2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

NORTH AND SOUTH ASH IMPOUNDMENTS MONTROSE GENERATING STATION CLINTON, MISSOURI

Presented To:
Evergy Metro, Inc. (f/k/a Kansas City Power & Light Co.)

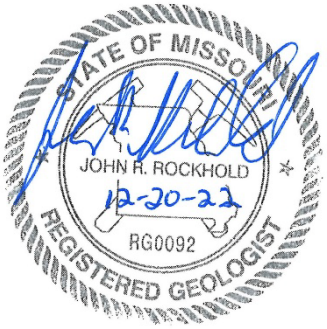
SCS ENGINEERS

27213168.19 | January 2020, Revised December 20, 2022

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

CERTIFICATIONS

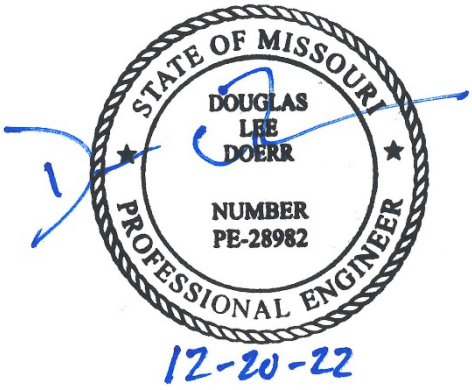
I, John R. Rockhold, being a qualified groundwater scientist and Registered Geologist in the State of Missouri, do hereby certify that the 2019 Annual Groundwater Monitoring and Corrective Action Report for the North and South Ash Impoundments at the Montrose Generating Station was prepared by me or 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 2019 Annual Groundwater Monitoring and Corrective Action Report for the North and South Ash Impoundments at the Montrose 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 2020	NA	Original Report.
1	December 20, 2022	Addendum 1	Added Addendum 1

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1 INTRODUCTION

This 2019 Annual Groundwater Monitoring and Corrective Action Report was prepared to support compliance with the groundwater monitoring requirements of the "Coal Combustion Residuals (CCR) Final Rule" (Rule) published by the United States Environmental Protection Agency (USEPA) in the *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*, dated April 17, 2015 (USEPA, 2015). Specifically, this report was prepared for Evergy Metro, Inc. (f/k/a Kansas City Power & Light Company) 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 2019 Annual Groundwater Monitoring and Corrective Action Report for the North and South Ash Impoundments at the Montrose Generating Station.

2 § 257.90(E) ANNUAL REPORT REQUIREMENTS

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

2.1 § 257.90(E)(1) SITE MAP

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

A site map with an aerial image showing the North and South Ash Impoundments and all background (or upgradient) and downgradient monitoring wells with identification numbers for the North and South Ash Impoundments 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 North and South Ash Impoundments in 2019.

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

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

Only detection monitoring was conducted during the reporting period (2019). Samples collected in 2019 were collected and analyzed for Appendix III detection monitoring constituents as indicated in **Appendix B**, **Table 1** (Appendix III Detection Monitoring Results, and **Table 2** (Detection Monitoring Field Measurements). The dates of sample collection, the monitoring program requiring the sample, and the results of the analyses are also provided in these tables. These tables include Fall 2018 semiannual detection monitoring event verification data taken in 2019; Spring 2019 semiannual detection monitoring data; and the initial Fall 2019 semiannual detection monitoring data.

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

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

There was no transition between monitoring programs in 2019. Only detection monitoring was conducted in 2019.

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 2018 verification sampling and analyses per the certified statistical method,

b. completion of the statistical evaluation of the Fall 2018 semiannual detection monitoring sampling and analysis event per the certified statistical method,

c. completion of the 2018 Annual Groundwater Monitoring and Corrective Action Report,

d. completion of the Spring 2019 semiannual detection monitoring sampling and analysis event, and subsequent verification sampling per the certified statistical method,

e. completion of the statistical evaluation of the Spring 2019 semiannual detection monitoring sampling and analysis event per the certified statistical method, and

f. initiation of the Fall 2019 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 (2020).

Completion of verification sampling and data analysis, and the statistical evaluation of Fall 2019 detection monitoring sampling and analysis event. Semiannual Spring and Fall 2020 groundwater sampling and analysis. Completion of the statistical evaluation of the Spring 2020 detection monitoring sampling and analysis event, and, if required, alternative source demonstration(s).

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

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

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

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

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

Not applicable because no such demonstration was conducted.

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

The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority

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

Not applicable because there was no assessment monitoring conducted.

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

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

Not applicable because there was no assessment monitoring conducted.

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

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

Not applicable because there was no assessment monitoring conducted.

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

Within 90 days of finding that any constituent listed in appendix IV to this part has been detected at a statistically significant level exceeding the groundwater protection standard defined under § 257.95(h), or immediately upon detection of a release from a CCR unit, the owner or operator must initiate an assessment of corrective measures to prevent further releases, to remediate any releases and to restore affected area to original conditions. The assessment of corrective measures must be completed within 90 days, unless the owner or operator demonstrates the need for additional time to complete the assessment of corrective measures due to site-specific conditions or circumstances. The owner or operator must obtain a certification from a qualified professional engineer attesting that the demonstration is accurate. The 90-day deadline to complete the assessment of corrective measures may be extended for no longer than 60 days. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority.

Not applicable because there was no assessment monitoring conducted.

3 GENERAL COMMENTS

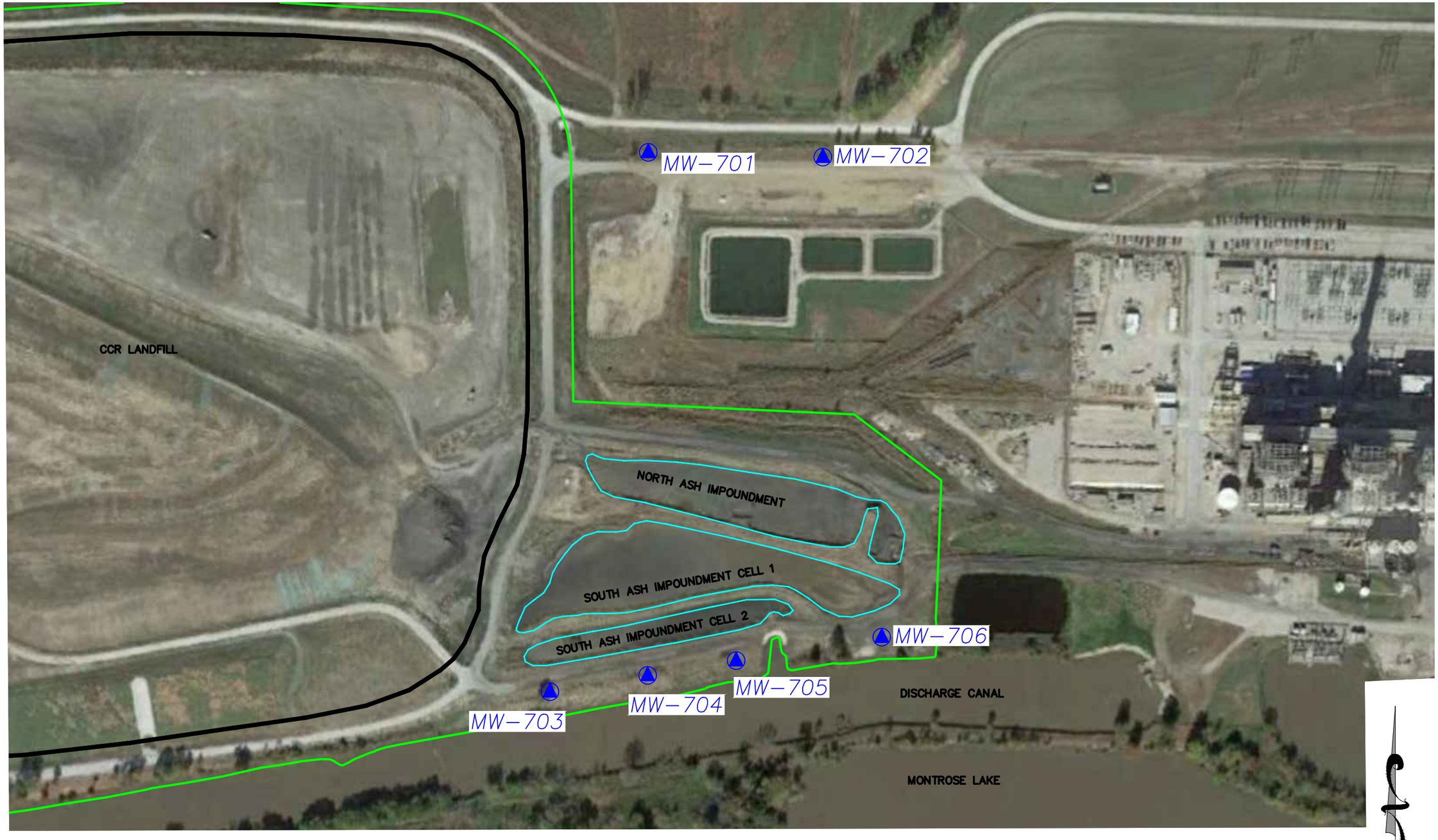
This report has been prepared and reviewed under the direction of a qualified groundwater scientist and qualified professional engineer. The information contained in this report is a reflection of the conditions encountered at the Montrose Generating Station at the time of fieldwork. This report includes 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 Montrose Generating Station North and South Ash Impoundments. No warranties, express or implied, are intended or made.

APPENDIX A

FIGURES

Figure 1: Site Map



LEGEND:

- PERMITTED SOLID WASTE FACILITY BOUNDARY (APPROXIMATE)
- CCR LANDFILL UNIT BOUNDARY (APPROXIMATE)
- MW-703 CCR GROUNDWATER MONITORING SYSTEM WELLS
- ASH IMPOUNDMENT UNIT BOUNDARY (APPROXIMATE)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 88
3. GOOGLE EARTH IMAGE DATED 10/20/2014. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR WELL LOCATIONS PROVIDED BY AECOM

200 0 200 400
SCALE FEET

REV.	DATE		CK. BY
0	-		-
1	-		-
2	-		-
3	-		-
4	-		-
5	-		-

SHEET TITLE
SITE MAP
NORTH AND SOUTH ASH IMPOUNDMENTS
CCR GROUNDWATER MONITORING SYSTEM

PROJECT TITLE
2019 GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT

CLIENT
EVERGY METRO, INC
MONTROSE GENERATING STATION
MONTROSE, MISSOURI

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS AND CONTRACTORS
8575 W. 110th St, Ste. 100
Overland Park, Kansas 66210
PH. (913) 681-0030 FAX. (913) 681-0012

PROJ. NO.	DWN. BY:	Q/A RVW BY:
27213168.19	TGW	JRR
DSN. BY:	CHK. BY:	PROJ. MGR.
TGW	JRR	JRF

CADD FILE:
FIGURE 1_MONT NS ASH IMP.DWG

DATE:
1/07/20

FIGURE NO.
1

N:\KCPL\PROJECTS\GROUNDWATER\DWG\MONTROSE\2018\ANNUAL CCR REPORTING\FIGURE 1_MONT NS ASH IMP.DWG

APPENDIX B

TABLES

Table 1: Appendix III Detection Monitoring Results

Table 2: Detection Monitoring Field Measurements

Table 1
North and South Ash Impoundments
Appendix III Detection Monitoring Results
Evergy Montrose Generating Station

Well Number	Sample Date	Appendix III Constituents						
		Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	pH (S.U.)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
MW-701	5/21/2019	<0.200	402	355	1.17	4.58	2080	2930
MW-701	11/5/2019	<0.200	366	319	0.926	4.39	1650	2700
MW-702	1/10/2019	*<0.200	---	---	---	**6.83	---	---
MW-702	5/21/2019	<0.200	450	271	0.243	6.19	1510	3010
MW-702	11/5/2019	<0.200	425	269	0.227	6.35	1330	2350
MW-703	1/10/2019	---	---	---	---	**6.25	*962	---
MW-703	5/21/2019	<0.200	226	16.5	0.157	6.25	988	1410
MW-703	11/5/2019	<0.200	238	20.0	0.158	6.30	925	1460
MW-704	5/21/2019	<0.200	159	4.17	0.204	6.05	786	1120
MW-704	11/5/2019	<0.200	156	3.47	0.138	6.29	644	1110
MW-705	1/10/2019	---	---	*13.4	---	**6.41	---	---
MW-705	5/21/2019	<0.200	162	13.3	0.202	6.38	741	1210
MW-705	11/5/2019	<0.200	108	13.0	0.185	6.79	489	843
MW-706	5/21/2019	0.282	278	31.5	0.135	6.10	1280	1770
MW-706	7/15/2019	*0.234	---	*29.9	---	**6.47	*1150	---
MW-706	11/5/2019	<0.200	287	28.8	0.186	6.71	1040	1800

* 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

Table 2
North and South Ash Impoundments
Detection Monitoring Field Measurements
Evergy Montrose Generating Station

Well Number	Sample Date	pH (S.U.)	Specific Conductivity (µS)	Temperature (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Water Level (ft btoc)	Groundwater Elevation (ft NGVD)
MW-701	5/21/2019	4.58	3830	14.70	0.0	398	0.86	4.29	759.19
MW-701	11/5/2019	4.39	3590	17.12	0.2	267	0.87	4.63	758.85
MW-702	1/10/2019	**6.83	2710	14.04	49.8	363	0.00	5.36	758.39
MW-702	5/21/2019	6.19	3500	14.68	0.0	200	0.70	3.63	760.12
MW-702	11/5/2019	6.35	3280	16.90	33.8	169	3.42	4.00	759.75
MW-703	1/10/2019	**6.25	1910	14.37	0.2	158	0.00	9.12	751.31
MW-703	5/21/2019	6.25	1410	14.04	0.0	-15	0.71	9.34	751.09
MW-703	11/5/2019	6.30	1980	16.30	6.5	74	0.53	9.00	751.43
MW-704	5/21/2019	6.05	1600	15.89	10.2	-60	0.00	8.57	751.31
MW-704	11/5/2019	6.29	1490	17.48	29.0	-67	0.38	8.42	751.46
MW-705	1/10/2019	**6.41	1340	14.41	9.3	-133	0.00	6.56	751.37
MW-705	5/21/2019	6.38	1690	14.22	19.5	-105	0.00	6.60	751.33
MW-705	11/5/2019	6.79	1160	18.16	28.1	-62	0.00	6.46	751.47
MW-706	5/21/2019	6.10	2360	16.18	0.0	23	0.99	7.68	751.52
MW-706	7/15/2019	**6.47	2270	18.40	3.1	39	0.53	8.64	750.56
MW-706	11/5/2019	6.71	2080	19.88	0.0	1	0.05	7.41	751.79

* 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

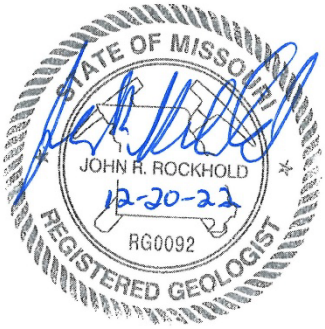
ft NGVD - National Geodetic Vertical Datum (NAVD 88)

NTU - Nephelometric Turbidity Unit

ADDENDUM 1

2019 Annual Groundwater Monitoring and Corrective Action Report
Addendum 1

December 20, 2022
File No. 27213168.19



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

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

Subject: 2019 Annual Groundwater Monitoring and Corrective Action Report Addendum 1
Evergy Metro, Inc.
North and South Ash Impoundments
Montrose Generating Station – Clinton, Missouri

The North and South Ash Impoundments at the Montrose Generating Station are subject to the groundwater monitoring and corrective action requirements of the "Coal Combustion Residuals (CCR) Final Rule" (Rule); as described in CFR 40 257.90 through CFR 40 257.98. An Annual Groundwater Monitoring and Corrective Action (GWMCA) Report documenting activities completed in 2019 for the North and South Ash Impoundments was completed and placed in the facility's operating record on January 30, 2020, as required by the Rule. The Annual GWMCA report was to fulfill the requirements specified in 40 CFR 257.90(e).

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

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

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

The attachments to this addendum are as follows:

- Attachment 1 – Laboratory Analytical Reports:

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

  - January 2019 – First verification sampling for the Fall 2018 detection monitoring event.
  - May 2019 – Spring 2019 semiannual detection monitoring sampling event.
  - July 2019 – First verification sampling for the Spring 2019 detection monitoring sampling event.
  - November 2019 - Fall 2019 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 2019 included the following:

  - Fall 2018 semiannual detection monitoring statistical analyses.
  - Spring 2019 semiannual detection monitoring statistical analyses.

- Attachment 3 - Groundwater Potentiometric Surface Maps:

  Includes 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 2019 - Spring 2019 semiannual detection monitoring sampling event.
  - November 2019 - Fall 2019 semiannual detection monitoring sampling event.

Jared Morrison
December 20, 2022

ATTACHMENT 1

Laboratory Analytical Reports

Jared Morrison
December 20, 2022

ATTACHMENT 1-1

January 2019 Sampling Event Laboratory Report

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

January 21, 2019

SCS Engineers - KS

Sample Delivery Group:	L1060634
Samples Received:	01/12/2019
Project Number:	27213168.18
Description:	KCPL - Montrose Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Project Manager

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MW-602 L1060634-01 GW

Collected by: Whit Martin | Collected date/time: 01/10/19 11:50 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1223839	1	01/16/19 10:48	01/16/19 11:47	AJS

DUPLCATE 1 L1060634-02 GW

Collected by: Whit Martin | Collected date/time: 01/10/19 11:50 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1223839	1	01/16/19 10:48	01/16/19 11:47	AJS

MW-605 L1060634-03 GW

Collected by: Whit Martin | Collected date/time: 01/10/19 12:45 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1223919	1	01/18/19 00:02	01/18/19 00:02	ELN

MW-705 L1060634-04 GW

Collected by: Whit Martin | Collected date/time: 01/10/19 15:10 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1223919	1	01/18/19 00:18	01/18/19 00:18	ELN

DUPLICATE 2 L1060634-05 GW

Collected by: Whit Martin | Collected date/time: 01/10/19 15:10 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1223919	1	01/18/19 01:20	01/18/19 01:20	ELN

MW-702 L1060634-06 GW

Collected by: Whit Martin | Collected date/time: 01/10/19 13:30 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1223291	1	01/14/19 18:41	01/15/19 11:08	TRB

DUPLICATE 3 L1060634-07 GW

Collected by: Whit Martin | Collected date/time: 01/10/19 13:30 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1223291	1	01/14/19 18:41	01/15/19 11:47	TRB

MW-703 L1060634-08 GW

Collected by: Whit Martin | Collected date/time: 01/10/19 14:25 | Received date/time: 01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1224700	20	01/18/19 17:04	01/18/19 17:04	ELN

DUPLICATE 4 L1060634-09 GW

Collected by	Collected date/time	Received date/time
Whit Martin	01/10/19 14:25	01/12/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1224700	20	01/18/19 17:14	01/18/19 17:14	ELN

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

Jeff Carr
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1870000		25000	1	01/16/2019 11:47	WG1223839

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1950000		25000	1	01/16/2019 11:47	WG1223839

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	50900		1000	1	01/18/2019 00:02	WG1223919

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13400		1000	1	01/18/2019 00:18	WG1223919

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13500		1000	1	01/18/2019 01:20	WG1223919

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	01/15/2019 11:08	WG1223291

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	01/15/2019 11:47	WG1223291

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	962000		100000	20	01/18/2019 17:04	WG1224700

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfate	939000		100000	20	01/18/2019 17:14	WG1224700

Method Blank (MB)

(MB) R3376566-1 01/16/19 11:47

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

L1060411-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1060411-04 01/16/19 11:47 • (DUP) R3376566-3 01/16/19 11:47

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	369000	364000	1	1.36		5

Laboratory Control Sample (LCS)

(LCS) R3376566-2 01/16/19 11:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8660000	98.4	85.0-115	

Method Blank (MB)

(MB) R3376793-1 01/17/19 16:54

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

L1060411-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1060411-06 01/17/19 18:23 • (DUP) R3376793-3 01/17/19 18:39

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	56000	56000	1	0.131		15

L1060634-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1060634-04 01/18/19 00:18 • (DUP) R3376793-5 01/18/19 00:33

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	13400	13500	1	0.273		15

Laboratory Control Sample (LCS)

(LCS) R3376793-2 01/17/19 17:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38600	96.5	80.0-120	

L1060411-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1060411-06 01/17/19 18:23 • (MS) R3376793-4 01/17/19 18:54

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	56000	103000	95.1	1	80.0-120	E

L1060634-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1060634-04 01/18/19 00:18 • (MS) R3376793-6 01/18/19 00:49 • (MSD) R3376793-7 01/18/19 01:04

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	13400	63900	64000	101	101	1	80.0-120			0.143	15

Method Blank (MB)

(MB) R3377160-1 01/18/19 15:30

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

L1060639-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1060639-05 01/18/19 18:20 • (DUP) R3377160-7 01/18/19 18:31

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	42200	42400	1	0.437		15

L1060642-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1060642-08 01/18/19 20:52 • (DUP) R3377160-8 01/18/19 21:03

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	31900	32000	1	0.396		15

Laboratory Control Sample (LCS)

(LCS) R3377160-2 01/18/19 15:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	38200	95.6	80.0-120	

L1060634-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1060634-08 01/18/19 16:31 • (MS) R3377160-3 01/18/19 16:42 • (MSD) R3377160-4 01/18/19 16:53

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	50000	878000	900000	911000	43.6	65.4	1	80.0-120	E V	E V	1.20	15

L1060639-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1060639-04 01/18/19 17:25 • (MS) R3377160-5 01/18/19 17:36 • (MSD) R3377160-6 01/18/19 18:09

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	50000	43300	88100	88000	89.5	89.3	1	80.0-120			0.103	15

Method Blank (MB)

(MB) R3375870-1 01/15/19 11:01

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

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

(LCS) R3375870-2 01/15/19 11:03 • (LCSD) R3375870-3 01/15/19 11:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Boron	1000	975	956	97.5	95.6	80.0-120			2.02	20

L1060634-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1060634-06 01/15/19 11:08 • (MS) R3375870-5 01/15/19 11:14 • (MSD) R3375870-6 01/15/19 11:16

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	ND	1170	1180	97.6	98.1	1	75.0-125			0.439	20

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

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

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

State Accreditations

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

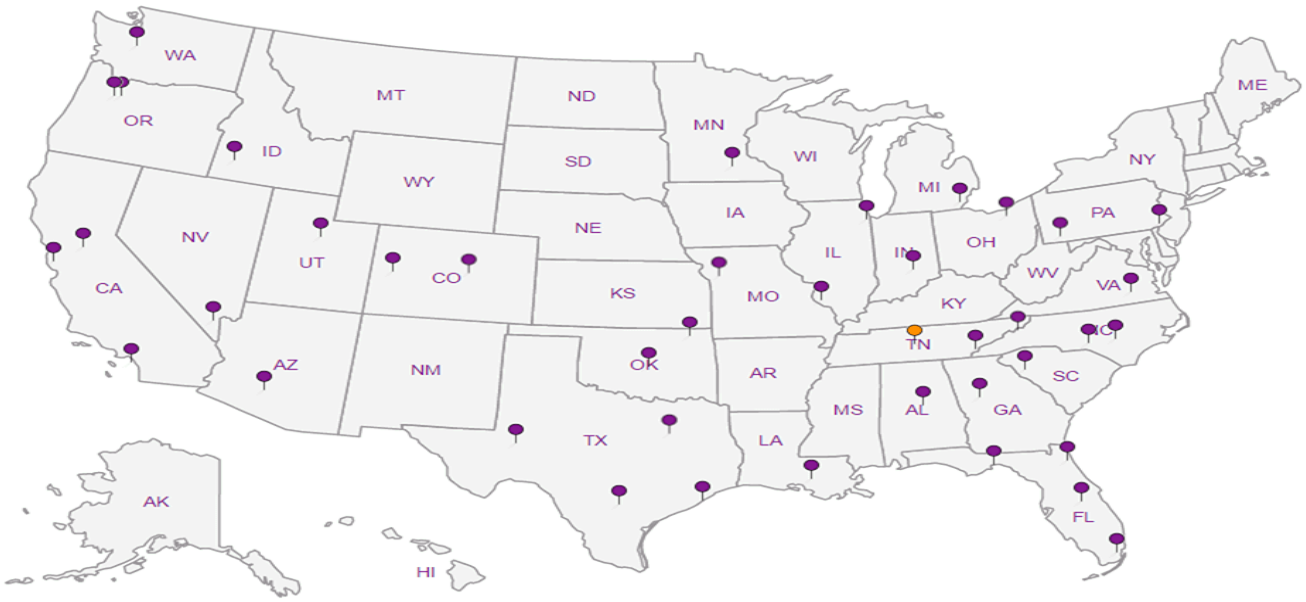
Third Party Federal Accreditations

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

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

Our Locations

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



SCS Engineers - KS
8575 W. 110th Street
Overland Park, KS 66210

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

Report to: **Jason Franks**

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

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

City/State Collected:

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

Client Project # **27213168.18**

Lab Project # **AQUAOPKS-MONTROSE**

Collected by (print): Whit Martin

Site/Facility ID #

P.O. #

Collected by (signature): Whit Martin

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed: Standard

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Boron - 6010 250mlHDPE-HNO3	CHLORIDE 125mlHDPE-NoPres	SULFATE 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-602	Grab	GW		1/10/19	1150	1				X		-01
DUPLICATE 1	Grab	GW		1/10/19	1150	1				X		-02
MW-602 MS/MSD	Grab	GW		1/10/19	1155	1				X		-01
MW-605	Grab	GW		1/10/19	1245	1		X				-03
MW-705	Grab	GW		1/10/19	1510	1		X				-04
DUPLICATE 2	Grab	GW		1/10/19	1510	1		X				-05
MW-705 MS/MSD	Grab	GW		1/10/19	1515	1		X				-04
MW-702	Grab	GW		1/10/19	1330	1	X					-06
DUPLICATE 3	Grab	GW		1/10/19	1330	1	X					-07
MW-702 MS/MSD	Grab	GW		1/10/19	1335	1	X				RAD SCREEN: <0.5	-04

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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

L# L1060634
A151

Acctnum: **AQUAOPKS**
Template: **T144749**
Prelogin: **P689187**
TSR: **206 - Jeff Carr**
PB:
Shipped Via:

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 1510 1655 8684

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	1/11/19	1326	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.0 / 0.9 °C Bottles Received: 13

Date: 01/12/19 Time: 8:30

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

SCS Engineers - KS

8575 W. 110th Street
Overland Park, KS 66210

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

Pres Chk

Report to: Jason Franks

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

Project Description: KCPL - Montrose Generating Station

City/State Collected:

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

Client Project # 27213168.18

Lab Project # AQUAOPKS-MONTROSE

Collected by (print): Whit Martin

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed: Standard

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Boron - 6010 250mlHDPE-HNO3	CHLORIDE 125mlHDPE-NoPres	SULFATE 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-703	Grab	GW		1/10/19	1425	1			X			-08
DUPLICATE 4	Grab	GW		1/10/19	1425	1			X			-09
MW-703 MS/MSD	Grab	GW		1/10/19	1430	1			X			-08

RAD SCREEN: <0.5

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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

L # L1060634

Table #

Acctnum: AQUAOPKS

Template: T144749

Prelogin: P689187

TSR: 206 - Jeff Carr

PB:

Shipped Via:

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4510 1655 8684

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	1/11/19	1320	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.0 / 1.0 °C Bottles Received: 13

Date: 01/12/19 Time: 8:30

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Jared Morrison
December 20, 2022

ATTACHMENT 1-2

May 2019 Sampling Event Laboratory Report

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

June 03, 2019

SCS Engineers - KS

Sample Delivery Group:	L1102016
Samples Received:	05/23/2019
Project Number:	27213168.19
Description:	KCPL - Montrose Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Project Manager

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MW-601 L1102016-01 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 12:25 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287261	1	05/28/19 19:21	05/28/19 19:50	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 11:32	06/01/19 11:32	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	100	06/01/19 11:45	06/01/19 11:45	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:07	CCE	Mt. Juliet, TN

MW-602 L1102016-02 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 12:25 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287261	1	05/28/19 19:21	05/28/19 19:50	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 12:00	06/01/19 12:00	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	50	06/01/19 12:14	06/01/19 12:14	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:10	CCE	Mt. Juliet, TN

MW-603 L1102016-03 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 14:00 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 12:29	06/01/19 12:29	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	100	06/01/19 13:47	06/01/19 13:47	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 17:56	CCE	Mt. Juliet, TN

MW-604 L1102016-04 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 13:20 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 14:02	06/01/19 14:02	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	100	06/01/19 14:16	06/01/19 14:16	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:13	CCE	Mt. Juliet, TN

MW-605 L1102016-05 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 12:35 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 14:30	06/01/19 14:30	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	100	06/01/19 14:45	06/01/19 14:45	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:21	CCE	Mt. Juliet, TN

MW-701 L1102016-06 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 15:00 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 14:59	06/01/19 14:59	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	100	06/01/19 15:14	06/01/19 15:14	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:24	CCE	Mt. Juliet, TN

MW-702 L1102016-07 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 15:35 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 15:28	06/01/19 15:28	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	50	06/01/19 15:42	06/01/19 15:42	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:27	CCE	Mt. Juliet, TN

MW-703 L1102016-08 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 12:00 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 15:57	06/01/19 15:57	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	20	06/01/19 16:40	06/01/19 16:40	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:29	CCE	Mt. Juliet, TN

MW-704 L1102016-09 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 15:50 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 16:55	06/01/19 16:55	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	20	06/01/19 17:09	06/01/19 17:09	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:32	CCE	Mt. Juliet, TN

MW-705 L1102016-10 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 16:15 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 17:23	06/01/19 17:23	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	10	06/01/19 17:52	06/01/19 17:52	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:35	CCE	Mt. Juliet, TN

MW-706 L1102016-11 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 16:10 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 18:21	06/01/19 18:21	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	20	06/01/19 18:35	06/01/19 18:35	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:37	CCE	Mt. Juliet, TN

DUPLICATE 2 L1102016-12 GW

Collected by: Jason R Franks | Collected date/time: 05/21/19 14:00 | Received date/time: 05/23/19 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1287262	1	05/28/19 18:11	05/28/19 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	1	06/01/19 18:50	06/01/19 18:50	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1287708	100	06/01/19 19:33	06/01/19 19:33	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1286048	1	05/29/19 07:39	05/31/19 18:40	CCE	Mt. Juliet, TN

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

Jeff Carr
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	4410000		50000	1	05/28/2019 19:50	WG1287261

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	55500		1000	1	06/01/2019 11:32	WG1287708
Fluoride	487		100	1	06/01/2019 11:32	WG1287708
Sulfate	3230000		500000	100	06/01/2019 11:45	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	05/31/2019 18:07	WG1286048
Calcium	472000		1000	1	05/31/2019 18:07	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1870000		25000	1	05/28/2019 19:50	WG1287261

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	4110		1000	1	06/01/2019 12:00	WG1287708
Fluoride	132		100	1	06/01/2019 12:00	WG1287708
Sulfate	1260000		250000	50	06/01/2019 12:14	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	4480		200	1	05/31/2019 18:10	WG1286048
Calcium	342000		1000	1	05/31/2019 18:10	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2990000	J3	50000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8240		1000	1	06/01/2019 12:29	WG1287708
Fluoride	365		100	1	06/01/2019 12:29	WG1287708
Sulfate	2480000		500000	100	06/01/2019 13:47	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	7350	O1	200	1	05/31/2019 17:56	WG1286048
Calcium	429000	O1 V	1000	1	05/31/2019 17:56	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	3270000		50000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	15500		1000	1	06/01/2019 14:02	WG1287708
Fluoride	519		100	1	06/01/2019 14:02	WG1287708
Sulfate	2090000		500000	100	06/01/2019 14:16	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	4860		200	1	05/31/2019 18:13	WG1286048
Calcium	476000		1000	1	05/31/2019 18:13	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2810000		50000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	55400		1000	1	06/01/2019 14:30	WG1287708
Fluoride	222		100	1	06/01/2019 14:30	WG1287708
Sulfate	1970000		500000	100	06/01/2019 14:45	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1650		200	1	05/31/2019 18:21	WG1286048
Calcium	416000		1000	1	05/31/2019 18:21	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2930000		50000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	355000		100000	100	06/01/2019 15:14	WG1287708
Fluoride	1170		100	1	06/01/2019 14:59	WG1287708
Sulfate	2080000		500000	100	06/01/2019 15:14	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	05/31/2019 18:24	WG1286048
Calcium	402000		1000	1	05/31/2019 18:24	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	3010000		50000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	271000		50000	50	06/01/2019 15:42	WG1287708
Fluoride	243		100	1	06/01/2019 15:28	WG1287708
Sulfate	1510000		250000	50	06/01/2019 15:42	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	05/31/2019 18:27	WG1286048
Calcium	450000		1000	1	05/31/2019 18:27	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1410000		20000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	16500		1000	1	06/01/2019 15:57	WG1287708
Fluoride	157		100	1	06/01/2019 15:57	WG1287708
Sulfate	988000		100000	20	06/01/2019 16:40	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	05/31/2019 18:29	WG1286048
Calcium	226000		1000	1	05/31/2019 18:29	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1120000		20000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	4170		1000	1	06/01/2019 16:55	WG1287708
Fluoride	204		100	1	06/01/2019 16:55	WG1287708
Sulfate	786000		100000	20	06/01/2019 17:09	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	05/31/2019 18:32	WG1286048
Calcium	159000		1000	1	05/31/2019 18:32	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1210000		20000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13300		1000	1	06/01/2019 17:23	WG1287708
Fluoride	202		100	1	06/01/2019 17:23	WG1287708
Sulfate	741000		50000	10	06/01/2019 17:52	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	05/31/2019 18:35	WG1286048
Calcium	162000		1000	1	05/31/2019 18:35	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1770000		25000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	31500		1000	1	06/01/2019 18:21	WG1287708
Fluoride	135		100	1	06/01/2019 18:21	WG1287708
Sulfate	1280000		100000	20	06/01/2019 18:35	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	282		200	1	05/31/2019 18:37	WG1286048
Calcium	278000		1000	1	05/31/2019 18:37	WG1286048

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	3920000		50000	1	05/28/2019 18:33	WG1287262

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8230		1000	1	06/01/2019 18:50	WG1287708
Fluoride	378		100	1	06/01/2019 18:50	WG1287708
Sulfate	2460000		500000	100	06/01/2019 19:33	WG1287708

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	7230		200	1	05/31/2019 18:40	WG1286048
Calcium	430000		1000	1	05/31/2019 18:40	WG1286048

Method Blank (MB)

(MB) R3416327-1 05/28/19 19:50

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

L1099549-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1099549-23 05/28/19 19:50 • (DUP) R3416327-3 05/28/19 19:50

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	480000	520000	1	8.00	J3	5

Laboratory Control Sample (LCS)

(LCS) R3416327-2 05/28/19 19:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8720000	99.1	85.0-115	

Method Blank (MB)

(MB) R3416367-1 05/28/19 18:33

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

L1102016-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1102016-03 05/28/19 18:33 • (DUP) R3416367-3 05/28/19 18:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	2990000	3260000	1	8.81	J3	5

Laboratory Control Sample (LCS)

(LCS) R3416367-2 05/28/19 18:33

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8550000	97.2	85.0-115	

Method Blank (MB)

(MB) R3416973-1 06/01/19 08:27

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

L1102016-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1102016-10 06/01/19 17:23 • (DUP) R3416973-5 06/01/19 17:38

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	13300	13300	1	0.0654		15
Fluoride	202	206	1	2.35		15

L1102016-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1102016-10 06/01/19 17:52 • (DUP) R3416973-6 06/01/19 18:07

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	741000	742000	10	0.0191		15

L1102021-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1102021-01 06/01/19 23:38 • (DUP) R3416973-7 06/01/19 23:53

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	ND	350	1	0.000		15
Fluoride	201	187	1	6.96		15
Sulfate	ND	0.000	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3416973-2 06/01/19 08:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	40300	101	80.0-120	
Fluoride	8000	8200	103	80.0-120	
Sulfate	40000	40900	102	80.0-120	

L1102016-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1102016-03 06/01/19 12:29 • (MS) R3416973-3 06/01/19 12:43 • (MSD) R3416973-4 06/01/19 13:04

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	8240	60500	60600	105	105	1	80.0-120			0.0705	15
Fluoride	5000	365	5300	5280	98.7	98.2	1	80.0-120			0.444	15
Sulfate	50000	2190000	2120000	2130000	0.000	0.000	1	80.0-120	E V	E V	0.186	15

L1102021-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1102021-01 06/01/19 23:38 • (MS) R3416973-8 06/02/19 00:07 • (MSD) R3416973-9 06/02/19 00:21

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	ND	52400	52600	104	104	1	80.0-120			0.373	15
Fluoride	5000	201	5420	5450	104	105	1	80.0-120			0.576	15
Sulfate	50000	ND	51200	51500	102	103	1	80.0-120			0.593	15

Method Blank (MB)

(MB) R3417058-1 05/31/19 17:48

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

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

(LCS) R3417058-2 05/31/19 17:51 • (LCSD) R3417058-3 05/31/19 17:53

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Boron	1000	1010	1010	101	101	80.0-120			0.119	20
Calcium	10000	10100	10100	101	101	80.0-120			0.589	20

L1102016-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1102016-03 05/31/19 17:56 • (MS) R3417058-5 05/31/19 18:01 • (MSD) R3417058-6 05/31/19 18:04

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	7350	8200	8120	84.6	77.0	1	75.0-125			0.941	20
Calcium	10000	429000	430000	428000	12.6	0.000	1	75.0-125	V	V	0.304	20

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
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.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

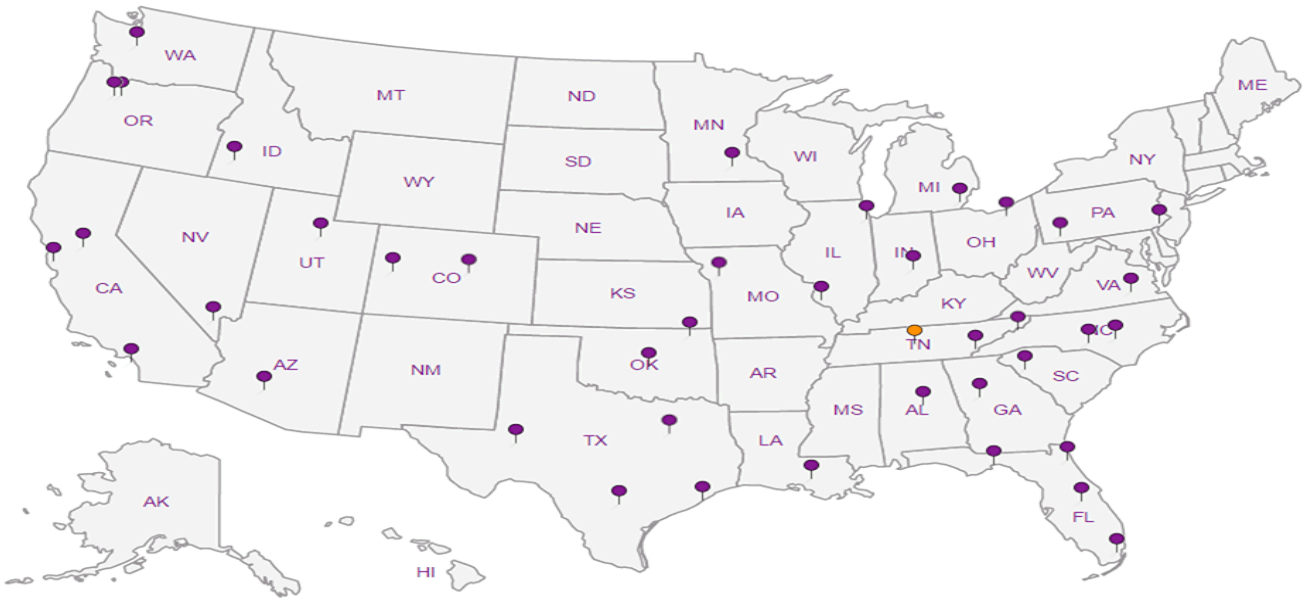
Third Party Federal Accreditations

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

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

Our Locations

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



SCS Engineers - KS
8575 W. 110th Street
Overland Park, KS 66210

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

Pres Chk

Report to: **Jason Franks**

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

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

City/State Collected: Montrose, Mo

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

Client Project # **27213168.19**

Lab Project # **AQUAOPKS-MONTROSE**

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature): Jason R. Franks

Immediately Packed on Ice N ___ Y ✓

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

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions (Cld, F, SO4) 125mlHDPE-NoPres	B, Ca - 6010 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-601	GRAB	GW	–	5/21/19	1225	3	X	X	X		-01
MW-602		GW	–		1225	3	X	X	X		-02
MW-603		GW	–		1400	3	X	X	X		-03
MW-604		GW	–		1320	3	X	X	X		-04
MW-605		GW	–		1235	3	X	X	X		-05
MW-701		GW	–		1500	3	X	X	X		-06
MW-702		GW	–		1535	3	X	X	X		-07
MW-703		GW	–		1200	3	X	X	X		-08
MW-704		GW	–		1550	3	X	X	X		-09
MW-705		GW	–		1615	3	X	X	X		-10

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1102016

F121

Acctnum: **AQUAOPKS**
Template: **T135966**
Prelogin: **P709140**
TSR: **206 - Jeff Carr**
PB:

Shipped Via:

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier SVA

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	5/22/19	1130	
	5/22/19	1700	SWA
			Received for lab by: (Signature)

1.2 2.0 0.2

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.7°C +1 1.8°C Bottles Received: 39

Date: 5/23/19 TOA? Time: 0800

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

SCS Engineers - KS
8575 W. 110th Street
Overland Park, KS 66210

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

Pres Chk

Report to: **Jason Franks**

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

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

City/State Collected: MONTROSE, MO

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

Client Project # **27213168.18**

Lab Project # **AQUAOPKS-MONTROSE**

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature): Jason R. Franks

Immediately Packed on Ice N ___ Y ✓

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

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions (Cld, F, SO4) 125mlHDPE-NoPres	B, Ca - 6010 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-706	GRAB	GW	-	5/21/19	1610	3	X	X	X		-11
1003 MS/MSD		GW	-	5/21/19	1400	3	X	X	X		-03
~~MSD~~		~~GW~~	-			~~3~~	~~X~~	~~X~~	~~X~~		
DUPLICATE		GW	-	5/21/19	1400	3	X	X	X		-12

Analysis / Container / Preservative

<2

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier SWA

Tracking #

Relinquished by : (Signature) Jason R Franks — Date: 5/22/19 — Time: 1130 — Received by: (Signature)

Relinquished by : (Signature) — Date: 5/22/19 — Time: 1700 — Received by: (Signature) SWA — 1.22.0 0.2

Relinquished by : (Signature) — Date: — Time: — Received for lab by: (Signature) — Date: 5/23/19 — Time: 0800

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.7° +.1 °C 1.8° — Bottles Received: 39

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

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

Chain of Custody Page 2 of 2

National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 1102016

Table #

Acctnum: **AQUAOPKS**
Template: **T135966**
Prelogin: **P709140**
TSR: **206 - Jeff Carr**
PB:

Shipped Via:

Jared Morrison
December 20, 2022

ATTACHMENT 1-3

July 2019 Sampling Event Laboratory Report

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 24, 2019

SCS Engineers - KS

Sample Delivery Group:	L1118897
Samples Received:	07/16/2019
Project Number:	27213168.18
Description:	KCPL - Montrose Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Project Manager

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MW-601 L1118897-01 GW

Collected by: Whit Martin | Collected date/time: 07/15/19 10:35 | Received date/time: 07/16/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1314688	5	07/22/19 09:28	07/22/19 09:28	ST	Mt. Juliet, TN

MW-603 L1118897-02 GW

Collected by: Whit Martin | Collected date/time: 07/15/19 11:20 | Received date/time: 07/16/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1314688	5	07/22/19 09:42	07/22/19 09:42	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1312461	1	07/16/19 22:03	07/17/19 10:45	TRB	Mt. Juliet, TN

MW-604 L1118897-03 GW

Collected by: Whit Martin | Collected date/time: 07/15/19 12:00 | Received date/time: 07/16/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1312373	1	07/17/19 08:09	07/17/19 08:24	TH	Mt. Juliet, TN

DUPLCATE 1 L1118897-04 GW

Collected by: Whit Martin | Collected date/time: 07/15/19 00:00 | Received date/time: 07/16/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1312373	1	07/17/19 08:09	07/17/19 08:24	TH	Mt. Juliet, TN

MW-605 L1118897-05 GW

Collected by: Whit Martin | Collected date/time: 07/15/19 12:40 | Received date/time: 07/16/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1314706	1	07/22/19 01:36	07/22/19 01:36	ST	Mt. Juliet, TN

MW-706 L1118897-06 GW

Collected by: Whit Martin | Collected date/time: 07/15/19 13:20 | Received date/time: 07/16/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1314706	1	07/22/19 02:10	07/22/19 02:10	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1314706	20	07/22/19 03:03	07/22/19 03:03	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1312461	1	07/16/19 22:03	07/17/19 09:52	TRB	Mt. Juliet, TN

DUPLICATE 2 L1118897-07 GW

Collected by: Whit Martin | Collected date/time: 07/15/19 00:00 | Received date/time: 07/16/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG1314706	1	07/22/19 03:21	07/22/19 03:21	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1314706	20	07/22/19 03:39	07/22/19 03:39	ST	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1312461	1	07/16/19 22:03	07/17/19 10:47	TRB	Mt. Juliet, TN

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

Jeff Carr
Project Manager

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	56500		5000	5	07/22/2019 09:28	WG1314688

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8750		5000	5	07/22/2019 09:42	WG1314688

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	6490		200	1	07/17/2019 10:45	WG1312461

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2680000		50000	1	07/17/2019 08:24	WG1312373

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2660000		50000	1	07/17/2019 08:24	WG1312373

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	57800		1000	1	07/22/2019 01:36	WG1314706

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	29900		1000	1	07/22/2019 02:10	WG1314706
Sulfate	1150000		100000	20	07/22/2019 03:03	WG1314706

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	234		200	1	07/17/2019 09:52	WG1312461

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	29900		1000	1	07/22/2019 03:21	WG1314706
Sulfate	1160000		100000	20	07/22/2019 03:39	WG1314706

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	245		200	1	07/17/2019 10:47	WG1312461

Method Blank (MB)

(MB) R3432060-1 07/17/19 08:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	11000		2820	10000

L1118897-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1118897-04 07/17/19 08:24 • (DUP) R3432060-3 07/17/19 08:24

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2660000	2640000	1	0.756		5

Laboratory Control Sample (LCS)

(LCS) R3432060-2 07/17/19 08:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8910000	101	85.0-115	

Method Blank (MB)

(MB) R3432969-1 07/21/19 21:20

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

L1118662-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1118662-01 07/22/19 00:21 • (DUP) R3432969-3 07/22/19 00:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	56200	56100	1	0.264		15

L1118867-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1118867-01 07/22/19 06:49 • (DUP) R3432969-5 07/22/19 07:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	17700	17800	1	0.716		15

Laboratory Control Sample (LCS)

(LCS) R3432969-2 07/21/19 21:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	39800	99.6	80.0-120	

L1118662-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1118662-01 07/22/19 00:21 • (MS) R3432969-4 07/22/19 00:49

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	56200	105000	97.0	1	80.0-120	E

L1118896-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1118896-07 07/22/19 08:45 • (MS) R3432969-6 07/22/19 08:59 • (MSD) R3432969-7 07/22/19 09:14

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Chloride	50000	70900	118000	119000	94.6	96.4	1	80.0-120	E	E	0.722	15

Method Blank (MB)

(MB) R3432978-1 07/21/19 22:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		51.9	1000
Sulfate	U		77.4	5000

L1118897-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1118897-05 07/22/19 01:36 • (DUP) R3432978-3 07/22/19 01:53

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	57800	57500	1	0.448		15
Sulfate	ND	0.000	1	0.000		15

L1119208-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1119208-01 07/22/19 08:38 • (DUP) R3432978-6 07/22/19 08:56

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5850	5780	1	1.21		15
Sulfate	23100	24300	1	4.98		15

Laboratory Control Sample (LCS)

(LCS) R3432978-2 07/21/19 22:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	40000	100	80.0-120	
Sulfate	40000	39000	97.4	80.0-120	

L1118897-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1118897-06 07/22/19 02:10 • (MS) R3432978-4 07/22/19 02:28 • (MSD) R3432978-5 07/22/19 02:46

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	29900	80600	81000	101	102	1	80.0-120			0.524	15
Sulfate	50000	1130000	1110000	1110000	0.000	0.000	1	80.0-120	E V	E V	0.276	15

L1119208-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1119208-01 07/22/19 08:38 • (MS) R3432978-7 07/22/19 09:13

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	5850	55600	99.4	1	80.0-120	
Sulfate	50000	23100	70900	95.6	1	80.0-120	

Method Blank (MB)

(MB) R3431497-1 07/17/19 09:44

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

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

(LCS) R3431497-2 07/17/19 09:47 • (LCSD) R3431497-3 07/17/19 09:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Boron	1000	1000	1010	100	101	80.0-120			0.339	20

L1118897-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1118897-06 07/17/19 09:52 • (MS) R3431497-5 07/17/19 09:57 • (MSD) R3431497-6 07/17/19 09:59

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	234	1270	1250	104	102	1	75.0-125			2.03	20

Guide to Reading and Understanding Your Laboratory Report

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

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.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

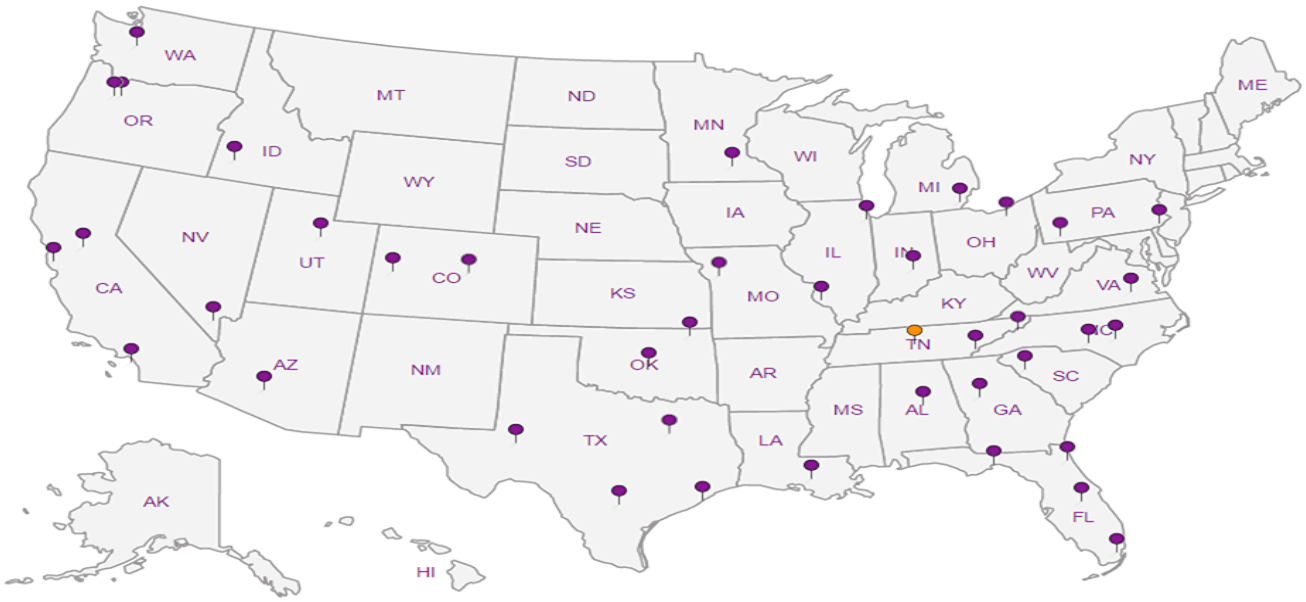
Third Party Federal Accreditations

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

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

Our Locations

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



SCS Engineers - KS

8575 W. 110th Street
Overland Park, KS 66210

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

Pres Chk: Z2

Report to: Jason Franks

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

Project Description: KCPL - Montrose Generating Station

City/State Collected: Montrose, MO

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

Client Project # 27213168.18

Lab Project # AQUAOPKS-MONTROSE

Collected by (print): Whit Martin

Site/Facility ID #

P.O. #

Collected by (signature): Whit Martin

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed: Std

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Boron - 6010 250mlHDPE-HNO3	Chloride 125mlHDPE-NoPres	Chloride, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-601	Grab	GW		7/15/19	1035	1		X				-01
MW-603	Grab	GW		7/15/19	1120	2	X	X				02
MW-604	Grab	GW		7/15/19	1200	1				X		03
DUPLICATE 1	Grab	GW		7/15/19	—	1				X		04
MW-605	Grab	GW		7/15/19	1240	1		X				05
MW-706	Grab	GW		7/15/19	1320	2	X		X			06
MW-706 MS / MSD	Grab	GW		7/15/19	1325	2	X		X			06
DUPLICATE 2	Grab	GW		7/15/19	—	2	X		X			07
MW-604 MS/MSD	Grab	GW		7/15/19	1205	1				X		03

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 4794 8839 2437

Chain of Custody Page 1 of 1

National Center for Testing & Innovation

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

L# L1118897
J172

Acctnum: AQUAOPKS
Template: T144749
Prelogin: P719349
TSR: 206 - Jeff Carr
PB:

Shipped Via:

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

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	7/15/19	1540	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	7/15/19	1800	FEDEX
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: 4.7 BF °C Bottles Received: 13
2.4+.1=2.5

If preservation required by Login: Date/Time

Hold:

Condition: NCF (OK)

Date: 7/16/19 Time: 0845

Jared Morrison
December 20, 2022

ATTACHMENT 1-4

November 2019 Sampling Event Laboratory Report

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 14, 2019

SCS Engineers - KS

Sample Delivery Group:	L1158415
Samples Received:	11/07/2019
Project Number:	27213168.18
Description:	KCPL - Montrose Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Project Manager

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MW-601 L1158415-01 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 11:15 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 12:36	11/11/19 12:36	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	100	11/11/19 12:52	11/11/19 12:52	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 04:52	TRB	Mt. Juliet, TN

MW-602 L1158415-02 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 13:00 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 13:08	11/11/19 13:08	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 13:56	11/11/19 13:56	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 04:55	TRB	Mt. Juliet, TN

MW-603 L1158415-03 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 13:40 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 14:11	11/11/19 14:11	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 14:59	11/11/19 14:59	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 04:58	TRB	Mt. Juliet, TN

MW-604 L1158415-04 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 14:10 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 15:15	11/11/19 15:15	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 15:31	11/11/19 15:31	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 05:00	TRB	Mt. Juliet, TN

MW-605 L1158415-05 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 14:40 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 15:46	11/11/19 15:46	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 16:02	11/11/19 16:02	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 05:03	TRB	Mt. Juliet, TN

MW-701 L1158415-06 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 14:10 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 16:18	11/11/19 16:18	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 16:34	11/11/19 16:34	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 05:06	TRB	Mt. Juliet, TN

MW-702 L1158415-07 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 14:40 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 16:50	11/11/19 16:50	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 17:06	11/11/19 17:06	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 05:09	TRB	Mt. Juliet, TN

MW-703 L1158415-08 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 15:20 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 17:22	11/11/19 17:22	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 18:10	11/11/19 18:10	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 05:12	TRB	Mt. Juliet, TN

MW-704 L1158415-09 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 15:35 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 18:26	11/11/19 18:26	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 18:41	11/11/19 18:41	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 05:14	TRB	Mt. Juliet, TN

MW-705 L1158415-10 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 13:50 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 18:57	11/11/19 18:57	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	20	11/11/19 19:29	11/11/19 19:29	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 05:17	TRB	Mt. Juliet, TN

MW-706 L1158415-11 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 14:35 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 20:01	11/11/19 20:01	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 21:21	11/11/19 21:21	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 04:28	TRB	Mt. Juliet, TN

DUPLICATE L1158415-12 GW

Collected by: G. Penaflor | Collected date/time: 11/05/19 14:40 | Received date/time: 11/07/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1378173	1	11/10/19 12:32	11/10/19 13:23	TH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	1	11/11/19 21:36	11/11/19 21:36	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1378385	50	11/11/19 21:52	11/11/19 21:52	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1379525	1	11/13/19 19:53	11/14/19 05:25	TRB	Mt. Juliet, TN

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

Jeff Carr
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	3880000	J3	50000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	52800		1000	1	11/11/2019 12:36	WG1378385
Fluoride	402		100	1	11/11/2019 12:36	WG1378385
Sulfate	2950000		500000	100	11/11/2019 12:52	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	11/14/2019 04:52	WG1379525
Calcium	457000		1000	1	11/14/2019 04:52	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1880000		20000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3690		1000	1	11/11/2019 13:08	WG1378385
Fluoride	140		100	1	11/11/2019 13:08	WG1378385
Sulfate	1110000		250000	50	11/11/2019 13:56	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	4160		200	1	11/14/2019 04:55	WG1379525
Calcium	325000		1000	1	11/14/2019 04:55	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2530000		50000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	6660		1000	1	11/11/2019 14:11	WG1378385
Fluoride	436		100	1	11/11/2019 14:11	WG1378385
Sulfate	2010000		250000	50	11/11/2019 14:59	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	5960		200	1	11/14/2019 04:58	WG1379525
Calcium	410000		1000	1	11/14/2019 04:58	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2340000		50000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	12500		1000	1	11/11/2019 15:15	WG1378385
Fluoride	428		100	1	11/11/2019 15:15	WG1378385
Sulfate	1650000		250000	50	11/11/2019 15:31	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	4300		200	1	11/14/2019 05:00	WG1379525
Calcium	407000		1000	1	11/14/2019 05:00	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2380000		50000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	59100		1000	1	11/11/2019 15:46	WG1378385
Fluoride	195		100	1	11/11/2019 15:46	WG1378385
Sulfate	1730000		250000	50	11/11/2019 16:02	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	1500		200	1	11/14/2019 05:03	WG1379525
Calcium	399000		1000	1	11/14/2019 05:03	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2700000		50000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	319000		50000	50	11/11/2019 16:34	WG1378385
Fluoride	926		100	1	11/11/2019 16:18	WG1378385
Sulfate	1650000		250000	50	11/11/2019 16:34	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	11/14/2019 05:06	WG1379525
Calcium	366000		1000	1	11/14/2019 05:06	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2350000		50000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	269000		50000	50	11/11/2019 17:06	WG1378385
Fluoride	227		100	1	11/11/2019 16:50	WG1378385
Sulfate	1330000		250000	50	11/11/2019 17:06	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	11/14/2019 05:09	WG1379525
Calcium	425000		1000	1	11/14/2019 05:09	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1460000		20000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	20000		1000	1	11/11/2019 17:22	WG1378385
Fluoride	158		100	1	11/11/2019 17:22	WG1378385
Sulfate	925000		250000	50	11/11/2019 18:10	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	11/14/2019 05:12	WG1379525
Calcium	238000		1000	1	11/14/2019 05:12	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1110000		20000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3470		1000	1	11/11/2019 18:26	WG1378385
Fluoride	138		100	1	11/11/2019 18:26	WG1378385
Sulfate	644000		250000	50	11/11/2019 18:41	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	11/14/2019 05:14	WG1379525
Calcium	156000		1000	1	11/14/2019 05:14	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	843000		13300	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13000		1000	1	11/11/2019 18:57	WG1378385
Fluoride	185		100	1	11/11/2019 18:57	WG1378385
Sulfate	489000		100000	20	11/11/2019 19:29	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	11/14/2019 05:17	WG1379525
Calcium	108000		1000	1	11/14/2019 05:17	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1800000		25000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	28800		1000	1	11/11/2019 20:01	WG1378385
Fluoride	186		100	1	11/11/2019 20:01	WG1378385
Sulfate	1040000		250000	50	11/11/2019 21:21	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	11/14/2019 04:28	WG1379525
Calcium	287000	V	1000	1	11/14/2019 04:28	WG1379525

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1740000		25000	1	11/10/2019 13:23	WG1378173

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	28800		1000	1	11/11/2019 21:36	WG1378385
Fluoride	184		100	1	11/11/2019 21:36	WG1378385
Sulfate	1050000		250000	50	11/11/2019 21:52	WG1378385

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	200		200	1	11/14/2019 05:25	WG1379525
Calcium	282000		1000	1	11/14/2019 05:25	WG1379525

Method Blank (MB)

(MB) R3470627-1 11/10/19 13:23

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

L1158415-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1158415-01 11/10/19 13:23 • (DUP) R3470627-3 11/10/19 13:23

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	3880000	4270000	1	9.70	J3	5

L1158421-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1158421-03 11/10/19 13:23 • (DUP) R3470627-4 11/10/19 13:23

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2680000	2910000	1	8.23	J3	5

Laboratory Control Sample (LCS)

(LCS) R3470627-2 11/10/19 13:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8410000	95.6	85.0-115	

Method Blank (MB)

(MB) R3470854-1 11/11/19 11:01

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

L1158388-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1158388-09 11/11/19 11:48 • (DUP) R3470854-3 11/11/19 12:04

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

L1158415-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1158415-10 11/11/19 18:57 • (DUP) R3470854-5 11/11/19 19:13

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	13000	13000	1	0.293		15
Fluoride	185	183	1	1.09		15

L1158415-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1158415-10 11/11/19 19:29 • (DUP) R3470854-6 11/11/19 19:45

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	489000	488000	20	0.194		15

Laboratory Control Sample (LCS)

(LCS) R3470854-2 11/11/19 11:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38400	96.0	80.0-120	
Fluoride	8000	7980	99.7	80.0-120	
Sulfate	40000	38700	96.7	80.0-120	

L1158388-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1158388-09 11/11/19 11:48 • (MS) R3470854-4 11/11/19 12:20

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	ND	48600	97.2	1	80.0-120	
Fluoride	5000	ND	4870	97.4	1	80.0-120	
Sulfate	50000	ND	49000	98.1	1	80.0-120	

L1158415-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1158415-11 11/11/19 20:01 • (MS) R3470854-7 11/11/19 20:17 • (MSD) R3470854-8 11/11/19 20:33

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	28800	78000	78000	98.4	98.5	1	80.0-120			0.0328	15
Fluoride	5000	186	4880	5020	93.8	96.6	1	80.0-120			2.86	15
Sulfate	50000	1120000	1140000	1140000	47.2	47.8	1	80.0-120	E V	E V	0.0265	15

Method Blank (MB)

(MB) R3471789-1 11/14/19 04:20

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

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

(LCS) R3471789-2 11/14/19 04:23 • (LCSD) R3471789-3 11/14/19 04:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Boron	1000	940	965	94.0	96.5	80.0-120			2.59	20
Calcium	10000	9620	9670	96.2	96.7	80.0-120			0.497	20

L1158415-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1158415-11 11/14/19 04:28 • (MS) R3471789-5 11/14/19 04:33 • (MSD) R3471789-6 11/14/19 04:36

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Boron	1000	ND	1160	1170	98.3	99.2	1	75.0-125			0.776	20
Calcium	10000	287000	291000	292000	36.5	44.7	1	75.0-125	V	V	0.280	20

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
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.

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

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

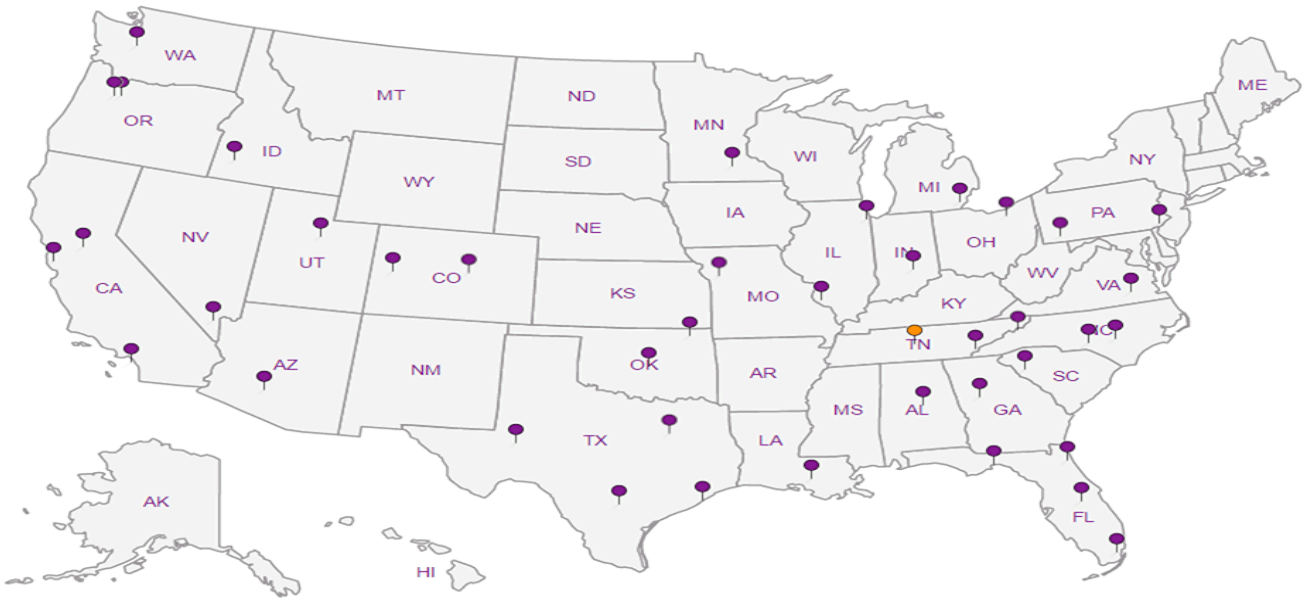
Third Party Federal Accreditations

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

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

Our Locations

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



Page 1 of 2

SCS Engineers - KS
8575 W. 110th Street
Overland Park, KS 66210

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

Pres Chk

Report to: Jason Franks

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

Project Description: EVERGY KCPL - Montrose Generating St

City/State Collected: Montrose, MO

Please Circle: PT MT CT ET

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

Client Project # 27213168.19

Lab Project # AQUAOPKS-MONTROSE

Collected by (print): G Pendleton

Site/Facility ID #

P.O. #

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

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

Quote #

Date Results Needed: Std

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions (Cld, F, SO4) 125mlHDPE-NoPres	B, Ca - 6010 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-601	GRAB	GW	—	11/5/19	1115	3	X	X	X		-01
MW-602		GW	—		1300	3	X	X	X		-02
MW-603		GW	—		1340	3	X	X	X		-03
MW-604		GW	—		1410	3	X	X	X		-04
MW-605		GW	—		1440	3	X	X	X		-05
MW-701		GW	—		1410	3	X	X	X		-06
MW-702		GW	—		1440	3	X	X	X		-07
MW-703		GW	—		1520	3	X	X	X		-08
MW-704		GW	—		1535	3	X	X	X		-09
MW-705		GW	—		1350	3	X	X	X		-10

Analysis / Container / Preservative

Chain of Custody

National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # 1154415
B162

Table #

Acctnum: AQUAOPKS
Template: T135966
Prelogin: P736915
PM: 206 - Jeff Carr
PB:
Shipped Via:

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

Remarks:

pH ___ Temp ___
Flow ___ Other ___

Samples returned via: __ UPS __ FedEx __ Courier ___

Tracking # SW

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

	Date	Time		
Relinquished by: (Signature) Jason K. Franks	11/6/19	1122	Received by: (Signature) [signature]	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature) [signature]	11/6/19	1800	Received by: (Signature) SWA	Temp: 4.3 °C 0.873=0.5 Bottles Received: 42
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 11/7 Time: 0830

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Chain of Custody Page 2 of 2

SCS Engineers - KS 8575 W. 110th Street Overland Park, KS 66210	Billing Information: Accounts Payable 8575 W. 110th Street Overland Park, KS 66210
Report to: Jason Franks	Email To: jfranks@scsengineers.com; jay.martin@kcpl.com;

Pres Chk

National Center for Testing & Innovation

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

Project Description: ~~KCPL~~ EVERGY - Montrose Generating St

City/State Collected: MONTROSE, MO

Please Circle: PT MT (CT) ET

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

Client Project #: 27213168.18 19

Lab Project #: AQUAOPKS-MONTROSE

Collected by (print): G. Penatzior

Site/Facility ID #:

P.O. #:

Collected by (signature): [signature]

Immediately Packed on Ice N ___ Y X

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

Quote #:

Date Results Needed: Std

SDG # 1158415

Table #

Acctnum: AQUAOPKS
Template: T135966
Prelogin: P736915
PM: 206 - Jeff Carr
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions (Cld, F, SO4) 125mlHDPE-NoPres	B, Ca - 6010 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
MW-706	GRAB	GW	–	11/5/19	1435	3	X	X	X		-11
706 MS	↓	GW	–	↓	1445	3	X	X	X		
706 MSD	↓	GW	–	↓	1450	3	X	X	X		
DUPLICATE	↓	GW		↓	1440	3	X	X	X		-12

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

Remarks:

pH ______ Temp ______
Flow ______ Other ______

Samples returned via:
__ UPS __ FedEx __ Courier ________

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Jason R. Franks	11/6/19	1122	[signature]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: A3 °C 0.8-.3=0.5	Bottles Received: 42
[signature]	11/6/19	1800	SWT	If preservation required by Login: Date/Time	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11/7	Time: 0830
			[signature]	Hold:	Condition: NCF / (OK)

Jared Morrison
December 20, 2022

ATTACHMENT 2

Statistical Analyses

Jared Morrison
December 20, 2022

ATTACHMENT 2-1

Fall 2018 Semiannual Detection Monitoring Statistical Analyses

MEMORANDUM

March 29, 2019

To: Montrose Generating Station
400 SW Highway P
Clinton, MO 64735
Kansas City Power & Light Company

From: SCS Engineers

RE: Determination of Statistically Significant Increases
North and South Ash Impoundments
Fall 2018 Semiannual Detection Monitoring 40 CFR 257.94

Statistical analysis of monitoring data from the multiunit groundwater monitoring system for the North and South Ash Impoundments at the Montrose Generating Station has been completed in substantial compliance with the "Statistical Method Certification by A Qualified Professional Engineer" dated October 12, 2017. Detection monitoring groundwater samples were collected on November 19, 2018. Review and validation of the results from the November 2018 Detection Monitoring Event was completed on December 31, 2018, which constitutes completion and finalization of detection monitoring laboratory analyses. A statistical analysis was then conducted to determine whether there was a statistically significant increase (SSI) over background values for each constituent listed in Appendix III to Part 257-Constituents for Detection Monitoring. One round of verification sampling was conducted for certain constituents on January 10, 2019.

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™ Output:
Statistical evaluation output from Sanitas™ for the prediction limit analysis. This includes prediction limit plots, prediction limit background data, detection sample results, 1st verification re-sample results (when applicable), extra sample results for pH for wells which were re-sampled for verification, and a Prediction Limit summary table. Output documentation includes the analytical data used for the statistical analyses.

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

Revision Number	Revision Date	Attachment Revised	Summary of Revisions

Montrose Generating Station
Determination of Statistically Significant Increases
North and South Ash Impoundments
March 29, 2019

ATTACHMENT 1

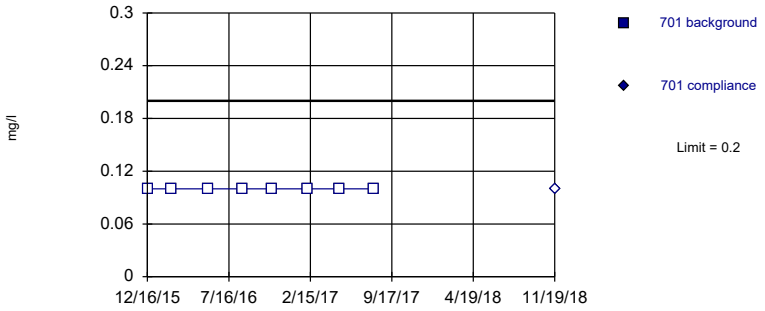
Sanitas™ Output

Sanitas™ v.9.6.12 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 = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 3/27/2019 11:26 AM View: Ash CCR III

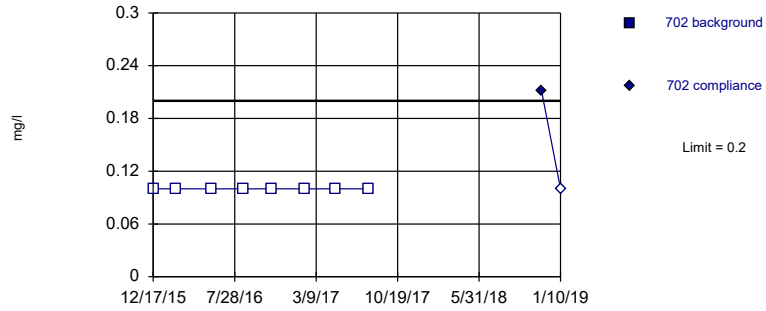
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.12 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 = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 3/27/2019 11:26 AM View: Ash CCR III

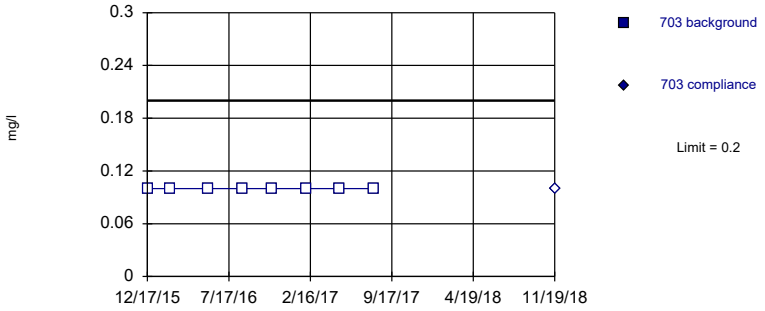
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.12 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 = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 3/27/2019 11:26 AM View: Ash CCR III

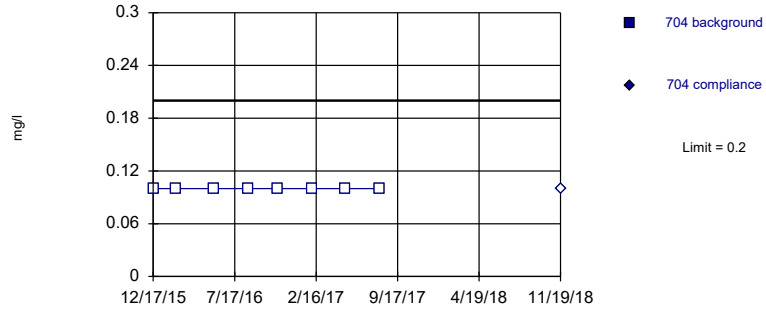
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.12 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 = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 3/27/2019 11:26 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	<0.2	
2/16/2016	<0.2	
5/24/2016	<0.2	
8/22/2016	<0.2	
11/8/2016	<0.2	
2/7/2017	<0.2	
5/2/2017	<0.2	
7/31/2017	<0.2	
11/19/2018		<0.2

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702	
12/17/2015	<0.2		
2/16/2016	<0.2		
5/24/2016	<0.2		
8/22/2016	<0.2		
11/7/2016	<0.2		
2/7/2017	<0.2		
5/2/2017	<0.2		
7/31/2017	<0.2		
11/19/2018		0.211	
1/10/2019		<0.2	1st verification re-sample

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	<0.2	
2/16/2016	<0.2	
5/23/2016	<0.2	
8/22/2016	<0.2	
11/7/2016	<0.2	
2/7/2017	<0.2	
5/2/2017	<0.2	
7/31/2017	<0.2	
11/19/2018		<0.2

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

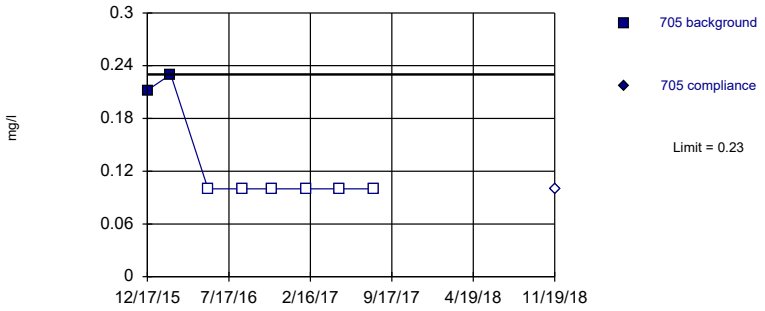
	704	704
12/17/2015	<0.2	
2/16/2016	<0.2	
5/23/2016	<0.2	
8/22/2016	<0.2	
11/7/2016	<0.2	
2/7/2017	<0.2	
5/2/2017	<0.2	
7/31/2017	<0.2	
11/19/2018		<0.2

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 3/27/2019 11:26 AM View: Ash CCR III

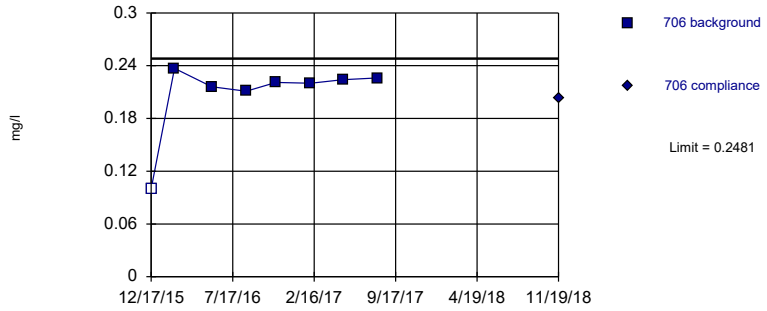
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on x^4 transformation): Mean=0.002159, Std. Dev.=0.0009007, n=8, 12.5% NDs. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7832, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

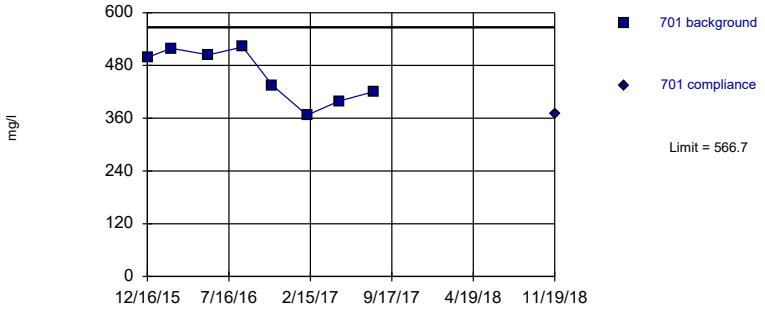
Constituent: Boron Analysis Run 3/27/2019 11:26 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=458, Std. Dev.=60.08, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8899, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

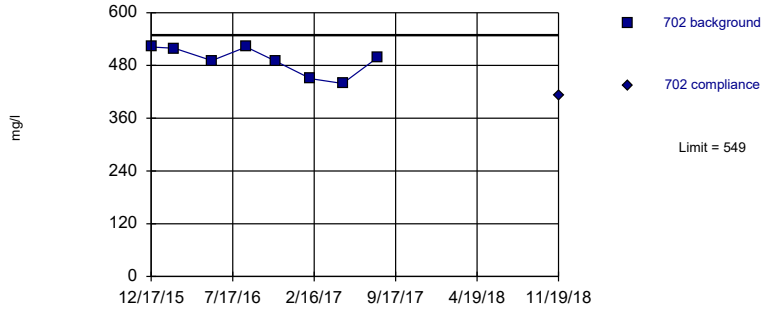
Constituent: Calcium Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=491.3, Std. Dev.=31.91, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8625, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	0.212	
2/16/2016	0.23	
5/24/2016	<0.2	
8/22/2016	<0.2	
11/8/2016	<0.2	
2/7/2017	<0.2	
5/2/2017	<0.2	
7/31/2017	<0.2	
11/19/2018		<0.2

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	<0.2	
2/16/2016	0.237	
5/24/2016	0.216	
8/22/2016	0.211	
11/8/2016	0.221	
2/7/2017	0.22	
5/2/2017	0.224	
7/31/2017	0.226	
11/19/2018		0.203

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	498	
2/16/2016	519	
5/24/2016	504	
8/22/2016	522	
11/8/2016	435	
2/7/2017	367	
5/2/2017	399	
7/31/2017	420	
11/19/2018		369

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

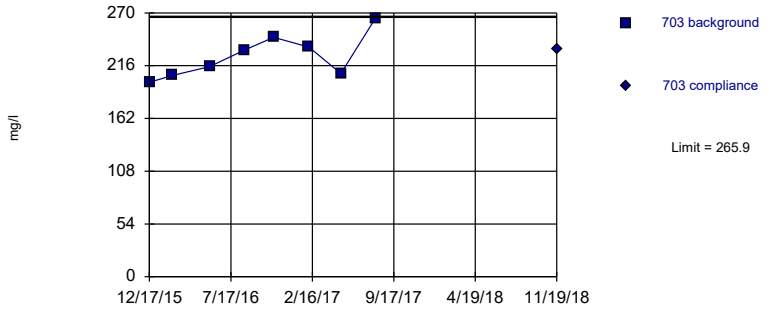
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	522	
2/16/2016	519	
5/24/2016	491	
8/22/2016	522	
11/7/2016	490	
2/7/2017	450	
5/2/2017	439	
7/31/2017	497	
11/19/2018		413

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=225.5, Std. Dev.=22.34, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9409, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

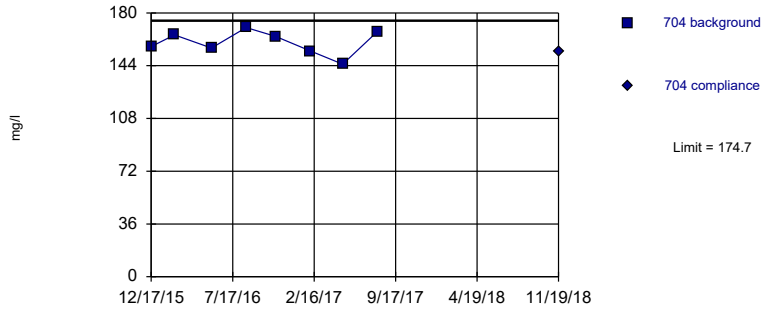
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.12 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=159.8, Std. Dev.=8.242, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9456, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

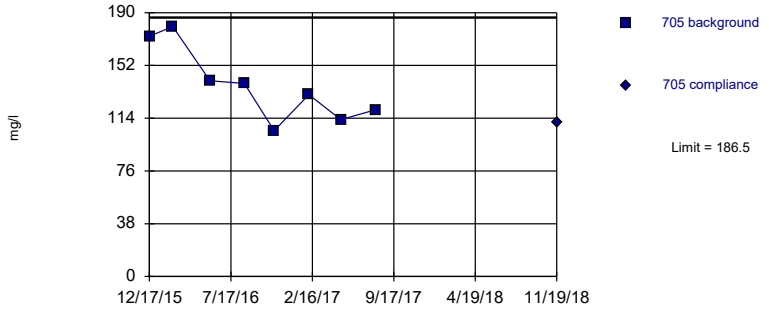
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.12 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=137.8, Std. Dev.=26.95, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9222, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

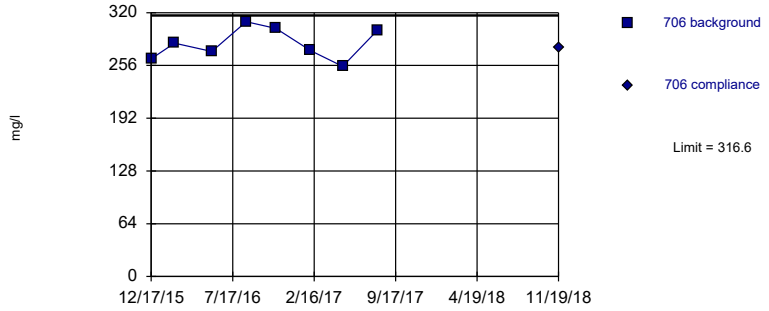
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.12 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=282.1, Std. Dev.=19.07, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9531, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	199	
2/16/2016	206	
5/23/2016	215	
8/22/2016	232	
11/7/2016	245	
2/7/2017	235	
5/2/2017	208	
7/31/2017	264	
11/19/2018		233

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	157	
2/16/2016	165	
5/23/2016	156	
8/22/2016	170	
11/7/2016	164	
2/7/2017	154	
5/2/2017	145	
7/31/2017	167	
11/19/2018		154

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	173	
2/16/2016	180	
5/24/2016	141	
8/22/2016	139	
11/8/2016	105	
2/7/2017	131	
5/2/2017	113	
7/31/2017	120	
11/19/2018		111

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

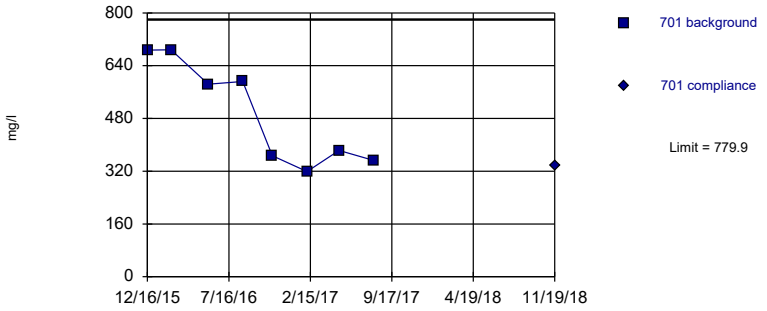
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	264	
2/16/2016	283	
5/24/2016	273	
8/22/2016	309	
11/8/2016	301	
2/7/2017	274	
5/2/2017	255	
7/31/2017	298	
11/19/2018		278

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=496.6, Std. Dev.=156.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8398, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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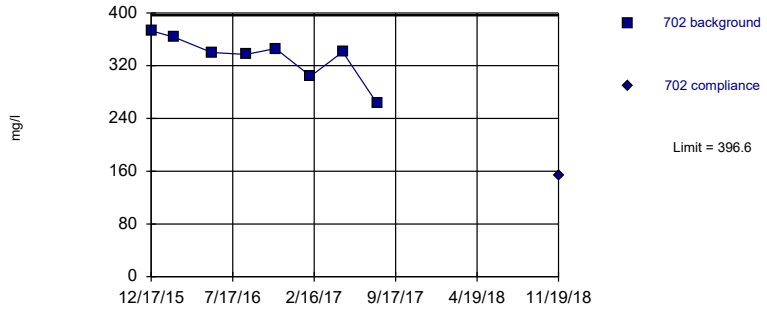
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=333.4, Std. Dev.=34.92, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8838, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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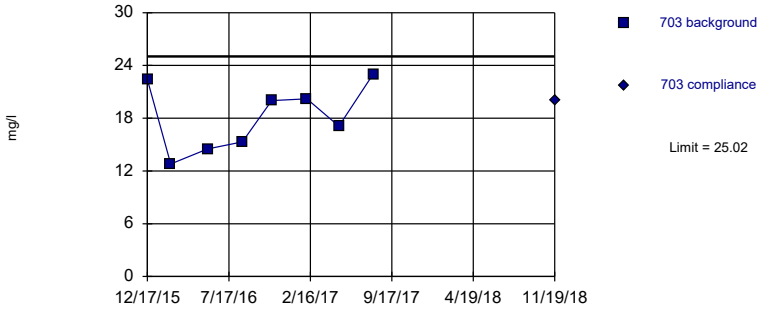
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=18.16, Std. Dev.=3.787, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9353, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

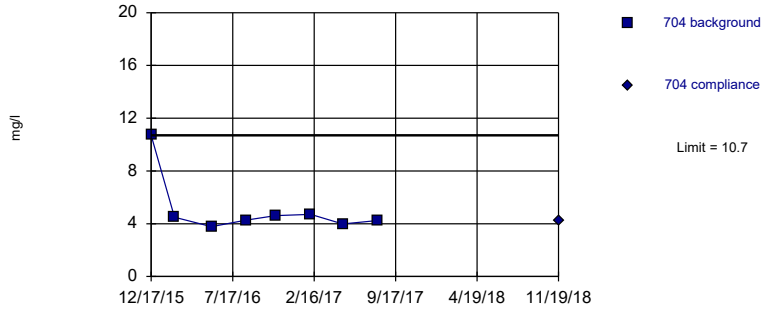
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.12 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Chloride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	687	
2/16/2016	688	
5/24/2016	584	
8/22/2016	592	
11/8/2016	367	
2/7/2017	319	
5/2/2017	383	
7/31/2017	353	
11/19/2018		336

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	373	
2/16/2016	363	
5/24/2016	340	
8/22/2016	337	
11/7/2016	346	
2/7/2017	304	
5/2/2017	341	
7/31/2017	263	
11/19/2018		153

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	22.4	
2/16/2016	12.8	
5/23/2016	14.5	
8/22/2016	15.3	
11/7/2016	20	
2/7/2017	20.2	
5/2/2017	17.1	
7/31/2017	23	
11/19/2018		20

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

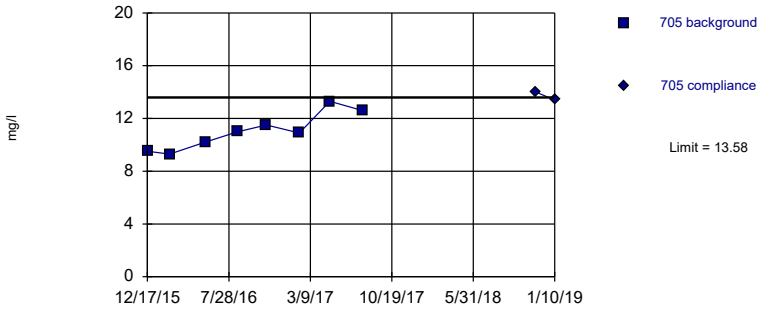
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	10.7	
2/16/2016	4.49	
5/23/2016	3.77	
8/22/2016	4.27	
11/7/2016	4.61	
2/7/2017	4.71	
5/2/2017	3.98	
7/31/2017	4.24	
11/19/2018		4.22

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=11.04, Std. Dev.=1.407, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9519, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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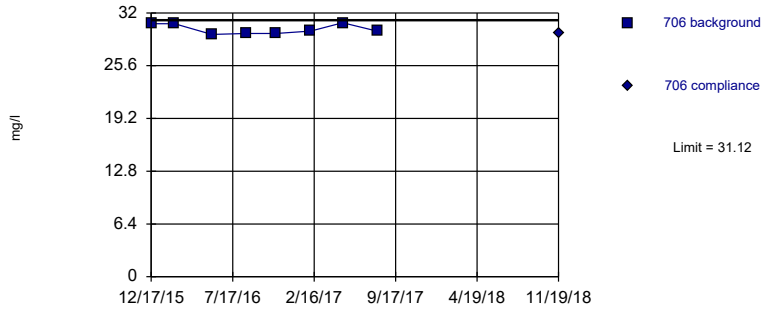
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=30.03, Std. Dev.=0.6042, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8072, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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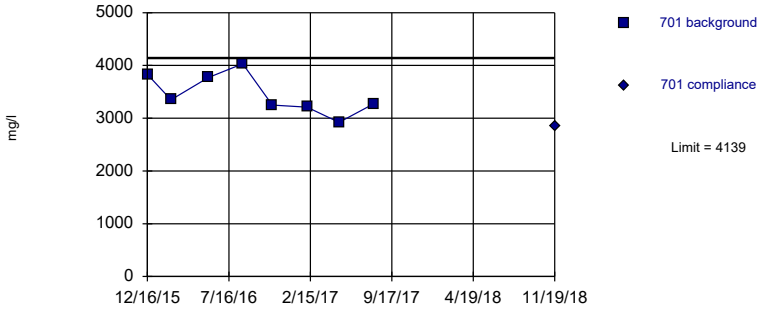
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3454, Std. Dev.=378.7, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9238, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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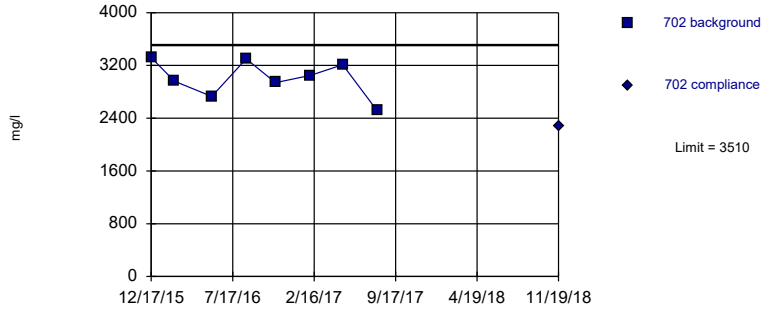
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3004, Std. Dev.=279.6, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9382, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705	
12/17/2015	9.51		
2/16/2016	9.3		
5/24/2016	10.2		
8/22/2016	11		
11/8/2016	11.5		
2/7/2017	10.9		
5/2/2017	13.3		
7/31/2017	12.6		
11/19/2018		14	
1/10/2019		13.4	1st verification re-sample

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	30.7	
2/16/2016	30.7	
5/24/2016	29.4	
8/22/2016	29.5	
11/8/2016	29.5	
2/7/2017	29.8	
5/2/2017	30.8	
7/31/2017	29.8	
11/19/2018		29.5

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	3830	
2/16/2016	3350	
5/24/2016	3770	
8/22/2016	4030	
11/8/2016	3250	
2/7/2017	3210	
5/2/2017	2920	
7/31/2017	3270	
11/19/2018		2860

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

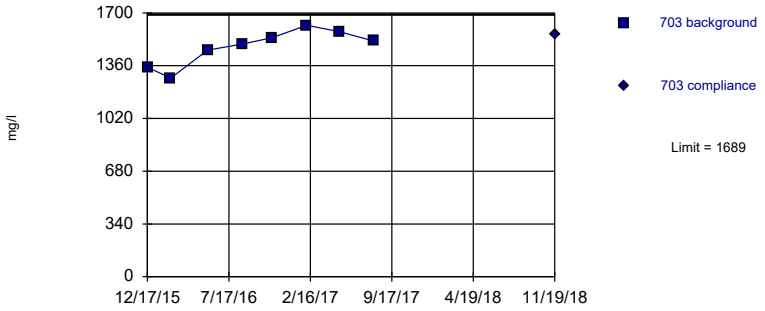
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	3320	
2/16/2016	2960	
5/24/2016	2730	
8/22/2016	3300	
11/7/2016	2940	
2/7/2017	3050	
5/2/2017	3210	
7/31/2017	2520	
11/19/2018		2280

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1481, Std. Dev.=114.9, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9321, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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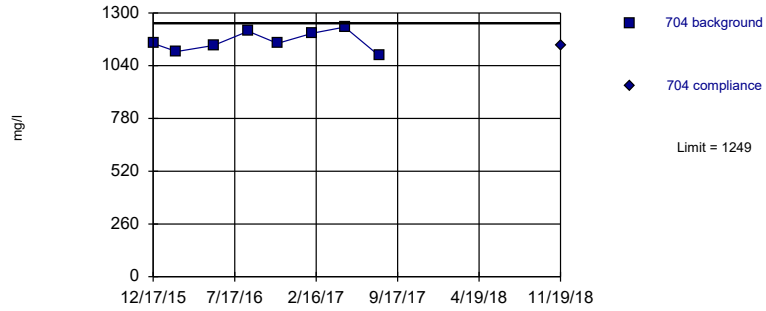
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1160, Std. Dev.=49.28, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9462, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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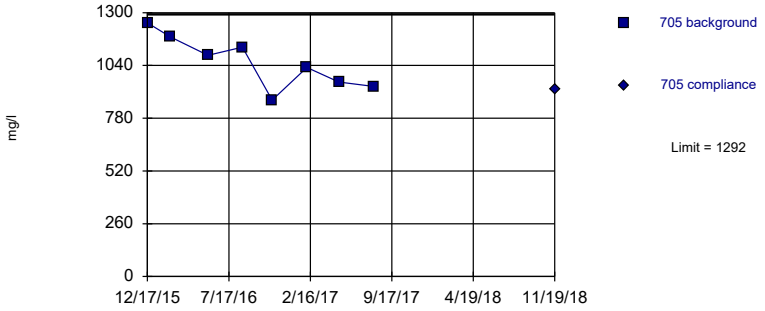
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1056, Std. Dev.=130.4, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9756, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

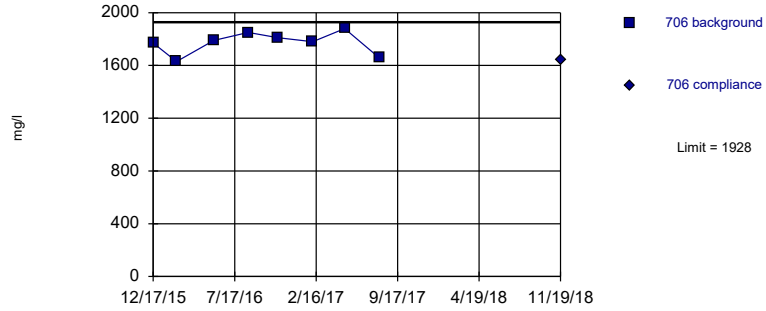
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.12 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1771, Std. Dev.=86.43, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9168, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	1350	
2/16/2016	1280	
5/23/2016	1460	
8/22/2016	1500	
11/7/2016	1540	
2/7/2017	1620	
5/2/2017	1580	
7/31/2017	1520	
11/19/2018		1560

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	1150	
2/16/2016	1110	
5/23/2016	1140	
8/22/2016	1210	
11/7/2016	1150	
2/7/2017	1200	
5/2/2017	1230	
7/31/2017	1090	
11/19/2018		1140

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	1250	
2/16/2016	1180	
5/24/2016	1090	
8/22/2016	1130	
11/8/2016	869	
2/7/2017	1030	
5/2/2017	958	
7/31/2017	937	
11/19/2018		924

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

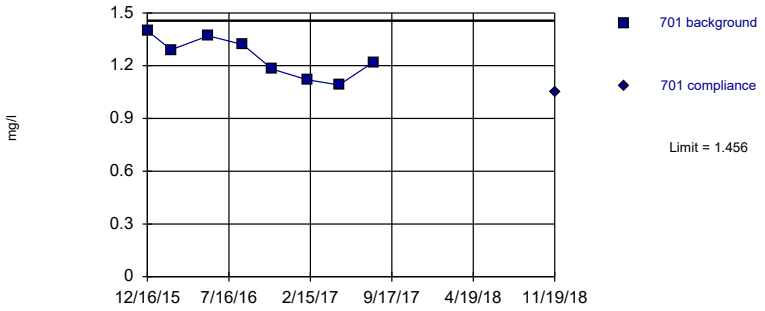
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	1770	
2/16/2016	1630	
5/24/2016	1790	
8/22/2016	1850	
11/8/2016	1810	
2/7/2017	1780	
5/2/2017	1880	
7/31/2017	1660	
11/19/2018		1640

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.249, Std. Dev.=0.1144, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9494, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

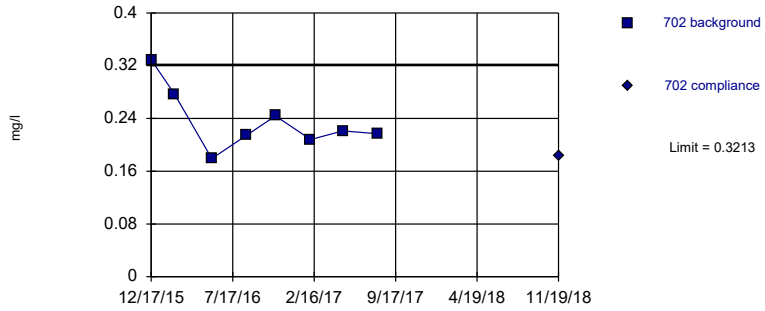
Constituent: Fluoride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2361, Std. Dev.=0.04705, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8995, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

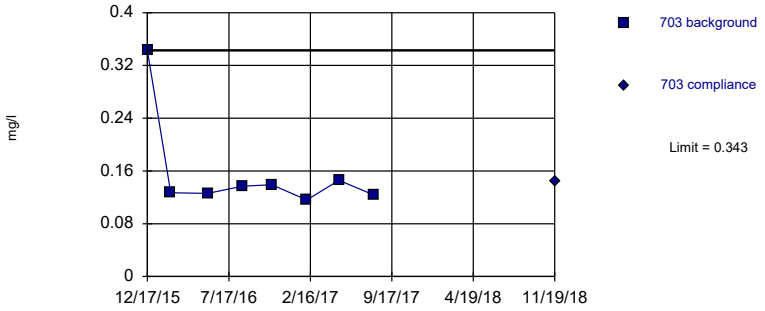
Constituent: Fluoride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Fluoride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

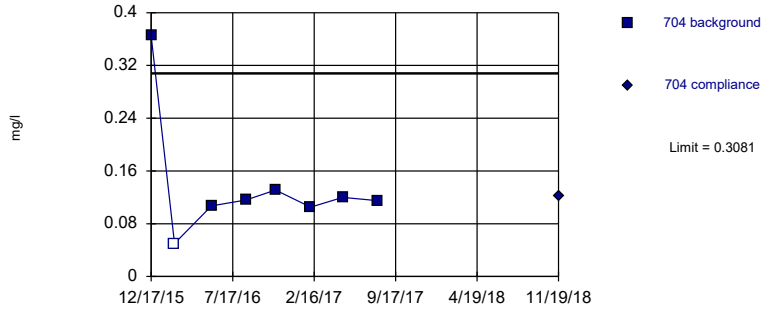
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube root transformation): Mean=0.5006, Std. Dev.=0.09657, n=8, 12.5% NDs. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7706, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	1.4	
2/16/2016	1.29	
5/24/2016	1.37	
8/22/2016	1.32	
11/8/2016	1.18	
2/7/2017	1.12	
5/2/2017	1.09	
7/31/2017	1.22	
11/19/2018		1.05

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	0.329	
2/16/2016	0.277	
5/24/2016	0.179	
8/22/2016	0.214	
11/7/2016	0.244	
2/7/2017	0.208	
5/2/2017	0.221	
7/31/2017	0.217	
11/19/2018		0.184

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	0.343	
2/16/2016	0.127	
5/23/2016	0.126	
8/22/2016	0.137	
11/7/2016	0.139	
2/7/2017	0.116	
5/2/2017	0.146	
7/31/2017	0.124	
11/19/2018		0.144

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

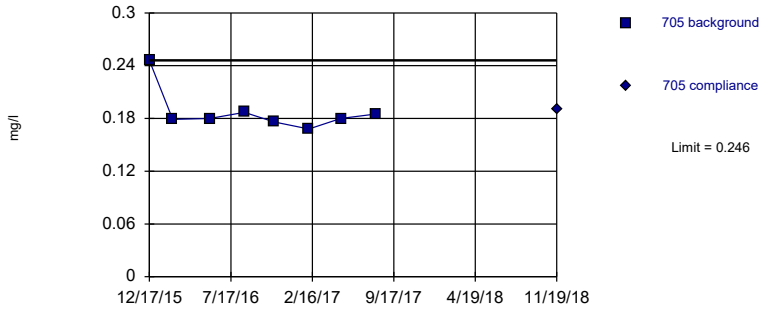
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	0.365	
2/16/2016	<0.1	
5/23/2016	0.107	
8/22/2016	0.116	
11/7/2016	0.131	
2/7/2017	0.105	
5/2/2017	0.12	
7/31/2017	0.115	
11/19/2018		0.122

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Fluoride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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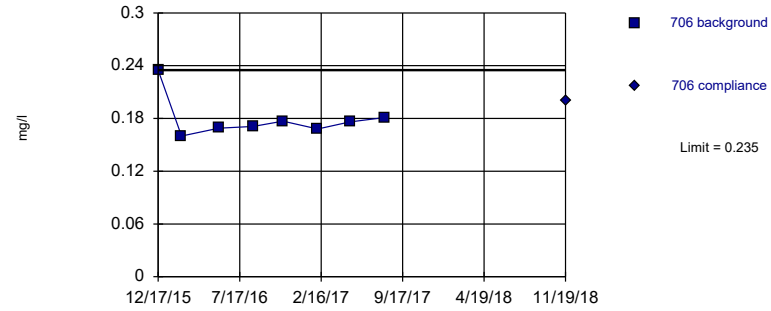
Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Fluoride Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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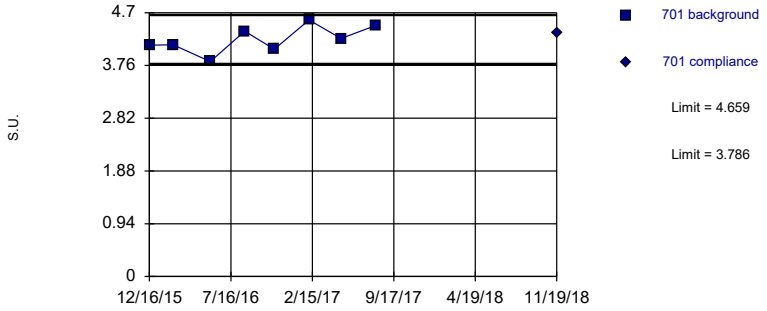
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.223, Std. Dev.=0.2411, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9768, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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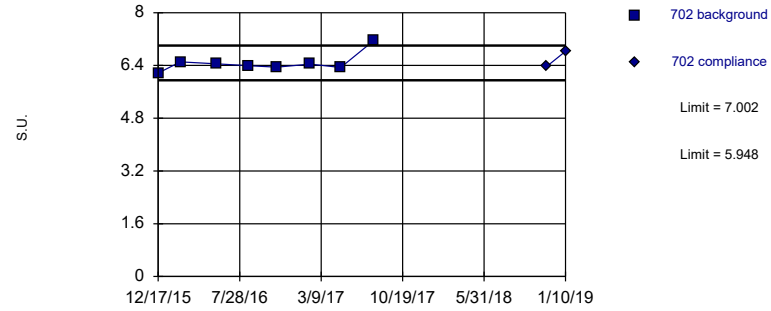
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.475, Std. Dev.=0.291, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7508, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	0.246	
2/16/2016	0.179	
5/24/2016	0.18	
8/22/2016	0.187	
11/8/2016	0.176	
2/7/2017	0.168	
5/2/2017	0.18	
7/31/2017	0.185	
11/19/2018		0.19

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	0.235	
2/16/2016	0.16	
5/24/2016	0.169	
8/22/2016	0.171	
11/8/2016	0.177	
2/7/2017	0.168	
5/2/2017	0.176	
7/31/2017	0.181	
11/19/2018		0.2

Prediction Limit

Constituent: pH (S.U.) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	4.12	
2/16/2016	4.13	
5/24/2016	3.83	
8/22/2016	4.37	
11/8/2016	4.05	
2/7/2017	4.57	
5/2/2017	4.24	
7/31/2017	4.47	
11/19/2018		4.34

Prediction Limit

Constituent: pH (S.U.) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

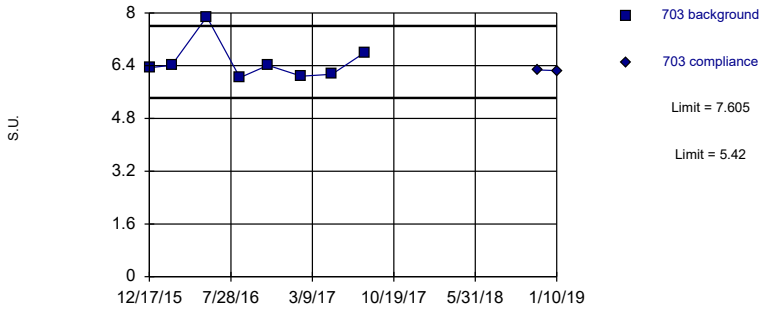
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702	
12/17/2015	6.17		
2/16/2016	6.51		
5/24/2016	6.45		
8/22/2016	6.39		
11/7/2016	6.35		
2/7/2017	6.44		
5/2/2017	6.34		
7/31/2017	7.15		
11/19/2018		6.37	
1/10/2019		6.83	extra sample

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.513, Std. Dev.=0.6039, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7595, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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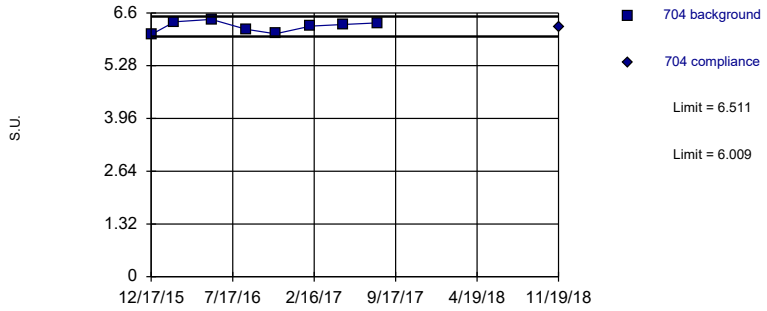
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.26, Std. Dev.=0.1388, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9351, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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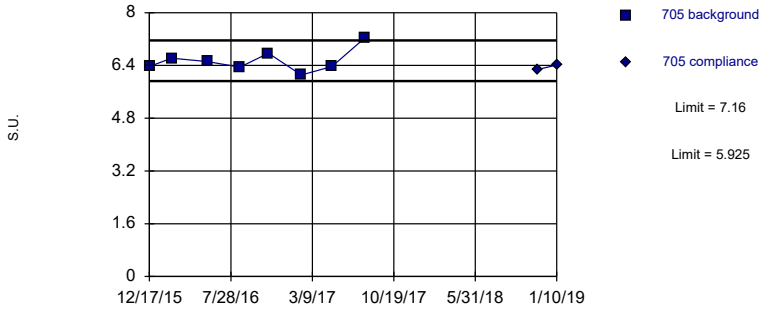
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.543, Std. Dev.=0.3411, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9137, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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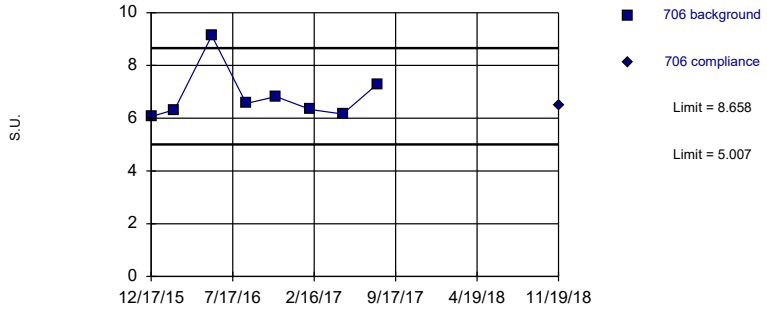
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.833, Std. Dev.=1.008, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7513, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: pH (S.U.) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703	
12/17/2015	6.34		
2/16/2016	6.41		
5/23/2016	7.88		
8/22/2016	6.04		
11/7/2016	6.41		
2/7/2017	6.08		
5/2/2017	6.14		
7/31/2017	6.8		
11/19/2018		6.27	
1/10/2019		6.25	extra sample

Prediction Limit

Constituent: pH (S.U.) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	6.06	
2/16/2016	6.38	
5/23/2016	6.44	
8/22/2016	6.19	
11/7/2016	6.08	
2/7/2017	6.27	
5/2/2017	6.31	
7/31/2017	6.35	
11/19/2018		6.24

Prediction Limit

Constituent: pH (S.U.) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705	
12/17/2015	6.37		
2/16/2016	6.62		
5/24/2016	6.52		
8/22/2016	6.35		
11/8/2016	6.77		
2/7/2017	6.11		
5/2/2017	6.37		
7/31/2017	7.23		
11/19/2018		6.28	
1/10/2019		6.41	extra sample

Prediction Limit

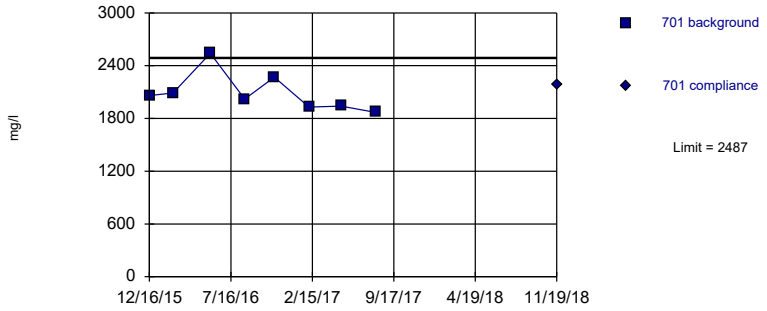
Constituent: pH (S.U.) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	6.06	
2/16/2016	6.32	
5/24/2016	9.13	
8/22/2016	6.56	
11/8/2016	6.82	
2/7/2017	6.33	
5/2/2017	6.16	
7/31/2017	7.28	
11/19/2018		6.49

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2090, Std. Dev.=219.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8694, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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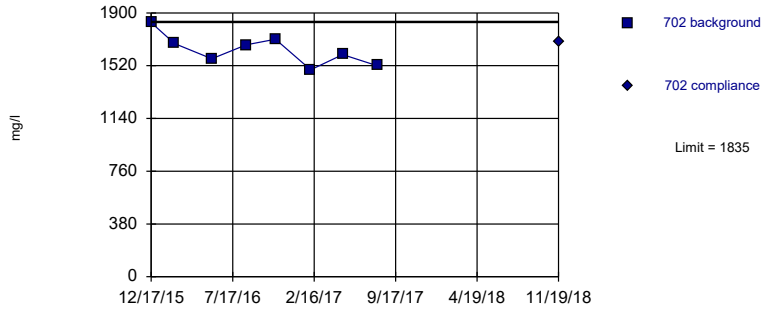
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1634, Std. Dev.=111.2, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9645, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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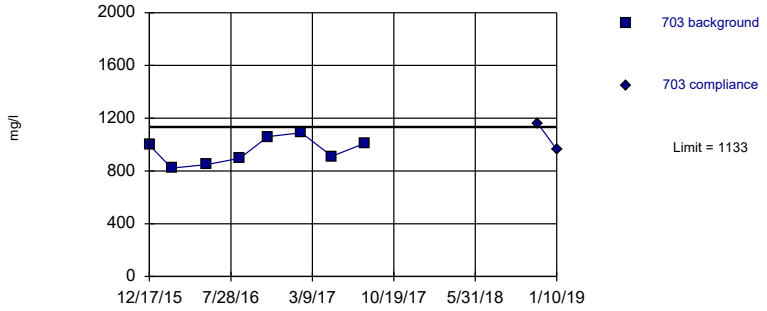
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=954.1, Std. Dev.=99.03, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9422, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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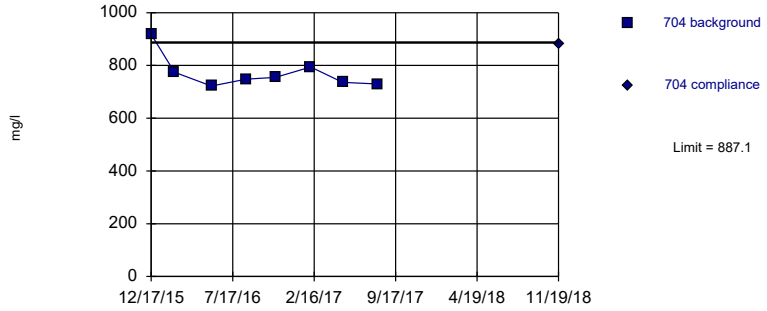
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=772.1, Std. Dev.=63.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7539, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	2060	
2/16/2016	2090	
5/24/2016	2540	
8/22/2016	2020	
11/8/2016	2270	
2/7/2017	1930	
5/2/2017	1940	
7/31/2017	1870	
11/19/2018		2180

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	1830	
2/16/2016	1680	
5/24/2016	1570	
8/22/2016	1670	
11/7/2016	1710	
2/7/2017	1490	
5/2/2017	1600	
7/31/2017	1520	
11/19/2018		1690

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703	
12/17/2015	996		
2/16/2016	821		
5/23/2016	848		
8/22/2016	897		
11/7/2016	1060		
2/7/2017	1090		
5/2/2017	911		
7/31/2017	1010		
11/19/2018		1160	
1/10/2019		962	1st verification re-sample

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

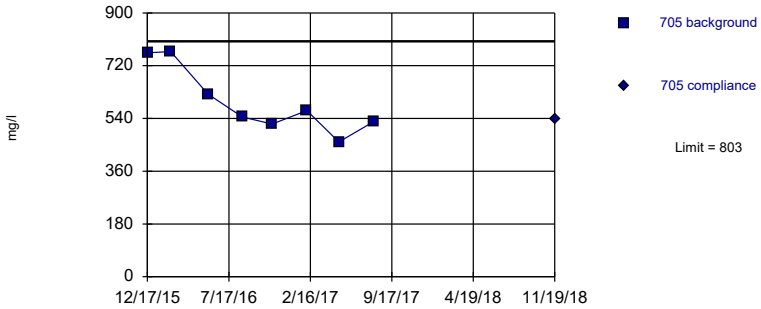
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	918	
2/16/2016	774	
5/23/2016	722	
8/22/2016	748	
11/7/2016	755	
2/7/2017	794	
5/2/2017	736	
7/31/2017	730	
11/19/2018		880

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=597, Std. Dev.=113.8, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8709, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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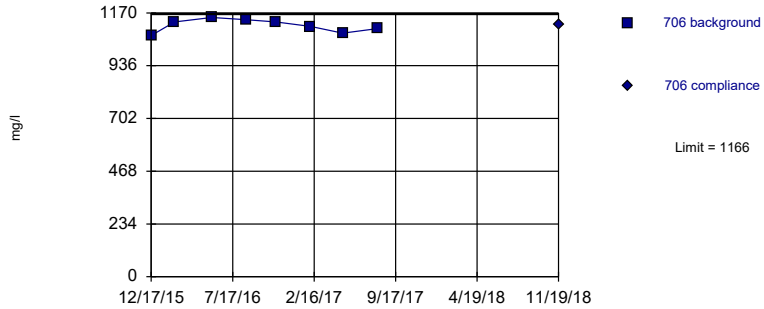
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1114, Std. Dev.=28.75, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9398, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 3/27/2019 11:27 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	764	
2/16/2016	768	
5/24/2016	623	
8/22/2016	545	
11/8/2016	521	
2/7/2017	567	
5/2/2017	460	
7/31/2017	528	
11/19/2018		536

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 3/27/2019 11:31 AM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	1070	
2/16/2016	1130	
5/24/2016	1150	
8/22/2016	1140	
11/8/2016	1130	
2/7/2017	1110	
5/2/2017	1080	
7/31/2017	1100	
11/19/2018		1120

Prediction Limit

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose Printed 3/27/2019, 11:31 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/l)	701	0.2	n/a	11/19/2018	0.1ND	No	8	100	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	702	0.2	n/a	1/10/2019	0.1ND	No	8	100	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	703	0.2	n/a	11/19/2018	0.1ND	No	8	100	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	704	0.2	n/a	11/19/2018	0.1ND	No	8	100	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	705	0.23	n/a	11/19/2018	0.1ND	No	8	75	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	706	0.2481	n/a	11/19/2018	0.203	No	8	12.5	x^4	0.00188	Param Intra 1 of 3
Calcium (mg/l)	701	566.7	n/a	11/19/2018	369	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	702	549	n/a	11/19/2018	413	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	703	265.9	n/a	11/19/2018	233	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	704	174.7	n/a	11/19/2018	154	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	705	186.5	n/a	11/19/2018	111	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	706	316.6	n/a	11/19/2018	278	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	701	779.9	n/a	11/19/2018	336	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	702	396.6	n/a	11/19/2018	153	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	703	25.02	n/a	11/19/2018	20	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	704	10.7	n/a	11/19/2018	4.22	No	8	0	n/a	0.005912	NP Intra (normality) ...
Chloride (mg/l)	705	13.58	n/a	1/10/2019	13.4	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	706	31.12	n/a	11/19/2018	29.5	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	701	4139	n/a	11/19/2018	2860	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	702	3510	n/a	11/19/2018	2280	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	703	1689	n/a	11/19/2018	1560	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	704	1249	n/a	11/19/2018	1140	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	705	1292	n/a	11/19/2018	924	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	706	1928	n/a	11/19/2018	1640	No	8	0	No	0.00188	Param Intra 1 of 3
Fluoride (mg/l)	701	1.456	n/a	11/19/2018	1.05	No	8	0	No	0.00188	Param Intra 1 of 3
Fluoride (mg/l)	702	0.3213	n/a	11/19/2018	0.184	No	8	0	No	0.00188	Param Intra 1 of 3
Fluoride (mg/l)	703	0.343	n/a	11/19/2018	0.144	No	8	0	n/a	0.005912	NP Intra (normality) ...
Fluoride (mg/l)	704	0.3081	n/a	11/19/2018	0.122	No	8	12.5	x^(1/3)	0.00188	Param Intra 1 of 3
Fluoride (mg/l)	705	0.246	n/a	11/19/2018	0.19	No	8	0	n/a	0.005912	NP Intra (normality) ...
Fluoride (mg/l)	706	0.235	n/a	11/19/2018	0.2	No	8	0	n/a	0.005912	NP Intra (normality) ...
pH (S.U.)	701	4.659	3.786	11/19/2018	4.34	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	702	7.002	5.948	1/10/2019	6.83	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	703	7.605	5.42	1/10/2019	6.25	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	704	6.511	6.009	11/19/2018	6.24	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	705	7.16	5.925	1/10/2019	6.41	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	706	8.658	5.007	11/19/2018	6.49	No	8	0	No	0.000...	Param Intra 1 of 3
Sulfate (mg/l)	701	2487	n/a	11/19/2018	2180	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	702	1835	n/a	11/19/2018	1690	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	703	1133	n/a	1/10/2019	962	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	704	887.1	n/a	11/19/2018	880	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	705	803	n/a	11/19/2018	536	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	706	1166	n/a	11/19/2018	1120	No	8	0	No	0.00188	Param Intra 1 of 3

ATTACHMENT 2

Sanitas™ Configuration Settings

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

Exclude data flags:

Data Reading Options

- (•) Individual Observations
- ( ) Mean of Each: ( ) Month
- ( ) Median of Each: ( ) Season

Non-Detect / Trace Handling...

Setup Seasons...

[ ] Automatically Process Resamples...

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

- [ ] Black and White Output
- [x] Four Plots Per Page
  - [ ] Always Combine Data Pages...
  - [x] Include Tick Marks on Data Page
  - [ ] Use Constituent Name for Graph Title
- [x] Draw Border Around Text Reports and Data Pages
- [x] Enlarge/Reduce Fonts (Graphs): 100%
- [x] Enlarge/Reduce Fonts (Data/Text Reports): 100%
- [x] Wide Margins (on reports without explicit setting)
- [ ] Use CAS# (Not Const. Name)
- [ ] Truncate File Names to 20 Characters
- [ ] Include Limit Lines when found in Database...
- [x] Show Deselected Data on Time Series: Lighter
- [x] Show Deselected Data on all Data Pages: Light

Setup Symbols and Colors...

- [x] Prompt to Overwrite/Append Summary Tables
- [ ] Round Limits to 2 Sig. Digits (when not set in data file)
- [ ] User-Set Scale
- [x] Indicate Background Data
- [ ] Show Exact Dates
- [ ] Thick Plot Lines

Zoom Factor: 200%

Output Decimal Precision

- ( ) Less Precision
- (•) Normal Precision
- ( ) More Precision

- [x] Store Print Jobs in Multiple Constituent Mode

Store All Print Jobs...

Printer: Adobe PDF

Printers...

Data | Output | Trend Test | Control Cht | **Prediction Lim** | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

☑ Test for Normality using Shapiro-Wilk/Francia at Alpha = 0.01

☑ Use Non-Parametric Test when Non-Detects Percent > 50

Use Aitchison's Adjustment when Non-Detects Percent > 15

☐ Optional Further Refinement: Use Aitchison's when NDs % > 50

☐ Use Poisson Prediction Limit when Non-Detects Percent > 90

Transformation

- ◉ Use Ladder of Powers
- ○ Natural Log or No Transformation
- ○ Never Transform
- ○ Use Specific Transformation: Natural Log

☐ Use Best W Statistic

☐ Plot Transformed Values

Deseasonalize (Intra- and InterWell)

- ◉ If Seasonality Is Detected
- ○ If Seasonality Is Detected Or Insufficient to Test
- ○ Always (When Sufficient Data)
- ○ Never

☐ Always Use Non-Parametric

Facility α

Statistical Evaluations per Year: 2

Constituents Analyzed: 7

Downgradient (Compliance) Wells: 4

Sampling Plan

Comparing Individual Observations

○ 1 of 1 ○ 1 of 2 ◉ 1 of 3 ○ 1 of 4

○ 2 of 4 ("Modified California")

IntraWell Other

☐ Stop if Background Trend Detected at Alpha = 0.05

☑ Plot Background Data

Override Standard Deviation:

Override DF: Override Kappa:

☐ Automatically Remove Background Outliers

☐ 2-Tailed Test Mode...

☐ Show Deselected Data Lighter

Non-Parametric Limit = Highest Background Value

Non-Parametric Limit when 100% Non-Detects:

- ○ Highest/Second Highest Background Value
- ◉ Most Recent PQL if available, or MDL
- ○ Most Recent Background Value (subst. method)

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

Rank Von Neumann, Wilcoxon Rank Sum / Mann-Whitney

- [ ] Use Modified Alpha...
- [ ] 2-Tailed Test Mode...

Outlier Tests

- ( ) EPA 1989 Outlier Screening (fixed alpha of 0.05)
- (•) Dixon's at α= 0.05 or if n > 22 Rosner's at α= 0.01 [x] Use EPA Screening to establish Suspected Outliers
- ( ) Tukey's Outlier Screening, with IQR Multiplier = 3.0 [ ] Use Ladder of Powers to achieve Best W Stat
- [x] Test For Normality using Shapiro-Wilk/Francia at Alpha = 0.1
  - (•) Stop if Non-Normal
  - ( ) Continue with Parametric Test if Non-Normal
  - ( ) Tukey's if Non-Normal, with IQR Multiplier = 3.0 [x] Use Ladder of Powers to achieve Best W Stat
- [x] No Outlier If Less Than 3.0 Times Median
- [ ] Apply Rules found in Ohio Guidance Document 0715
- [ ] Combine Background Wells on the Outlier Report...

Piper, Stiff Diagram

- [ ] Combine Wells
- [ ] Combine Dates
- (•) Use Default Constituent Names
- ( ) Use Constituent Definition File Edit
- [x] Label Constituents
- [x] Label Axes
- [x] Note Cation-Anion Balance (Piper only)

Jared Morrison
December 20, 2022

ATTACHMENT 2-2

Spring 2019 Semiannual Detection Monitoring Statistical Analyses

MEMORANDUM

September 30, 2019

To: Montrose Generating Station
400 SW Highway P
Clinton, MO 64735
Kansas City Power & Light Company

From: SCS Engineers

RE: Determination of Statistically Significant Increases
North and South Ash Impoundments
Spring 2019 Semiannual Detection Monitoring 40 CFR 257.94

Statistical analysis of monitoring data from the multiunit groundwater monitoring system for the North and South Ash Impoundments at the Montrose Generating Station has been completed in substantial compliance with the "Statistical Method Certification by A Qualified Professional Engineer" dated October 12, 2017. Detection monitoring groundwater samples were collected on May 21, 2019. Review and validation of the results from the May 2019 Detection Monitoring Event was completed on July 3, 2019, which constitutes completion and finalization of detection monitoring laboratory analyses. A statistical analysis was then conducted to determine whether there was a statistically significant increase (SSI) over background values for each constituent listed in Appendix III to Part 257-Constituents for Detection Monitoring. One round of verification sampling was conducted for certain constituents on July 15, 2019.

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™ Output:
Statistical evaluation output from Sanitas™ for the prediction limit analysis. This includes prediction limit plots, prediction limit background data, detection sample results, 1st verification re-sample results (when applicable), extra sample results for pH for wells which were re-sampled for verification, and a Prediction Limit summary table. Output documentation includes the analytical data used for the statistical analyses.

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

Revision Number	Revision Date	Attachment Revised	Summary of Revisions

Montrose Generating Station
Determination of Statistically Significant Increases
North and South Ash Impoundments
September 30, 2019

ATTACHMENT 1

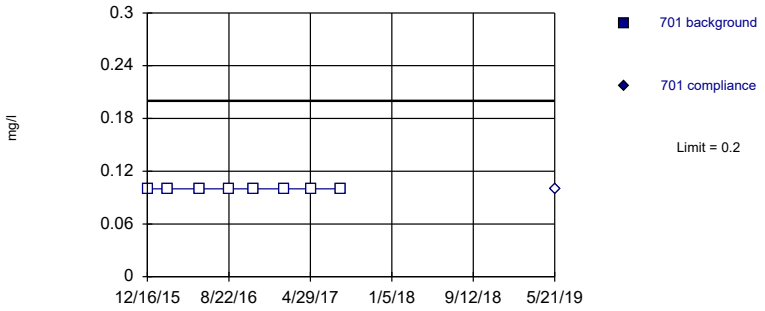
Sanitas™ Output

Sanitas™ v.9.6.23 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 = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

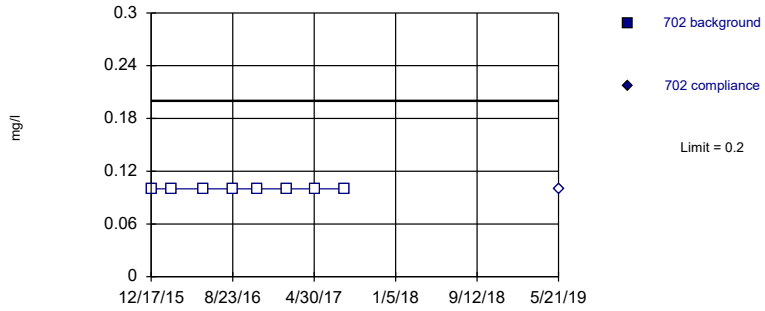
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.23 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 = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

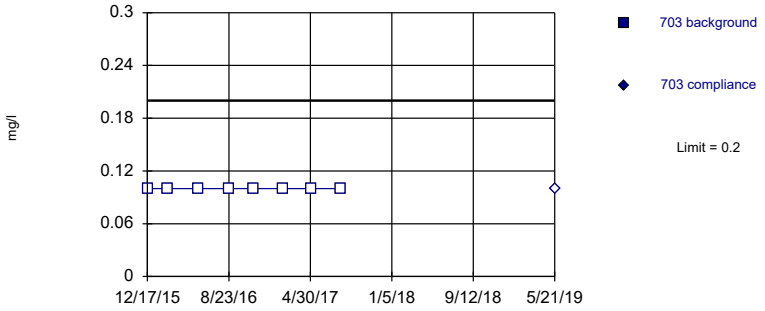
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.23 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 = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

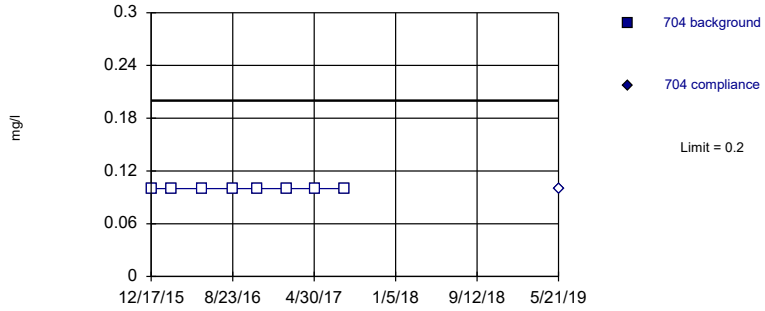
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.23 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 = 8) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	<0.2	
2/16/2016	<0.2	
5/24/2016	<0.2	
8/22/2016	<0.2	
11/8/2016	<0.2	
2/7/2017	<0.2	
5/2/2017	<0.2	
7/31/2017	<0.2	
5/21/2019		<0.2

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	<0.2	
2/16/2016	<0.2	
5/24/2016	<0.2	
8/22/2016	<0.2	
11/7/2016	<0.2	
2/7/2017	<0.2	
5/2/2017	<0.2	
7/31/2017	<0.2	
5/21/2019		<0.2

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	<0.2	
2/16/2016	<0.2	
5/23/2016	<0.2	
8/22/2016	<0.2	
11/7/2016	<0.2	
2/7/2017	<0.2	
5/2/2017	<0.2	
7/31/2017	<0.2	
5/21/2019		<0.2

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

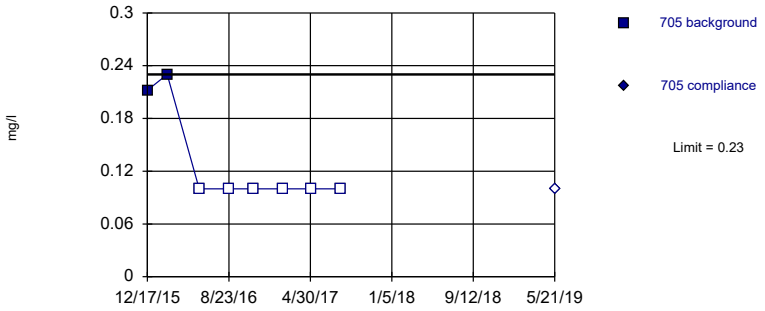
	704	704
12/17/2015	<0.2	
2/16/2016	<0.2	
5/23/2016	<0.2	
8/22/2016	<0.2	
11/7/2016	<0.2	
2/7/2017	<0.2	
5/2/2017	<0.2	
7/31/2017	<0.2	
5/21/2019		<0.2

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Boron Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

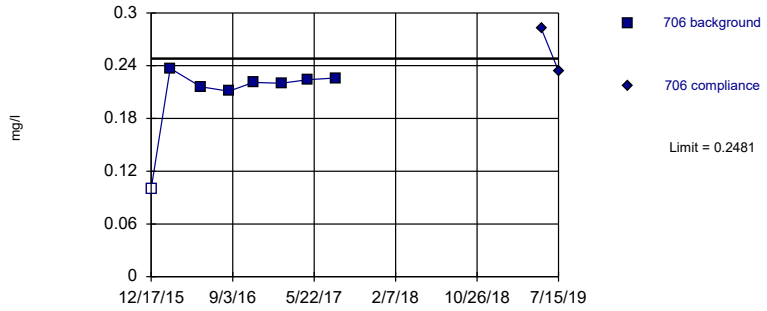
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on x^4 transformation): Mean=0.002159, Std. Dev.=0.0009007, n=8, 12.5% NDs. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7832, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

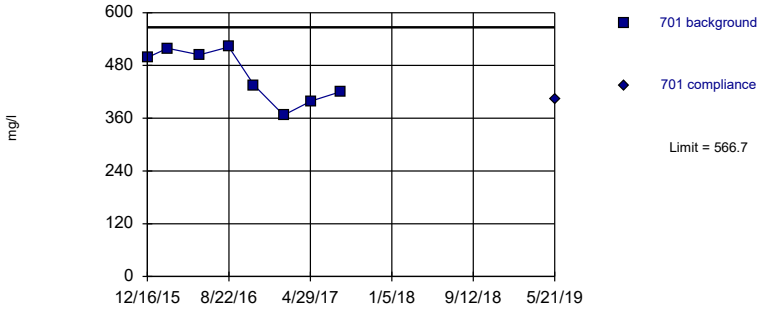
Constituent: Boron Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=458, Std. Dev.=60.08, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8899, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

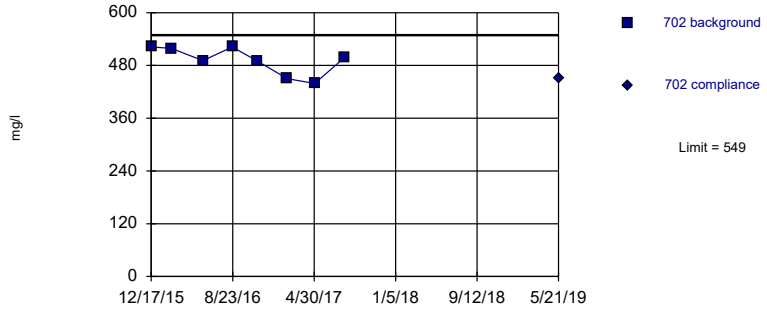
Constituent: Calcium Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=491.3, Std. Dev.=31.91, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8625, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	0.212	
2/16/2016	0.23	
5/24/2016	<0.2	
8/22/2016	<0.2	
11/8/2016	<0.2	
2/7/2017	<0.2	
5/2/2017	<0.2	
7/31/2017	<0.2	
5/21/2019		<0.2

Prediction Limit

Constituent: Boron (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706	
12/17/2015	<0.2		
2/16/2016	0.237		
5/24/2016	0.216		
8/22/2016	0.211		
11/8/2016	0.221		
2/7/2017	0.22		
5/2/2017	0.224		
7/31/2017	0.226		
5/21/2019		0.282	
7/15/2019		0.234	1st verification sample

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	498	
2/16/2016	519	
5/24/2016	504	
8/22/2016	522	
11/8/2016	435	
2/7/2017	367	
5/2/2017	399	
7/31/2017	420	
5/21/2019		402

Prediction Limit

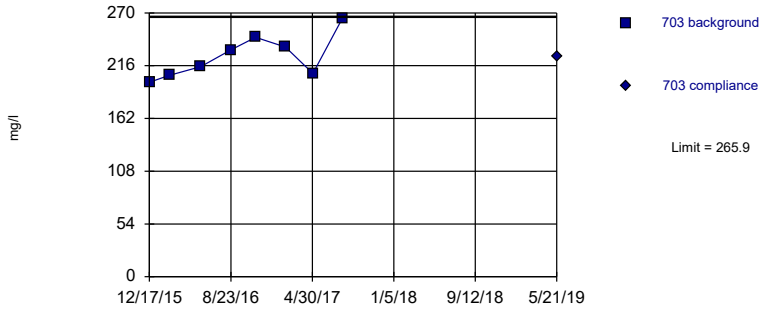
Constituent: Calcium (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	522	
2/16/2016	519	
5/24/2016	491	
8/22/2016	522	
11/7/2016	490	
2/7/2017	450	
5/2/2017	439	
7/31/2017	497	
5/21/2019		450

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=225.5, Std. Dev.=22.34, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9409, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

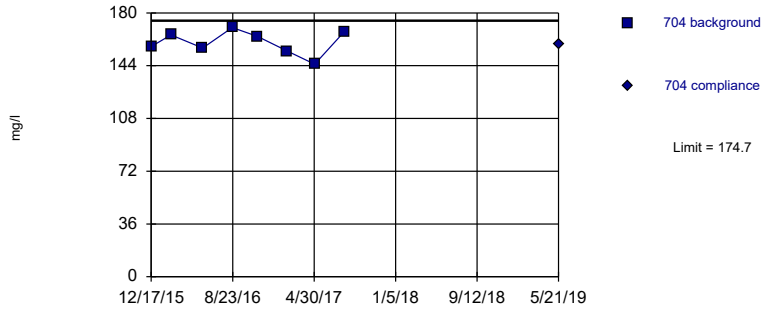
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.23 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=159.8, Std. Dev.=8.242, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9456, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

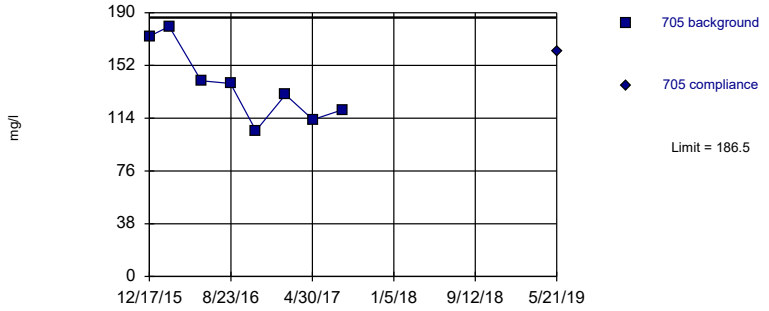
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.23 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=137.8, Std. Dev.=26.95, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9222, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

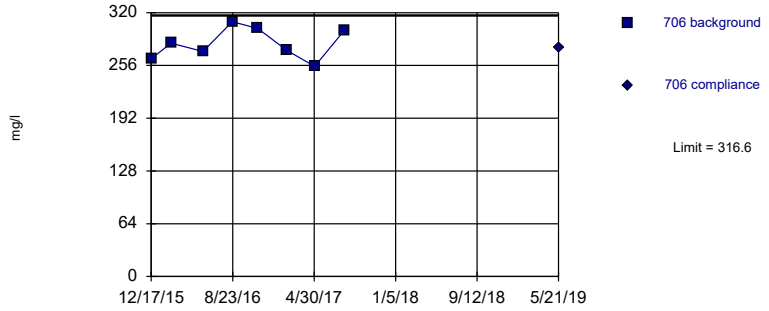
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Sanitas™ v.9.6.23 Sanitas software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=282.1, Std. Dev.=19.07, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9531, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	199	
2/16/2016	206	
5/23/2016	215	
8/22/2016	232	
11/7/2016	245	
2/7/2017	235	
5/2/2017	208	
7/31/2017	264	
5/21/2019		226

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	157	
2/16/2016	165	
5/23/2016	156	
8/22/2016	170	
11/7/2016	164	
2/7/2017	154	
5/2/2017	145	
7/31/2017	167	
5/21/2019		159

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	173	
2/16/2016	180	
5/24/2016	141	
8/22/2016	139	
11/8/2016	105	
2/7/2017	131	
5/2/2017	113	
7/31/2017	120	
5/21/2019		162

Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

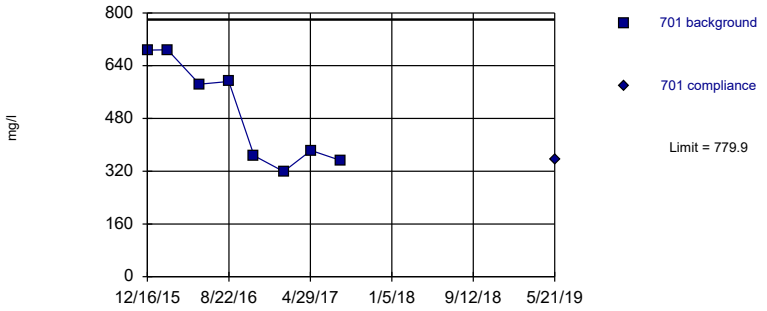
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	264	
2/16/2016	283	
5/24/2016	273	
8/22/2016	309	
11/8/2016	301	
2/7/2017	274	
5/2/2017	255	
7/31/2017	298	
5/21/2019		278

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=496.6, Std. Dev.=156.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8398, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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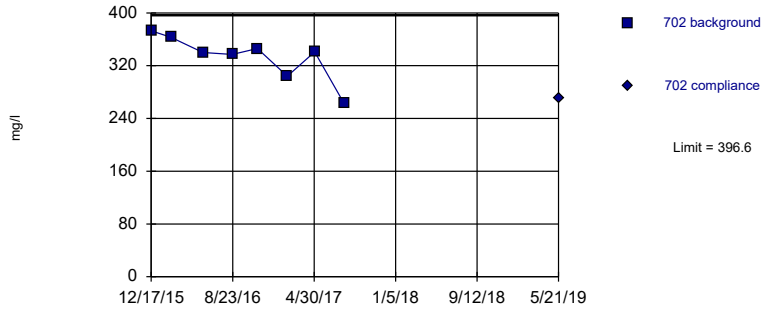
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=333.4, Std. Dev.=34.92, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8838, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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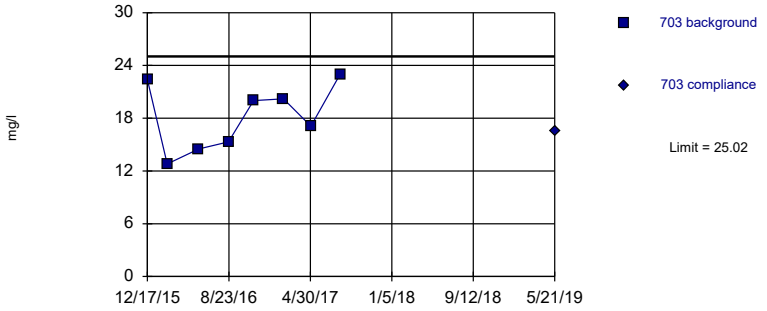
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=18.16, Std. Dev.=3.787, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9353, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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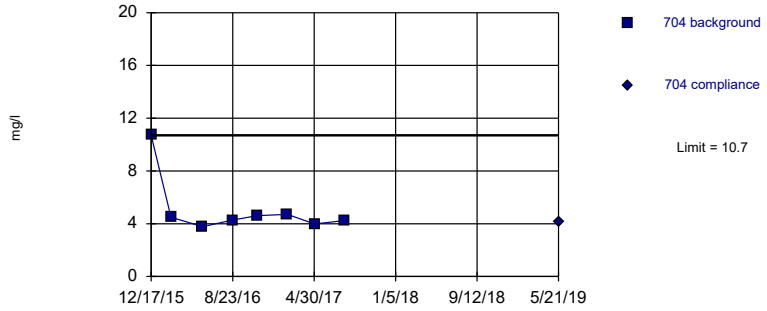
Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Chloride Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	687	
2/16/2016	688	
5/24/2016	584	
8/22/2016	592	
11/8/2016	367	
2/7/2017	319	
5/2/2017	383	
7/31/2017	353	
5/21/2019		355

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	373	
2/16/2016	363	
5/24/2016	340	
8/22/2016	337	
11/7/2016	346	
2/7/2017	304	
5/2/2017	341	
7/31/2017	263	
5/21/2019		271

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	22.4	
2/16/2016	12.8	
5/23/2016	14.5	
8/22/2016	15.3	
11/7/2016	20	
2/7/2017	20.2	
5/2/2017	17.1	
7/31/2017	23	
5/21/2019		16.5

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

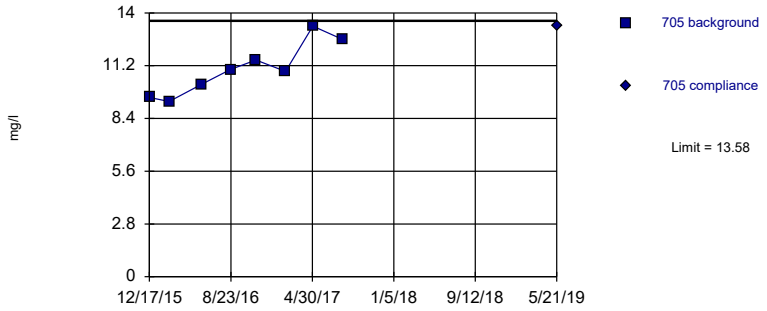
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	10.7	
2/16/2016	4.49	
5/23/2016	3.77	
8/22/2016	4.27	
11/7/2016	4.61	
2/7/2017	4.71	
5/2/2017	3.98	
7/31/2017	4.24	
5/21/2019		4.17

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=11.04, Std. Dev.=1.407, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9519, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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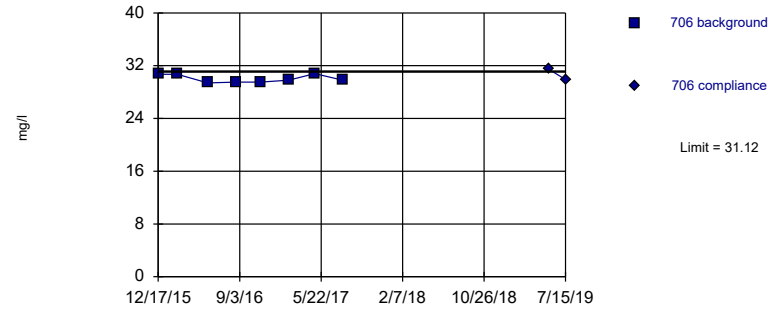
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=30.03, Std. Dev.=0.6042, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8072, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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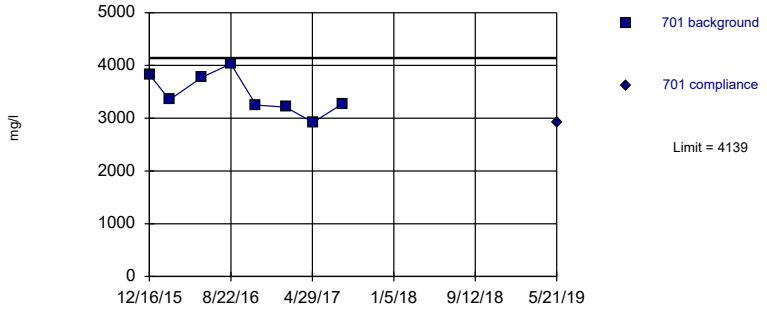
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3454, Std. Dev.=378.7, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9238, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 9/23/2019 3:33 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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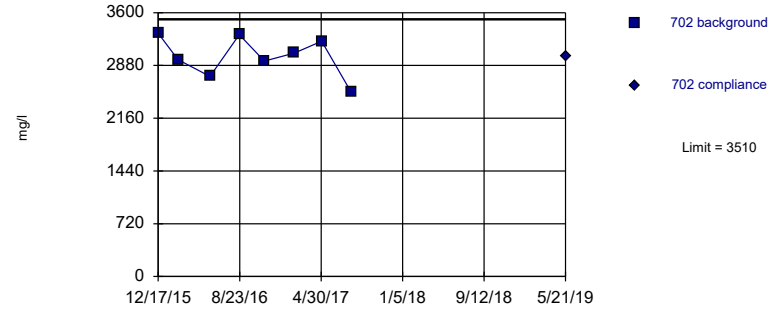
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3004, Std. Dev.=279.6, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9382, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	9.51	
2/16/2016	9.3	
5/24/2016	10.2	
8/22/2016	11	
11/8/2016	11.5	
2/7/2017	10.9	
5/2/2017	13.3	
7/31/2017	12.6	
5/21/2019		13.3

Prediction Limit

Constituent: Chloride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706	
12/17/2015	30.7		
2/16/2016	30.7		
5/24/2016	29.4		
8/22/2016	29.5		
11/8/2016	29.5		
2/7/2017	29.8		
5/2/2017	30.8		
7/31/2017	29.8		
5/21/2019		31.5	
7/15/2019		29.9	1st verification sample

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	3830	
2/16/2016	3350	
5/24/2016	3770	
8/22/2016	4030	
11/8/2016	3250	
2/7/2017	3210	
5/2/2017	2920	
7/31/2017	3270	
5/21/2019		2930

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

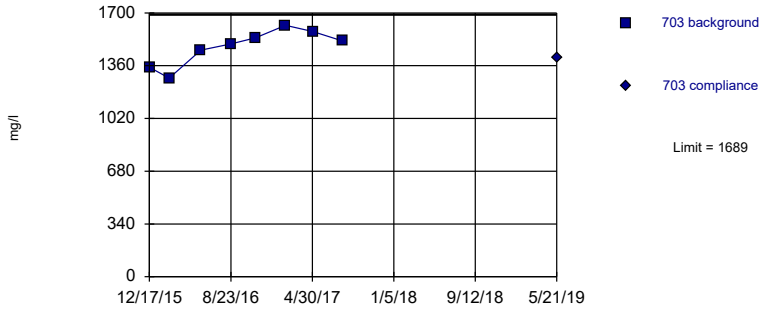
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	3320	
2/16/2016	2960	
5/24/2016	2730	
8/22/2016	3300	
11/7/2016	2940	
2/7/2017	3050	
5/2/2017	3210	
7/31/2017	2520	
5/21/2019		3010

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1481, Std. Dev.=114.9, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9321, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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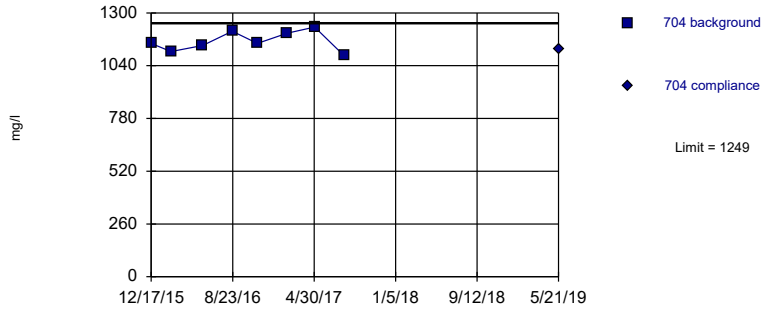
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1160, Std. Dev.=49.28, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9462, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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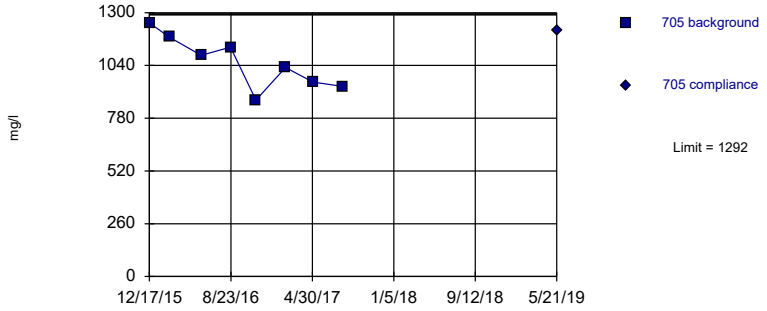
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1056, Std. Dev.=130.4, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9756, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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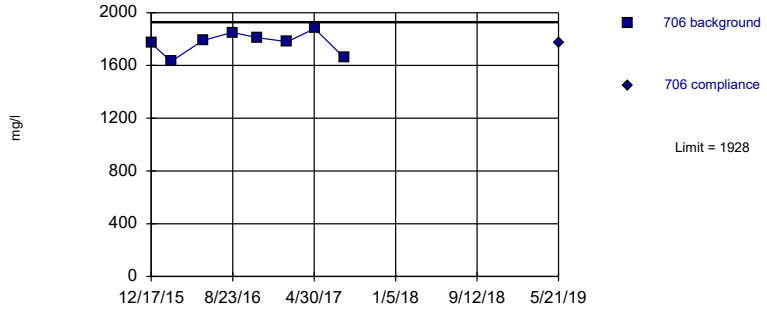
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1771, Std. Dev.=86.43, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9168, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Dissolved Solids Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	1350	
2/16/2016	1280	
5/23/2016	1460	
8/22/2016	1500	
11/7/2016	1540	
2/7/2017	1620	
5/2/2017	1580	
7/31/2017	1520	
5/21/2019		1410

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	1150	
2/16/2016	1110	
5/23/2016	1140	
8/22/2016	1210	
11/7/2016	1150	
2/7/2017	1200	
5/2/2017	1230	
7/31/2017	1090	
5/21/2019		1120

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	1250	
2/16/2016	1180	
5/24/2016	1090	
8/22/2016	1130	
11/8/2016	869	
2/7/2017	1030	
5/2/2017	958	
7/31/2017	937	
5/21/2019		1210

Prediction Limit

Constituent: Dissolved Solids (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

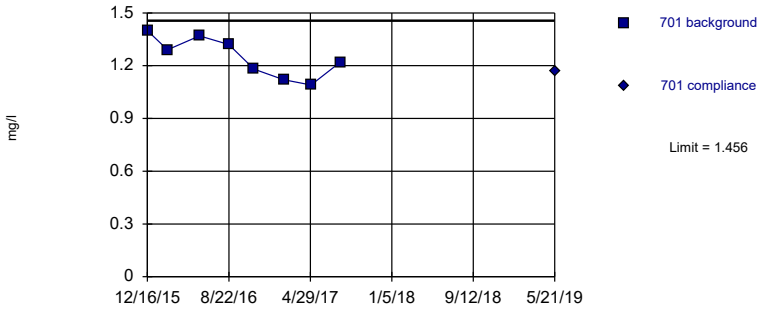
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	1770	
2/16/2016	1630	
5/24/2016	1790	
8/22/2016	1850	
11/8/2016	1810	
2/7/2017	1780	
5/2/2017	1880	
7/31/2017	1660	
5/21/2019		1770

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.249, Std. Dev.=0.1144, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9494, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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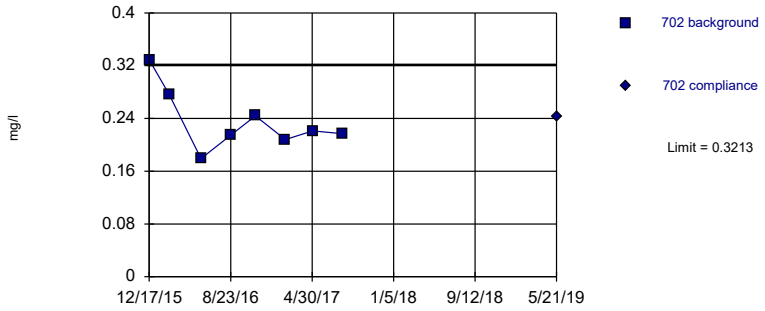
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2361, Std. Dev.=0.04705, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8995, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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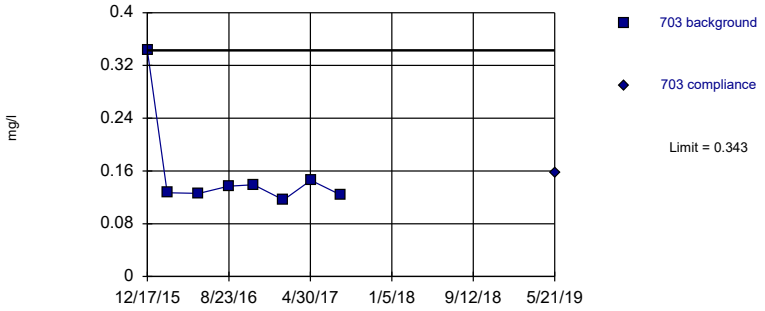
Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Fluoride Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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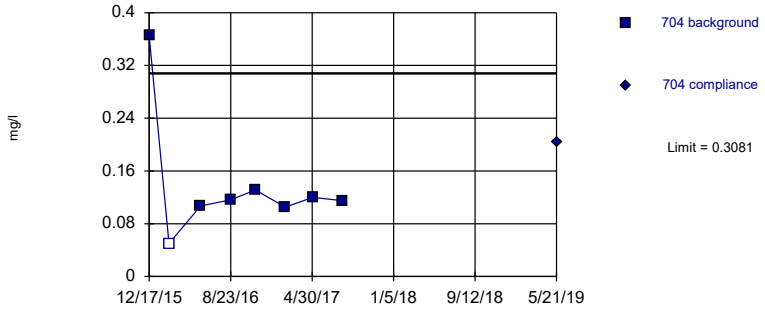
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube root transformation): Mean=0.5006, Std. Dev.=0.09657, n=8, 12.5% NDs. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7706, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Fluoride Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	1.4	
2/16/2016	1.29	
5/24/2016	1.37	
8/22/2016	1.32	
11/8/2016	1.18	
2/7/2017	1.12	
5/2/2017	1.09	
7/31/2017	1.22	
5/21/2019		1.17

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	0.329	
2/16/2016	0.277	
5/24/2016	0.179	
8/22/2016	0.214	
11/7/2016	0.244	
2/7/2017	0.208	
5/2/2017	0.221	
7/31/2017	0.217	
5/21/2019		0.243

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	0.343	
2/16/2016	0.127	
5/23/2016	0.126	
8/22/2016	0.137	
11/7/2016	0.139	
2/7/2017	0.116	
5/2/2017	0.146	
7/31/2017	0.124	
5/21/2019		0.157

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

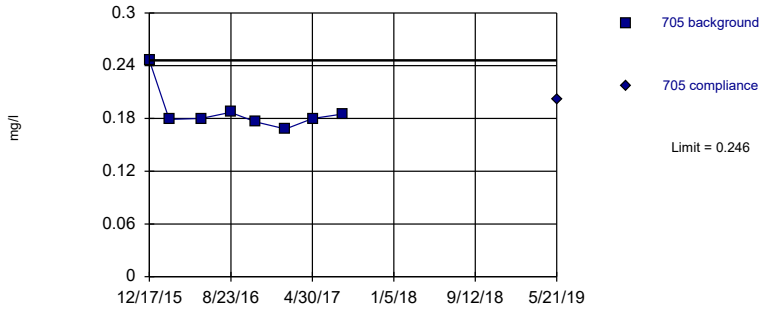
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	0.365	
2/16/2016	<0.1	
5/23/2016	0.107	
8/22/2016	0.116	
11/7/2016	0.131	
2/7/2017	0.105	
5/2/2017	0.12	
7/31/2017	0.115	
5/21/2019		0.204

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Fluoride Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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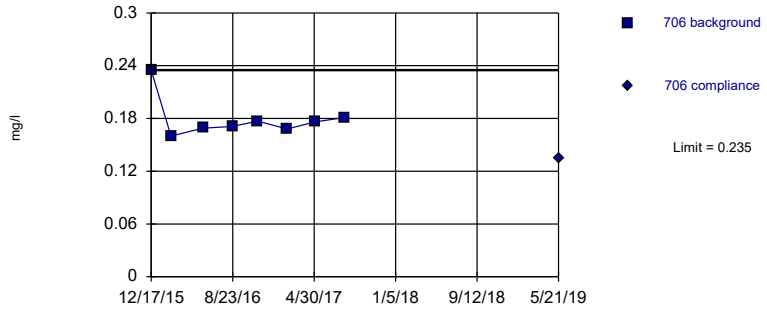
Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005912 (1 of 3). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Fluoride Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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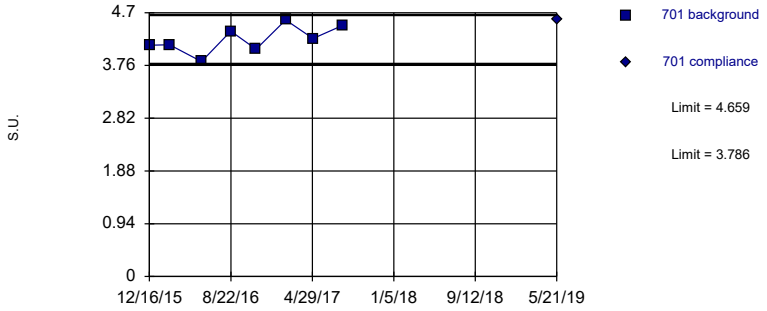
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.223, Std. Dev.=0.2411, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9768, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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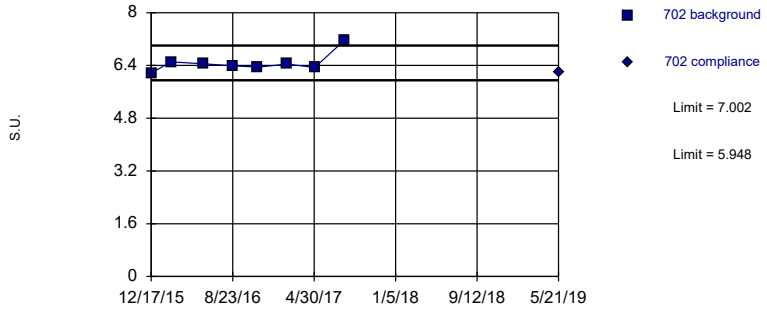
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.475, Std. Dev.=0.291, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7508, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	0.246	
2/16/2016	0.179	
5/24/2016	0.18	
8/22/2016	0.187	
11/8/2016	0.176	
2/7/2017	0.168	
5/2/2017	0.18	
7/31/2017	0.185	
5/21/2019		0.202

Prediction Limit

Constituent: Fluoride (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706
12/17/2015	0.235	
2/16/2016	0.16	
5/24/2016	0.169	
8/22/2016	0.171	
11/8/2016	0.177	
2/7/2017	0.168	
5/2/2017	0.176	
7/31/2017	0.181	
5/21/2019		0.135

Prediction Limit

Constituent: pH (S.U.) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	4.12	
2/16/2016	4.13	
5/24/2016	3.83	
8/22/2016	4.37	
11/8/2016	4.05	
2/7/2017	4.57	
5/2/2017	4.24	
7/31/2017	4.47	
5/21/2019		4.58

Prediction Limit

Constituent: pH (S.U.) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

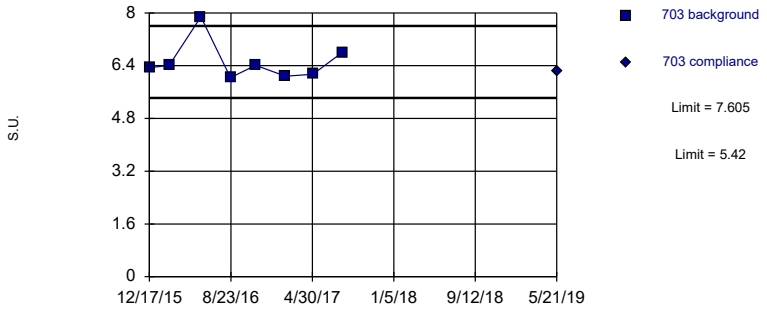
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	6.17	
2/16/2016	6.51	
5/24/2016	6.45	
8/22/2016	6.39	
11/7/2016	6.35	
2/7/2017	6.44	
5/2/2017	6.34	
7/31/2017	7.15	
5/21/2019		6.19

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.513, Std. Dev.=0.6039, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7595, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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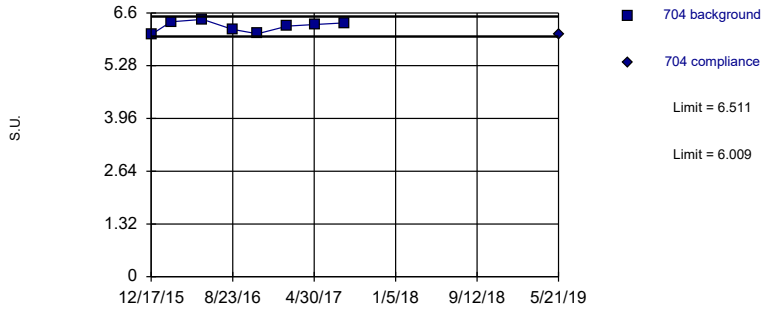
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.26, Std. Dev.=0.1388, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9351, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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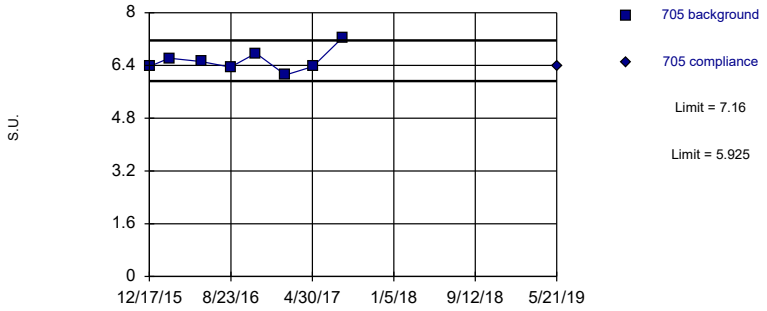
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.543, Std. Dev.=0.3411, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9137, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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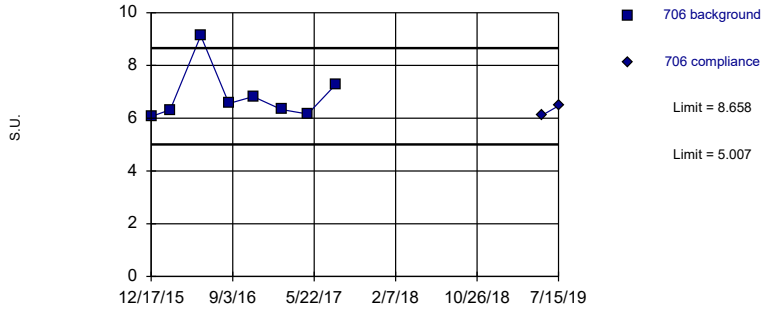
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.833, Std. Dev.=1.008, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7513, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: pH (S.U.) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	6.34	
2/16/2016	6.41	
5/23/2016	7.88	
8/22/2016	6.04	
11/7/2016	6.41	
2/7/2017	6.08	
5/2/2017	6.14	
7/31/2017	6.8	
5/21/2019		6.25

Prediction Limit

Constituent: pH (S.U.) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	6.06	
2/16/2016	6.38	
5/23/2016	6.44	
8/22/2016	6.19	
11/7/2016	6.08	
2/7/2017	6.27	
5/2/2017	6.31	
7/31/2017	6.35	
5/21/2019		6.05

Prediction Limit

Constituent: pH (S.U.) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	6.37	
2/16/2016	6.62	
5/24/2016	6.52	
8/22/2016	6.35	
11/8/2016	6.77	
2/7/2017	6.11	
5/2/2017	6.37	
7/31/2017	7.23	
5/21/2019		6.38

Prediction Limit

Constituent: pH (S.U.) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

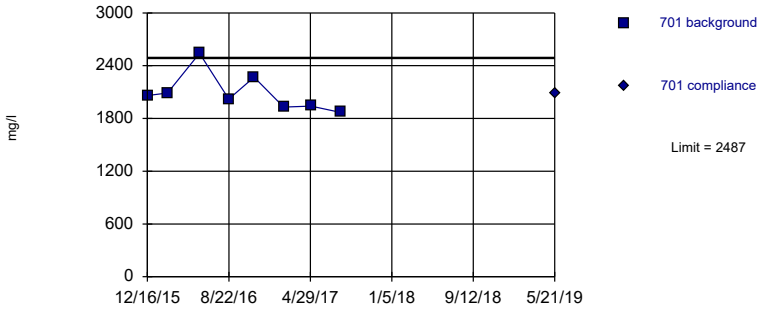
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706	
12/17/2015	6.06		
2/16/2016	6.32		
5/24/2016	9.13		
8/22/2016	6.56		
11/8/2016	6.82		
2/7/2017	6.33		
5/2/2017	6.16		
7/31/2017	7.28		
5/21/2019		6.1	
7/15/2019		6.47	extra sample

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2090, Std. Dev.=219.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8694, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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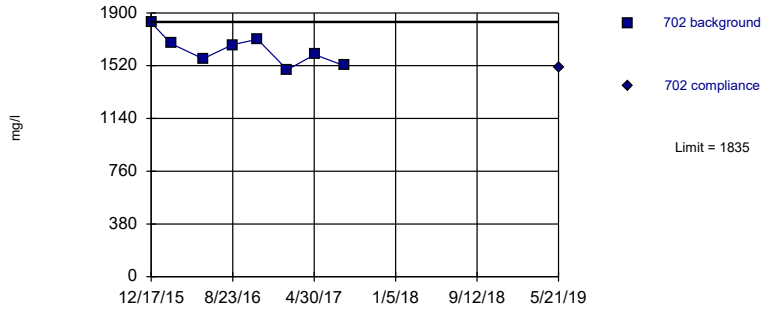
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1634, Std. Dev.=111.2, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9645, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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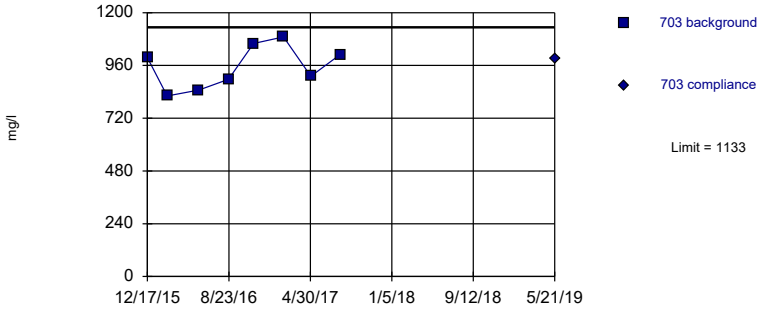
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=954.1, Std. Dev.=99.03, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9422, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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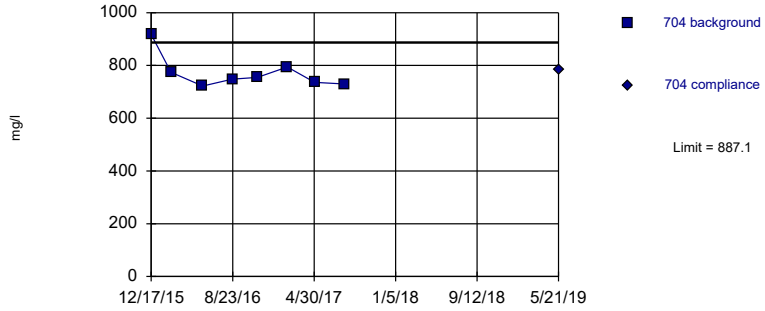
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=772.1, Std. Dev.=63.5, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7539, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	701	701
12/16/2015	2060	
2/16/2016	2090	
5/24/2016	2540	
8/22/2016	2020	
11/8/2016	2270	
2/7/2017	1930	
5/2/2017	1940	
7/31/2017	1870	
5/21/2019		2080

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	702	702
12/17/2015	1830	
2/16/2016	1680	
5/24/2016	1570	
8/22/2016	1670	
11/7/2016	1710	
2/7/2017	1490	
5/2/2017	1600	
7/31/2017	1520	
5/21/2019		1510

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	703	703
12/17/2015	996	
2/16/2016	821	
5/23/2016	848	
8/22/2016	897	
11/7/2016	1060	
2/7/2017	1090	
5/2/2017	911	
7/31/2017	1010	
5/21/2019		988

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III

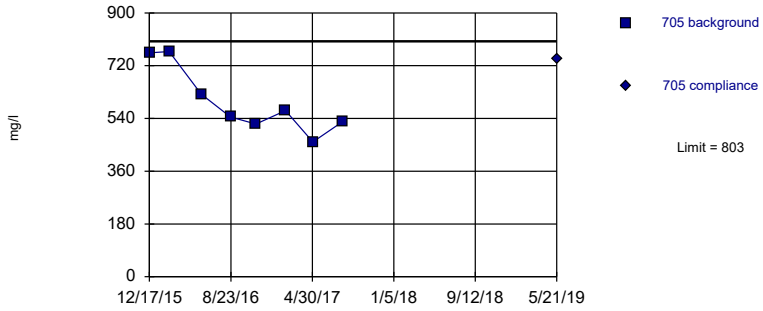
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	704	704
12/17/2015	918	
2/16/2016	774	
5/23/2016	722	
8/22/2016	748	
11/7/2016	755	
2/7/2017	794	
5/2/2017	736	
7/31/2017	730	
5/21/2019		786

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=597, Std. Dev.=113.8, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8709, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

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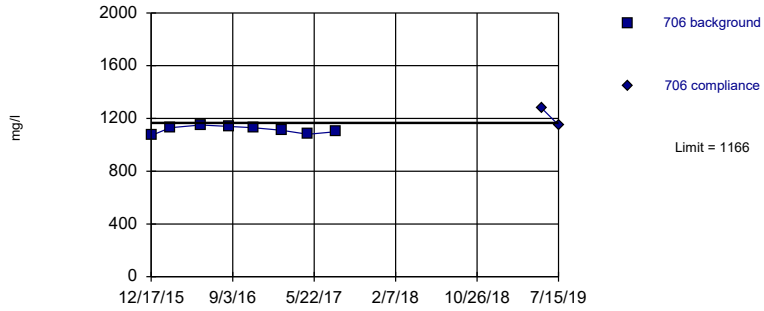
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1114, Std. Dev.=28.75, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9398, critical = 0.749. Kappa = 1.81 (c=7, w=4, 1 of 3, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 9/23/2019 3:34 PM View: Ash CCR III

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	705	705
12/17/2015	764	
2/16/2016	768	
5/24/2016	623	
8/22/2016	545	
11/8/2016	521	
2/7/2017	567	
5/2/2017	460	
7/31/2017	528	
5/21/2019		741

Prediction Limit

Constituent: Sulfate (mg/l) Analysis Run 9/23/2019 3:35 PM View: Ash CCR III
Montrose Generating Station UWL Client: SCS Engineers Data: Montrose

	706	706	
12/17/2015	1070		
2/16/2016	1130		
5/24/2016	1150		
8/22/2016	1140		
11/8/2016	1130		
2/7/2017	1110		
5/2/2017	1080		
7/31/2017	1100		
5/21/2019		1280	
7/15/2019		1150	1st verification sample

Prediction Limit

Montrose Generating Station UWL Client: SCS Engineers Data: Montrose Printed 9/23/2019, 3:35 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/l)	701	0.2	n/a	5/21/2019	0.1ND	No	8	100	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	702	0.2	n/a	5/21/2019	0.1ND	No	8	100	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	703	0.2	n/a	5/21/2019	0.1ND	No	8	100	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	704	0.2	n/a	5/21/2019	0.1ND	No	8	100	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	705	0.23	n/a	5/21/2019	0.1ND	No	8	75	n/a	0.005912	NP Intra (NDs) 1 of 3
Boron (mg/l)	706	0.2481	n/a	7/15/2019	0.234	No	8	12.5	x^4	0.00188	Param Intra 1 of 3
Calcium (mg/l)	701	566.7	n/a	5/21/2019	402	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	702	549	n/a	5/21/2019	450	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	703	265.9	n/a	5/21/2019	226	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	704	174.7	n/a	5/21/2019	159	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	705	186.5	n/a	5/21/2019	162	No	8	0	No	0.00188	Param Intra 1 of 3
Calcium (mg/l)	706	316.6	n/a	5/21/2019	278	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	701	779.9	n/a	5/21/2019	355	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	702	396.6	n/a	5/21/2019	271	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	703	25.02	n/a	5/21/2019	16.5	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	704	10.7	n/a	5/21/2019	4.17	No	8	0	n/a	0.005912	NP Intra (normality) ...
Chloride (mg/l)	705	13.58	n/a	5/21/2019	13.3	No	8	0	No	0.00188	Param Intra 1 of 3
Chloride (mg/l)	706	31.12	n/a	7/15/2019	29.9	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	701	4139	n/a	5/21/2019	2930	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	702	3510	n/a	5/21/2019	3010	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	703	1689	n/a	5/21/2019	1410	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	704	1249	n/a	5/21/2019	1120	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	705	1292	n/a	5/21/2019	1210	No	8	0	No	0.00188	Param Intra 1 of 3
Dissolved Solids (mg/l)	706	1928	n/a	5/21/2019	1770	No	8	0	No	0.00188	Param Intra 1 of 3
Fluoride (mg/l)	701	1.456	n/a	5/21/2019	1.17	No	8	0	No	0.00188	Param Intra 1 of 3
Fluoride (mg/l)	702	0.3213	n/a	5/21/2019	0.243	No	8	0	No	0.00188	Param Intra 1 of 3
Fluoride (mg/l)	703	0.343	n/a	5/21/2019	0.157	No	8	0	n/a	0.005912	NP Intra (normality) ...
Fluoride (mg/l)	704	0.3081	n/a	5/21/2019	0.204	No	8	12.5	x^(1/3)	0.00188	Param Intra 1 of 3
Fluoride (mg/l)	705	0.246	n/a	5/21/2019	0.202	No	8	0	n/a	0.005912	NP Intra (normality) ...
Fluoride (mg/l)	706	0.235	n/a	5/21/2019	0.135	No	8	0	n/a	0.005912	NP Intra (normality) ...
pH (S.U.)	701	4.659	3.786	5/21/2019	4.58	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	702	7.002	5.948	5/21/2019	6.19	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	703	7.605	5.42	5/21/2019	6.25	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	704	6.511	6.009	5/21/2019	6.05	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	705	7.16	5.925	5/21/2019	6.38	No	8	0	No	0.000...	Param Intra 1 of 3
pH (S.U.)	706	8.658	5.007	7/15/2019	6.47	No	8	0	No	0.000...	Param Intra 1 of 3
Sulfate (mg/l)	701	2487	n/a	5/21/2019	2080	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	702	1835	n/a	5/21/2019	1510	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	703	1133	n/a	5/21/2019	988	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	704	887.1	n/a	5/21/2019	786	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	705	803	n/a	5/21/2019	741	No	8	0	No	0.00188	Param Intra 1 of 3
Sulfate (mg/l)	706	1166	n/a	7/15/2019	1150	No	8	0	No	0.00188	Param Intra 1 of 3

ATTACHMENT 2

Sanitas™ Configuration Settings

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

Exclude data flags: i

Data Reading Options

- (•) Individual Observations
- ( ) Mean of Each: ( ) Month
- ( ) Median of Each: ( ) Season

Non-Detect / Trace Handling...

Setup Seasons...

[ ] Automatically Process Resamples...

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

- [ ] Black and White Output
- [x] Four Plots Per Page
  - [ ] Always Combine Data Pages...
  - [x] Include Tick Marks on Data Page
  - [ ] Use Constituent Name for Graph Title
- [ ] Draw Border Around Text Reports and Data Pages
- [x] Enlarge/Reduce Fonts (Graphs): 100%
- [x] Enlarge/Reduce Fonts (Data/Text Reports): 100%
- [x] Wide Margins (on reports without explicit setting)
- [ ] Use CAS# (Not Const. Name)
- [ ] Truncate File Names to 20 Characters
- [ ] Include Limit Lines when found in Database...
- [x] Show Deselected Data on Time Series: Lighter
- [x] Show Deselected Data on all Data Pages: Light

Setup Symbols and Colors...

- [x] Prompt to Overwrite/Append Summary Tables
- [ ] Round Limits to 2 Sig. Digits (when not set in data file)
- [ ] User-Set Scale
- [x] Indicate Background Data
- [ ] Show Exact Dates
- [ ] Thick Plot Lines

Zoom Factor: 200%

Output Decimal Precision

- ( ) Less Precision
- (•) Normal Precision
- ( ) More Precision

- [x] Store Print Jobs in Multiple Constituent Mode

Store All Print Jobs...

Printer: Adobe PDF

Printers...

Data | Output | Trend Test | Control Cht | **Prediction Lim** | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

☑ Test for Normality using Shapiro-Wilk/Francia at Alpha = 0.01

☑ Use Non-Parametric Test when Non-Detects Percent > 50

Use Aitchison's Adjustment when Non-Detects Percent > 15

☐ Optional Further Refinement: Use Aitchison's when NDs % > 50

☐ Use Poisson Prediction Limit when Non-Detects Percent > 90

Transformation

- ◉ Use Ladder of Powers
- ○ Natural Log or No Transformation
- ○ Never Transform
- ○ Use Specific Transformation: Natural Log

☐ Use Best W Statistic

☐ Plot Transformed Values

Deseasonalize (Intra- and InterWell)

- ◉ If Seasonality Is Detected
- ○ If Seasonality Is Detected Or Insufficient to Test
- ○ Always (When Sufficient Data)
- ○ Never

☐ Always Use Non-Parametric

Facility α

Statistical Evaluations per Year: 2

Constituents Analyzed: 7

Downgradient (Compliance) Wells: 4

Sampling Plan

Comparing Individual Observations

○ 1 of 1 ○ 1 of 2 ◉ 1 of 3 ○ 1 of 4

○ 2 of 4 ("Modified California")

IntraWell Other

☐ Stop if Background Trend Detected at Alpha = 0.05

☑ Plot Background Data

Override Standard Deviation:

Override DF: Override Kappa:

☐ Automatically Remove Background Outliers

☐ 2-Tailed Test Mode...

☑ Show Deselected Data Lighter

Non-Parametric Limit = Highest Background Value

Non-Parametric Limit when 100% Non-Detects:

- ○ Highest/Second Highest Background Value
- ◉ Most Recent PQL if available, or MDL
- ○ Most Recent Background Value (subst. method)

Data | Output | Trend Test | Control Cht | Prediction Lim | Tolerance Lim | Conf/Tol Int | ANOVA | Welchs | Other Tests

Rank Von Neumann, Wilcoxon Rank Sum / Mann-Whitney

- [ ] Use Modified Alpha...
- [ ] 2-Tailed Test Mode...
- [ ] Combine Background Wells on Mann-Whitney...

Outlier Tests

- ( ) EPA 1989 Outlier Screening (fixed alpha of 0.05)
- (•) Dixon's at α= 0.05 or if n > 22 Rosner's at α= 0.01 [x] Use EPA Screening to establish Suspected Outliers
- ( ) Tukey's Outlier Screening, with IQR Multiplier = 3.0 [ ] Use Ladder of Powers to achieve Best W Stat
- [x] Test For Normality using Shapiro-Wilk/Francia at Alpha = 0.1
  - (•) Stop if Non-Normal
  - ( ) Continue with Parametric Test if Non-Normal
  - ( ) Tukey's if Non-Normal, with IQR Multiplier = 3.0 [x] Use Ladder of Powers to achieve Best W Stat
- [x] No Outlier If Less Than 3.0 Times Median
- [ ] Apply Rules found in Ohio Guidance Document 0715
- [ ] Combine Background Wells on the Outlier Report...

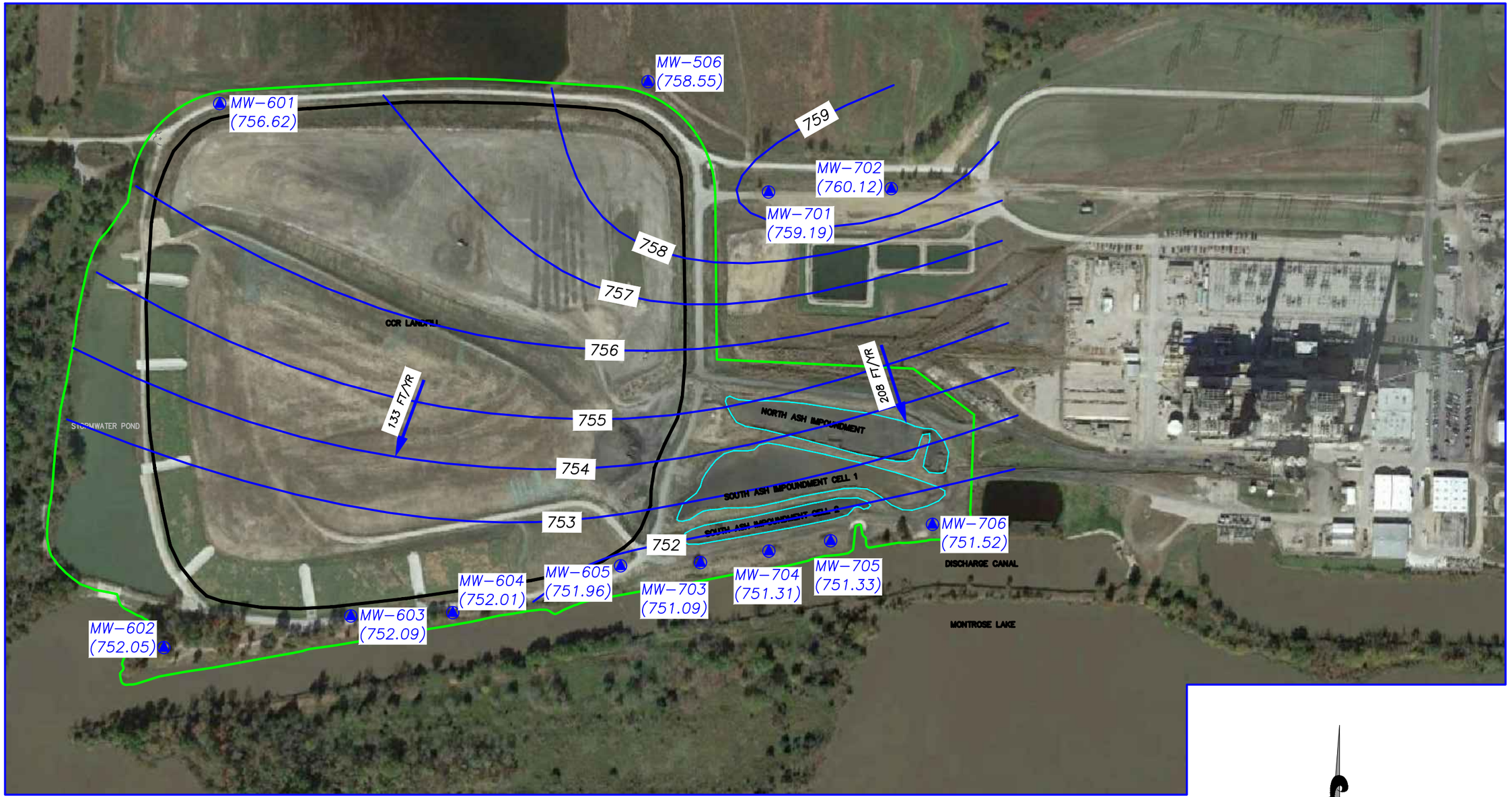
Piper, Stiff Diagram

- [ ] Combine Wells
- [ ] Combine Dates
- (•) Use Default Constituent Names
- ( ) Use Constituent Definition File Edit
- [x] Label Constituents
- [x] Label Axes
- [x] Note Cation-Anion Balance (Piper only)

Jared Morrison
December 20, 2022

ATTACHMENT 3

Groundwater Potentiometric Surface Maps



LEGEND:

- PERMITTERED SOLID WASTE FACILITY BOUNDARY (APPROXIMATE)
- CCR LANDFILL UNIT BOUNDARY (APPROXIMATE)
- MW-506 (757.17) — CCR GROUNDWATER MONITORING WELL SYSTEM
- ASH IMPOUNDMENT UNIT BOUNDARY (APPROXIMATE)
- GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (REPRESENTATIVE OF THIS UNIT)
- XX FT/YR — GROUNDWATER FLOW DIRECTION AND CALCULATED GROUNDWATER FLOW RATE (FT/YR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 88
3. GOOGLE EARTH IMAGE DATED 10/20/2014.
4. APPROXIMATE BOUNDARY LOCATIONS PROVIDED BY AECOM.
5. WATER LEVEL MEASUREMENTS COMPLETED ON MAY 21, 2019.

300 0 300 600

SCALE FEET

REV.	DATE	CK. BY
0	-	-
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-

SHEET TITLE
POTENTIOMETRIC SURFACE MAP
CCR LANDFILL AND ASH IMPOUNDMENT (MAY 2019)

PROJECT TITLE
2019 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY METRO, INC.
MONTROSE GENERATING STATION
MONTROSE, MISSOURI

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS AND CONTRACTORS
8575 W. 110th St, Ste. 100
Overland Park, Kansas 66210
PH: (913) 681-0030 FAX: (913) 681-0012

PROJ. NO.	DWN. BY:	Q/A RVW BY:
27213168.19	MBJ	JRR
	CHK. BY:	PROJ. MGR
	JRR	JRF
	DSN. BY:	
	TGW	

CADD FILE:
27213168.18_FIG2_MAY19 V1.DWG

DATE:
12/19/22

FIGURE NO.
1

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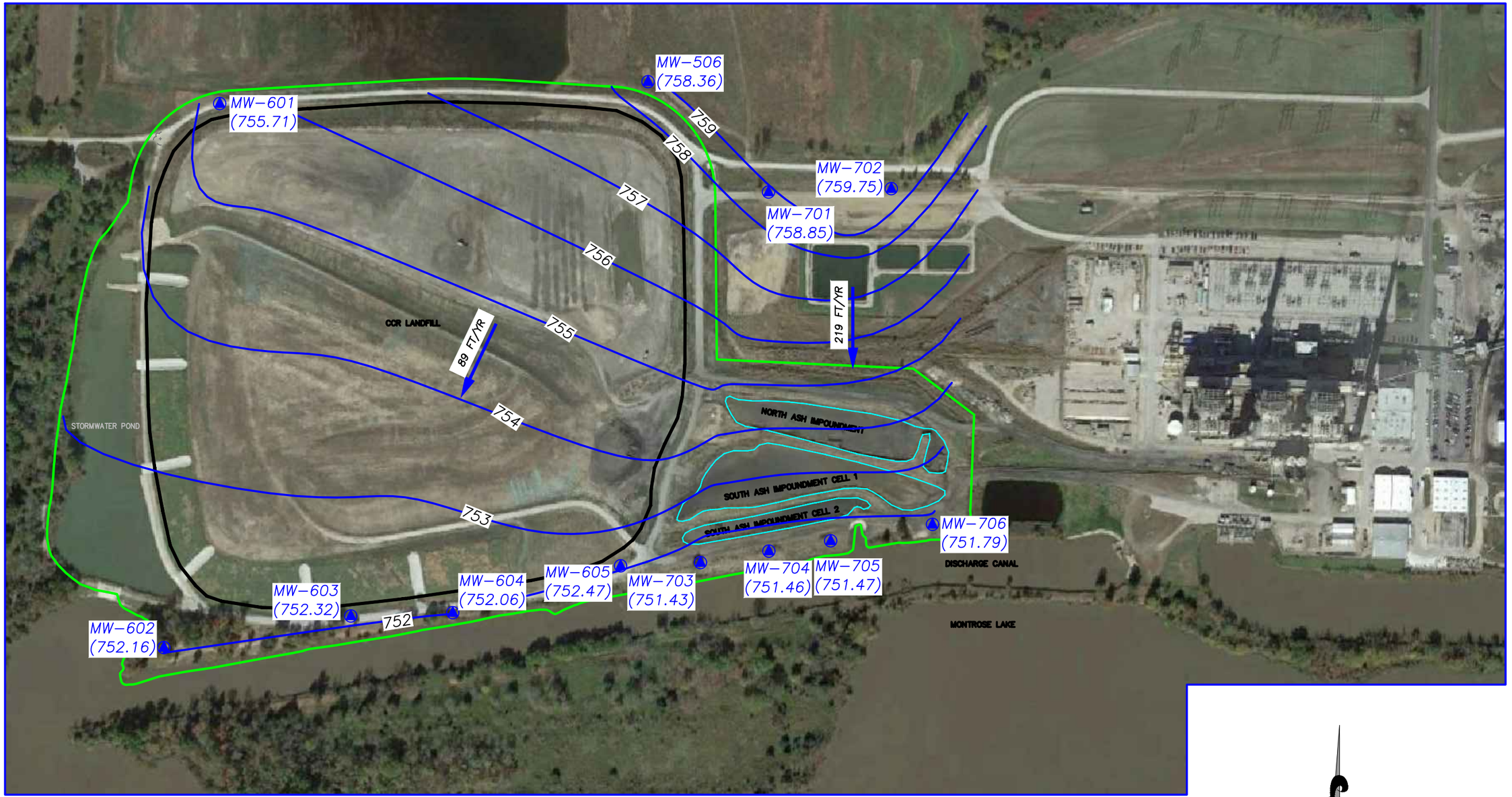

LEGEND:

- PERMITTERED SOLID WASTE FACILITY BOUNDARY (APPROXIMATE)
- CCR LANDFILL UNIT BOUNDARY (APPROXIMATE)
- MW-506 (757.17) — CCR GROUNDWATER MONITORING WELL SYSTEM
- ASH IMPOUNDMENT UNIT BOUNDARY (APPROXIMATE)
- GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (REPRESENTATIVE OF THIS UNIT)
- XX FT/YR — GROUNDWATER FLOW DIRECTION AND CALCULATED GROUNDWATER FLOW RATE (FT/YR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 88
3. GOOGLE EARTH IMAGE DATED 10/20/2014.
4. APPROXIMATE BOUNDARY LOCATIONS PROVIDED BY AECOM.
5. WATER LEVEL MEASUREMENTS COMPLETED ON NOVEMBER 5, 2019

300 0 300 600

SCALE FEET

REV.	DATE	CK. BY
0	-	-
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL AND ASH IMPOUNDMENT (NOVEMBER 2019)

PROJECT TITLE
2019 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY METRO, INC.
MONTROSE GENERATING STATION
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PROJ. NO.	DWN. BY:	Q/A RVW BY:
27213168.19	DAW	JRR
	CHK. BY:	PROJ. MGR
	JRR	JRF
	DSN. BY:	
	TGW	

CADD FILE:
27213168.18_FIG2_NOV19 V1.DWG

DATE:
1/7/2020

FIGURE NO.
2

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