1	MW-10	MW-10	MW-2	MW-2	MW-6	MW-6
8/18/2016	<0.2		<0.2		<0.2		<0.2	
9/29/2016	<0.2		<0.2		<0.2		<0.2	
11/9/2016	<0.2		<0.2		<0.2		<0.2	
12/21/2016	<0.2		<0.2		<0.2		<0.2	
2/3/2017	<0.2		<0.2		<0.2		<0.2	
5/24/2017	<0.2		<0.2		<0.2		<0.2	
7/5/2017	<0.2		<0.2		<0.2		<0.2	
8/17/2017	<0.2		<0.2		<0.2		<0.2	
10/5/2017	<0.2		<0.2		<0.2		<0.2	
5/21/2018	<0.2		<0.2		<0.2		<0.2	
11/12/2018	<0.2		<0.2		<0.2		<0.2	
5/20/2019	<0.2		<0.2		<0.2		<0.2	
5/20/2021		<0.2		<0.2		<0.2		<0.2

Sanitas  $^{\rm vw}$  v.9.6.31 Sanitas software licensed to SCS Engineers. UG Hollow symbols indicate censored values.

Prediction Limit Within Limit Intrawell Non-parametric 0.3 MW-7 background 0.24 MW-7 compliance 0.18 ng/L Limit = 0.20.12 -0--0 0.06 0 8/18/16 7/31/17 7/13/18 6/25/19 6/6/20 5/20/21

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). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Prediction Limit Within Limit Intrawell Non-parametric 0.3 MW-8 background 0.24 MW-8 compliance 0.18 mg/L Limit = 0.20.12 0.06 0 8/18/16 7/31/17 7/13/18 6/25/19 6/6/20 5/20/21

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). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Sanitas<sup>w</sup> v.9.6.31 Sanitas software licensed to SCS Engineers. UG Hollow symbols indicate censored values. Within Limit

Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. 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). Insufficient data to test for seasonality: data were not deseasonalized.

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Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Within Limit

Prediction Limit



Background Data Summary: Mean=131.8, Std. Dev.=5.97, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8766, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Boron, Calcium Analysis Run 9/16/2021 12:34 PM View: CCR LF III

1	MW-7	MW-7	MW-8	MW-8	MW-9	MW-9	MW-1	MW-1
8/18/2016	<0.2		<0.2		<0.2		134	
9/29/2016	<0.2		<0.2		<0.2		134	
11/9/2016	<0.2		<0.2		<0.2		136	
12/21/2016	<0.2		<0.2		<0.2		134	
2/3/2017	<0.2		<0.2		<0.2		116	
5/24/2017	<0.2		<0.2		<0.2		128	
7/5/2017	<0.2		<0.2		<0.2		129	
8/17/2017	<0.2		<0.2		<0.2		134	
10/5/2017	<0.2		<0.2		<0.2		141	
11/14/2017							130	
5/21/2018	<0.2		<0.2		<0.2		131	
11/12/2018	<0.2		<0.2		<0.2		137	
5/20/2019	<0.2		<0.2		<0.2		130	
5/20/2021		<0.2		<0.2		<0.2		137

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Background Data Summary: Mean=130.7, Std. Dev.=15.04, n=17. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8963, critical = 0.851. Kappa = 1.561 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

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mg/L

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=166.4, Std. Dev.=7.175, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8366, critical = 0.825. Kappa = 1.648 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Calcium Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Calcium Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG



Background Data Summary: Mean=144.7, Std. Dev.=7.032, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9678, critical = 0.825. Kappa = 1.648 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Within Limit

Prediction Limit



Background Data Summary (based on square root transformation): Mean=12.15, Std. Dev.=1.12, n=17. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8573, critical = 0.851. Kappa = 1.561 (c=7, wer7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Calcium Analysis Run 9/16/2021 12:34 PM View: CCR LF III

	MW-10	MW-10	MW-2	MW-2	MW-6	MW-6	MW-7	MW-7
8/18/2016	123		170		142		145	
9/29/2016	118		169		139		144	
11/9/2016	124		169		142		146	
12/21/2016	123		166		146		138	
2/3/2017	109		146		136		116	
5/24/2017	125		166		150		123	
7/5/2017	120		165		147		125	
8/17/2017	122		168		150		133	
10/5/2017	131		177		157		135	
11/14/2017	119		161		151		125	
5/21/2018	115		164		150		123	
11/12/2018	138		166		147		192	
1/10/2019	157						185	
3/14/2019	151						132	
5/20/2019	151		167		131		184	
7/11/2019	153		175		138		199	
8/20/2019	143						183	
5/20/2021		148		167		188		148
7/20/2021						147		

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Background Data Summary: Mean=142, Std. Dev.=10.21, n=15. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8744, critical = 0.835. Kappa = 1.615 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit





Background Data Summary: Mean=109.9, Std. Dev.=7.272, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9797, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Calcium Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Calcium Analysis Run 9/16/2021 12:30 PM View: CCR LF III Iatan Utility Waste LF Client: SCS Engineers Data: Iatan jrr

Sanitas<sup>™</sup> v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=5.966, Std. Dev.=0.4435, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.011, calculated = 0.9436, critical = 0.825. Kappa = 1.648 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit



Background Data Summary: Mean=15.12, Std. Dev=5.1, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9286, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Calcium, Chloride Analysis Run 9/16/2021 12:34 PM View: CCR LF III

1	MW-8	MW-8	MW-9	MW-9	MW-1	MW-1	MW-10	MW-10
8/18/2016	136		119		5.93		7.47	
9/29/2016	132		102		6.07		7.83	
11/9/2016	135		103		5.95		9.15	
12/21/2016	139		116		5.97		9.84	
2/3/2017	133		105		6		10.3	
5/24/2017	138		108		5.61		12.6	
7/5/2017	142		97.2		5.78		15.9	
8/17/2017	145		110		6.13		17.6	
10/5/2017	155		113		6.75		19.7	
11/14/2017	145		113		6.73		17.6	
12/29/2017					6.27			
5/21/2018	130		105		5.63		14.1	
11/12/2018	170		122		5.04		15.1	
1/10/2019	149						21	
3/14/2019	140							
5/20/2019	141		115		5.66		21	
7/11/2019							22.5	
8/20/2019							20.3	
5/20/2021		127		98.4		5.59		16.5

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Background Data Summary: Mean=8.253, Std. Dev.=1.076, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8719, critical = 0.825. Kappa = 1.648 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075. Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG



mg/L



Prediction Limit

Intrawell Parametric

Background Data Summary (based on square root transformation): Mean=1.216, Std. Dev.=0.1104, n=15. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8387, critical = 0.835. Kappa = 1.615 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Chloride Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Chloride Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=3.057, Std. Dev.=1.629, n=17. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8683, critical = 0.851. Kappa = 1.561 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit



Background Data Summary (based on square root transformation): Mean=1.907, Std. Dev.=0.5992, n=15. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8695, critical = 0.835. Kappa = 1.615 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Chloride Analysis Run 9/16/2021 12:34 PM View: CCR LF III

					-	-		
1	MW-2	MW-2	MW-6	MW-6	MW-7	MW-7	MW-8	MW-8
8/18/2016	8.26		1.31		12.3		1.5	
9/29/2016	8.79		1.46		13.9		1.42	
11/9/2016	8.76		1.29		11.1		1.76	
12/21/2016	8.24		1.72		6.64		1.89	
2/3/2017	8.17		1.4		3.32		4.02	
5/24/2017	9.54		1.49		1.76		3.63	
7/5/2017	8.99		1.54		1.81		4.44	
8/17/2017	8.98		1.32		2		3.53	
10/5/2017	9.23		2.09		3.32		4.55	
11/14/2017	8.97		2.12		2.58		4.86	
12/29/2017			1.45					
5/21/2018	8.14		1.45		1.54		1.5	
11/12/2018	5.79		1.31		26.4		12.1	
1/10/2019					23.3		5.63	
3/14/2019					4.77		4.79	
5/20/2019	7.18		1.21		26		3.98	
7/11/2019	6.5		1.2		31.9			
8/20/2019					28.7			
5/20/2021		6.45		2.75		6.03		1.34
7/20/2021				1.56				

Sanitas<sup>™</sup> v.9.6.31 Sanitas software licensed to SCS Engineers. UG Hollow symbols indicate censored values. Within Limit







Background Data Summary (after Aitchison's Adjustment): Mean=1.151, Std. Dev.=1.028, n=13, 30.77% NDs. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8333, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.













Intrawell Parametric

Background Data Summary: Mean=488.6, Std. Dev.=13.34, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9663, critical = 0.805. Kappa = 1.716 (c=7, we7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

> Constituent: Dissolved Solids Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit



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). Insufficient data to test for seasonality: data were not deseasonalized.





Prediction Limit Intrawell Parametric



Background Data Summary: Mean=663.3, Std. Dev.=33.46, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9501, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

Constituent: Chloride, Dissolved Solids Analysis Run 9/16/2021 12:34 PM View: CCR LF III

1	MW-9	MW-9	MW-1	MW-1	MW-10	MW-10	MW-2	MW-2
8/18/2016	1.95		513		532		696	
9/29/2016	<1		486		502		651	
11/9/2016	<1		484		516		711	
12/21/2016	1.66		493		497		636	
2/3/2017	1.16		506		531		661	
5/24/2017	1.07		477		1760		690	
7/5/2017	1.06		481		474		638	
8/17/2017	<1		500		539		690	
10/5/2017	3.57		472		539		683	
11/14/2017	1.82							
5/21/2018	<1		496		509		648	
11/12/2018	1.1		485		554		590	
5/20/2019	1.57		470		697		666	
5/20/2021		<1		500		628		611

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Background Data Summary: Mean=515.5, Std. Dev.=23.66, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9399, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075. Sanitas™ v.9.6.31 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 16 background values. Well-constituent pair annual alpha = 0.002051. Individual comparison alpha = 0.001026 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Dissolved Solids Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Dissolved Solids Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Sanitas™ v.9.6.31 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=500.3, Std. Dev.=28.83, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9252, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

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Prediction Limit



Background Data Summary: Mean=429.7, Std. Dev.=28.65, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9417, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Dissolved Solids Analysis Run 9/16/2021 12:34 PM View: CCR LF III

1	MW-6	MW-6	MW-7	MW-7	MW-8	MW-8	MW-9	MW-9
8/18/2016	522		560		494		475	
9/29/2016	498		554		517		398	
11/9/2016	506		538		471		476	
12/21/2016	519		492		493		415	
2/3/2017	527		487		515		442	
5/24/2017	544		462		485		415	
7/5/2017	508		445		500		386	
8/17/2017	542		466		504		431	
10/5/2017	528		459		505		414	
5/21/2018	540		439		437		412	
11/12/2018	484		681		563		435	
1/10/2019			724		502			
3/14/2019			472					
5/20/2019	468		737		518		457	
7/11/2019			761					
8/20/2019			743					
5/20/2021		619		513		426		384
7/20/2021		550						

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Background Data Summary: Mean=0.278, Std. Dev.=0.02501, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9534, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Within Limit

mg/L





Prediction Limit

Intrawell Parametric

Background Data Summary (based on square transformation): Mean=0.3525, Std. Dev.=0.1011, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8795, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Fluoride Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Fluoride Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit



Background Data Summary: Mean=0.3379, Std. Dev.=0.02721, n=15. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9262, critical = 0.835. Kappa = 1.615 (c=7, w=7, 1 of 3, event alpha = 0.05123). Report alpha = 0.001075.

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Prediction Limit



Background Data Summary: Mean=0.3279, Std. Dev.=0.02554, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9487, critical = 0.825. Kappa = 1.648 (c=7, w=7, 1 of 3, event alpha = 0.001075.

Constituent: Fluoride Analysis Run 9/16/2021 12:34 PM View: CCR LF III

				-	-	-		
	MW-1	MW-1	MW-10	MW-10	MW-2	MW-2	MW-6	MW-6
8/18/2016	0.234		0.584		0.303		0.298	
9/29/2016	0.292		0.622		0.356		0.343	
11/9/2016	0.274		0.642		0.331		0.324	
12/21/2016	0.241		0.538		0.292		0.293	
2/3/2017	0.288		0.521		0.342		0.348	
5/24/2017	0.272		0.591		0.327		0.297	
7/5/2017	0.275		0.582		0.334		0.317	
8/17/2017	0.276		0.682		0.332		0.313	
10/5/2017	0.273		0.312		0.326		0.312	
5/21/2018	0.327		0.654		0.383		0.354	
6/26/2018	0.263				0.32			
11/12/2018	0.288		0.68		0.327		0.325	
5/20/2019	0.311		0.623		0.373		0.366	
7/11/2019					0.389		0.373	
8/20/2019					0.333		0.328	
5/20/2021		0.257		0.457		0.316		0.274

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Background Data Summary: Mean=0.3603, Std. Dev.=0.03685, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9559, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.001075.

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Within Limit

Prediction Limit



Background Data Summary: Mean=0.4189, Std. Dev.=0.02467, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8902, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Fluoride Analysis Run 9/16/2021 12:30 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr Constituent: Fluoride Analysis Run 9/16/2021 12:31 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit



Background Data Summary: Mean=0.3653, Std. Dev.=0.05978, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8122, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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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 15 background values. Well-constituent pair annual alpha = 0.005248. Individual comparison alpha = 0.002625 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.
Constituent: Fluoride, pH Analysis Run 9/16/2021 12:34 PM View: CCR LF III

				•	•			
	MW-7	MW-7	MW-8	MW-8	MW-9	MW-9	MW-1	MW-1
8/18/2016	0.366		0.438		0.338		6.89	
9/29/2016	0.395		0.439		0.415		7.24	
11/9/2016	0.333		0.415		0.383		6.74	
12/21/2016	0.284		0.461		0.344		6.86	
2/3/2017	0.337		0.407		0.327		6.91	
5/24/2017	0.391		0.391		0.387		7.41	
7/5/2017	0.378		0.391		0.364		7.54	
8/17/2017	0.326		0.406		0.39		6.98	
10/5/2017	0.341		0.396		0.204		7.03	
11/14/2017							6.93	
12/29/2017							6.98	
5/21/2018	0.414		0.441		0.426		6.93	
6/26/2018							6.99	
11/12/2018	0.369		0.396		0.39		6.99	
5/20/2019	0.389		0.446		0.415		6.93	
5/20/2021		0.342		0.364		0.367		7.34

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Background Data Summary: Mean=7.157, Std. Dev.=0.18, n=17. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.011, calculated = 0.0906, critical = 0.851. Kappa = 1.561 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.





Within Limits

Prediction Limit



Background Data Summary: Mean=7.048, Std. Dev.=0.2096, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8784, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.00175.

> Constituent: pH Analysis Run 9/16/2021 12:31 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limits

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=7.243, Std. Dev.=0.2171, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.011, calculated = 0.9298, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit Intrawell Parametric



Background Data Summary: Mean=7.244, Std. Dev=0.2706, n=17. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.916, critical = 0.851. Kappa = 1.561 (c=7), w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: pH Analysis Run 9/16/2021 12:34 PM View: CCR LF III

					-	-		
T	MW-10	MW-10	MW-2	MW-2	MW-6	MW-6	MW-7	MW-7
8/18/2016	7.06		6.9		7.18		6.97	
9/29/2016	7.31		7.45		6.97		7.25	
11/9/2016	6.93		6.79		7.72		7.87	
12/21/2016	6.96		6.85		6.99		6.88	
2/3/2017	6.99		7.08		7.1		7.01	
5/24/2017	7.51		7.35		7.49		7.67	
7/5/2017	7.31		7.33		7.46		7.36	
8/17/2017	7.1		6.97		7.47		7.15	
10/5/2017	7.05		7		7.2		7.15	
11/14/2017	7.09		6.91		7.14		7.13	
12/29/2017					7.02			
5/21/2018	7.04		6.9		7.08		7.04	
6/26/2018			6.99					
11/12/2018	7.19		7.15		7.27		7.18	
1/10/2019	7.36						7.42	
3/14/2019	7.27						7.24	
5/20/2019	7.05		6.92		7.43		7.21	
7/11/2019	7.46		7.33		7.29		7.63	
8/20/2019	6.99		6.85		7.07		6.99	
5/20/2021		6.32		7.05		6.26		6.4
7/20/2021		6.93				6.93		7.54

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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 15 background values. Well-constituent pair annual alpha = 0.005248. Individual comparison alpha = 0.002625 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.





Within Limits

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=7.185, Std. Dev.=0.1795, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.895, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

> Constituent: pH Analysis Run 9/16/2021 12:31 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

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Within Limit

Prediction Limit Intrawell Parametric



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Prediction Limit Intrawell Parametric



Background Data Summary: Mean=26.95, Std. Dev.=7.937, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9063, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Background Data Summary: Mean=32.62, Std. Dev.=3.775, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8898, critical = 0.805. Kappa = 1.716 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

> Constituent: Sulfate Analysis Run 9/16/2021 12:31 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Constituent: Sulfate Analysis Run 9/16/2021 12:31 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Constituent: pH, Sulfate Analysis Run 9/16/2021 12:34 PM View: CCR LF III

					-	-		
	MW-8	MW-8	MW-9	MW-9	MW-1	MW-1	MW-10	MW-10
8/18/2016	7.1		7.02		32.4		17.8	
9/29/2016	7.32		7.28		35.3		19.7	
11/9/2016	8.24		6.99		33.2		17.4	
12/21/2016	7.1		7.02		36.2		17.7	
2/3/2017	7.13		7.05		36.9		19.1	
5/24/2017	7.66		7.61		27.4		22.4	
7/5/2017	7.44		7.37		34.2		24.7	
8/17/2017	7.27		7.13		35.2		26.5	
10/5/2017	7.25		7.35		34.5		26.4	
11/14/2017	7.24		7.19					
5/21/2018	7.17		7.05		32.6		23.6	
11/12/2018	7.15		7.21		24.6		32.9	
1/10/2019	7.57						38	
3/14/2019	7.38						40.1	
5/20/2019	7.11		7.13		28.9		37.3	
7/11/2019							33	
8/20/2019							34.6	
5/20/2021		6.5		6.48		33.3		46.7
7/20/2021		7.87		7.33				38.6

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Background Data Summary: Mean=141, Std. Dev.=23.93, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8552, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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mg/L

Prediction Limit

Intrawell Parametric





Background Data Summary: Mean=30.21, Std. Dev.=5.456, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9209, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Sulfate Analysis Run 9/16/2021 12:31 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr



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Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=8.273, Std. Dev=3.445, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8729, critical = 0.844. Kappa = 1.581 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

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Prediction Limit Intrawell Parametric



Background Data Summary: Mean=40.07, Std. Dev.=17.39, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8273, critical = 0.814. Kappa = 1.682 (c=7, w=7, 1 of 3, event alpha = 0.05132). Report alpha = 0.001075.

Constituent: Sulfate Analysis Run 9/16/2021 12:34 PM View: CCR LF III

	MW-2	MW-2	MW-6	MW-6	MW-7	MW-7	MW-8	MW-8
8/18/2016	142		30.2		70.2		23.3	
9/29/2016	151		33.5		70.6		24.2	
11/9/2016	155		31.4		62.6		23.8	
12/21/2016	155		28.6		50		25.5	
2/3/2017	150		28.5		41.9		39.6	
5/24/2017	172		32.7		16.2		42.8	
7/5/2017	158		37.2		19.5		54.8	
8/17/2017	149		37.6		34.1		43	
10/5/2017	151		34.5		24.3		43.4	
5/21/2018	137		30.9		23.8		25.4	
11/12/2018	81.5		27.3		149		85.8	
1/10/2019					159		48.4	
3/14/2019					33.9			
5/20/2019	119		20.2		166		40.9	
7/11/2019	112		20.1		186			
8/20/2019					166			
5/20/2021		126		46.9		57.2		17.3
7/20/2021				31.6				

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Constituent: Sulfate Analysis Run 9/16/2021 12:31 PM View: CCR LF III latan Utility Waste LF Client: SCS Engineers Data: latan jrr

Constituent: Sulfate Analysis Run 9/16/2021 12:34 PM View: CCR LF III

	1	
	MW-9	MW-9
8/18/2016	16.7	
9/29/2016	26.2	
5/25/2010	20.2	
11/9/2016	23	
12/21/2016	22.2	
2/3/2017	21.1	
5/24/2017	15.9	
7/5/2017	24.9	
7/5/2017	24.0	
8/17/2017	19.8	
10/5/2017	21.5	
5/21/2018	18.3	
11/12/2018	25.8	
11/12/2016	23.0	
5/20/2019	22.8	
5/20/2021		19.7

latan Utility Waste LF Client: SCS Engineers Data: latan jrr Printed 9/16/2021, 12:34 PM

<u>Constituent</u>	Well	<u>Upper Lim.</u>	Lower Lim.	<u>Date</u>	Observ.	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	Transform	<u>Alpha</u>	Method
Boron (mg/L)	MW-1	0.2	n/a	5/20/2021	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-10	0.2	n/a	5/20/2021	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-2	0.2	n/a	5/20/2021	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-6	0.2	n/a	5/20/2021	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-7	0.2	n/a	5/20/2021	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-8	0.2	n/a	5/20/2021	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Boron (mg/L)	MW-9	0.2	n/a	5/20/2021	0.1ND	No	12	100	n/a	0.002173	NP Intra (NDs) 1 of 3
Calcium (mg/L)	MW-1	141.9	n/a	5/20/2021	137	No	13	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-10	154.2	n/a	5/20/2021	148	No	17	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-2	178.2	n/a	5/20/2021	167	No	14	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-6	156.3	n/a	7/20/2021	147	No	14	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-7	193.1	n/a	5/20/2021	148	No	17	0	sqrt(x)	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-8	158.5	n/a	5/20/2021	127	No	15	0	No	0.001075	Param Intra 1 of 3
Calcium (mg/L)	MW-9	122.1	n/a	5/20/2021	98.4	No	13	0	No	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-1	6.697	n/a	5/20/2021	5.59	No	14	0	No	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-10	23.19	n/a	5/20/2021	16.5	No	16	0	No	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-2	10.03	n/a	5/20/2021	6.45	No	14	0	No	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-6	1.945	n/a	7/20/2021	1.56	No	15	0	sqrt(x)	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-7	31.35	n/a	5/20/2021	6.03	No	17	0	sqrt(x)	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-8	8.265	n/a	5/20/2021	1.34	No	15	0	sqrt(x)	0.001075	Param Intra 1 of 3
Chloride (mg/L)	MW-9	2.881	n/a	5/20/2021	0.5ND	No	13	30.77	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-1	511.5	n/a	5/20/2021	500	No	12	0	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-10	1760	n/a	5/20/2021	628	No	12	0	n/a	0.002173	NP Intra (normality)
Dissolved Solids (mg/l)	MW-2	720.7	n/a	5/20/2021	611	No	12	0	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-6	556.1	n/a	7/20/2021	550	No	12	0	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-7	761	n/a	5/20/2021	513	No	16	0	n/a	0.001026	NP Intra (normality)
Dissolved Solids (mg/l)	MW-8	548.8	n/a	5/20/2021	426	No	13	0	No	0.001075	Param Intra 1 of 3
Dissolved Solids (mg/l)	MW-9	478.8	n/a	5/20/2021	384	No	12	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-1	0.3201	n/a	5/20/2021	0.257	No	13	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-10	0.7252	n/a	5/20/2021	0.457	No	12	0	x^2	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-2	0.3818	n/a	5/20/2021	0.316	No	15	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-6	0.37	n/a	5/20/2021	0.274	No	14	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-7	0.4235	n/a	5/20/2021	0.342	No	12	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-8	0.4612	n/a	5/20/2021	0.364	No	12	0	No	0.001075	Param Intra 1 of 3
Fluoride (mg/L)	MW-9	0.4678	n/a	5/20/2021	0.367	No	12	0	No	0.001075	Param Intra 1 of 3
pH (S.U.)	MW-1	7.54	6.74	5/20/2021	7.34	No	15	0	n/a	0.002625	NP Intra (normality)
pH (S.U.)	MW-10	7.438	6.876	7/20/2021	6.93	No	17	0	No	0.000	Param Intra 1 of 3
pH (S.U.)	MW-2	7.379	6.717	5/20/2021	7.05	No	16	0	No	0.000	Param Intra 1 of 3
pH (S.U.)	MW-6	7.586	6.899	7/20/2021	6.93	No	16	0	No	0.000	Param Intra 1 of 3
pH (S.U.)	MW-7	7.666	6.822	7/20/2021	7.54	No	17	0	No	0.000	Param Intra 1 of 3
pH (SU)	MW-8	8 24	7 1	7/20/2021	7 87	No	15	0	n/a	0.002625	NP Intra (normality)
pH (SU)	MW-9	7 487	6 883	7/20/2021	7 33	No	13	0	No	0.000	Param Intra 1 of 3
Sulfate (mg/L)	MW-1	39.1	n/a	5/20/2021	33.3	No	12	0	No	0.001075	Param Intra 1 of 3
Sulfate (mg/L)	MW-10	39.5	n/a	7/20/2021	38.6	No	16	0	No	0.001075	Param Intra 1 of 3
Sulfate (mg/L)	M\\\/_2	181.2	n/a	5/20/2021	126	No	13	0	No	0.001075	Param Intra 1 of 3
Sulfate (mg/L)	M\\/_6	39.39	n/a	7/20/2021	31 6	No	13	0	No	0.001075	Param Intra 1 of 3
Sulfate (mg/L)	M\\\/_7	188 2	n/a	5/20/2021	57.2	No	16	0	sart(x)	0.001075	Param Intra 1 of 3
Sulfate (mg/L)	M\\\/_8	69.33	n/a	5/20/2021	17 3	No	13	0	No	0.001075	Param Intra 1 of 3
Sulfate (mg/L)	M\\/_Q	27.26	n/a	5/20/2021	10.7	No	12	0	No	0.001075	Param Intra 1 of 3
	10100-0	21.20	1, u	0,20,2021	10.1	110	14			0.001070	

latan Generating Station Determination of Statistically Significant Increases CCR Landfill October 5, 2021

# ATTACHMENT 2

Sanitas<sup>™</sup> Configuration Settings

Data	Output	Trend Test	Control Cht	Prediction Lim	Tolerance Lim	Conf/Tol Int	ANOVA	Welchs	Other Tests
Exclud	le data flag	s: i							
Data	Reading O	ptions							
🔘 In	ndividual Ob	oservations							
$\bigcirc$ M	lean of Eac	:h:	O Month						
$\bigcirc$ M	ledian of Ea	ach:	Seasor	n					
Non-I Setup	Detect / Tri Seasons omatically F	ace Handling. Process Resa							

Data Output	Trend Test	Control Cht	Prediction Lim	Tolerance Lim	Conf/Tol Int	ANOVA	Welchs	Other Tests
Use Modified	Alpha (	).02						
🗹 Test Residua	ls For Normalit	y (Parametric f	test only) using	Shapiro-Wilk/Fr	ancia 🗸 🗸	at Alpha	= 0.01	$\sim$
Continue	Parametric if l	Jnable to Nom	nalize					
Transformation	(Parametric tes r of Powers ) or No Transfo Isform ic Transformati	it only) ormation ion:						
Use Non-Parame	tric Test (Sen'	's Slope/Mann	-Kendall) when I	Non-Detects Perc	cent > 75			
Include 95.	% Confidence	e Interval arou	und Trend Line					
Automatically	Remove Outli	ers (Parametri	c test only)					
Note: there is no "/ Mann-Kendall (the	Always Use No non-parametric	on-Parametric' c alternative) i	' checkbox on th s available as a r	iis tab because, f report in its own ri	or consistency ght, under Anal	with prior ve ysis->Intraw	ersions, Sen vell->Trend.	's Slope /

Data	Output	Trend Test	Control Cht	Prediction Lim	Tolerance Lim	Conf/Tol Int	ANOVA	Welchs	Other Tests
☑ Test ☑ Use I Use Aito	for Normal Non-Paran shison's Ad	ity using Sha netric Test wh	apiro-Wilk/Fra ien Non-Dete when Non-De	ncia ∽ cts Percent > etects Percent >	at Alpha = 0.01	✓ O O	sformation Use Ladder Natural Log Never Tran Use Specifi	r of Powers or No Tran sform c Transform	isformation nation :
Optional Further Refinement: Use       when NDs % > 50       Use Best W Statistic         Use Poisson Prediction Limit when Non-Detects Percent > 90       Plot Transformed Values									
Deseas	ed at Alph	a = 0.05 ∨							
Alv Facility Statistic Constitu Downg Samplin Compa 0 1 c 0 2 c	ways Use I a Evaluat uents Anal radient (Co ng Plan aring Ind of 1 C of 4 (''Modi	Non-Parametr tions per Year yzed: ompliance) Wo ividual Obsen ) 1 of 2 ( fied California	ic ells: vations 1 of 3 ")	2 7 7 0 1 of 4	Override D Automa 2-Taileo Show D Non-Parama Non-Parama Highes Most R Most R	F: ( tically Remove d Test Mode )eselected Dat etric Limit = etric Limit wher t/Second High ecent PQL if a jecent Backgro	Dverride Kap Backgroun a Lighter Highest Bac n 100% Non est Backgro vailable, or pund Value (	ppa: d Outliers  kground Va -Detects: bund Value MDL (subst. meth	ilue V

Data Output Trend Test Control Cht Prediction Lim Tolerance	Lim Conf/Tol Int ANOVA Welchs Other Test
Rank Von Neumann, Wilcoxon Rank Sum / Mann-Whitney	
Use Modified Alpha	Combine Background Wells on Mann-Whitney
Outlier Tests	
<ul> <li>EPA 1989 Outlier Screening (fixed alpha of 0.05)</li> </ul>	
• Dixon's at $\alpha = 0.05 \lor$ or if n > 22 $\lor$ Rosner's at $\alpha = 0.01 \lor$	Use EPA Screening to establish Suspected Outlier
O Tukey's Outlier Screening, with IQR Multiplier = 3.0 Use	Ladder of Powers to achieve Best W Stat
✓ Test For Normality using Shapiro-Wilk/Francia ∨ at Alpha = 0.1	~
Stop if Non-Normal	
O Continue with Parametric Test if Non-Normal	
O Tukey's if Non-Normal, with IQR Multiplier = 3.0 Use	Ladder of Powers to achieve Best W Stat
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	✓ Label Constituents
Combine Dates	☑ Label Axes
Use Default Constituent Names	Note Cation-Anion Balance (Piper only)
Use Constituent Definition File Edit	

Jared Morrison December 16, 2022

# ATTACHMENT 3 Groundwater Potentiometric Surface Maps



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LEGEND CCR UNIT BOUNDARY (APPROXIMATE LIMITS) CCR GROUNDWATER MONITORING SYSTEM WELLS	REV DATE	IAY 2021) 🔼 – 📔	<u> </u>	-	aing ann 🛆 - I		UDENUUM     -
(GROUNDWATER ELEVATION) GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)		IIOMETHIC SURFACE MAP (N	CCH LANDFILL	Ш			א וועב אטווטא אטוויא
<u>S:</u> HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM WEST ZONE (NAD 83)	SHEET TITLE	POIEN		PROJECT TI	2021 GF		いしちについ
VERTICAL DATUM: NAVD 88							
GOOGLE EARTH IMAGE DATED MARCH 27, 2017		c		NION			
APPROXIMATE BOUNDARY LOCATION PROVIDED BY BURNS & MCDONNELL					SSOURI		
MONITORING WELL LOCATIONS PROVIDED BY SHAFFER, KLINE, & WARREN				JENERAI	ATAN, MI		
WATER LEVEL MEASUREMENTS COMPLETED ON MAY 20, 2021	ENT			IA IAN (	1		
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45° PLANT NORTH	SCS ENGINEERS		E B 8575 W. 110th St, Ste. 100	PH. (913) 681-0030 FAX. (913) 681-0012	PROLINO. DWN. BY: Q/A RVW BY:	27213167.21 ALR JR	TGW TRK True JRK
0 500 1000 FEET	DATE FIGUF	: 12 RE 1	2 <u>/2</u> NO.	<u>2/</u>	22	2	



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LEGEND CCR UNIT BOUNDARY (APPROXIMATE LIMITS) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION) GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR) S: HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM WEST ZONE	SHEET TILE CONTRACTOR OF A CONTRACTOR OF A	POLENTIOMETRIC SURFACE MAP (NOVEMBER 2021) 🔼 –	CCH LANDHILL				
(NAD 83)		й Г				. (	<u>כ</u>
VERTICAL DATUM: NAVD 88							
GOOGLE EARTH IMAGE DATED MARCH 27, 2017		<u>c</u>		ATION	_		
APPROXIMATE BOUNDARY LOCATION PROVIDED BY BURNS & MCDONNELL		4 0 0		TING ST	SSOURI		
MONITORING WELL LOCATIONS PROVIDED BY SHAFFER, KLINE, & WARREN				JENERA	VTAN, MI.		
WATER LEVEL MEASUREMENTS COMPLETED ON NOVEMBER 17, 2021	T EVERG IATAN G						
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45° PLANT NORTH	SCS FNGINFFRS		8575 W. 110th St, Ste. 100	PH. (913) 681-0030 FAX. (913) 681-0012	PROJ. NO. DWN. BY: Q/A RVW BY:	Z 27213167.21 ALK JRR	TGW TRK TRK
0 500 1000 FEET	DATE	: 12 RE 1	2/2 NO.	<u>2/1</u> 3	22		