2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CCR LANDFILL
SIBLEY GENERATING STATION
SIBLEY, MISSOURI

Presented To:

KCP&L Greater Missouri Operations Company

Presented By:

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

Revision 2: December 16, 2022
Revision 1: February 5, 2018
January 30, 2018
File Number 27213169.17

CERTIFICATIONS

I, John R. Rockhold, being a qualified groundwater scientist and Registered Geologist in the State of Missouri, do hereby certify that the 2017 Annual Groundwater Monitoring and Corrective Action Report for the CCR Landfill at the Sibley 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 2017 Annual Groundwater Monitoring and Corrective Action Report for the CCR Landfill at the Sibley 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
1	2/5/2018	Report Text	Revision table added. No changes to text regarding the 2017 Annual Groundwater Monitoring and Corrective Action Report. Table 1 revised to include two extra data results as explained below.
1	2/5/2018	Appendix B Table 1	Table 1 was revised to include an extra sample for calcium from MW-504 collected 11/16/2017 and an extra sample for chloride from MW-510 collected 11/16/2017. These samples were collected as part of the quality control process.
2	December 16, 2022	Appendix B Table 2	Corrected groundwater elevations.
2	December 16, 2022	Addendum 1	Added Addendum 1

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Appendices

1 INTRODUCTION

This 2017 Annual Groundwater Monitoring and Corrective Action Report was prepared to support compliance with the groundwater monitoring requirements of the "Coal Combustion Residuals (CCR) Final Rule" (Rule) published by the United States Environmental Protection Agency (USEPA) in the *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*, dated April 17, 2015 (USEPA, 2015). Specifically, this report was prepared to fulfill the requirements of 40 CFR 257.90 (e). The applicable sections of the Rule are provided below in *italics*, followed by applicable information relative to the 2017 Annual Groundwater Monitoring and Corrective Action Report for the CCR Landfill at the Sibley Generating Station.

2 § 257.90(e) ANNUAL REPORT REQUIREMENTS

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

2.1 § 257.90(e)(1) SITE MAP

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

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

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

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

The CCR groundwater monitoring system was initially certified on October 13, 2017. No new monitoring wells were installed and no wells were decommissioned as part of the CCR groundwater monitoring program for the CCR Landfill in 2017.

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. Sampling for the detection monitoring program began in December 2015. Samples were analyzed as indicated in **Appendix B**, **Table 1** (Appendix III and Appendix IV Detection Monitoring Results, and **Table 2** (Detection Monitoring Field Measurements). The dates of sample collection and the results of the analyses are also provided in these tables.

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

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

There was no transition between monitoring programs in 2017. Only detection monitoring was conducted in 2017. Statistical evaluation of the data was still in process as of the end of 2017.

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)

Status of Groundwater Monitoring and Corrective Action Program.

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

Summary of Key Actions Completed.

Collection of initial background groundwater quality data was completed and the initial detection monitoring sampling and analysis event was completed in October 2017. Verification sampling was also conducted per the certified statistical method.

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 (2018).

Completion of statistical evaluation of detection monitoring data. Groundwater sampling and analysis and alternative source demonstration(s) (if required).

2.5.2 § 257.94(d)(3)

Demonstration providing the basis for an alternative monitoring frequency for detection monitoring and certification that it meets the requirements of this section.

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

2.5.3 § 257.94(e)(2)

Demonstration that an alternative source other than the CCR unit caused the statistically significant increase (SSI) over background or that the SSI was caused by an 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 providing the basis for an alternative monitoring frequency for assessment monitoring and certification that it meets the requirements of this section.

Not applicable because no such demonstration was conducted.

2.5.5 § 257.95(d)(3)

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)

Demonstration that an alternative source other than the CCR unit caused the contamination, or that the SSI (during assessment monitoring) resulted from an 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.

2.5.7 § 257.96(a)

Demonstration of the need for additional time to complete the assessment of corrective measures due to site-specific conditions or circumstances. In addition, certification of the demonstration is to be included in the annual report.

Not applicable because no such demonstration was 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 Sibley 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 KCP&L Greater Missouri Operations Company for specific application to the Sibley Generating Station CCR Landfill. No warranties, express or implied, are intended or made.

APPENDIX A

FIGURES

Figure 1: Site Map

LEGEND:

506 CCR GROUNDWATER MONITORING SYSTEM WELLS

CCR LANDFILL UNIT BOUNDARY

NOTES:

1. HORIZONTAL & VERTICAL DATUM: URS PLANS FOR CONSTRUCTION, KCP&L SIBLEY GENERATING STATION, DESIGN FILE 16530511.00001, DATED JANUARY 2010
2. GOOGLE EARTH AERIAL IMAGE, MARCH 2015. MONITOR WELL LOCATIONS ARE APPROXIMATE.
3. BOUNDARY AND MONITORING WELL LOCATIONS SHOWN ARE APPROXIMATE.

200 0 200 400

SCALE FEET

REV.	DATE
-	-

SHEET TITLE
SITE MAP
CCR LANDFILL
CCR GROUNDWATER MONITORING SYSTEM

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CLIENT
KCP&L GREATER MISSOURI OPERATIONS CO.
SIBLEY GENERATING STATION
SIBLEY, MISSOURI

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

PROJ. NO.	DWN. BY:	Q/A RVW BY:
27213167.17	RCW	JRF
CHK. BY:	PROJ. MGR:	
JRF	JRF	
DSN. BY:		
RCW		

CADD FILE:
FIG 1 - SIBLEY LF.DWG

DATE:
1/12/18

FIGURE NO.
1

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\ANNUAL CCR REPORTING\2017\FIG 1 - SIBLEY LF.DWG

APPENDIX B

TABLES

Table 1: Appendix III and Appendix IV Detection Monitoring Results

Table 2: Detection Monitoring Field Measurements

Table 1
CCR Landfill
Appendix III and Appendix IV Detection Monitoring Results
KCP&L GMO Sibley Generating Station

		Appendix III Constituents							Appendix IV Constituents														
Well Number	Sample Date	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	pH (S.U.)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Radium Combined (pCi/L)
MW-504	12/16/2015	<0.200	31.5	<1	0.168	7.83	14.3	155	<0.002	<0.002	0.117	<0.002	<0.001	<0.01	<0.01	0.168	<0.002	<0.015	<0.0002	<0.005	<0.002	<0.002	0.24
MW-504	2/18/2016	<0.200	34.3	<1	0.170	6.99	14.7	236	<0.002	<0.002	0.113	<0.002	<0.001	<0.01	<0.01	0.170	<0.002	<0.015	<0.0002	<0.005	0.00228	<0.002	0.108
MW-504	5/25/2016	<0.200	30.2	<1	0.188	7.66	18.9	385	<0.002	0.00211	0.106	<0.002	<0.001	<0.01	<0.01	0.188	<0.002	<0.015	<0.0002	<0.005	0.00239	<0.002	2.883
MW-504	8/23/2016	<0.200	32.2	<1	0.118	6.74	15.4	168	<0.002	<0.002	0.111	<0.002	<0.001	<0.01	<0.01	0.118	<0.002	<0.015	<0.0002	<0.005	0.00248	<0.002	0.957
MW-504	11/11/2016	<0.200	36.9	<1	0.171	9.03	17.4	173	<0.002	<0.002	0.121	<0.002	<0.001	<0.01	<0.01	0.171	<0.002	<0.015	<0.0002	<0.005	0.00268	<0.002	0.655
MW-504	2/8/2017	<0.200	29.6	<1	0.151	7.09	21.0	174	<0.002	<0.002	0.123	<0.002	<0.001	<0.01	<0.01	0.151	<0.002	<0.015	<0.0002	<0.005	0.00249	<0.002	0.499
MW-504	5/4/2017	<0.200	27.7	1.27	0.157	6.40	21.8	181	<0.002	0.00202	0.110	<0.002	<0.001	<0.01	<0.01	0.157	<0.002	<0.015	<0.0002	<0.005	0.00311	<0.002	0.965
MW-504	8/1/2017	<0.200	30.5	<1	0.189	6.83	23.3	156	<0.002	<0.002	0.116	<0.002	<0.001	<0.01	<0.01	0.189	<0.002	<0.015	<0.0002	<0.005	0.00342	<0.002	1.08
MW-504	10/3/2017	<0.200	33.2	3.91	0.117	6.30	24.3	181	<0.002	<0.002	0.121	<0.002	<0.001	<0.01	<0.01	0.117	<0.002	<0.015	<0.0002	<0.005	0.00307	<0.002	1.94
MW-504	11/16/2017	---	**37.6	*1.52	---	**6.45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-504	12/28/2017	---	---	*1.00	---	**6.47	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-505	12/16/2015	<0.200	28.0	<1	0.164	7.74	29.2	162	<0.002	<0.002	0.105	<0.002	<0.001	<0.01	<0.01	0.164	<0.002	<0.015	<0.0002	<0.005	0.00299	<0.002	0.153
MW-505	2/18/2016	<0.200	25.4	1.05	0.174	6.88	16.0	148	<0.002	<0.002	0.0876	<0.002	<0.001	<0.01	<0.01	0.174	<0.002	<0.015	<0.0002	<0.005	0.00249	<0.002	0.915
MW-505	5/25/2016	<0.200	24.6	<1	0.143	7.42	21.9	172	<0.002	<0.002	0.0872	<0.002	<0.001	<0.01	<0.01	0.143	<0.002	<0.015	<0.0002	<0.005	0.00269	<0.002	0.427
MW-505	8/23/2016	<0.200	25.7	1.19	0.265	6.79	9.73	182	<0.002	<0.002	0.0878	<0.002	<0.001	<0.01	<0.01	0.265	<0.002	<0.015	<0.0002	<0.005	0.00221	<0.002	0.388
MW-505	11/11/2016	<0.200	21.6	<1	0.177	9.20	15.9	152	<0.002	<0.002	0.0882	<0.002	<0.001	<0.01	<0.01	0.177	<0.002	<0.015	<0.0002	<0.005	0.00210	<0.002	1.17
MW-505	2/8/2017	<0.200	23.5	<1	0.217	6.84	14.9	151	<0.002	<0.002	0.0919	<0.002	<0.001	<0.01	<0.01	0.217	<0.002	<0.015	<0.0002	<0.005	0.00231	<0.002	0
MW-505	5/4/2017	<0.200	23.2	<1	0.160	6.80	19.2	159	<0.002	<0.002	0.0890	<0.002	<0.001	<0.01	<0.01	0.160	<0.002	<0.015	<0.0002	<0.005	0.00300	<0.002	0.292
MW-505	8/1/2017	<0.200	25.1	1.18	0.206	7.44	14.4	156	<0.002	<0.002	0.0937	<0.002	<0.001	<0.01	<0.01	0.206	<0.002	<0.015	<0.0002	<0.005	0.00230	<0.002	0
MW-505	10/3/2017	<0.200	26.6	3.13	0.124	6.98	13.4	158	<0.002	<0.002	0.101	<0.002	<0.001	<0.01	<0.01	0.124	<0.002	<0.015	<0.0002	<0.005	0.00244	<0.002	0.063
MW-505	11/16/2017	---	**26.0	*1.59	---	**6.84	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-505	12/28/2017	---	---	*2.12	---	**6.85	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-506	12/15/2015	<0.200	100	6.45	0.296	7.78	64.8	475	<0.002	<0.002	0.252	<0.002	<0.001	<0.01	<0.01	0.296	<0.002	<0.015	<0.0002	<0.005	0.00743	<0.002	0.917
MW-506	2/18/2016	<0.200	99.3	6.15	0.290	6.97	65.6	423	<0.002	<0.002	0.232	<0.002	<0.001	<0.01	<0.01	0.290	<0.002	<0.015	<0.0002	<0.005	0.00892	<0.002	0.517
MW-506	5/25/2016	<0.200	98.3	5.76	0.324	7.24	71.0	133	<0.002	<0.002	0.237	<0.002	<0.001	<0.01	<0.01	0.324	<0.002	<0.015	<0.0002	<0.005	0.00895	<0.002	3.461
MW-506	8/23/2016	<0.200	97.2	6.16	0.312	7.04	65.8	459	<0.002	<0.002	0.237	<0.002	<0.001	<0.01	<0.01	0.312	<0.002	<0.015	<0.0002	<0.005	0.00932	<0.002	0.997
MW-506	11/11/2016	<0.200	96.5	6.13	0.298	7.58	65.0	477	<0.002	<0.002	0.250	<0.002	<0.001	<0.01	<0.01	0.298	<0.002	<0.015	<0.0002	<0.005	0.0107	<0.002	0.508
MW-506	2/8/2017	<0.200	83.6	5.89	0.317	7.00	76.5	451	<0.002	<0.002	0.233	<0.002	<0.001	<0.01	<0.01	0.317	<0.002	<0.015	<0.0002	<0.005	0.0101	<0.002	0.177
MW-506	5/4/2017	<0.200	96.4	6.15	0.338	7.59	69.2	462	<0.002	0.00392	0.319	<0.002	<0.001	0.0152	<0.01	0.338	0.00822	<0.015	<0.0002	<0.005	0.0116	<0.002	0.841
MW-506	8/4/2017	<0.200	99.0	5.45	0.359	6.98	73.3	480	<0.002	<0.002	0.236	<0.002	<0.001	<0.01	<0.01	0.359	<0.002	<0.015	<0.0002	<0.005	0.0106	<0.002	0.48
MW-506	10/3/2017	<0.200	105	8.74	0.182	6.88	71.3	450	<0.002	<0.002	0.250	<0.002	<0.001	<0.01	<0.01	0.182	<0.002	<0.015	<0.0002	<0.005	0.0115	<0.002	0.693
MW-506	11/16/2017	---	*96.0	*6.15	---	**6.96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-510	12/15/2015	<0.200	122	3.33	0.296	7.14	14.7	489	<0.002	<0.002	0.356	<0.002	<0.001	<0.01	<0.01	0.296	<0.002	<0.015	<0.0002	<0.005	0.00338	<0.002	0.578
MW-510	2/18/2016	<0.200	121	3.48	0.282	7.05	12.0	446	<0.002	<0.002	0.361	<0.002	<0.001	<0.01	<0.01	0.282	<0.002	<0.015	<0.0002	<0.005	0.00349	<0.002	0.197
MW-510	5/25/2016	<0.200	119	3.12	0.273	7.95	18.1	451	<0.002	<0.002	0.365	<0.002	<0.001	<0.01	<0.01	0.273	<0.002	<0.015	<0.0002	<0.005	0.00333	<0.002	0.317
MW-510	8/23/2016	<0.200	122	3.58	0.311	6.84	12.7	472	<0.002	<0.002	0.367	<0.002	<0.001	<0.01	<0.01	0.311	<0.002	<0.015	<0.0002	<0.005	0.00314	<0.002	0.848
MW-510	11/10/2016	<0.200	119	3.49	0.296	8.15	16.0	468	<0.002	<0.002	0.373	<0.002	<0.001	<0.01	<0.01	0.296	<0.002	<0.015	<0.0002	<0.005	0.00407	<0.002	1.311
MW-510	2/8/2017	<0.200	103	3.49	0.320	7.06	16.1	462	<0.002	<0.002	0.355	<0.002	<0.001	<0.01	<0.01	0.320	<0.002	<0.015	<0.0002	<0.005	0.00341	<0.002	0.344
MW-510	5/3/2017	<0.200	116	3.63	0.290	6.94	15.0	486	<0.002	<0.002	0.353	<0.002	<0.001	<0.01	<0.01	0.290	<0.002	<0.015	<0.0002	<0.005	0.00361	<0.002	0.711
MW-510	8/1/2017	<0.200	120	3.53	0.315	6.95	16.8	456	<0.002	<0.002	0.362	<0.002	<0.001	<0.01	<0.01	0.315	<0.002	<0.015	<0.0002	<0.005	0.00350	<0.002	0.862
MW-510	10/3/2017	<0.200	130	3.36	0.271	6.72	16.9	485	<0.002	<0.002	0.393	<0.002	<0.001	<0.01	<0.01	0.271	<0.002	<0.015	<0.0002	<0.005	0.00490	<0.002	1.08
MW-510	11/16/2017	---	*119	**3.91	---	**6.90	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-512	12/15/2015	<0.200	98.1	2.72	0.281	7.29	23.0	425	<0.002	<0.002	0.371	<0.002	<0.001	0.0121	<0.01	0.281	<0.002	<0.015	<0.0002	<0.005	0.00436	<0.002	2.134
MW-512	2/18/2016	<0.200	100	2.78	0.270	7.00	21.0	366	<0.002	<0.002	0.358	<0.002	<0.001	<0.01	<0.01	0.270	<0.002	<0.015	<0.0002	<0.005	0.00459	<0.002	1.541
MW-512	5/25/2016	<0.200	98.9	2.55	0.308	7.18	23.1	467	<0.002	<0.002	0.361	<0.002	<0.001	<0.01	<0.01	0.308	<0.002	<0.015	<0.0002	<0.005	0.00421	<0.002	2.469
MW-512	8/23/2016	<0.200	103	3.23	0.331	6.77	24.4	422	<0.002	<0.002	0.360	<0.002	<0.001	0.0111	<0.01	0.331	<0.002	<0.015	<0.0002	<0.005	0.00505	<0.002	0.529
MW-512	11/11/2016	<0.200	100	3.17	0.282	6.80	24.0	443	<0.002	<0.002	0.374	<0.002	<0.001	0.0103	<0.01	0.282	<0.002	<0.015	<0.0002	<0.005	0.00495	<0.002	1.424
MW-512	2/8/2017	<0.200	86.4	3.14	0.302	7.70	27.8	404	<0.002	<0.002	0.364	<0.002	<0.001	0.0105	<0.01	0.302	<0.002	<0.015	<0.0002	<0.005	0.00446	<0.002	1.41
MW-512	5/3/2017	<0.200	98.4	3.70	0.277	6.92	27.3	436	<0.002	<0.002	0.391	<0.002	<0.001	0.0147	<0.01	0.277	<0.002	<0.015	<0.0002	<0.005	0.00517	<0.002	1.13
MW-512	8/1/2017	<0.200	102	3.53	0.301	6.97	28.1	414	<0.002	<0.002	0.409	<0.002	<0.001	0.0134	<0.01	0.301	0.00273	<0.015	<0.0002	<0.005	0.00548	<0.002	1.31
MW-512	10/3/2017	<0.200	110	6.59	0.172	6.79	28.2	423	<0.002	<0.002	0.419	<0.002	<0.001	0.0120	<0.01	0.172	<0.002	<0.015	<0.0002	<0.005	0.00475	<0.002	1.23
MW-512	11/16/2017	---	*101	*3.97	---	**6.92	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-512	12/28/2017	---	---	*3.58	---	**6.88	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-601	12/15/2015	<0.200	107	3.30	0.224	8.11	15.5	387	<0.002	<0.002	0.329	<0.002	<0.001	<0.01	<0.01	0.224	<0.002	<0.015	<0.0002	<0.005	0.00579	<0.002	0.874
MW-601	2/18/2016	<0.200	105	3.22	0.214	6.80	8.87	380	<0.002	<0.002	0.326	<0.002	<0.001	<0.01	<0.01	0.214	<0.002	<0.015	<0.0002	<0.005	0.00677	<0.002	0.827
MW-601	5/26/2016	<0.200	103	3.18	0.266	8.13	8.85	461	<0.002	<0.002	0.333	<0.002	<0.001	<0.01	<0.01	0.266	<0.002	0.0154	<0.0002	<0.005	0.00601	<0.002	1.482
MW-601	8/23/2016	<0.200	102	3.41	0.275	6.75	9.11	401	<0.002	<0.002	0.331	<0.002	<0.001	<0.01	<0.01	0.275	<0.002	<0.015	<0.0002	<0.005	0.00602	<0.002	0.181
MW-601	11/11/2016	<0.200	105	3.51	0.273	6.71	16.1	423	<0.002	<0.002	0.324	<0.002	<0.001	<0.01	<0.01	0.273	<0.002	<0.015	<0.0002	<0.005	0.00521	<0.002	1.297
MW-601	2/8/2017	<0.200	87.5	3.19	0.260	6.93	10.5	396	<0.002	<0.002	0.331	<0.002	<0.001	<0.01	<0.01	0.260	<0.002	<0.015	<0.0002	<0.005	0.00482	<0.002	0.103
MW-601	5/3/2017	<0.200	100	3.50	0.247	6.81	8.71	406	<0.002	<0.002	0.355	<0.002	<0.001	<0.01	<0.01	0.247	<0.002	<0.015	<0.0002	<0.005	0.00595	<0.002	1.14
MW-601	8/1/2017	<0.200	102	3.37	0.257	6.84	9.33	393	<0.002	<0.002	0.345	<0.002	<0.001	<0.01	<0.01	0.257	<0.002	<0.015	<0.0002	<0.005	0.00500	<0.002	1.38
MW-601	10/3/2017	<0.200	111	6.10	0.154	6.65	9.76	397	<0.002	<0.002	0.357	<0.002	<0.001	<0.01	<0.01	0.154	<0.002	<0.015	<0.0002	<0.005	0.00646	<0.002	0.718
MW-601	11/16/2017	---	**101	*3.87	---	*6.84	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-601	12/28/2017	---	---	*3.95	---	**6.78	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

* Verification Sample
**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
CCR Landfill
Detection Monitoring Field Measurements
KCP&L GMO Sibley Generating Station

Well Number	Sample Date	pH (S.U.)	Specific Conductivity (µS)	Temperature (°C)	Turbidity (NTU)	Water Level (ft btoc)	Groundwater Elevation (ft NGVD)
MW-504	12/16/2015	7.83	237	13.52	10.9	18.85	797.93
MW-504	2/18/2016	6.99	309	14.30	13.1	21.99	794.79
MW-504	5/25/2016	7.66	218	21.09	0.0	21.58	795.20
MW-504	8/23/2016	6.74	282	19.32	14.2	21.83	794.95
MW-504	11/11/2016	9.03	280	15.10	11.0	22.56	794.22
MW-504	2/8/2017	7.09	299	11.20	19.1	23.74	793.04
MW-504	5/4/2017	6.40	248	14.70	15.0	19.04	797.74
MW-504	8/1/2017	6.83	250	19.15	8.3	21.55	795.23
MW-504	10/3/2017	6.30	274	16.97	0.0	22.27	794.51
MW-504	11/16/2017	**6.45	343	13.35	0.5	22.44	793.88
MW-504	12/28/2017	**6.47	288	11.54	2.7	23.57	792.75
MW-505	12/16/2015	7.74	256	13.39	21.4	22.38	793.02
MW-505	2/18/2016	6.88	283	14.13	13.2	27.58	787.82
MW-505	5/25/2016	7.42	212	17.16	0.0	26.35	789.05
MW-505	8/23/2016	6.79	288	19.30	0.0	27.63	787.77
MW-505	11/11/2016	9.20	242	15.80	3.2	28.16	787.24
MW-505	2/8/2017	6.84	274	8.07	2.1	28.76	786.64
MW-505	5/4/2017	6.80	320	15.32	0.0	23.25	792.15
MW-505	8/1/2017	7.44	240	20.23	0.0	26.78	788.62
MW-505	10/3/2017	6.98	251	16.73	0.0	28.03	787.37
MW-505	11/16/2017	**6.84	255	14.15	0.0	27.96	787.01
MW-505	12/28/2017	**6.85	246	11.38	1.2	28.67	786.30
MW-506	12/15/2015	7.78	698	14.10	8.9	41.23	758.27
MW-506	2/18/2016	6.97	802	15.82	17.1	41.21	758.29
MW-506	5/25/2016	7.24	771	19.01	0.0	41.14	758.36
MW-506	8/23/2016	7.04	514	21.51	0.0	41.19	758.31
MW-506	11/11/2016	7.58	828	15.84	8.9	42.05	757.45
MW-506	2/8/2017	7.00	810	7.78	1.1	42.24	757.26
MW-506	5/4/2017	7.59	826	13.87	37.3	52.26	757.42
MW-506	8/4/2017	6.98	752	20.84	8.9	60.99	757.37
MW-506	10/3/2017	6.88	660	26.11	0.0	61.05	757.31
MW-506	11/16/2017	**6.96	685	14.33	0.0	61.12	757.24
MW-510	12/15/2015	7.14	941	12.37	0.0	42.67	746.59
MW-510	2/18/2016	7.05	856	17.54	5.0	39.11	750.15
MW-510	5/25/2016	7.95	690	21.38	8.0	39.81	749.45
MW-510	8/23/2016	6.84	786	17.45	1.0	40.29	748.97
MW-510	11/10/2016	8.15	881	15.49	0.0	41.70	747.56
MW-510	2/8/2017	7.06	888	7.72	0.7	44.89	744.37
MW-510	5/3/2017	6.94	862	12.88	0.0	43.76	745.50
MW-510	8/1/2017	6.95	813	18.09	0.0	44.82	744.44
MW-510	10/3/2017	6.72	838	16.85	1.3	42.87	746.39
MW-510	11/16/2017	**6.90	781	12.87	0.0	44.45	741.34
MW-512	12/15/2015	7.29	767	11.84	19.7	23.93	741.13
MW-512	2/18/2016	7.00	725	16.46	7.7	20.41	744.65
MW-512	5/25/2016	7.18	751	16.56	22.1	22.75	742.31
MW-512	8/23/2016	6.77	709	20.00	0.0	23.44	741.62
MW-512	11/11/2016	6.80	748	15.36	0.0	24.82	740.24
MW-512	2/8/2017	7.70	800	9.93	16.0	26.55	738.51
MW-512	5/3/2017	6.92	747	13.17	30.1	24.66	740.40
MW-512	8/1/2017	6.97	704	17.40	18.7	32.18	737.95
MW-512	10/3/2017	6.79	745	15.79	19.1	29.56	740.57
MW-512	11/16/2017	**6.92	662	14.92	5.2	31.70	738.43
MW-512	12/28/2017	**6.88	657	10.33	4.0	32.49	737.64
MW-601	12/15/2015	8.11	683	13.24	25.0	46.61	734.29
MW-601	2/18/2016	6.80	735	15.13	12.9	45.74	735.16
MW-601	5/26/2016	8.13	661	16.31	0.0	46.29	734.61
MW-601	8/23/2016	6.75	693	18.10	0.0	46.35	734.55
MW-601	11/11/2016	6.71	748	15.32	29.4	45.81	735.09
MW-601	2/8/2017	6.93	762	8.20	1.5	46.18	734.72
MW-601	5/3/2017	6.81	720	13.98	39.1	45.82	735.08
MW-601	8/1/2017	6.84	603	24.47	14.8	46.20	734.70
MW-601	10/3/2017	6.65	706	18.33	1.8	45.73	735.17
MW-601	11/16/2017	*6.84	822	14.24	0.0	46.12	734.78
MW-601	12/28/2017	**6.78	626	9.84	0.8	46.30	734.60

* Verification Sample
** Extra Sample Collected 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

2017 Annual Groundwater Monitoring and Corrective Action Report Addendum 1

December 16, 2022
File No. 27213167.17

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: 2017 Annual Groundwater Monitoring and Corrective Action Report Addendum 1
Evergy Missouri West, Inc.
CCR Landfill
Sibley Generating Station – Sibley, Missouri

The CCR Landfill at the Sibley Generating Station is subject to the groundwater monitoring and corrective action requirements of the "Coal Combustion Residuals (CCR) Final Rule" (Rule); as described in CFR 40 257.90 through CFR 40 257.98. An Annual Groundwater Monitoring and Corrective Action (GWMCA) Report documenting activities completed in 2017 for the CCR Landfill was completed and placed in the facility's operating record on January 30, 2018, as required by the Rule. The report was subsequently revised and placed in the operating record February 13, 2018. 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. Because a GWMCA Report was not required for 2016, the Appendix III and Appendix IV background data collected in 2016 is included herewith. The laboratory data packages for the following sampling events are provided:

- December 2015 – First background sampling event for Appendix III and Appendix IV.
- February 2016 – Second background sampling event for Appendix III and Appendix IV.
- May 2016 - Third background sampling event for Appendix III and Appendix IV.
- July - August 2016 - Fourth background sampling event for Appendix III and Appendix IV.
- November 2016 - Fifth background sampling event for Appendix III and Appendix IV.
- February 2017 - Sixth background sampling event for Appendix III and Appendix IV.
- May 2017 - Seventh background sampling event for Appendix III and Appendix IV.
- August 2017 - Eighth background sampling event for Appendix III and Appendix IV.
- October 2017 - Ninth background sampling event for Appendix IV.
- October 2017 – Fall semiannual detection monitoring sampling event.
- November 2017 – First verification sampling for the Fall 2017 detection monitoring sampling event.
- December 2017 – Second verification sampling for the Fall 2017 detection monitoring sampling event.

- Attachment 2 - Statistical Analyses:

  Statistical analyses were not completed in 2017. Statistical analyses of the background sampling events were completed following data verification in 2018.

- 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:

  - December 2015 – First background sampling event.
  - February 2016 – Second background sampling event.
  - May 2016 - Third background sampling event.
  - August 2016 - Fourth background sampling event.
  - November 2016 - Fifth background sampling event.
  - February 2017 - Sixth background sampling event.
  - May 2017 - Seventh background sampling event.
  - August 2017 - Eighth background sampling event.
  - October 2017 – Ninth background sampling event and Fall semiannual detection monitoring sampling event.
  - November 2017 – First verification sampling event for the Fall 2017 detection monitoring sampling event.

Jared Morrison
December 16, 2022

ATTACHMENT 1

Laboratory Analytical Reports

Jared Morrison
December 16, 2022

ATTACHMENT 1-1

December 2015 Sampling Event Laboratory Report

ANALYTICAL REPORT

April 11, 2016

SCS Engineers

Sample Delivery Group:	L807906
Samples Received:	12/18/2015
Project Number:	27213169.15
Description:	Sibley Generating Station

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jason Romer
Technical Service Representative

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

504 L807906-01 GW

Collected by: Jason R Franks
Collected date/time: 12/16/15 10:00
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837790	1	12/23/15 11:18	12/23/15 12:01	MF
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:07	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 11:01	WBD
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/26/15 12:56	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/23/15 02:48	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/22/15 20:55	12/22/15 20:55	DJD

505 L807906-02 GW

Collected by: Jason R Franks
Collected date/time: 12/16/15 11:00
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837790	1	12/23/15 11:18	12/23/15 12:01	MF
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:09	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 11:04	WBD
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/26/15 12:59	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/23/15 02:51	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/22/15 21:10	12/22/15 21:10	DJD

506 L807906-03 GW

Collected by: Jason R Franks
Collected date/time: 12/15/15 14:10
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837235	1	12/21/15 12:31	12/21/15 12:54	JER
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:17	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 11:07	WBD
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/26/15 13:03	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/23/15 02:53	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/22/15 21:26	12/22/15 21:26	DJD

510 L807906-05 GW

Collected by: Jason R Franks
Collected date/time: 12/15/15 16:45
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837235	1	12/21/15 12:31	12/21/15 12:54	JER
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:22	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/26/15 13:09	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/23/15 03:02	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/22/15 21:56	12/22/15 21:56	DJD

512 L807906-06 GW

Collected by: Jason R Franks
Collected date/time: 12/15/15 16:35
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837235	1	12/21/15 12:31	12/21/15 12:54	JER
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 17:59	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 10:49	WBD
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/26/15 12:44	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/23/15 02:39	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/22/15 22:12	12/22/15 22:12	DJD

DUPLICATE L807906-12 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 00:00 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837235	1	12/21/15 12:31	12/21/15 12:54	JER
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:36	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/26/15 15:11	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/23/15 03:16	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/23/15 00:46	12/23/15 00:46	DJD

601 L807906-13 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 12:15 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837236	1	12/21/15 09:45	12/21/15 10:34	JER
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:39	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/26/15 15:14	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/23/15 03:18	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/23/15 01:02	12/23/15 01:02	DJD

701 L807906-14 GW

Collected by: Jason R Franks | Collected date/time: 12/14/15 16:55 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837217	1	12/21/15 01:13	12/21/15 02:44	JM
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:46	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/26/15 15:17	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/23/15 03:20	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/23/15 01:17	12/23/15 01:17	DJD

702 L807906-15 GW

Collected by: Jason R Franks | Collected date/time: 12/14/15 15:50 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837217	1	12/21/15 01:13	12/21/15 02:44	JM
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:49	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 13:59	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/28/15 09:22	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/23/15 01:32	12/23/15 01:32	DJD

703 L807906-16 GW

Collected by: Jason R Franks | Collected date/time: 12/14/15 15:40 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837217	1	12/21/15 01:13	12/21/15 02:44	JM
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:51	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 14:02	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/28/15 09:24	JDG
Wet Chemistry by Method 9056A	WG837450	1	12/23/15 01:48	12/23/15 01:48	DJD

704 L807906-17 GW

Collected by: Jason R Franks
Collected date/time: 12/14/15 16:40
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837217	1	12/21/15 01:13	12/21/15 02:44	JM
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:54	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 14:05	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/28/15 09:26	JDG
Wet Chemistry by Method 9056A	WG837387	1	12/22/15 13:06	12/22/15 13:06	CM

803 L807906-18 GW

Collected by: Jason R Franks
Collected date/time: 12/15/15 10:50
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837236	1	12/21/15 09:45	12/21/15 10:34	JER
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:56	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 14:08	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/28/15 09:29	JDG
Wet Chemistry by Method 9056A	WG837387	1	12/22/15 13:19	12/22/15 13:19	CM
Wet Chemistry by Method 9056A	WG837387	5	12/22/15 17:55	12/22/15 17:55	CM

804 L807906-19 GW

Collected by: Jason R Franks
Collected date/time: 12/15/15 11:40
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837236	1	12/21/15 09:45	12/21/15 10:34	JER
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 18:59	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 14:11	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/28/15 09:31	JDG
Wet Chemistry by Method 9056A	WG837387	1	12/22/15 13:32	12/22/15 13:32	CM

805 L807906-20 GW

Collected by: Jason R Franks
Collected date/time: 12/15/15 12:25
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837236	1	12/21/15 09:45	12/21/15 10:34	JER
Mercury by Method 7470A	WG837780	1	12/23/15 08:45	12/23/15 19:01	TRB
Metals (ICP) by Method 6010B	WG837594	1	12/22/15 00:28	12/24/15 14:14	WBD
Metals (ICPMS) by Method 6020	WG837587	1	12/22/15 15:00	12/28/15 09:33	JDG
Wet Chemistry by Method 9056A	WG837387	1	12/22/15 13:45	12/22/15 13:45	CM

806 L807906-21 GW

Collected by: Jason R Franks
Collected date/time: 12/16/15 13:35
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837236	1	12/21/15 09:45	12/21/15 10:34	JER
Mercury by Method 7470A	WG837884	1	12/23/15 08:40	12/23/15 15:31	TRB
Metals (ICP) by Method 6010B	WG837597	1	12/23/15 20:18	12/27/15 01:16	WBD
Metals (ICPMS) by Method 6020	WG837891	1	12/23/15 12:33	12/29/15 19:50	ST
Wet Chemistry by Method 9056A	WG837447	1	12/23/15 01:27	12/23/15 01:27	CM
Wet Chemistry by Method 9056A	WG837447	10	12/23/15 09:22	12/23/15 09:22	CM

801 L807906-22 GW

Collected by: Jason R Franks
Collected date/time: 12/16/15 11:55
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837790	1	12/23/15 11:18	12/23/15 12:01	MF
Mercury by Method 7470A	WG837884	1	12/23/15 08:40	12/23/15 15:59	TRB
Metals (ICP) by Method 6010B	WG837597	1	12/23/15 20:18	12/27/15 01:19	WBD
Metals (ICPMS) by Method 6020	WG837891	1	12/23/15 12:33	12/29/15 19:52	ST
Wet Chemistry by Method 9056A	WG837447	1	12/23/15 01:40	12/23/15 01:40	CM

802 L807906-23 GW

Collected by: Jason R Franks
Collected date/time: 12/16/15 12:45
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG837790	1	12/23/15 11:18	12/23/15 12:01	MF
Mercury by Method 7470A	WG837884	1	12/23/15 08:40	12/23/15 16:01	TRB
Metals (ICP) by Method 6010B	WG837597	1	12/23/15 20:18	12/27/15 01:22	WBD
Metals (ICPMS) by Method 6020	WG837891	1	12/23/15 12:33	12/29/15 19:55	ST
Wet Chemistry by Method 9056A	WG837784	1	12/23/15 20:01	12/23/15 20:01	DJD

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jason Romer
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	155000		10000	1	12/23/2015 12:01	WG837790

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	12/22/2015 20:55	WG837450
Fluoride	168		100	1	12/22/2015 20:55	WG837450
Sulfate	14300		5000	1	12/22/2015 20:55	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:07	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	117		5.00	1	12/24/2015 11:01	WG837594
Boron	ND		200	1	12/24/2015 11:01	WG837594
Calcium	31500		1000	1	12/26/2015 12:56	WG837594
Chromium	ND		10.0	1	12/24/2015 11:01	WG837594
Cobalt	ND		10.0	1	12/24/2015 11:01	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/23/2015 02:48	WG837587
Arsenic	ND		2.00	1	12/23/2015 02:48	WG837587
Beryllium	ND		2.00	1	12/23/2015 02:48	WG837587
Cadmium	ND		1.00	1	12/23/2015 02:48	WG837587
Lead	ND		2.00	1	12/23/2015 02:48	WG837587
Selenium	ND		2.00	1	12/23/2015 02:48	WG837587
Thallium	ND		2.00	1	12/23/2015 02:48	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	162000		10000	1	12/23/2015 12:01	WG837790

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	12/22/2015 21:10	WG837450
Fluoride	164		100	1	12/22/2015 21:10	WG837450
Sulfate	29200		5000	1	12/22/2015 21:10	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:09	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	105		5.00	1	12/24/2015 11:04	WG837594
Boron	ND		200	1	12/24/2015 11:04	WG837594
Calcium	28000		1000	1	12/26/2015 12:59	WG837594
Chromium	ND		10.0	1	12/24/2015 11:04	WG837594
Cobalt	ND		10.0	1	12/24/2015 11:04	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/23/2015 02:51	WG837587
Arsenic	ND		2.00	1	12/23/2015 02:51	WG837587
Beryllium	ND		2.00	1	12/23/2015 02:51	WG837587
Cadmium	ND		1.00	1	12/23/2015 02:51	WG837587
Lead	ND		2.00	1	12/23/2015 02:51	WG837587
Selenium	2.99		2.00	1	12/23/2015 02:51	WG837587
Thallium	ND		2.00	1	12/23/2015 02:51	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	475000		10000	1	12/21/2015 12:54	WG837235

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	6450		1000	1	12/22/2015 21:26	WG837450
Fluoride	296		100	1	12/22/2015 21:26	WG837450
Sulfate	64800		5000	1	12/22/2015 21:26	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:17	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	252		5.00	1	12/24/2015 11:07	WG837594
Boron	ND		200	1	12/24/2015 11:07	WG837594
Calcium	100000		1000	1	12/26/2015 13:03	WG837594
Chromium	ND		10.0	1	12/24/2015 11:07	WG837594
Cobalt	ND		10.0	1	12/24/2015 11:07	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/23/2015 02:53	WG837587
Arsenic	ND		2.00	1	12/23/2015 02:53	WG837587
Beryllium	ND		2.00	1	12/23/2015 02:53	WG837587
Cadmium	ND		1.00	1	12/23/2015 02:53	WG837587
Lead	ND		2.00	1	12/23/2015 02:53	WG837587
Selenium	7.43		2.00	1	12/23/2015 02:53	WG837587
Thallium	ND		2.00	1	12/23/2015 02:53	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	489000		10000	1	12/21/2015 12:54	WG837235

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3330		1000	1	12/22/2015 21:56	WG837450
Fluoride	296		100	1	12/22/2015 21:56	WG837450
Sulfate	14700		5000	1	12/22/2015 21:56	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:22	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	356		5.00	1	12/26/2015 13:09	WG837594
Boron	ND		200	1	12/26/2015 13:09	WG837594
Calcium	122000		1000	1	12/26/2015 13:09	WG837594
Chromium	ND		10.0	1	12/26/2015 13:09	WG837594
Cobalt	ND		10.0	1	12/26/2015 13:09	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/23/2015 03:02	WG837587
Arsenic	ND		2.00	1	12/23/2015 03:02	WG837587
Beryllium	ND		2.00	1	12/23/2015 03:02	WG837587
Cadmium	ND		1.00	1	12/23/2015 03:02	WG837587
Lead	ND		2.00	1	12/23/2015 03:02	WG837587
Selenium	3.38		2.00	1	12/23/2015 03:02	WG837587
Thallium	ND		2.00	1	12/23/2015 03:02	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	425000		10000	1	12/21/2015 12:54	WG837235

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	2720		1000	1	12/22/2015 22:12	WG837450
Fluoride	281		100	1	12/22/2015 22:12	WG837450
Sulfate	23000		5000	1	12/22/2015 22:12	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 17:59	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	371		5.00	1	12/24/2015 10:49	WG837594
Boron	ND		200	1	12/24/2015 10:49	WG837594
Calcium	98100	V	1000	1	12/26/2015 12:44	WG837594
Chromium	12.1		10.0	1	12/24/2015 10:49	WG837594
Cobalt	ND		10.0	1	12/24/2015 10:49	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/23/2015 02:39	WG837587
Arsenic	ND		2.00	1	12/23/2015 02:39	WG837587
Beryllium	ND		2.00	1	12/23/2015 02:39	WG837587
Cadmium	ND		1.00	1	12/23/2015 02:39	WG837587
Lead	ND		2.00	1	12/23/2015 02:39	WG837587
Selenium	4.36		2.00	1	12/23/2015 02:39	WG837587
Thallium	ND		2.00	1	12/23/2015 02:39	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	429000		10000	1	12/21/2015 12:54	WG837235

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	2720		1000	1	12/23/2015 00:46	WG837450
Fluoride	283		100	1	12/23/2015 00:46	WG837450
Sulfate	23100		5000	1	12/23/2015 00:46	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:36	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	376		5.00	1	12/26/2015 15:11	WG837594
Boron	ND		200	1	12/26/2015 15:11	WG837594
Calcium	101000		1000	1	12/26/2015 15:11	WG837594
Chromium	ND		10.0	1	12/26/2015 15:11	WG837594
Cobalt	ND		10.0	1	12/26/2015 15:11	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/23/2015 03:16	WG837587
Arsenic	ND		2.00	1	12/23/2015 03:16	WG837587
Beryllium	ND		2.00	1	12/23/2015 03:16	WG837587
Cadmium	ND		1.00	1	12/23/2015 03:16	WG837587
Lead	ND		2.00	1	12/23/2015 03:16	WG837587
Selenium	3.94		2.00	1	12/23/2015 03:16	WG837587
Thallium	ND		2.00	1	12/23/2015 03:16	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	387000		10000	1	12/21/2015 10:34	WG837236

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3300		1000	1	12/23/2015 01:02	WG837450
Fluoride	224		100	1	12/23/2015 01:02	WG837450
Sulfate	15500		5000	1	12/23/2015 01:02	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:39	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	329		5.00	1	12/26/2015 15:14	WG837594
Boron	ND		200	1	12/26/2015 15:14	WG837594
Calcium	107000		1000	1	12/26/2015 15:14	WG837594
Chromium	ND		10.0	1	12/26/2015 15:14	WG837594
Cobalt	ND		10.0	1	12/26/2015 15:14	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/23/2015 03:18	WG837587
Arsenic	ND		2.00	1	12/23/2015 03:18	WG837587
Beryllium	ND		2.00	1	12/23/2015 03:18	WG837587
Cadmium	ND		1.00	1	12/23/2015 03:18	WG837587
Lead	ND		2.00	1	12/23/2015 03:18	WG837587
Selenium	5.79		2.00	1	12/23/2015 03:18	WG837587
Thallium	ND		2.00	1	12/23/2015 03:18	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	291000		10000	1	12/21/2015 02:44	WG837217

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8270		1000	1	12/23/2015 01:17	WG837450
Fluoride	106		100	1	12/23/2015 01:17	WG837450
Sulfate	15700		5000	1	12/23/2015 01:17	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:46	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	180		5.00	1	12/26/2015 15:17	WG837594
Boron	ND		200	1	12/26/2015 15:17	WG837594
Calcium	83900		1000	1	12/26/2015 15:17	WG837594
Chromium	ND		10.0	1	12/26/2015 15:17	WG837594
Cobalt	ND		10.0	1	12/26/2015 15:17	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/23/2015 03:20	WG837587
Arsenic	2.86		2.00	1	12/23/2015 03:20	WG837587
Beryllium	ND		2.00	1	12/23/2015 03:20	WG837587
Cadmium	ND		1.00	1	12/23/2015 03:20	WG837587
Lead	ND		2.00	1	12/23/2015 03:20	WG837587
Selenium	ND		2.00	1	12/23/2015 03:20	WG837587
Thallium	ND		2.00	1	12/23/2015 03:20	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	307000		10000	1	12/21/2015 02:44	WG837217

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8880		1000	1	12/23/2015 01:32	WG837450
Fluoride	121		100	1	12/23/2015 01:32	WG837450
Sulfate	21600		5000	1	12/23/2015 01:32	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:49	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	254		5.00	1	12/24/2015 13:59	WG837594
Boron	ND		200	1	12/24/2015 13:59	WG837594
Calcium	98000		1000	1	12/24/2015 13:59	WG837594
Chromium	ND		10.0	1	12/24/2015 13:59	WG837594
Cobalt	ND		10.0	1	12/24/2015 13:59	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/28/2015 09:22	WG837587
Arsenic	7.53		2.00	1	12/28/2015 09:22	WG837587
Beryllium	ND		2.00	1	12/28/2015 09:22	WG837587
Cadmium	ND		1.00	1	12/28/2015 09:22	WG837587
Lead	ND		2.00	1	12/28/2015 09:22	WG837587
Selenium	ND		2.00	1	12/28/2015 09:22	WG837587
Thallium	ND		2.00	1	12/28/2015 09:22	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	410000		10000	1	12/21/2015 02:44	WG837217

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	18000		1000	1	12/23/2015 01:48	WG837450
Fluoride	231		100	1	12/23/2015 01:48	WG837450
Sulfate	11000		5000	1	12/23/2015 01:48	WG837450

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:51	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	246		5.00	1	12/24/2015 14:02	WG837594
Boron	769		200	1	12/24/2015 14:02	WG837594
Calcium	112000		1000	1	12/24/2015 14:02	WG837594
Chromium	ND		10.0	1	12/24/2015 14:02	WG837594
Cobalt	ND		10.0	1	12/24/2015 14:02	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/28/2015 09:24	WG837587
Arsenic	126		2.00	1	12/28/2015 09:24	WG837587
Beryllium	ND		2.00	1	12/28/2015 09:24	WG837587
Cadmium	ND		1.00	1	12/28/2015 09:24	WG837587
Lead	ND		2.00	1	12/28/2015 09:24	WG837587
Selenium	ND		2.00	1	12/28/2015 09:24	WG837587
Thallium	ND		2.00	1	12/28/2015 09:24	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	342000		10000	1	12/21/2015 02:44	WG837217

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13700		1000	1	12/22/2015 13:06	WG837387
Fluoride	157		100	1	12/22/2015 13:06	WG837387
Sulfate	45800		5000	1	12/22/2015 13:06	WG837387

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:54	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	182		5.00	1	12/24/2015 14:05	WG837594
Boron	ND		200	1	12/24/2015 14:05	WG837594
Calcium	99300		1000	1	12/24/2015 14:05	WG837594
Chromium	ND		10.0	1	12/24/2015 14:05	WG837594
Cobalt	ND		10.0	1	12/24/2015 14:05	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/28/2015 09:26	WG837587
Arsenic	3.14		2.00	1	12/28/2015 09:26	WG837587
Beryllium	ND		2.00	1	12/28/2015 09:26	WG837587
Cadmium	ND		1.00	1	12/28/2015 09:26	WG837587
Lead	ND		2.00	1	12/28/2015 09:26	WG837587
Selenium	ND		2.00	1	12/28/2015 09:26	WG837587
Thallium	ND		2.00	1	12/28/2015 09:26	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	564000		10000	1	12/21/2015 10:34	WG837236

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	14900		1000	1	12/22/2015 13:19	WG837387
Fluoride	276		100	1	12/22/2015 13:19	WG837387
Sulfate	175000		25000	5	12/22/2015 17:55	WG837387

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:56	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	150		5.00	1	12/24/2015 14:08	WG837594
Boron	3010		200	1	12/24/2015 14:08	WG837594
Calcium	131000		1000	1	12/24/2015 14:08	WG837594
Chromium	ND		10.0	1	12/24/2015 14:08	WG837594
Cobalt	ND		10.0	1	12/24/2015 14:08	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/28/2015 09:29	WG837587
Arsenic	4.93		2.00	1	12/28/2015 09:29	WG837587
Beryllium	ND		2.00	1	12/28/2015 09:29	WG837587
Cadmium	ND		1.00	1	12/28/2015 09:29	WG837587
Lead	ND		2.00	1	12/28/2015 09:29	WG837587
Selenium	ND		2.00	1	12/28/2015 09:29	WG837587
Thallium	ND		2.00	1	12/28/2015 09:29	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	673000		10000	1	12/21/2015 10:34	WG837236

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	17500		1000	1	12/22/2015 13:32	WG837387
Fluoride	219		100	1	12/22/2015 13:32	WG837387
Sulfate	ND		5000	1	12/22/2015 13:32	WG837387

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 18:59	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	531		5.00	1	12/24/2015 14:11	WG837594
Boron	4630		200	1	12/24/2015 14:11	WG837594
Calcium	193000		1000	1	12/24/2015 14:11	WG837594
Chromium	ND		10.0	1	12/24/2015 14:11	WG837594
Cobalt	ND		10.0	1	12/24/2015 14:11	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/28/2015 09:31	WG837587
Arsenic	10.8		2.00	1	12/28/2015 09:31	WG837587
Beryllium	ND		2.00	1	12/28/2015 09:31	WG837587
Cadmium	ND		1.00	1	12/28/2015 09:31	WG837587
Lead	8.65		2.00	1	12/28/2015 09:31	WG837587
Selenium	ND		2.00	1	12/28/2015 09:31	WG837587
Thallium	ND		2.00	1	12/28/2015 09:31	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	356000		10000	1	12/21/2015 10:34	WG837236

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	9510		1000	1	12/22/2015 13:45	WG837387
Fluoride	148		100	1	12/22/2015 13:45	WG837387
Sulfate	60900		5000	1	12/22/2015 13:45	WG837387

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 19:01	WG837780

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	180		5.00	1	12/24/2015 14:14	WG837594
Boron	ND		200	1	12/24/2015 14:14	WG837594
Calcium	104000		1000	1	12/24/2015 14:14	WG837594
Chromium	ND		10.0	1	12/24/2015 14:14	WG837594
Cobalt	ND		10.0	1	12/24/2015 14:14	WG837594

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/28/2015 09:33	WG837587
Arsenic	ND		2.00	1	12/28/2015 09:33	WG837587
Beryllium	ND		2.00	1	12/28/2015 09:33	WG837587
Cadmium	ND		1.00	1	12/28/2015 09:33	WG837587
Lead	ND		2.00	1	12/28/2015 09:33	WG837587
Selenium	ND		2.00	1	12/28/2015 09:33	WG837587
Thallium	ND		2.00	1	12/28/2015 09:33	WG837587

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	729000		10000	1	12/21/2015 10:34	WG837236

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	28100		1000	1	12/23/2015 01:27	WG837447
Fluoride	398		100	1	12/23/2015 01:27	WG837447
Sulfate	244000		50000	10	12/23/2015 09:22	WG837447

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 15:31	WG837884

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	331		5.00	1	12/27/2015 01:16	WG837597
Boron	5310		200	1	12/27/2015 01:16	WG837597
Calcium	199000		1000	1	12/27/2015 01:16	WG837597
Chromium	15.2		10.0	1	12/27/2015 01:16	WG837597
Cobalt	ND		10.0	1	12/27/2015 01:16	WG837597

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/29/2015 19:50	WG837891
Arsenic	8.58		2.00	1	12/29/2015 19:50	WG837891
Beryllium	ND		2.00	1	12/29/2015 19:50	WG837891
Cadmium	ND		1.00	1	12/29/2015 19:50	WG837891
Lead	17.7		2.00	1	12/29/2015 19:50	WG837891
Selenium	ND		2.00	1	12/29/2015 19:50	WG837891
Thallium	ND		2.00	1	12/29/2015 19:50	WG837891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	601000		10000	1	12/23/2015 12:01	WG837790

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	73600		1000	1	12/23/2015 01:40	WG837447
Fluoride	182		100	1	12/23/2015 01:40	WG837447
Sulfate	88100		5000	1	12/23/2015 01:40	WG837447

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 15:59	WG837884

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	146		5.00	1	12/27/2015 01:19	WG837597
Boron	438		200	1	12/27/2015 01:19	WG837597
Calcium	159000		1000	1	12/27/2015 01:19	WG837597
Chromium	ND		10.0	1	12/27/2015 01:19	WG837597
Cobalt	ND		10.0	1	12/27/2015 01:19	WG837597

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/29/2015 19:52	WG837891
Arsenic	ND		2.00	1	12/29/2015 19:52	WG837891
Beryllium	ND		2.00	1	12/29/2015 19:52	WG837891
Cadmium	ND		1.00	1	12/29/2015 19:52	WG837891
Lead	ND		2.00	1	12/29/2015 19:52	WG837891
Selenium	ND		2.00	1	12/29/2015 19:52	WG837891
Thallium	ND		2.00	1	12/29/2015 19:52	WG837891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	385000		10000	1	12/23/2015 12:01	WG837790

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	63500		1000	1	12/23/2015 20:01	WG837784
Fluoride	268		100	1	12/23/2015 20:01	WG837784
Sulfate	33300		5000	1	12/23/2015 20:01	WG837784

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	12/23/2015 16:01	WG837884

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	232		5.00	1	12/27/2015 01:22	WG837597
Boron	221		200	1	12/27/2015 01:22	WG837597
Calcium	86600		1000	1	12/27/2015 01:22	WG837597
Chromium	ND		10.0	1	12/27/2015 01:22	WG837597
Cobalt	ND		10.0	1	12/27/2015 01:22	WG837597

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	12/29/2015 19:55	WG837891
Arsenic	3.04		2.00	1	12/29/2015 19:55	WG837891
Beryllium	ND		2.00	1	12/29/2015 19:55	WG837891
Cadmium	ND		1.00	1	12/29/2015 19:55	WG837891
Lead	2.60		2.00	1	12/29/2015 19:55	WG837891
Selenium	ND		2.00	1	12/29/2015 19:55	WG837891
Thallium	ND		2.00	1	12/29/2015 19:55	WG837891

Method Blank (MB)

(MB) R3101401-1 12/21/15 02:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

Original Sample (OS) • Duplicate (DUP)

(OS) L807085-01 12/21/15 02:44 • (DUP) R3101401-4 12/21/15 02:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	204	214	1	4.78		5

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

(LCS) R3101401-2 12/21/15 02:44 • (LCSD) R3101401-3 12/21/15 02:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800	8160	8340	92.7	94.8	85.0-115			2.18	5

Method Blank (MB)

(MB) R3101619-1 12/21/15 12:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

Original Sample (OS) • Duplicate (DUP)

(OS) L807906-03 12/21/15 12:54 • (DUP) R3101619-4 12/21/15 12:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	475	461	1	2.99		5

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

(LCS) R3101619-2 12/21/15 12:54 • (LCSD) R3101619-3 12/21/15 12:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800	8850	8610	101	97.8	85.0-115			2.75	5

Method Blank (MB)

(MB) R3101400-1 12/21/15 10:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

Original Sample (OS) • Duplicate (DUP)

(OS) L807906-13 12/21/15 10:34 • (DUP) R3101400-4 12/21/15 10:34

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	387	406	1	4.79		5

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

(LCS) R3101400-2 12/21/15 10:34 • (LCSD) R3101400-3 12/21/15 10:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800	8490	8780	96.5	99.8	85.0-115			3.36	5

Method Blank (MB)

(MB) R3102426-1 12/23/15 12:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

Original Sample (OS) • Duplicate (DUP)

(OS) L807906-01 12/23/15 12:01 • (DUP) R3102426-4 12/23/15 12:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	155	148	1	4.62		5

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

(LCS) R3102426-2 12/23/15 12:01 • (LCSD) R3102426-3 12/23/15 12:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800	8490	8540	96.5	97.0	85.0-115			0.587	5

Method Blank (MB)

(MB) R3101904-1 12/22/15 07:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.0099	0.100
Sulfate	U		0.0774	5.00

Original Sample (OS) • Duplicate (DUP)

(OS) L805836-01 12/22/15 11:10 • (DUP) R3101904-4 12/22/15 11:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	3.22	3.27	2	2		15
Sulfate	62.7	62.6	2	0		15

Original Sample (OS) • Duplicate (DUP)

(OS) L808002-04 12/22/15 16:24 • (DUP) R3101904-9 12/22/15 16:37

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3.19	3.31	1	4		15
Fluoride	0.000200	0.0139	1	194	P1	15
Sulfate	9.69	10.2	1	5		15

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

(LCS) R3101904-2 12/22/15 07:43 • (LCSD) R3101904-3 12/22/15 07:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	39.5	39.6	99	99	80-120			0	15
Fluoride	8.00	7.87	7.87	98	98	80-120			0	15
Sulfate	40.0	41.5	41.5	104	104	80-120			0	15

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

(OS) L807255-05 12/22/15 12:01 • (MS) R3101904-5 12/22/15 12:14 • (MSD) R3101904-6 12/22/15 12:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %

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

(OS) L807255-05 12/22/15 12:01 • (MS) R3101904-5 12/22/15 12:14 • (MSD) R3101904-6 12/22/15 12:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	19.0	69.6	62.8	101	88	1	80-120			10	15
Fluoride	5.00	0.268	5.41	5.21	103	99	1	80-120			4	15
Sulfate	50.0	ND	52.3	52.2	105	104	1	80-120			0	15

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

(OS) L807303-03 12/22/15 14:23 • (MS) R3101904-7 12/22/15 14:36 • (MSD) R3101904-8 12/22/15 14:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	4.39	502	502	99	99	10	80-120			0	15
Fluoride	5.00	0.381	49.5	51.2	98	102	10	80-120			3	15
Sulfate	50.0	330	789	786	92	91	10	80-120			0	15

Method Blank (MB)

(MB) R3101981-1 12/22/15 18:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.0099	0.100
Sulfate	U		0.0774	5.00

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

(LCS) R3101981-2 12/22/15 19:12 • (LCSD) R3101981-3 12/22/15 19:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	39.6	39.6	99	99	80-120			0	15
Fluoride	8.00	7.85	7.86	98	98	80-120			0	15
Sulfate	40.0	40.3	40.3	101	101	80-120			0	15

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

(OS) L807799-03 12/23/15 00:35 • (MS) R3101981-4 12/23/15 00:48 • (MSD) R3101981-5 12/23/15 01:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	7.23	56.6	56.9	99	99	1	80-120			1	15
Fluoride	5.00	0.0390	4.96	5.19	98	103	1	80-120			4	15
Sulfate	50.0	2.33	54.0	54.2	103	104	1	80-120			0	15

Method Blank (MB)

(MB) R3101913-1 12/22/15 19:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.0099	0.100
Sulfate	U		0.0774	5.00

Original Sample (OS) • Duplicate (DUP)

(OS) L807863-04 12/22/15 20:24 • (DUP) R3101913-4 12/22/15 20:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	153	153	10	0		15
Fluoride	ND	-0.0608	10	0		15
Sulfate	0.490	-0.00200	10	0		15

Original Sample (OS) • Duplicate (DUP)

(OS) L807863-07 12/23/15 02:49 • (DUP) R3101913-8 12/23/15 03:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	138	138	10	0		15
Fluoride	ND	-0.0843	10	0		15
Sulfate	11.2	11.9	10	6		15

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

(LCS) R3101913-2 12/22/15 19:22 • (LCSD) R3101913-3 12/22/15 19:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	39.4	39.4	98	98	80-120			0	15
Fluoride	8.00	7.86	7.88	98	98	80-120			0	15
Sulfate	40.0	40.3	40.4	101	101	80-120			0	15

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

(OS) L807906-06 12/22/15 22:12 • (MS) R3101913-5 12/22/15 22:27 • (MSD) R3101913-6 12/22/15 22:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	2.72	53.4	53.3	101	101	1	80-120			0	15
Fluoride	5.00	0.281	5.40	5.39	102	102	1	80-120			0	15
Sulfate	50.0	23.0	72.7	72.7	99	100	1	80-120			0	15

Original Sample (OS) • Matrix Spike (MS)

(OS) L807863-05 12/23/15 02:03 • (MS) R3101913-7 12/23/15 02:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	102	603	100	10	80-120	
Fluoride	5.00	ND	52.2	104	10	80-120	
Sulfate	50.0	ND	524	105	10	80-120	

Method Blank (MB)

(MB) R3102588-1 12/23/15 18:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.0099	0.100
Sulfate	U		0.0774	5.00

Original Sample (OS) • Duplicate (DUP)

(OS) L808026-02 12/23/15 21:18 • (DUP) R3102588-5 12/23/15 21:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3.67	3.72	1	1		15
Fluoride	0.0144	0.0431	1	0		15

Original Sample (OS) • Duplicate (DUP)

(OS) L808026-02 12/24/15 11:00 • (DUP) R3102588-10 12/24/15 11:13

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	454	449	10	1		15

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

(LCS) R3102588-2 12/23/15 19:09 • (LCSD) R3102588-3 12/23/15 19:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	39.8	39.9	99	100	80-120			0	15
Fluoride	8.00	7.88	7.92	99	99	80-120			1	15
Sulfate	40.0	40.5	40.6	101	101	80-120			0	15

Original Sample (OS) • Matrix Spike (MS)

(OS) L808003-01 12/23/15 20:27 • (MS) R3102588-4 12/23/15 20:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	21.7	71.3	99	1	80-120	
Fluoride	5.00	0.0310	4.99	99	1	80-120	

Original Sample (OS) • Matrix Spike (MS)

(OS) L808003-01 12/23/15 20:27 • (MS) R3102588-4 12/23/15 20:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	50.0	61.8	100	77	1	80-120	J6

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

(OS) L808026-01 12/23/15 23:02 • (MS) R3102588-6 12/23/15 23:15 • (MSD) R3102588-7 12/23/15 23:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	4.34	54.1	54.4	100	100	1	80-120			0	15
Fluoride	5.00	0.0199	5.06	5.15	101	103	1	80-120			2	15

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

(OS) L808026-01 12/24/15 10:21 • (MS) R3102588-8 12/24/15 10:34 • (MSD) R3102588-9 12/24/15 10:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	50.0	305	727	723	84	83	10	80-120			1	15

Method Blank (MB)

(MB) R3102244-1 12/23/15 17:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000049	0.000200

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

(LCS) R3102244-2 12/23/15 17:54 • (LCSD) R3102244-3 12/23/15 17:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00266	0.00295	89	98	80-120			10	20

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

(OS) L807906-06 12/23/15 17:59 • (MS) R3102244-4 12/23/15 18:02 • (MSD) R3102244-5 12/23/15 18:04

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	ND	0.00268	0.00235	89	78	1	75-125			13	20

Method Blank (MB)

(MB) R3102242-1 12/23/15 15:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000049	0.000200

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

(LCS) R3102242-2 12/23/15 15:26 • (LCSD) R3102242-3 12/23/15 15:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00270	0.00251	90	84	80-120			7	20

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

(OS) L807906-21 12/23/15 15:31 • (MS) R3102242-4 12/23/15 15:34 • (MSD) R3102242-5 12/23/15 15:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	ND	0.00267	0.00271	89	90	1	75-125			2	20

Method Blank (MB)

(MB) R3102577-4 12/24/15 10:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Barium	U		0.0017	0.00500
Boron	U		0.0126	0.200
Chromium	U		0.0014	0.0100
Cobalt	U		0.0023	0.0100

Method Blank (MB)

(MB) R3102831-1 12/28/15 10:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium	U		0.0463	1.00

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

(LCS) R3102577-6 12/24/15 10:43 • (LCSD) R3102577-7 12/24/15 10:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Barium	1.00	1.08	1.08	108	108	80-120			0	20
Boron	1.00	1.12	1.09	112	109	80-120			2	20
Chromium	1.00	1.12	1.11	112	111	80-120			1	20
Cobalt	1.00	1.11	1.12	111	112	80-120			1	20

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

(LCS) R3102831-2 12/28/15 10:39 • (LCSD) R3102831-3 12/28/15 10:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Calcium	10.0	10.1	10.1	101	101	80-120			0	20

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

(OS) L807906-06 12/24/15 10:49 • (MS) R3102577-9 12/24/15 10:55 • (MSD) R3102577-10 12/24/15 10:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	1.00	0.371	1.45	1.47	108	109	1	75-125			1	20

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

(OS) L807906-06 12/24/15 10:49 • (MS) R3102577-9 12/24/15 10:55 • (MSD) R3102577-10 12/24/15 10:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	0.0756	1.21	1.20	113	112	1	75-125			1	20
Chromium	1.00	0.0121	1.13	1.15	112	114	1	75-125			2	20
Cobalt	1.00	0.00329	1.14	1.15	114	115	1	75-125			1	20

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

(OS) L807906-06 12/26/15 12:44 • (MS) R3102640-2 12/26/15 12:50 • (MSD) R3102640-3 12/26/15 12:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Calcium	10.0	98.1	110	115	120	169	1	75-125		V	4	20

Method Blank (MB)

(MB) R3102660-7 12/27/15 00:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Barium	U		0.0017	0.00500
Boron	U		0.0126	0.200
Calcium	0.133		0.0463	1.00
Chromium	U		0.0014	0.0100
Cobalt	U		0.0023	0.0100

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

(LCS) R3102660-8 12/27/15 00:58 • (LCSD) R3102660-9 12/27/15 01:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Barium	1.00	1.00	1.03	100	103	80-120			3	20
Boron	1.00	1.01	1.03	101	103	80-120			2	20
Calcium	10.0	9.86	9.89	99	99	80-120			0	20
Chromium	1.00	1.04	1.06	104	106	80-120			2	20
Cobalt	1.00	1.01	1.04	101	104	80-120			3	20

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

(OS) L808122-04 12/27/15 01:04 • (MS) R3102660-11 12/27/15 01:10 • (MSD) R3102660-12 12/27/15 01:13

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	1.00	0.0170	1.02	1.03	100	101	1	75-125			1	20
Boron	1.00	4.78	5.79	5.81	101	103	1	75-125			0	20
Calcium	10.0	476	485	484	95	83	1	75-125			0	20
Chromium	1.00	ND	1.04	1.05	104	105	1	75-125			0	20
Cobalt	1.00	0.00282	1.10	1.11	110	111	1	75-125			0	20

Method Blank (MB)

(MB) R3101870-1 12/23/15 02:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	0.000326		0.00021	0.00200
Arsenic	U		0.00025	0.00200
Beryllium	U		0.00012	0.00200
Cadmium	U		0.00016	0.00100
Lead	U		0.00024	0.00200
Selenium	U		0.00038	0.00200
Thallium	U		0.00019	0.00200

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

(LCS) R3101870-2 12/23/15 02:34 • (LCSD) R3101870-3 12/23/15 02:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.0529	0.0524	106	105	80-120			1	20
Arsenic	0.0500	0.0474	0.0497	95	99	80-120			5	20
Beryllium	0.0500	0.0474	0.0478	95	96	80-120			1	20
Cadmium	0.0500	0.0480	0.0496	96	99	80-120			3	20
Lead	0.0500	0.0470	0.0486	94	97	80-120			4	20
Selenium	0.0500	0.0460	0.0480	92	96	80-120			4	20
Thallium	0.0500	0.0476	0.0480	95	96	80-120			1	20

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

(OS) L807906-06 12/23/15 02:39 • (MS) R3101870-5 12/23/15 02:44 • (MSD) R3101870-6 12/23/15 02:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.000376	0.0530	0.0526	105	104	1	75-125			1	20
Arsenic	0.0500	0.00107	0.0503	0.0483	99	94	1	75-125			4	20
Beryllium	0.0500	0.0000663	0.0481	0.0475	96	95	1	75-125			1	20
Cadmium	0.0500	0.0000319	0.0502	0.0483	100	97	1	75-125			4	20
Lead	0.0500	0.000325	0.0484	0.0462	96	92	1	75-125			5	20
Selenium	0.0500	0.00436	0.0525	0.0494	96	90	1	75-125			6	20
Thallium	0.0500	0.0000560	0.0478	0.0470	95	94	1	75-125			2	20

Method Blank (MB)

(MB) R3102962-1 12/28/15 15:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	0.000238		0.00021	0.00200
Arsenic	U		0.00025	0.00200
Beryllium	U		0.00012	0.00200
Cadmium	U		0.00016	0.00100
Lead	U		0.00024	0.00200
Selenium	U		0.00038	0.00200
Thallium	U		0.00019	0.00200

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

(LCS) R3102962-2 12/28/15 15:49 • (LCSD) R3102962-3 12/28/15 15:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.0471	0.0480	94	96	80-120			2	20
Arsenic	0.0500	0.0512	0.0522	102	104	80-120			2	20
Beryllium	0.0500	0.0485	0.0513	97	103	80-120			6	20
Cadmium	0.0500	0.0489	0.0490	98	98	80-120			0	20
Lead	0.0500	0.0507	0.0536	101	107	80-120			6	20
Selenium	0.0500	0.0518	0.0520	104	104	80-120			0	20
Thallium	0.0500	0.0493	0.0528	99	106	80-120			7	20

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

(OS) L808486-01 12/28/15 15:59 • (MS) R3102962-5 12/28/15 16:08 • (MSD) R3102962-6 12/28/15 16:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.000242	0.0470	0.0471	93	94	1	75-125			0	20
Arsenic	0.0500	0.000204	0.0514	0.0513	102	102	1	75-125			0	20
Beryllium	0.0500	0.000258	0.0476	0.0466	95	93	1	75-125			2	20
Cadmium	0.0500	0.000108	0.0486	0.0482	97	96	1	75-125			1	20
Lead	0.0500	0.000557	0.0501	0.0501	99	99	1	75-125			0	20
Selenium	0.0500	0.000559	0.0535	0.0518	106	103	1	75-125			3	20
Thallium	0.0500	0.000425	0.0486	0.0480	96	95	1	75-125			1	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

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

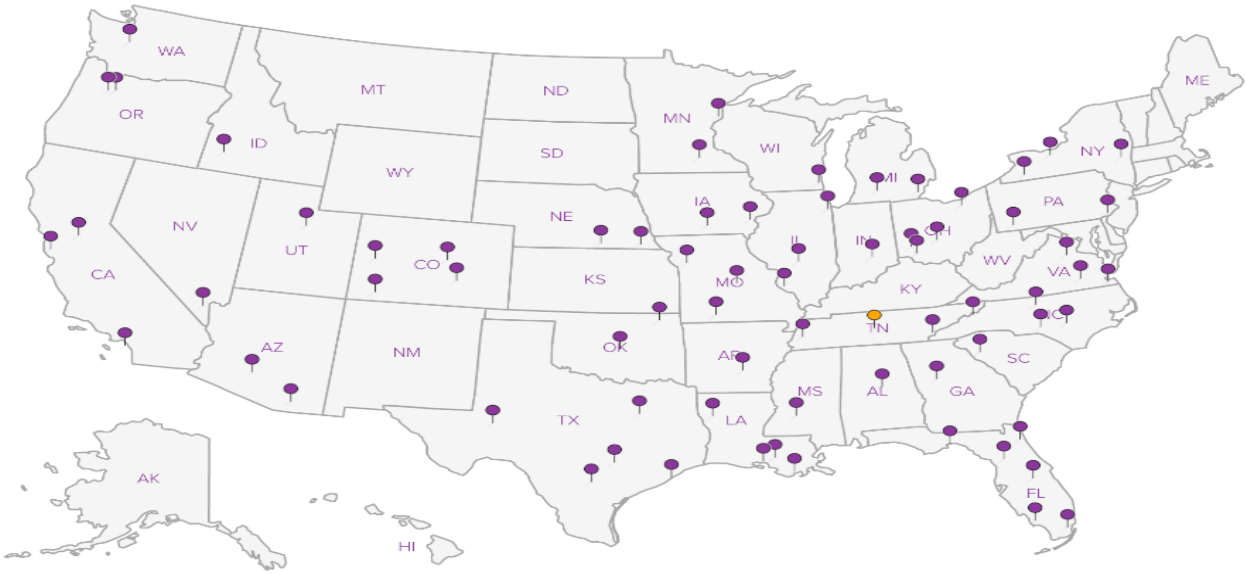
Third Party & Federal Accreditations

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

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

Our Locations

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



SCS Aquaterra

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

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

Report to: Mr. Jason R. Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: SIBLEY, MO

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

Client Project # 27213169.15

Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions 125mlHDPE-NoPres	COD 250mlHDPE-H2SO4	Metals 500mlHDPE-HNO3	TDS 250mlHDPE-NoPres	TOC 250mlAmb-Septa-HCl	TOX 1L-Amb-Add H2SO4	Rem./Contaminant	Sample # (lab only)
504	GRAB	GW	–	12/16/15	1000	6	X	X	X	X	X	X		-01
505		GW	–	12/16/15	1100	6	X	X	X	X	X	X		02
506		GW	–	12/15/15	1410	6	X	X	X	X	X	X		03
507		GW	–	12/15/15	1535	6	X	X	X	X	X	X		04
~~508~~		GW	–	NO SAMPLE		6	X	X	X	X	X	X		
510		GW	–	12/15/15	1645	6	X	X	X	X	X	X		05
~~511~~		GW	–	NO SAMPLE		6	X	X	X	X	X	X		
512		GW	–	12/15/15	1635	6	X	X	X	X	X	X		06
513		GW	–	12/15/15	1600	6	X	X	X	X	X	X		07
514		GW	–	12/15/15	1410	6	X	X	X	X	X	X		08

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Chain of Custody Page 1 of 2

ESC LAB SCIENCES
YOUR LAB OF CHOICE

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

L # L807906
C004

Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206 - Jeff Carr
PB:

Shipped Via: FedEX Ground

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	12/17/15	1400	
Relinquished by : (Signature)	Date: 12/17/15	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 2.2 °C Bottles Received: 38

Date: 12/18/15 Time: 900

Condition: (lab use only) OK

COC Seal Intact: ___Y ___N ___NA

pH Checked: L2 NCF: N/S

Chain of Custody Page 2 of 2

ESC LABS — YOUR LAB OF CHOICE
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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

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

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

Report to: **Mr. Jason R. Franks**
Email To: **jfranks@scsengineers.com**

Project Description: **Sibley Generating Station**
City/State Collected: Sibley, MO

Phone: **913-681-0030**
Fax: **913-681-0012**
Client Project # **27213169.15**
Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): JASON R. FRANKS
Collected by (signature): Jason R. Franks
Immediately Packed on Ice N ___ Y ✓
Site/Facility ID #
P.O. #

Rush? (Lab MUST be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD
Email? ___No X Yes
FAX? ___No ___Yes

L# 1807906
Table #
Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206 - Jeff Carr
PB:
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions 125mlHDPE-NoPres	COD 250mlHDPE-H2SO4	Metals 500mlHDPE-HNO3	TDS 250mlHDPE-NoPres	TOC 250mlAmb-Septa-HCl	TOX 1L-Amb-Add H2SO4	Rem./Contaminant	Sample # (lab only)
515	GRAB	GW	-	12/15/15	1315	6	X	X	X	X	X	X		09
516		GW	-	12/15/15	1225	6	X	X	X	X	X	X		10
PZ-03		GW	-	12/15/15	1445	6	X	X	X	X	X	X		11
DUPLICATE		GW	-	12/15/15		6	X	X	X	X	X	X		12
512 MS		GW	-	12/15/15	1645	6	X	X	X	X	X	X		06
512 MSD	✓	GW	-	12/15/15	1645	6	X	X	X	X	X	X		06

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____
Temp: 3.2 °C Bottles Received: 138

Hold #
Condition: (lab use only) OK
COC Seal Intact: ___Y ___N ___NA
pH Checked: LZ NCF: Yes

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	12/17/15	1400	
Relinquished by: (Signature)	Date: 12/17/15	Time: 1700	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Date: 12/18/15 Time: 900

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions 125ml HDPE-NoPres	COD 250mlHDPE-H2S04	Metals 500mlHDPE-HN03	TDS 250mlHDPE-NoPres	TOC 250mlAmb-Septa-HCL	TOX 1L-Amb-Add H2S04	Rem./Contaminant	Sample # (lab only)
601	GRAB	GW	—	12/15/15	1215	6	X	X	X	X	X	X		13
~~602~~		GW	—	NO SAMPLE		6	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
701		GW	—	12/14/15	1655	6	X	X	X	X	X	X		14
702		GW	—	12/14/15	1550	6	X	X	X	X	X	X		15
703		GW	—	12/14/15	1590	6	X	X	X	X	X	X		16
704		GW	—	12/14/15	1640	6	X	X	X	X	X	X		17
801		GW	—	12/16/15	1155	6	X	X	X	X	X	X		~~18~~
802		GW	—	12/16/15	1245	6	X	X	X	X	X	X		
803		GW	—	12/15/15	1050	6	X	X	X	X	X	X		18
804		GW	—	12/15/15	1140	6	X	X	X	X	X	X		19

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Remarks:

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	12/17/15	1400	
Relinquished by : (Signature)	Date: 12/17/15	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 138

Date: 12/18/15 Time: 900

Condition: (lab use only) OK

COC Seal Intact: ___Y ___N ___NA

pH Checked: CC NCF: YES

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L807906
C243
Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206-jeff Carr
Cooler:
Shipped Via:

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions 125ml HDPE-NoPres	COD 250mlHDPE-H2S04	Metals 500mlHDPE-HN03	TDS 250mlHDPE-NoPres	TOC 250mlAmb-Septa-HCL	TOX 1L-Amb-Add H2S04	Rem./Contaminant	Sample # (lab only)
805	Grab	GW	-	12/15/15	1225	6	X	X	X	X	X	X		21
806	↓	GW	-	12/16/15	1335	6	X	X	X	X	X	X		22

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1807906

Table #

Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206-jeff Carr
Cooler:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other ___

Remarks:

pH ___ Temp ___
Flow ___ Other ___

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	12/17/15	1400	
Relinquished by: (Signature)	Date: 12/17/15	Time: 1700	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ___

Temp: 3.2 °C Bottles Received: 13

Date: 12/18/15 Time: 9:00

Condition: (lab use only) W OK

COC Seal Intact: ___Y ___N ___NA

pH Checked: LL

NCF: YES

ANALYTICAL REPORT

February 05, 2016

SCS Aquaterra

Sample Delivery Group:	L807986
Samples Received:	12/18/2015
Project Number:	27213169.15
Description:	Sibley Generating Station

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Project Narrative

L807986 -01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15, -16, -17 contains subout data that is included after the chain of custody.

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description

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

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

Third Party & Federal Accreditations

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

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

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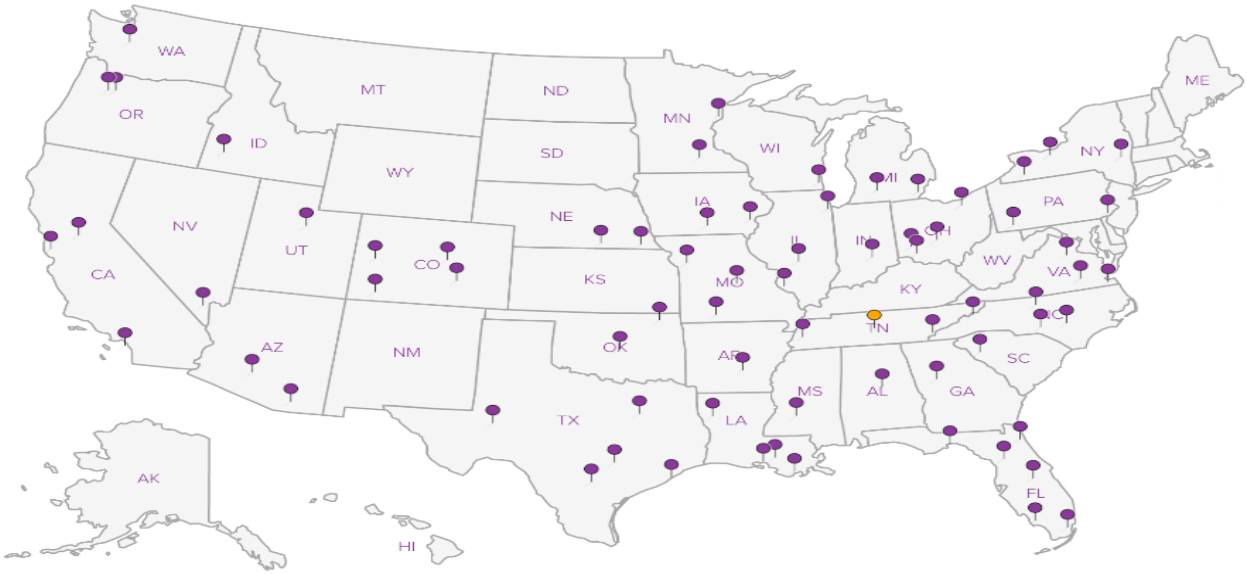


Chain of Custody Page 5 of 5

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L807986
B069
Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206-jeff Carr
Cooler:
Shipped Via:

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks
Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station
City/State Collected: Sibley, MO

Phone: 913-681-0030
Fax: 913-681-0012
Client Project # 27213169.15
Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD
Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenum 500mlHDPE-HN03 ✓N	RA-226, RA-228 1LHDPE-HN03 ✓N	Rem./Contaminant	Sample # (lab only)
504	GRAB	GW	-	12/16/15	1000	3	X	X		-01
505			-	12/16/15	1100	3	X	X		02
506			-	12/15/15	1410	3	X	X		03
510			-	12/15/15	1645	3	X	X		04
512			-	12/15/15	1635	3	X	X		05
DUPLICATE			-	12/15/15		3	X	X		06
512' MS			-	12/15/15	1645	3	X	X		04
512 MSD			-	12/15/15	1645	3	X	X		

Analysis / Container / Preservative

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

pH ___ Temp ___
Flow ___ Other ___

Remarks:

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	12/17/15	1400	
Relinquished by: (Signature)	Date: 12/17/15	Time: 1700	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ___
Temp: 3.2 °C Bottles Received: 32=ER
Date: 12/18/15 Time: 900

Hold #
Condition: 02 (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

Chain of Custody Page 3 of 5

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L907986

Table #

Acctnum: AQUAOPKS

Template: T59883

Prelogin: P529029

TSR: 206-jeff Carr

Cooler:

Shipped Via:

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenum 500ml HDPE-HN03	RA-226, RA-228 1LHDPE-HNO3								Rem./Contaminant	Sample # (lab only)
601	GRAB	GW	—	12/15/15	1215	3	X	X									06
602		GW	—	NO SAMPLE		3	X	X									
701		GW	—	12/14/15	1655	3	X	X									07
702		GW	—	12/14/15	1550	3	X	X									08
703		GW	—	12/14/15	1540	3	X	X									09
704		GW	—	12/14/15	1640	3	X	X									10
801		GW	—	12/16/15	1155	3	X	X									.
802		GW	—	12/16/15	1245	3	X	X									
803		GW	—	12/15/15	1050	3	X	X									11
804		GW	—	12/15/15	1140	3	X	X									12

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

pH ___ Temp ___

Flow ___ Other ___

Remarks:

Hold #

Condition: (lab use only)

Relinquished by : (Signature) Jason R. Franks — Date: 12/17/15 — Time: 1400 — Received by : (Signature)

Relinquished by : (Signature) — Date: 12/17/15 — Time: 1700 — Received by : (Signature)

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

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ___

Temp: 3.2 °C Bottles Received: 32

Date: 12/18/15 Time: 900

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Page 4 of 5

Chain of Custody

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L907986

Table #

Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206-jeff Carr
Cooler:
Shipped Via:

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenum 500mlHDPE-HN03	RA-226, RA-228 1LHDPE-HN03	Rem./Contaminant	Sample # (lab only)
805	GRAB	GW	—	12/15/15	1225	3	X	X		13
806	↓	GW	—	12/16/15	1335	3	X	X		14

Analysis / Container / Preservative

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 32

Date: 12/18/15 Time: 900

Hold #

Condition: (lab use only) OK

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	12/17/15	1400	
Relinquished by: (Signature)	Date: 12/17/15	Time: 1700	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

ANALYTICAL REPORT

December 24, 2015

SCS Aquaterra

Sample Delivery Group:	L807978
Samples Received:	12/18/2015
Project Number:	27213169.15
Description:	Sibley Generating Station

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

John Hawkins
Technical Service Representative

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

504 L807978-01 GW

Collected by: Jason R Franks | Collected date/time: 12/16/15 10:00 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:13	ST

506 L807978-02 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 14:10 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:22	ST

510 L807978-03 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 16:45 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:25	ST

512 L807978-04 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 16:35 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:01	ST

DUPLICATE L807978-05 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 00:00 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:28	ST

601 L807978-06 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 12:15 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:31	ST

701 L807978-07 GW

Collected by: Jason R Franks | Collected date/time: 12/14/15 16:55 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:34	ST

702 L807978-08 GW

Collected by: Jason R Franks | Collected date/time: 12/14/15 15:50 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:37	ST

703 L807978-09 GW

Collected by: Jason R Franks | Collected date/time: 12/14/15 15:40 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:40	ST

704 L807978-10 GW

Collected by: Jason R Franks | Collected date/time: 12/14/15 16:40 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:44	ST

803 L807978-11 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 10:50 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:47	ST

804 L807978-12 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 11:40 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:50	ST

805 L807978-13 GW

Collected by: Jason R Franks | Collected date/time: 12/15/15 12:25 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 18:59	ST

806 L807978-14 GW

Collected by: Jason R Franks | Collected date/time: 12/16/15 13:35 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 19:02	ST

505 L807978-15 GW

Collected by: Jason R Franks | Collected date/time: 12/16/15 11:00 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 19:05	ST

801 L807978-16 GW

Collected by: Jason R Franks | Collected date/time: 12/16/15 11:55 | Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 19:08	ST

802 L807978-17 GW

Collected by: Jason R Franks
Collected date/time: 12/16/15 12:45
Received date/time: 12/18/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG837607	1	12/23/15 16:33	12/23/15 19:11	ST

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

John Hawkins
Technical Service Representative

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:13	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:13	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:22	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:22	WG837607

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Lithium	ND		15.0	1	12/23/2015 18:25	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:25	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:01	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:01	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:28	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:28	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:31	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:31	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:34	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:34	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:37	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:37	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:40	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:40	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:44	WG837607
Molybdenum	9.14		5.00	1	12/23/2015 18:44	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:47	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:47	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	21.8		15.0	1	12/23/2015 18:50	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:50	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 18:59	WG837607
Molybdenum	ND		5.00	1	12/23/2015 18:59	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	20.4		15.0	1	12/23/2015 19:02	WG837607
Molybdenum	982		5.00	1	12/23/2015 19:02	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 19:05	WG837607
Molybdenum	ND		5.00	1	12/23/2015 19:05	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 19:08	WG837607
Molybdenum	ND		5.00	1	12/23/2015 19:08	WG837607

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	12/23/2015 19:11	WG837607
Molybdenum	ND		5.00	1	12/23/2015 19:11	WG837607

Method Blank (MB)

(MB) 12/23/15 17:52

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Lithium	ND		0.0150
Molybdenum	ND		0.00500

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

(LCS) 12/23/15 17:55 • (LCSD) 12/23/15 17:58

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Lithium	1.00	1.07	1.06	107	106	80-120			1	20
Molybdenum	1.00	1.02	1.01	102	101	80-120			1	20

L807978-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/23/15 18:01 • (MS) 12/23/15 18:07 • (MSD) 12/23/15 18:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Lithium	1.00	0.00387	1.06	1.05	105	105	1	75-125			0	20
Molybdenum	1.00	0.00111	0.987	0.986	99	99	1	75-125			0	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

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

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

State Accreditations

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

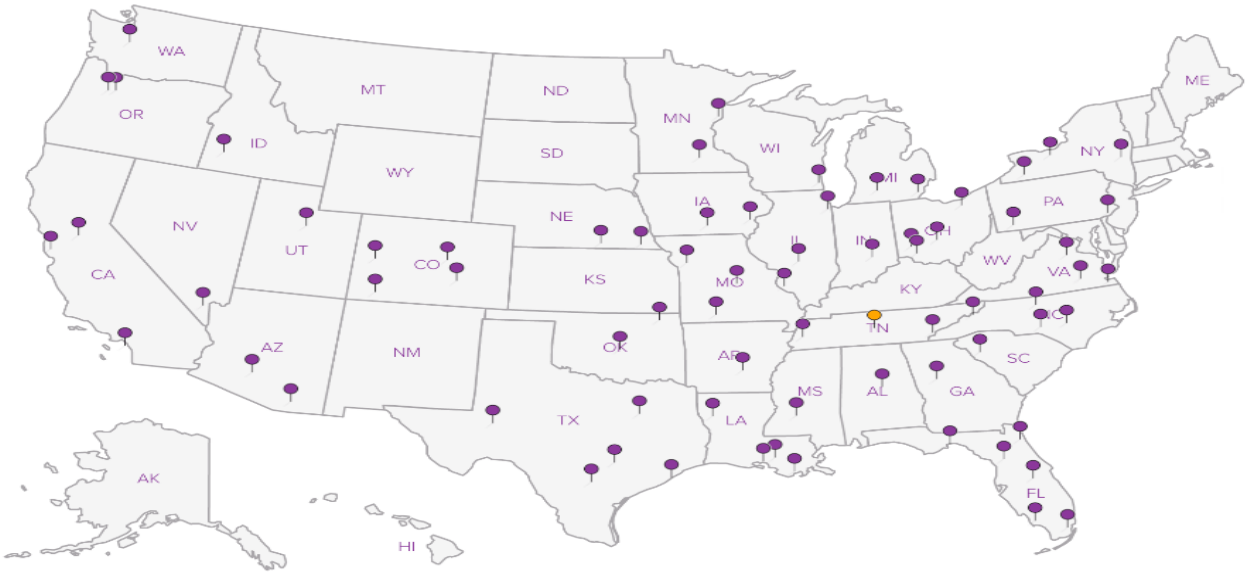
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenum 500mlHDPE-HN03	RA-226, RA-228 1LHDPE-HN03
504	GRAB	GW	-	12/16/15	1000	3	X	X
505			-	12/16/15	1100	3	X	X
506			-	12/15/15	1410	3	X	X
510			-	12/15/15	1645	3	X	X
512			-	12/15/15	1635	3	X	X
DUPLICATE			-	12/15/15		3	X	X
512 MS			-	12/15/15	1645	3	X	X
512 MSD			-	12/15/15	1645	3	X	X

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 16=DR

Date: 12/15/15 Time: 900

Relinquished by: (Signature) Jason R. Franks — Date: 12/17/15 — Time: 1400 — Received by: (Signature)

Relinquished by: (Signature) — Date: 12/17/15 — Time: 1700 — Received by: (Signature)

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

Hold #

Condition: HV OK (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF: YES

Chain of Custody Page 5 of 5

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L807978

B068

Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206-jeff Carr
Cooler:
Shipped Via:

Rem./Contaminant	Sample # (lab only)
	-01
	02 03
	03 04
	04 05
	05 06
	04 05
	04 05

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: **Jason Franks**

Email To: **jfranks@scsengineers.com**

Project Description: **Sibley Generating Station**

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project # **AQUAOPKS-SIBLEY**

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 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenom 500ml HDPE-HN03	RA-226, RA-228 1LHDPE-HNO3	Rem./Contaminant	Sample # (lab only)
601	GRAB	GW	—	12/15/15	1215	3	X	X		06
602		GW	—	NO SAMPLE		3	X	X		
701		GW	—	12/14/15	1655	3	X	X		07
702		GW	—	12/14/15	1550	3	X	X		08
703		GW	—	12/14/15	1540	3	X	X		09
704		GW	—	12/14/15	1640	3	X	X		10
801		GW	—	12/16/15	1155	3	X	X		MW
802		GW	—	12/16/15	1245	3	X	X		
803		GW	—	12/15/15	1050	3	X	X		11
804		GW	—	12/15/15	1140	3	X	X		12

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Relinquished by : (Signature): Jason R. Franks — Date: 12/17/15 — Time: 1400 — Received by: (Signature)

Relinquished by : (Signature) — Date: 12/17/15 — Time: 1700 — Received by: (Signature)

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

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 16

Date: 12/18/15 Time: 9:00

Hold #

Condition: N (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF: YES

Analysis / Container / Preservative

Chain of Custody Page 3 of 5

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L807978

Table #

Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206-jeff Carr
Cooler:
Shipped Via:

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks
Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station
City/State Collected: Sibley, MO

Phone: 913-681-0030
Fax: 913-681-0012
Client Project #: 27213169.15
Lab Project #: AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD
Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenom 500mlHDPE-HN03	RA-226, RA-228 1LHDPE-HN03	Rem./Contaminant	Sample # (lab only)
805	Grab	GW	—	12/15/15	1225	3	X	X		13
806	↓	GW	—	12/16/15	1335	3	X	X		14

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABORATORIES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #:
Table #:
Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206-jeff Carr
Cooler:
Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #:

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	12/17/15	1400	
Relinquished by: (Signature)	Date: 12/17/15	Time: 1700	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____
Temp: 3.2 °C Bottles Received: 16
Date: 12/18/15 Time: 900

Condition: 1 (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF: YES

Case Narrative

Lab No: 20151328

This report contains the analytical results for the 19 sample(s) received under chain of custody by Outreach Laboratory on 12/23/15 15:47:39. These samples are associated with your WG837380 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of Outreach Laboratory.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Laboratory Manager and QA Manager or their designees and is approved for release.

Observations / Nonconformances

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20151328-01**								
Client ID : **504**								
Date Sampled : **12/16/15 10:00:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.204 +/- 0.514	0.800	pCi/l		01/14/16	01/26/16	RE
Radium-228	EPA 904*/9320*	0.036 +/- 0.401	0.429	pCi/l		01/20/16	01/26/16	AE
Lab ID : **20151328-02**								
Client ID : **506**								
Date Sampled : **12/15/15 14:10:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.231 +/- 0.867	1.33	pCi/l		01/14/16	01/26/16	RE
Radium-228	EPA 904*/9320*	0.686 +/- 0.389	0.427	pCi/l		01/20/16	01/26/16	AE
Lab ID : **20151328-03**								
Client ID : **510**								
Date Sampled : **12/15/15 16:45:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.107 +/- 0.130	0.193	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.471 +/- 0.511	0.528	pCi/l		01/20/16	01/26/16	AE
Lab ID : **20151328-04**								
Client ID : **512**								
Date Sampled : **12/15/15 16:35:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.324 +/- 0.162	0.166	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	1.91 +/- 0.805	0.811	pCi/l		01/20/16	01/26/16	AE
Lab ID : **20151328-05**								
Client ID : **512 MS**								
Date Sampled : **12/15/15 16:45:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	12.4 +/- 0.656	0.137	pCi/l		01/20/16	01/21/16	RE

*NELAC Certified Parameter BDL = Below Detection Limit

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radium-228	EPA 904*/9320*	7.62 +/- 0.609	0.753	pCi/l		01/20/16	01/26/16	AE

Lab ID : 20151328-06
Client ID : 512 MSD
Date Sampled : 12/15/15 16:45:00
Matrix : NPW

Radiochemical Analyses

Radium-226	SM 7500 Ra B M*	12.1 +/- 0.673	0.111	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	8.40 +/- 0.616	0.537	pCi/l		01/20/16	01/26/16	AE

Lab ID : 20151328-07
Client ID : Duplicate
Date Sampled : 12/15/15
Matrix : NPW

Radiochemical Analyses

Radium-226	SM 7500 Ra B M*	0.382 +/- 0.121	0.084	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	1.78 +/- 0.506	0.559	pCi/l		01/20/16	01/26/16	AE

Lab ID : 20151328-08
Client ID : 601
Date Sampled : 12/15/15 12:15:00
Matrix : NPW

Radiochemical Analyses

Radium-226	SM 7500 Ra B M*	0.236 +/- 0.095	0.076	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.638 +/- 0.501	0.547	pCi/l		01/20/16	01/26/16	AE

Lab ID : 20151328-09
Client ID : 701
Date Sampled : 12/14/15 16:55:00
Matrix : NPW

Radiochemical Analyses

Radium-226	SM 7500 Ra B M*	0.136 +/- 0.072	0.066	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.169 +/- 0.415	0.470	pCi/l		01/20/16	01/26/16	AE

Lab ID : 20151328-10
Client ID : 702
Date Sampled : 12/14/15 15:50:00
Matrix : NPW

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.100 +/- 0.098	0.138	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.263 +/- 0.507	0.567	pCi/l		01/20/16	01/26/16	AE

Lab ID : **20151328-11**
Client ID : **703**
Date Sampled : **12/14/15 15:40:00**
Matrix : **NPW**

		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.261 +/- 0.126	0.119	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.605 +/- 0.437	0.496	pCi/l		01/20/16	01/26/16	AE

Lab ID : **20151328-12**
Client ID : **704**
Date Sampled : **12/14/15 16:40:00**
Matrix : **NPW**

		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.301 +/- 0.110	0.060	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	1.10 +/- 0.379	0.499	pCi/l		01/20/16	01/26/16	AE

Lab ID : **20151328-13**
Client ID : **803**
Date Sampled : **12/15/15 10:50:00**
Matrix : **NPW**

		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.313 +/- 0.105	0.072	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.797 +/- 0.502	0.871	pCi/l		01/20/16	01/26/16	AE

Lab ID : **20151328-14**
Client ID : **804**
Date Sampled : **12/15/15 11:40:00**
Matrix : **NPW**

		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.667 +/- 0.169	0.114	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.590 +/- 0.491	0.686	pCi/l		01/20/16	01/26/16	AE

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Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20151328-15**								
Client ID : **805**								
Date Sampled : **12/15/15 12:25:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.793 +/- 0.177	0.085	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	1.05 +/- 0.520	0.683	pCi/l		01/20/16	01/26/16	AE
Lab ID : **20151328-16**								
Client ID : **806**								
Date Sampled : **12/16/15 13:35:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.499 +/- 0.168	0.167	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.349 +/- 0.425	0.609	pCi/l		01/20/16	01/26/16	AE
Lab ID : **20151328-17**								
Client ID : **505**								
Date Sampled : **12/16/15 11:00:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.000 +/- 0.149	0.248	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.153 +/- 0.553	0.629	pCi/l		01/20/16	01/26/16	AE
Lab ID : **20151328-18**								
Client ID : **801**								
Date Sampled : **12/16/15 11:55:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.197 +/- 0.109	0.085	pCi/l		01/20/16	01/21/16	RE
Radium-228	EPA 904*/9320*	0.651 +/- 0.633	0.775	pCi/l		01/20/16	01/26/16	AE
Lab ID : **20151328-19**								
Client ID : **802**								
Date Sampled : **12/16/15 12:45:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.234 +/- 0.135	0.154	pCi/l		01/20/16	01/21/16	RE

*NELAC Certified Parameter BDL = Below Detection Limit

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Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radium-228	EPA 904*/9320*	2.10 +/- 0.678	0.820	pCi/l		01/20/16	01/26/16	AE

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Date
Radium-226	0.014	108.0			NC	0.261	120.0	120.0	0.5	01/26/16
Radium-226	-0.017	110.0			NC	0.525	122.0	119.0	2.6	01/21/16
Radium-228	0.979	99.1			NC	0.377	114.0	130.0	9.7	01/26/16

Lab Approval: 

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
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Chain of Custody Page 5 of 5

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Phone: 800-767-5859
Fax: 615-758-5859

L# L801986
B069
Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206-Jeff Carr
Cooler:
Shipped Via:

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks
Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station
City/State Collected: Sibley, MO

Phone: 913-681-0030
Fax: 913-681-0012
Client Project # 27213169.15
Lab Project # AQUAOPKS-SIBLEY

Collected by (print): Jason R. Franks
Collected by (signature): Jason R. Franks
Immediately Packed on Ice N ___ Y ✓
Site/Facility ID #
P.O. #

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD
Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenum 500mlHDPE-HN03 - N	RA-226, RA-228 1LHDPE-HN03 - N	Rem./Contaminant	Sample # (lab only)
504	GRAB	GW	-	12/10/15	1000	3	X	X		-01
505			-	12/10/15	1100	3	X	X		-15
506			-	12/15/15	1410	3	X	X		02
510			-	12/15/15	1645	3	X	X		03
512			-	12/15/15	1635	3	X	X		04
DUPLICATE			-	12/15/15		3	X	X		05
512' MS			-	12/15/15	1645	3	X	X		06
512 MSD			-	12/15/15	1645	3	X	X		07

Analysis / Container / Preservative

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

pH ___ Temp ___
Flow ___ Other ___

Remarks:

Relinquished by: (Signature) Jason R. Franks — Date: 12/17/15 — Time: 1900 — Received by: (Signature)
Relinquished by: (Signature) — Date: 12/17/15 — Time: 1700 — Received by: (Signature)
Relinquished by: (Signature) — Date: — Time: — Received by: Lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ___
Temp: 3.2 °C Bottles Received: 32=ER
Date: 12/18/15 Time: 900

Hold #
Condition: 02 (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

2015 1328

Chain of Custody Page 3 of 5

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L907986

Table #

Acctnum: AQUAOPKS

Template: T59883

Prelogin: P529029

TSR: 206-Jeff Carr

Cooler:

Shipped Via:

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenum 500ml HDPE-HNO3	RA-226, RA-228 1LHDPE-HNO3	Rem./Contaminant	Sample # (lab only)
601	GRAB	GW	—	12/15/15	1215	3	X	X		06
~~602~~		GW	—	NO SAMPLE		3	~~X~~	~~X~~		
701		GW	—	12/14/15	1655	3	X	X		07
702		GW	—	12/14/15	1550	3	X	X		08
703		GW	—	12/14/15	1540	3	X	X		09
704		GW	—	12/14/15	1640	3	X	X		10
801		GW	—	12/16/15	1155	3	X	X		-16
802		GW	—	12/16/15	1245	3	X	X		-17
803		GW	—	12/15/15	1050	3	X	X		11
804		GW	—	12/15/15	1140	3	X	X		12

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ____

Remarks:

pH ____ Temp ____

Flow ____ Other ____

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ____

Tempt: 3.2 °C Bottles Received: 32

Date: 12/18/15 Time: 900

Hold #:

Condition: OK (lab use only)

COC Seal Intact? ____Y ____N ____NA

pH Checked: NCF:

	Date:	Time:	Received by/(Signature)
Relinquished by: (Signature) Jason R. Franks	12/17/15	1400	
Relinquished by: (Signature)	12/17/15	1700	
Relinquished by: (Signature)	Date:	Time:	Received for lab by (Signature)

20151328

Chain of Custody Page 1 of 1

Company Name/Address:
SCS AQUATERRA
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project #: 27213169.15

Lab Project #: AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenum 500mlHDPE-HN03	RA-226, RA-228 1LHDPE-HN03	Rem./Contaminant	Sample # (lab only)
805	Grab	GW	—	12/15/15	1225	3	X	X		13
806	↓	GW	—	12/16/15	1335	3	X	X		14

Analysis / Container / Preservative

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L907986
Table #
Acctnum: AQUAOPKS
Template: T59883
Prelogin: P529029
TSR: 206-Jeff Carr
Cooler:
Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 32

Date: 12/18/15 Time: 900

Hold #
Condition: (lab use only) OK
COC Seal Intact: ___Y ___N ___NA
pH Checked: ___ NCF: ___

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	12/17/15	1400	
Relinquished by: (Signature)	Date: 12/17/15	Time: 1700	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

20151328

Jared Morrison
December 16, 2022

ATTACHMENT 1-2

February 2016 Sampling Event Laboratory Report

ANALYTICAL REPORT

April 11, 2016

SCS Engineers

Sample Delivery Group:	L818727
Samples Received:	02/19/2016
Project Number:	27213169.15
Description:	Sibley Generating Station

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jason Romer
Technical Service Representative

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

504 L818727-01 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 10:20
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851528	1	02/24/16 05:55	02/24/16 06:44	JM
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 10:36	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:00	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:01	JDG
Wet Chemistry by Method 9056A	WG850758	1	02/22/16 21:07	02/22/16 21:07	CM

505 L818727-02 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 10:55
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851528	1	02/24/16 05:55	02/24/16 06:44	JM
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 10:39	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:03	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:04	JDG
Wet Chemistry by Method 9056A	WG850758	1	02/22/16 21:38	02/22/16 21:38	CM

506 L818727-03 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 11:40
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851528	1	02/24/16 05:55	02/24/16 06:44	JM
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 10:42	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:06	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:07	JDG
Wet Chemistry by Method 9056A	WG850758	1	02/22/16 22:24	02/22/16 22:24	CM

510 L818727-04 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 14:50
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851528	1	02/24/16 05:55	02/24/16 06:44	JM
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 10:45	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:15	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:15	JDG
Wet Chemistry by Method 9056A	WG850758	1	02/22/16 22:40	02/22/16 22:40	CM

512 L818727-05 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 13:30
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851528	1	02/24/16 05:55	02/24/16 06:44	JM
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 10:16	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 13:48	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 11:51	JDG
Wet Chemistry by Method 9056A	WG850758	1	02/22/16 22:55	02/22/16 22:55	CM

601 L818727-06 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 12:55
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851528	1	02/24/16 05:55	02/24/16 06:44	JM
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 10:48	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:19	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:17	JDG
Wet Chemistry by Method 9056A	WG850758	1	02/22/16 23:11	02/22/16 23:11	CM

701 L818727-07 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 12:50
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 10:51	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:22	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:20	JDG
Wet Chemistry by Method 9056A	WG850758	1	02/22/16 23:26	02/22/16 23:26	CM

702 L818727-08 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 11:55
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:00	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:25	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:23	JDG
Wet Chemistry by Method 9056A	WG850758	1	02/22/16 23:41	02/22/16 23:41	CM

703 L818727-09 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 12:30
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:03	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:28	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:25	JDG
Wet Chemistry by Method 9056A	WG850758	1	02/22/16 23:57	02/22/16 23:57	CM

704 L818727-10 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 13:45
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:06	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:31	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:28	JDG
Wet Chemistry by Method 9056A	WG850900	1	02/22/16 19:12	02/22/16 19:12	DJD

801 L818727-11 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 14:20
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:09	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:34	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:31	JDG
Wet Chemistry by Method 9056A	WG850900	1	02/22/16 19:43	02/22/16 19:43	DJD

802 L818727-12 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 13:40
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:12	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:37	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:34	JDG
Wet Chemistry by Method 9056A	WG850900	1	02/22/16 19:58	02/22/16 19:58	DJD

803 L818727-13 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 15:05
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:15	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:40	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:36	JDG
Wet Chemistry by Method 9056A	WG850900	1	02/22/16 20:13	02/22/16 20:13	DJD
Wet Chemistry by Method 9056A	WG850900	10	02/23/16 03:35	02/23/16 03:35	DJD

804 L818727-14 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 15:05
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:17	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 14:43	CCE
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:39	JDG
Wet Chemistry by Method 9056A	WG850900	1	02/22/16 20:29	02/22/16 20:29	DJD

805 L818727-15 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 14:00
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:20	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 16:00	LTB
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:47	JDG
Wet Chemistry by Method 9056A	WG850900	1	02/22/16 20:44	02/22/16 20:44	DJD

806 L818727-16 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 13:15
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851107	1	02/22/16 14:11	02/22/16 14:50	MF
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:23	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 16:03	LTB
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:50	JDG
Wet Chemistry by Method 9056A	WG850900	1	02/22/16 21:15	02/22/16 21:15	DJD
Wet Chemistry by Method 9056A	WG850900	10	02/23/16 03:51	02/23/16 03:51	DJD

DUPLICATE L818727-17 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 13:30
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG851528	1	02/24/16 05:55	02/24/16 06:44	JM
Mercury by Method 7470A	WG850752	1	02/22/16 13:48	02/23/16 11:26	BRJ
Metals (ICP) by Method 6010B	WG851074	1	02/22/16 11:12	02/22/16 16:06	LTB
Metals (ICPMS) by Method 6020	WG850793	1	02/23/16 09:16	02/25/16 12:52	JDG
Wet Chemistry by Method 9056A	WG850900	1	02/22/16 21:30	02/22/16 21:30	DJD

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jason Romer
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	236000		10000	1	02/24/2016 06:44	WG851528

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	02/22/2016 21:07	WG850758
Fluoride	170		100	1	02/22/2016 21:07	WG850758
Sulfate	14700		5000	1	02/22/2016 21:07	WG850758

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 10:36	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	113		5.00	1	02/22/2016 14:00	WG851074
Boron	ND		200	1	02/22/2016 14:00	WG851074
Calcium	34300		1000	1	02/22/2016 14:00	WG851074
Chromium	ND		10.0	1	02/22/2016 14:00	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:00	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:01	WG850793
Arsenic	ND		2.00	1	02/25/2016 12:01	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:01	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:01	WG850793
Lead	ND		2.00	1	02/25/2016 12:01	WG850793
Selenium	2.28		2.00	1	02/25/2016 12:01	WG850793
Thallium	ND		2.00	1	02/25/2016 12:01	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	148000		10000	1	02/24/2016 06:44	WG851528

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	1050		1000	1	02/22/2016 21:38	WG850758
Fluoride	174		100	1	02/22/2016 21:38	WG850758
Sulfate	16000		5000	1	02/22/2016 21:38	WG850758

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 10:39	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	87.6		5.00	1	02/22/2016 14:03	WG851074
Boron	ND		200	1	02/22/2016 14:03	WG851074
Calcium	25400		1000	1	02/22/2016 14:03	WG851074
Chromium	ND		10.0	1	02/22/2016 14:03	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:03	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:04	WG850793
Arsenic	ND		2.00	1	02/25/2016 12:04	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:04	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:04	WG850793
Lead	ND		2.00	1	02/25/2016 12:04	WG850793
Selenium	2.49		2.00	1	02/25/2016 12:04	WG850793
Thallium	ND		2.00	1	02/25/2016 12:04	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	423000		10000	1	02/24/2016 06:44	WG851528

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	6150		1000	1	02/22/2016 22:24	WG850758
Fluoride	290		100	1	02/22/2016 22:24	WG850758
Sulfate	65600		5000	1	02/22/2016 22:24	WG850758

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 10:42	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	232		5.00	1	02/22/2016 14:06	WG851074
Boron	ND		200	1	02/22/2016 14:06	WG851074
Calcium	99300		1000	1	02/22/2016 14:06	WG851074
Chromium	ND		10.0	1	02/22/2016 14:06	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:06	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:07	WG850793
Arsenic	ND		2.00	1	02/25/2016 12:07	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:07	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:07	WG850793
Lead	ND		2.00	1	02/25/2016 12:07	WG850793
Selenium	8.92		2.00	1	02/25/2016 12:07	WG850793
Thallium	ND		2.00	1	02/25/2016 12:07	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	446000		10000	1	02/24/2016 06:44	WG851528

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3480		1000	1	02/22/2016 22:40	WG850758
Fluoride	282		100	1	02/22/2016 22:40	WG850758
Sulfate	12000		5000	1	02/22/2016 22:40	WG850758

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 10:45	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	361		5.00	1	02/22/2016 14:15	WG851074
Boron	ND		200	1	02/22/2016 14:15	WG851074
Calcium	121000		1000	1	02/22/2016 14:15	WG851074
Chromium	ND		10.0	1	02/22/2016 14:15	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:15	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:15	WG850793
Arsenic	ND		2.00	1	02/25/2016 12:15	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:15	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:15	WG850793
Lead	ND		2.00	1	02/25/2016 12:15	WG850793
Selenium	3.49		2.00	1	02/25/2016 12:15	WG850793
Thallium	ND		2.00	1	02/25/2016 12:15	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	366000		10000	1	02/24/2016 06:44	WG851528

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	2780		1000	1	02/22/2016 22:55	WG850758
Fluoride	270		100	1	02/22/2016 22:55	WG850758
Sulfate	21000		5000	1	02/22/2016 22:55	WG850758

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 10:16	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	358		5.00	1	02/22/2016 13:48	WG851074
Boron	ND		200	1	02/22/2016 13:48	WG851074
Calcium	100000		1000	1	02/22/2016 13:48	WG851074
Chromium	ND		10.0	1	02/22/2016 13:48	WG851074
Cobalt	ND		10.0	1	02/22/2016 13:48	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 11:51	WG850793
Arsenic	ND		2.00	1	02/25/2016 11:51	WG850793
Beryllium	ND		2.00	1	02/25/2016 11:51	WG850793
Cadmium	ND		1.00	1	02/25/2016 11:51	WG850793
Lead	ND		2.00	1	02/25/2016 11:51	WG850793
Selenium	4.59		2.00	1	02/25/2016 11:51	WG850793
Thallium	ND		2.00	1	02/25/2016 11:51	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	380000		10000	1	02/24/2016 06:44	WG851528

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3220		1000	1	02/22/2016 23:11	WG850758
Fluoride	214		100	1	02/22/2016 23:11	WG850758
Sulfate	8870		5000	1	02/22/2016 23:11	WG850758

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 10:48	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	326		5.00	1	02/22/2016 14:19	WG851074
Boron	ND		200	1	02/22/2016 14:19	WG851074
Calcium	105000		1000	1	02/22/2016 14:19	WG851074
Chromium	ND		10.0	1	02/22/2016 14:19	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:19	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:17	WG850793
Arsenic	ND		2.00	1	02/25/2016 12:17	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:17	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:17	WG850793
Lead	ND		2.00	1	02/25/2016 12:17	WG850793
Selenium	6.77		2.00	1	02/25/2016 12:17	WG850793
Thallium	ND		2.00	1	02/25/2016 12:17	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	305000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8300		1000	1	02/22/2016 23:26	WG850758
Fluoride	ND		100	1	02/22/2016 23:26	WG850758
Sulfate	16000		5000	1	02/22/2016 23:26	WG850758

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 10:51	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	177		5.00	1	02/22/2016 14:22	WG851074
Boron	ND		200	1	02/22/2016 14:22	WG851074
Calcium	88500		1000	1	02/22/2016 14:22	WG851074
Chromium	ND		10.0	1	02/22/2016 14:22	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:22	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:20	WG850793
Arsenic	2.80		2.00	1	02/25/2016 12:20	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:20	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:20	WG850793
Lead	ND		2.00	1	02/25/2016 12:20	WG850793
Selenium	ND		2.00	1	02/25/2016 12:20	WG850793
Thallium	ND		2.00	1	02/25/2016 12:20	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	302000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8560		1000	1	02/22/2016 23:41	WG850758
Fluoride	101		100	1	02/22/2016 23:41	WG850758
Sulfate	19000		5000	1	02/22/2016 23:41	WG850758

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:00	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	225		5.00	1	02/22/2016 14:25	WG851074
Boron	ND		200	1	02/22/2016 14:25	WG851074
Calcium	89500		1000	1	02/22/2016 14:25	WG851074
Chromium	ND		10.0	1	02/22/2016 14:25	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:25	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:23	WG850793
Arsenic	5.99		2.00	1	02/25/2016 12:23	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:23	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:23	WG850793
Lead	ND		2.00	1	02/25/2016 12:23	WG850793
Selenium	ND		2.00	1	02/25/2016 12:23	WG850793
Thallium	ND		2.00	1	02/25/2016 12:23	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	553000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	22500		1000	1	02/22/2016 23:57	WG850758
Fluoride	424		100	1	02/22/2016 23:57	WG850758
Sulfate	6970		5000	1	02/22/2016 23:57	WG850758

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:03	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	275		5.00	1	02/22/2016 14:28	WG851074
Boron	743		200	1	02/22/2016 14:28	WG851074
Calcium	132000		1000	1	02/22/2016 14:28	WG851074
Chromium	ND		10.0	1	02/22/2016 14:28	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:28	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:25	WG850793
Arsenic	259		2.00	1	02/25/2016 12:25	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:25	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:25	WG850793
Lead	ND		2.00	1	02/25/2016 12:25	WG850793
Selenium	ND		2.00	1	02/25/2016 12:25	WG850793
Thallium	ND		2.00	1	02/25/2016 12:25	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	348000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13200		1000	1	02/22/2016 19:12	WG850900
Fluoride	155		100	1	02/22/2016 19:12	WG850900
Sulfate	32500		5000	1	02/22/2016 19:12	WG850900

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:06	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	155		5.00	1	02/22/2016 14:31	WG851074
Boron	ND		200	1	02/22/2016 14:31	WG851074
Calcium	93800		1000	1	02/22/2016 14:31	WG851074
Chromium	ND		10.0	1	02/22/2016 14:31	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:31	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:28	WG850793
Arsenic	2.89		2.00	1	02/25/2016 12:28	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:28	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:28	WG850793
Lead	ND		2.00	1	02/25/2016 12:28	WG850793
Selenium	ND		2.00	1	02/25/2016 12:28	WG850793
Thallium	ND		2.00	1	02/25/2016 12:28	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	589000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	72400		1000	1	02/22/2016 19:43	WG850900
Fluoride	165		100	1	02/22/2016 19:43	WG850900
Sulfate	60500		5000	1	02/22/2016 19:43	WG850900

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:09	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	112		5.00	1	02/22/2016 14:34	WG851074
Boron	382		200	1	02/22/2016 14:34	WG851074
Calcium	150000		1000	1	02/22/2016 14:34	WG851074
Chromium	ND		10.0	1	02/22/2016 14:34	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:34	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:31	WG850793
Arsenic	ND		2.00	1	02/25/2016 12:31	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:31	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:31	WG850793
Lead	ND		2.00	1	02/25/2016 12:31	WG850793
Selenium	ND		2.00	1	02/25/2016 12:31	WG850793
Thallium	ND		2.00	1	02/25/2016 12:31	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	413000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	55000		1000	1	02/22/2016 19:58	WG850900
Fluoride	233		100	1	02/22/2016 19:58	WG850900
Sulfate	35500		5000	1	02/22/2016 19:58	WG850900

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:12	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	170		5.00	1	02/22/2016 14:37	WG851074
Boron	ND		200	1	02/22/2016 14:37	WG851074
Calcium	91400		1000	1	02/22/2016 14:37	WG851074
Chromium	ND		10.0	1	02/22/2016 14:37	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:37	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:34	WG850793
Arsenic	2.23		2.00	1	02/25/2016 12:34	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:34	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:34	WG850793
Lead	ND		2.00	1	02/25/2016 12:34	WG850793
Selenium	ND		2.00	1	02/25/2016 12:34	WG850793
Thallium	ND		2.00	1	02/25/2016 12:34	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	558000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	14800		1000	1	02/22/2016 20:13	WG850900
Fluoride	245		100	1	02/22/2016 20:13	WG850900
Sulfate	162000		50000	10	02/23/2016 03:35	WG850900

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:15	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	141		5.00	1	02/22/2016 14:40	WG851074
Boron	2850		200	1	02/22/2016 14:40	WG851074
Calcium	127000		1000	1	02/22/2016 14:40	WG851074
Chromium	ND		10.0	1	02/22/2016 14:40	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:40	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:36	WG850793
Arsenic	4.01		2.00	1	02/25/2016 12:36	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:36	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:36	WG850793
Lead	ND		2.00	1	02/25/2016 12:36	WG850793
Selenium	ND		2.00	1	02/25/2016 12:36	WG850793
Thallium	ND		2.00	1	02/25/2016 12:36	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	588000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	14600		1000	1	02/22/2016 20:29	WG850900
Fluoride	183		100	1	02/22/2016 20:29	WG850900
Sulfate	ND		5000	1	02/22/2016 20:29	WG850900

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:17	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	370		5.00	1	02/22/2016 14:43	WG851074
Boron	3810		200	1	02/22/2016 14:43	WG851074
Calcium	158000		1000	1	02/22/2016 14:43	WG851074
Chromium	ND		10.0	1	02/22/2016 14:43	WG851074
Cobalt	ND		10.0	1	02/22/2016 14:43	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:39	WG850793
Arsenic	7.19		2.00	1	02/25/2016 12:39	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:39	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:39	WG850793
Lead	ND		2.00	1	02/25/2016 12:39	WG850793
Selenium	ND		2.00	1	02/25/2016 12:39	WG850793
Thallium	ND		2.00	1	02/25/2016 12:39	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	366000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	9860		1000	1	02/22/2016 20:44	WG850900
Fluoride	155		100	1	02/22/2016 20:44	WG850900
Sulfate	50700		5000	1	02/22/2016 20:44	WG850900

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:20	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	172		5.00	1	02/22/2016 16:00	WG851074
Boron	ND		200	1	02/22/2016 16:00	WG851074
Calcium	99500		1000	1	02/22/2016 16:00	WG851074
Chromium	ND		10.0	1	02/22/2016 16:00	WG851074
Cobalt	ND		10.0	1	02/22/2016 16:00	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:47	WG850793
Arsenic	ND		2.00	1	02/25/2016 12:47	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:47	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:47	WG850793
Lead	ND		2.00	1	02/25/2016 12:47	WG850793
Selenium	ND		2.00	1	02/25/2016 12:47	WG850793
Thallium	ND		2.00	1	02/25/2016 12:47	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	699000		10000	1	02/22/2016 14:50	WG851107

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	20700		1000	1	02/22/2016 21:15	WG850900
Fluoride	325		100	1	02/22/2016 21:15	WG850900
Sulfate	208000		50000	10	02/23/2016 03:51	WG850900

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:23	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	192		5.00	1	02/22/2016 16:03	WG851074
Boron	5310		200	1	02/22/2016 16:03	WG851074
Calcium	172000		1000	1	02/22/2016 16:03	WG851074
Chromium	ND		10.0	1	02/22/2016 16:03	WG851074
Cobalt	ND		10.0	1	02/22/2016 16:03	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:50	WG850793
Arsenic	4.86		2.00	1	02/25/2016 12:50	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:50	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:50	WG850793
Lead	7.74		2.00	1	02/25/2016 12:50	WG850793
Selenium	ND		2.00	1	02/25/2016 12:50	WG850793
Thallium	ND		2.00	1	02/25/2016 12:50	WG850793

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	394000		10000	1	02/24/2016 06:44	WG851528

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	2890		1000	1	02/22/2016 21:30	WG850900
Fluoride	274		100	1	02/22/2016 21:30	WG850900
Sulfate	21000		5000	1	02/22/2016 21:30	WG850900

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/23/2016 11:26	WG850752

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	361		5.00	1	02/22/2016 16:06	WG851074
Boron	ND		200	1	02/22/2016 16:06	WG851074
Calcium	100000		1000	1	02/22/2016 16:06	WG851074
Chromium	ND		10.0	1	02/22/2016 16:06	WG851074
Cobalt	ND		10.0	1	02/22/2016 16:06	WG851074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/25/2016 12:52	WG850793
Arsenic	ND		2.00	1	02/25/2016 12:52	WG850793
Beryllium	ND		2.00	1	02/25/2016 12:52	WG850793
Cadmium	ND		1.00	1	02/25/2016 12:52	WG850793
Lead	ND		2.00	1	02/25/2016 12:52	WG850793
Selenium	4.66		2.00	1	02/25/2016 12:52	WG850793
Thallium	ND		2.00	1	02/25/2016 12:52	WG850793

Method Blank (MB)

(MB) R3115655-1 02/22/16 14:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

Original Sample (OS) • Duplicate (DUP)

(OS) L818727-16 02/22/16 14:50 • (DUP) R3115655-4 02/22/16 14:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	699	696	1	0.430		5

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

(LCS) R3115655-2 02/22/16 14:50 • (LCSD) R3115655-3 02/22/16 14:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800	8700	8670	98.9	98.5	85.0-115			0.345	5

Method Blank (MB)

(MB) R3116147-1 02/24/16 06:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

Original Sample (OS) • Duplicate (DUP)

(OS) L818770-02 02/24/16 06:44 • (DUP) R3116147-4 02/24/16 06:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	846	822	1	2.88		5

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

(LCS) R3116147-2 02/24/16 06:44 • (LCSD) R3116147-3 02/24/16 06:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800	8670	8840	98.5	100	85.0-115			1.94	5

Method Blank (MB)

(MB) R3115435-1 02/22/16 16:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.0099	0.100
Sulfate	U		0.0774	5.00

Original Sample (OS) • Duplicate (DUP)

(OS) L818619-10 02/22/16 18:33 • (DUP) R3115435-4 02/22/16 18:48

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	9.39	9.32	1	1		15
Fluoride	ND	0.000	1	0		15
Sulfate	1.10	0.912	1	0		15

Original Sample (OS) • Duplicate (DUP)

(OS) L818727-01 02/22/16 21:07 • (DUP) R3115435-6 02/22/16 21:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	0.736	0.532	1	0		15
Fluoride	0.170	0.197	1	14		15
Sulfate	14.7	14.8	1	0		15

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

(LCS) R3115435-2 02/22/16 16:29 • (LCSD) R3115435-3 02/22/16 16:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	38.6	38.6	96	97	80-120			0	15
Fluoride	8.00	7.82	7.77	98	97	80-120			1	15
Sulfate	40.0	39.9	39.6	100	99	80-120			1	15

Original Sample (OS) • Matrix Spike (MS)

(OS) L818619-14 02/22/16 19:50 • (MS) R3115435-5 02/22/16 20:05

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	0.111	49.0	98	1	80-120	
Fluoride	5.00	ND	4.96	99	1	80-120	
Sulfate	50.0	0.347	49.8	99	1	80-120	

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

(OS) L818727-02 02/22/16 21:38 • (MS) R3115435-7 02/22/16 21:53 • (MSD) R3115435-8 02/22/16 22:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	1.05	50.2	50.0	98	98	1	80-120			0	15
Fluoride	5.00	0.174	5.20	5.22	101	101	1	80-120			0	15
Sulfate	50.0	16.0	65.3	65.4	99	99	1	80-120			0	15

Method Blank (MB)

(MB) R3115523-1 02/22/16 17:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.0099	0.100
Sulfate	U		0.0774	5.00

Original Sample (OS) • Duplicate (DUP)

(OS) L818727-10 02/22/16 19:12 • (DUP) R3115523-4 02/22/16 19:27

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	13.2	12.9	1	2		15
Fluoride	0.155	0.172	1	10		15
Sulfate	32.5	32.2	1	1		15

Original Sample (OS) • Duplicate (DUP)

(OS) L818927-01 02/23/16 00:10 • (DUP) R3115523-6 02/23/16 01:17

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	88.6	88.9	1	0		15
Fluoride	0.299	0.350	1	16	P1	15
Sulfate	20.4	20.3	1	1		15

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

(LCS) R3115523-2 02/22/16 18:10 • (LCSD) R3115523-3 02/22/16 18:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	39.7	39.7	99	99	80-120			0	15
Fluoride	8.00	7.75	7.75	97	97	80-120			0	15
Sulfate	40.0	38.5	38.6	96	96	80-120			0	15

Original Sample (OS) • Matrix Spike (MS)

(OS) L818727-15 02/22/16 20:44 • (MS) R3115523-5 02/22/16 21:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	9.86	59.9	100	1	80-120	
Fluoride	5.00	0.155	5.19	101	1	80-120	
Sulfate	50.0	50.7	96.0	91	1	80-120	

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

(OS) L818927-03 02/23/16 01:47 • (MS) R3115523-7 02/23/16 02:03 • (MSD) R3115523-8 02/23/16 02:18

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	5.95	55.9	55.8	100	100	1	80-120			0	15
Fluoride	5.00	0.0359	5.07	5.11	101	102	1	80-120			1	15
Sulfate	50.0	10.3	59.4	59.5	98	98	1	80-120			0	15

Method Blank (MB)

(MB) R3115562-1 02/23/16 10:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000049	0.000200

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

(LCS) R3115562-2 02/23/16 10:10 • (LCSD) R3115562-3 02/23/16 10:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00287	0.00278	96	93	80-120			3	20

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

(OS) L818727-05 02/23/16 10:16 • (MS) R3115562-4 02/23/16 10:24 • (MSD) R3115562-5 02/23/16 10:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	ND	0.00290	0.00290	97	97	1	75-125			0	20

Method Blank (MB)

(MB) R3115307-1 02/22/16 13:39

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Barium	U		0.0017	0.00500
Boron	U		0.0126	0.200
Calcium	U		0.0463	1.00
Chromium	U		0.0014	0.0100
Cobalt	U		0.0023	0.0100

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

(LCS) R3115307-2 02/22/16 13:42 • (LCSD) R3115307-3 02/22/16 13:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Barium	1.00	1.05	1.05	105	105	80-120			1	20
Boron	1.00	1.07	1.07	107	107	80-120			1	20
Calcium	10.0	10.3	10.4	103	104	80-120			1	20
Chromium	1.00	1.04	1.04	104	104	80-120			1	20
Cobalt	1.00	1.07	1.07	107	107	80-120			1	20

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

(OS) L818727-05 02/22/16 13:48 • (MS) R3115307-5 02/22/16 13:54 • (MSD) R3115307-6 02/22/16 13:57

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	1.00	0.358	1.39	1.39	104	103	1	75-125			0	20
Boron	1.00	0.0799	1.15	1.14	107	106	1	75-125			0	20
Calcium	10.0	100	110	111	100	101	1	75-125			0	20
Chromium	1.00	0.00985	1.05	1.05	104	104	1	75-125			1	20
Cobalt	1.00	0.000314	1.08	1.07	108	107	1	75-125			0	20

Method Blank (MB)

(MB) R3116291-1 02/25/16 11:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	0.000397		0.00021	0.00200
Arsenic	U		0.00025	0.00200
Beryllium	U		0.00012	0.00200
Cadmium	U		0.00016	0.00100
Lead	U		0.00024	0.00200
Selenium	U		0.00038	0.00200
Thallium	U		0.00019	0.00200

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

(LCS) R3116291-2 02/25/16 11:45 • (LCSD) R3116291-3 02/25/16 11:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.0555	0.0559	111	112	80-120			1	20
Arsenic	0.0500	0.0486	0.0473	97	95	80-120			3	20
Beryllium	0.0500	0.0513	0.0531	103	106	80-120			3	20
Cadmium	0.0500	0.0521	0.0507	104	101	80-120			3	20
Lead	0.0500	0.0511	0.0511	102	102	80-120			0	20
Selenium	0.0500	0.0514	0.0526	103	105	80-120			2	20
Thallium	0.0500	0.0504	0.0513	101	103	80-120			2	20

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

(OS) L818727-05 02/25/16 11:51 • (MS) R3116291-5 02/25/16 11:56 • (MSD) R3116291-6 02/25/16 11:59

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	0.000445	0.0574	0.0576	114	114	1	75-125			0	20
Arsenic	0.0500	0.000981	0.0502	0.0499	98	98	1	75-125			1	20
Beryllium	0.0500	0.0000631	0.0519	0.0529	104	106	1	75-125			2	20
Cadmium	0.0500	0.0000502	0.0532	0.0526	106	105	1	75-125			1	20
Lead	0.0500	0.000161	0.0521	0.0518	104	103	1	75-125			1	20
Selenium	0.0500	0.00459	0.0576	0.0568	106	104	1	75-125			1	20
Thallium	0.0500	0.0000513	0.0505	0.0523	101	104	1	75-125			3	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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

State Accreditations

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

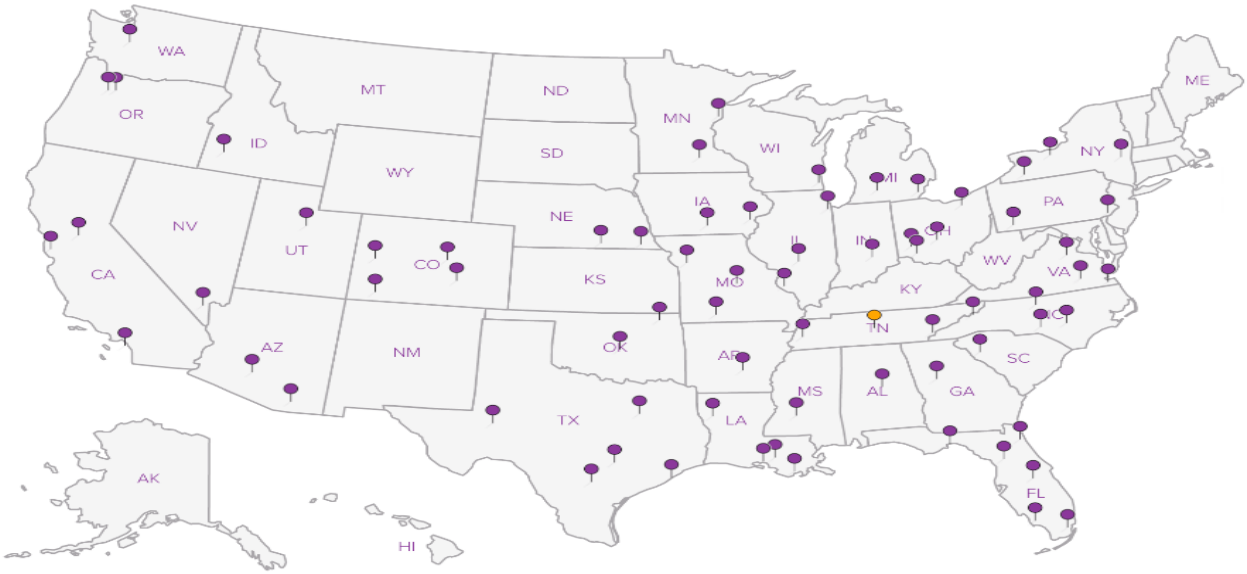
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:
SCS Engineers
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks
Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station
City/State Collected: Sibley, MO

Phone: 913-681-0030
Fax: 913-681-0012
Client Project #: 27213169.15
Lab Project #: AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 4

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

L# L818727
H156

Acctnum: AQUAOPKS
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions 125ml HDPE-NoPres	COD 250mlHDPE-H2SO4	Metals 500mlHDPE-HNO3 1/2	TDS 250mlHDPE-NoPres	TOC-250mlAmb-Septa-HCL	TOX 1L-Amb-Add H2SO4	Rem./Contaminant	Sample # (lab only)
504	Grab	GW		2/18/16	1020	3	X	X	X	X	X	X		-01
505	Grab	GW		2/18/16	1055	3	X	X	X	X	X	X		02
506	Grab	GW		2/18/16	1140	3	X	X	X	X	X	X		03
510	Grab	GW		2/18/16	1450	3	X	X	X	X	X	X		04
512	Grab	GW		2/18/16	1330	3	X	X	X	X	X	X		05
601	Grab	GW		2/18/16	1255	3	X	X	X	X	X	X		06
701	Grab	GW		2/18/16	1250	3	X	X	X	X	X	X		07
702	Grab	GW		2/17/16	1155	3	X	X	X	X	X	X		08
703	Grab	GW		2/17/16	1230	3	X	X	X	X	X	X		09 -5540
704	Grab	GW		2/17/16	1345	3	X	X	X	X	X	X		10 -5550

0645 0389 5561 -5539

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 3.2 °C Bottles Received: 57

Hold #
Condition: (lab use only) Good
COC Seal Intact: ___Y ___N ✓NA
pH Checked: <2 NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	2/18/16	1600	
Relinquished by : (Signature)	Date: 2/18/16	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Date: 2/18/16 Time: 910

Company Name/Address:
SCS Engineers
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard
Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions 125ml HDPE-NoPres	~~COD 250mlHDPE-H2S04~~	Metals 500mlHDPE-HN03 ✓2	TDS 250mlHDPE-NoPres	~~TOC 250mlAmb-Septa-HCl~~	~~TOX 1L-Amb-Add H2S04~~	Rem./Contaminant	Sample # (lab only)
801	Grab	GW		2/17/16	1420	3	X	X	X	X	X	X		11
802	Grab	GW		2/17/16	1340	3	X	X	X	X	X	X		12
803	Grab	GW		2/17/16	1505	3	X	X	X	X	X	X		13
804	Grab	GW		2/17/16	1505	3	X	X	X	X	X	X		14
805	Grab	GW		2/17/16	1400	3	X	X	X	X	X	X		15
806	Grab	GW		2/17/16	1315	3	X	X	X	X	X	X		16
Duplicate (512)	Grab	GW		2/18/16	1330	3	X	X	X	X	X	X		17
MS (512)	Grab	GW		2/18/16	1340	3	X	X	X	X	X	X		05
MSD (512)	Grab	GW		2/18/16	1340	3	X	X	X	X	X	X		05
		GW				6	X	X	X	X	X	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

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

Temp: 3.2 °C Bottles Received: 57

Date: 2/18/16 Time: 900

Received for lab by: (Signature)

Hold #

Condition: (lab use only) GOO

COC Seal Intact: ___Y ___N ___NA

pH Checked: <2 NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	2/18/16	1600	
Relinquished by : (Signature)	Date: 2/18/16	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Chain of Custody Page 2 of 4

ESC LAB SCIENCES
YOUR LAB OF CHOICE

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

L # L818727

Table #

Acctnum: AQUAOPKS

Template:

Prelogin:

TSR:

Cooler:

Shipped Via:

ANALYTICAL REPORT

March 29, 2016

SCS Engineers

Sample Delivery Group:	L818771
Samples Received:	02/19/2016
Project Number:	27213169.15
Description:	Sibley Generating Station

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

TABLE OF CONTENTS

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Project Narrative

L818771 -01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19 contains subout data that is included after the chain of custody.

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description

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

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

State Accreditations

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

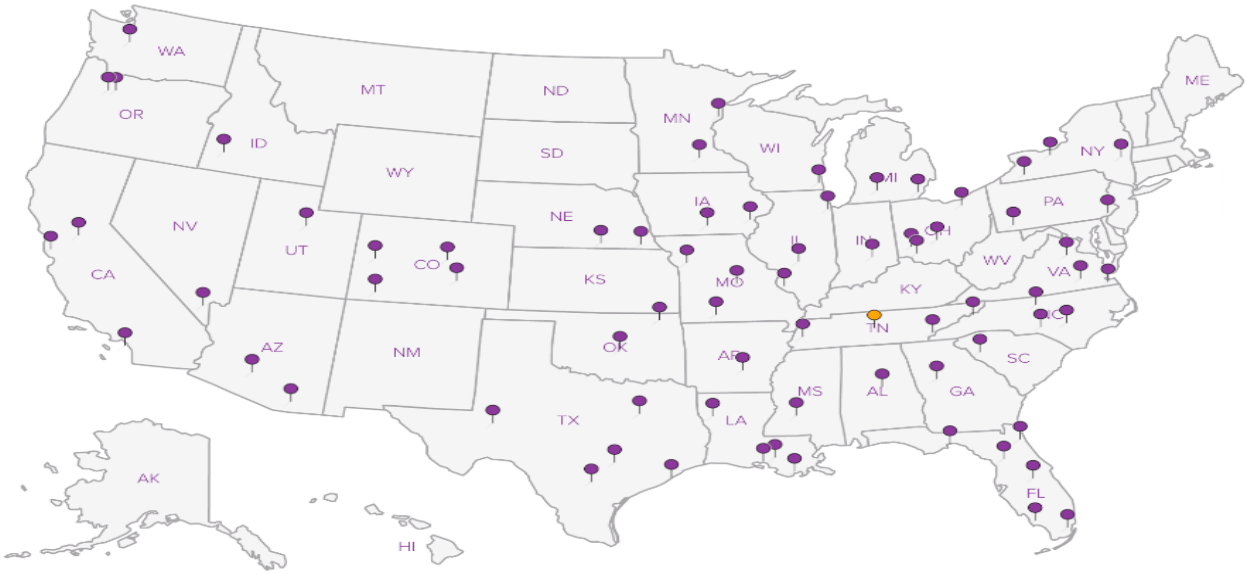
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:
SCS Engineers
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks
Email To: jfranks@scsengineers.com
Project Description: Sibley Generating Station
City/State Collected: Sibley, MO
Phone: 913-681-0030
Fax: 913-681-0012
Client Project #: 27213169.15
Lab Project #: AQUAOPKS-SIBLEY
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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard
Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 3 of 4

ESC LABORATORIES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L818771
I215

Acctnum: AQUAOPKS
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenom 500ml HDPE+HN03	RA-226, RA-228 1L HDPE+HN03	Rem /Contaminant	Sample # (lab only)
504	Grab	GW		2/18/16	1020	3	X	X		-01
505	Grab	GW		2/18/16	1055	3	X	X		02
506	Grab	GW		2/18/16	1140	3	X	X		03
510	Grab	GW		2/18/16	1450	3	X	X		04
512	Grab	GW		2/18/16	1330	3	X	X		05
601	Grab	GW		2/18/16	1255	3	X	X		06
701	Grab	GW		2/17/16	1250	3	X	X		07
702	Grab	GW		2/17/16	1155	3	X	X		08
703	Grab	GW		2/17/16	1230	3	X	X		09
704	Grab	GW		2/17/16	1345	3	X	X		10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____ RH

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	2/18/16	1600	
Relinquished by : (Signature)	Date: 2/18/16	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 3.2 °C Bottles Received: 38-GB
Date: 2/19/16 Time: 90

Hold #
Condition: (lab use only) GPO
COC Seal Intact: ___ Y ___ N ___ NA
pH Checked: NCF:

Company Name/Address:
SCS Engineers
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks
Email To: jfranks@scsengineers.com
Project Description: Sibley Generating Station
City/State Collected: Sibley, MO
Phone: 913-681-0030
Fax: 913-681-0012
Client Project # 27213169.15
Lab Project # AQUAOPKS-SIBLEY
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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: standard
Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 4 of 4

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

L# L818771
Table #
Acctnum: AQUAOPKS
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenom 500ml HDPE+HN03	RA-226, RA-228 1L HDPE+HN03	Rem./Contaminant	Sample # (lab only)
801	Grab	GW		2/17/16	1420	2	X	X		11
802	Grab	GW		2/17/16	1340	2	X	X		12
803	Grab	GW		2/17/16	1505	2	X	X		13
804	Grab	GW		2/17/16	1505	2	X	X		14
805	Grab	GW		2/17/16	1400	2	X	X		15
806	Grab	GW		2/17/16	1315	2	X	X		16
Duplicate (512)	Grab	GW		2/18/16	1330	2	X	X		17
MS (512)	Grab	GW		2/18/16	1340	2	X	X		05
MSD (512)	Grab	GW		2/18/16	1340	2	X	X		05
	Grab	GW					X	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: RH

pH _____ Temp _____
Flow _____ Other _____

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	2/18/16	1600	
Relinquished by : (Signature)	Date: 2/18/16	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 3.2 °C Bottles Received: 38 = ER
Date: 2/18/16 Time: 900

Hold #
Condition: (lab use only) 6010
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

Case Narrative

Lab No: 20160181

This report contains the analytical results for the 19 sample(s) received under chain of custody by Outreach Laboratory on 02/23/16 12:39:19. These samples are associated with your Sibley Generating Station project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of Outreach Laboratory.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Laboratory Manager and QA Manager or their designees and is approved for release.

Observations / Nonconformances

Sample #9 time descrepancy: COC 12:50, label 11:50.

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160181-01**								
Client ID : **504**								
Date Sampled : **02/18/16 10:20:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.060 +/- 0.075	0.098	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	0.048 +/- 0.488	0.624	pCi/l		03/15/16	03/18/16	JR
Lab ID : **20160181-02**								
Client ID : **505**								
Date Sampled : **02/18/16 10:55:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.104 +/- 0.117	0.154	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	0.811 +/- 0.754	0.900	pCi/l		03/15/16	03/18/16	JR
Lab ID : **20160181-03**								
Client ID : **506**								
Date Sampled : **02/18/16 11:40:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.129 +/- 0.140	0.188	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	0.388 +/- 0.518	0.630	pCi/l		03/15/16	03/18/16	JR
Lab ID : **20160181-04**								
Client ID : **510**								
Date Sampled : **02/18/16 14:50:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.197 +/- 0.157	0.194	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	-0.455 +/- 0.587	0.965	pCi/l		03/15/16	03/18/16	JR
Lab ID : **20160181-05**								
Client ID : **512**								
Date Sampled : **02/18/16 13:30:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.321 +/- 0.201	0.160	pCi/l		03/01/16	03/08/16	AK

*NELAC Certified Parameter BDL = Below Detection Limit

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radium-228	EPA 904*/9320*	1.22 +/- 0.622	0.859	pCi/l		03/15/16	03/18/16	JR

Lab ID : 20160181-06
Client ID : MS (512)
Date Sampled : 02/18/16 13:40:00
Matrix : NPW

Radiochemical Analyses

Radium-226	SM 7500 Ra B M*	11.6 +/- 1.10	0.126	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	8.22 +/- 0.827	1.02	pCi/l		03/15/16	03/18/16	JR

Lab ID : 20160181-07
Client ID : MSD (512)
Date Sampled : 02/18/16 13:40:00
Matrix : NPW

Radiochemical Analyses

Radium-226	SM 7500 Ra B M*	11.7 +/- 0.870	0.150	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	10.2 +/- 0.834	0.840	pCi/l		03/15/16	03/18/16	JR

Lab ID : 20160181-08
Client ID : 601
Date Sampled : 02/18/16 12:55:00
Matrix : NPW

Radiochemical Analyses

Radium-226	SM 7500 Ra B M*	-0.035 +/- 0.074	0.174	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	0.827 +/- 1.03	1.05	pCi/l		03/15/16	03/18/16	JR

Lab ID : 20160181-09
Client ID : 701
Date Sampled : 02/17/16 12:50:00
Matrix : NPW

Radiochemical Analyses

Radium-226	SM 7500 Ra B M*	0.049 +/- 0.095	0.150	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	0.410 +/- 0.751	0.774	pCi/l		03/15/16	03/18/16	JR

Lab ID : 20160181-10
Client ID : 702
Date Sampled : 02/17/16 11:55:00
Matrix : NPW

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.179 +/- 0.124	0.067	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	-0.827 +/- 0.843	0.872	pCi/l		03/15/16	03/18/16	JR

Lab ID : **20160181-11**
Client ID : **703**
Date Sampled : **02/17/16 12:30:00**
Matrix : **NPW**

		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.186 +/- 0.124	0.131	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	-0.805 +/- 0.839	0.999	pCi/l		03/15/16	03/18/16	JR

Lab ID : **20160181-12**
Client ID : **704**
Date Sampled : **02/17/16 13:45:00**
Matrix : **NPW**

		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.133 +/- 0.100	0.093	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	-0.584 +/- 0.658	0.737	pCi/l		03/15/16	03/18/16	JR

Lab ID : **20160181-13**
Client ID : **801**
Date Sampled : **02/17/16 14:20:00**
Matrix : **NPW**

		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.028 +/- 0.085	0.152	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	-0.087 +/- 0.621	0.680	pCi/l		03/15/16	03/18/16	JR

Lab ID : **20160181-14**
Client ID : **802**
Date Sampled : **02/17/16 13:40:00**
Matrix : **NPW**

		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.065 +/- 0.112	0.174	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	1.01 +/- 0.571	0.657	pCi/l		03/15/16	03/18/16	JR

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160181-15**								
Client ID : **803**								
Date Sampled : **02/17/16 15:05:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.326 +/- 0.161	0.146	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	0.063 +/- 0.671	0.749	pCi/l		03/15/16	03/18/16	JR
Lab ID : **20160181-16**								
Client ID : **804**								
Date Sampled : **02/17/16 15:05:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.372 +/- 0.173	0.152	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	0.936 +/- 0.665	0.690	pCi/l		03/15/16	03/18/16	JR
Lab ID : **20160181-17**								
Client ID : **805**								
Date Sampled : **02/17/16 14:00:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.365 +/- 0.177	0.161	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	0.575 +/- 0.665	0.716	pCi/l		03/15/16	03/18/16	JR
Lab ID : **20160181-18**								
Client ID : **806**								
Date Sampled : **02/17/16 13:15:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.383 +/- 0.176	0.146	pCi/l		03/01/16	03/08/16	AK
Radium-228	EPA 904*/9320*	-0.618 +/- 0.802	1.01	pCi/l		03/15/16	03/18/16	JR
Lab ID : **20160181-19**								
Client ID : **Duplicate (512)**								
Date Sampled : **02/18/16 13:30:00**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	0.092 +/- 0.091	0.105	pCi/l		03/01/16	03/08/16	AK

*NELAC Certified Parameter BDL = Below Detection Limit

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radium-228	EPA 904*/9320*	1.12 +/- 0.839	0.930	pCi/l		03/15/16	03/18/16	JR

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Date
Radium-226	0.003	115.0			NC	0.575	113.0	115.0	1.3	03/08/16
Radium-228	-0.155	104.0			NC	0.056	97.9	125.0	21.3	03/18/16

Lab Approval: 

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Company Name/Address:
SCS Engineers
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project #: 27213169.15

Lab Project #: AQUAOPKS-SIBLEY

Collected by (print): Whit Martin

Collected by (signature): Whit Martin

Site/Facility ID #:

P.O. #:

Immediately Packed on Ice: N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard
Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Ctrs	Lithium, Molybdenum 600ml HDPE+HN03	RA-226, RA-228 1L HDPE+HN03	Rem./Contaminant	Sample # (lab only)
504	Grab	GW		2/18/16	1020	2	X	X		-01
505	Grab	GW		2/18/16	1055	2	X	X		-02
506	Grab	GW		2/18/16	1140	2	X	X		-03
510	Grab	GW		2/18/16	1450	2	X	X		-04
512	Grab	GW		2/18/16	1330	2	X	X		-05
601	Grab	GW		2/18/16	1255	2	X	X		-06
701	Grab	GW		2/17/16	1250	2	X	X		-07
702	Grab	GW		2/17/16	1155	2	X	X		-08
703	Grab	GW		2/17/16	1230	2	X	X		-09
704	Grab	GW		2/17/16	1345	2	X	X		-10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

RH

pH _____ Temp _____

Flow _____ Other _____

Remarks:

20160181

Relinquished by: (Signature) Whit Martin — Date: 2/18/16 — Time: 1600 — Received by: (Signature)

Relinquished by: (Signature) — Date: 2/18/16 — Time: 1700 — Received by: (Signature)

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

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

Temp: 3.2 °C — Bottles Received: 32-GB

Date: 2/19/16 — Time: 9:6

Hold #

Condition: (lab use only) GOOD

COC Seal Intact: ___Y ___N ___NA

pH Checked: — NCF:

Chain of Custody — Page 3 of 4

ESC LAB SCIENCES

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

L# L818771
1215

Acctnum: AQUAOPKS
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Company Name/Address:
SCS Engineers
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks
Email To: jfranks@scsengineers.com
Project Description: Sibley Generating Station
City/State Collected: Sibley, MO
Phone: 913-681-0030
Fax: 913-681-0012
Client Project # 27213169.15
Lab Project # AQUAOPKS-SIBLEY
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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%
Date Results Needed: Standard
Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 4 of 4

ESC LABORATORY SCIENCES
LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L818771
Table #
Acctnum: AQUAOPKS
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Lithium, Molybdenum 500ml HDPE+HN03	RA-226, RA-228 1L HDPE+HN03	Rem./Containment	Sample # (lab only)
13 B01	Grab	GW		2/17/16	1420	2	X	X		11
14 B02	Grab	GW		2/17/16	1340	2	X	X		12
15 B03	Grab	GW		2/17/16	1505	2	X	X		13
16 B04	Grab	GW		2/17/16	1505	2	X	X		14
17 B05	Grab	GW		2/17/16	1400	2	X	X		15
18 B06	Grab	GW		2/17/16	1315	2	X	X		16
19 Duplicate (512)	Grab	GW		2/18/16	1330	2	X	X		17
20 MS (512)	Grab	GW		2/18/16	1340	2	X	X		05
05 MSD (512)	Grab	GW		2/18/16	1340	2	X	X		05
	Grab	GW				2	X	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

Remarks: RA

pH ___ Temp ___
Flow ___ Other ___

20160181

Relinquished by: (Signature) Whit Martin — Date: 2/18/16 — Time: 1600 — Received by: (Signature)
Relinquished by: (Signature) — Date: 2/18/16 — Time: 1700 — Received by: (Signature)
Relinquished by: (Signature) — Date: — Time: — Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ___
Temp: 3.2 °C Bottles Received: 38 = ER
Date: 2/19/16 Time: 900

Hold #
Condition: (lab use only) OK
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

ANALYTICAL REPORT

February 24, 2016

SCS Aquaterra

Sample Delivery Group:	L818774
Samples Received:	02/19/2016
Project Number:	27213169.15
Description:	Sibley Generating Station

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

504 L818774-01 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 10:20
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 07:59	CCE

505 L818774-02 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 10:55
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:02	CCE

506 L818774-03 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 11:40
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:06	CCE

510 L818774-04 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 14:50
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:15	CCE

512 L818774-05 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 13:30
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 07:47	CCE

601 L818774-06 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 12:55
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:18	CCE

701 L818774-07 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 12:50
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:21	CCE

702 L818774-08 GW

Collected by: Whit Martin
Collected date/time: 02/17/16 11:55
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:24	CCE

703 L818774-09 GW

Collected by: Whit Martin | Collected date/time: 02/17/16 12:30 | Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:28	CCE

704 L818774-10 GW

Collected by: Whit Martin | Collected date/time: 02/17/16 13:45 | Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:31	CCE

801 L818774-11 GW

Collected by: Whit Martin | Collected date/time: 02/17/16 14:20 | Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:34	CCE

802 L818774-12 GW

Collected by: Whit Martin | Collected date/time: 02/17/16 13:40 | Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:37	CCE

803 L818774-13 GW

Collected by: Whit Martin | Collected date/time: 02/17/16 15:05 | Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:40	CCE

804 L818774-14 GW

Collected by: Whit Martin | Collected date/time: 02/17/16 15:05 | Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:43	CCE

805 L818774-15 GW

Collected by: Whit Martin | Collected date/time: 02/17/16 14:00 | Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:52	CCE

806 L818774-16 GW

Collected by: Whit Martin | Collected date/time: 02/17/16 13:15 | Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:55	CCE

DUPLICATE 512 L818774-17 GW

Collected by: Whit Martin
Collected date/time: 02/18/16 13:30
Received date/time: 02/19/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG851189	1	02/22/16 16:51	02/23/16 08:58	CCE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 07:59	WG851189
Molybdenum	ND		5.00	1	02/23/2016 07:59	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:02	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:02	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:06	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:06	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:15	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:15	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 07:47	WG851189
Molybdenum	ND		5.00	1	02/23/2016 07:47	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:18	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:18	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:21	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:21	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:24	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:24	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:28	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:28	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:31	WG851189
Molybdenum	9.43		5.00	1	02/23/2016 08:31	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	18.2		15.0	1	02/23/2016 08:34	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:34	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:37	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:37	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	19.7		15.0	1	02/23/2016 08:40	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:40	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	25.7		15.0	1	02/23/2016 08:43	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:43	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:52	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:52	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	26.9		15.0	1	02/23/2016 08:55	WG851189
Molybdenum	1070		5.00	1	02/23/2016 08:55	WG851189

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	02/23/2016 08:58	WG851189
Molybdenum	ND		5.00	1	02/23/2016 08:58	WG851189

Method Blank (MB)

(MB) 02/23/16 07:39

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Lithium	ND		0.0150
Molybdenum	ND		0.00500

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

(LCS) 02/23/16 07:41 • (LCSD) 02/23/16 07:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lithium	1.00	1.03	1.03	103	103	80-120			1	20
Molybdenum	1.00	0.953	0.966	95	97	80-120			1	20

L818774-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/23/16 07:47 • (MS) 02/23/16 07:53 • (MSD) 02/23/16 07:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lithium	1.00	0.00839	1.07	1.04	106	103	1	75-125			3	20
Molybdenum	1.00	0.000512	0.990	0.959	99	96	1	75-125			3	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

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

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

State Accreditations

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

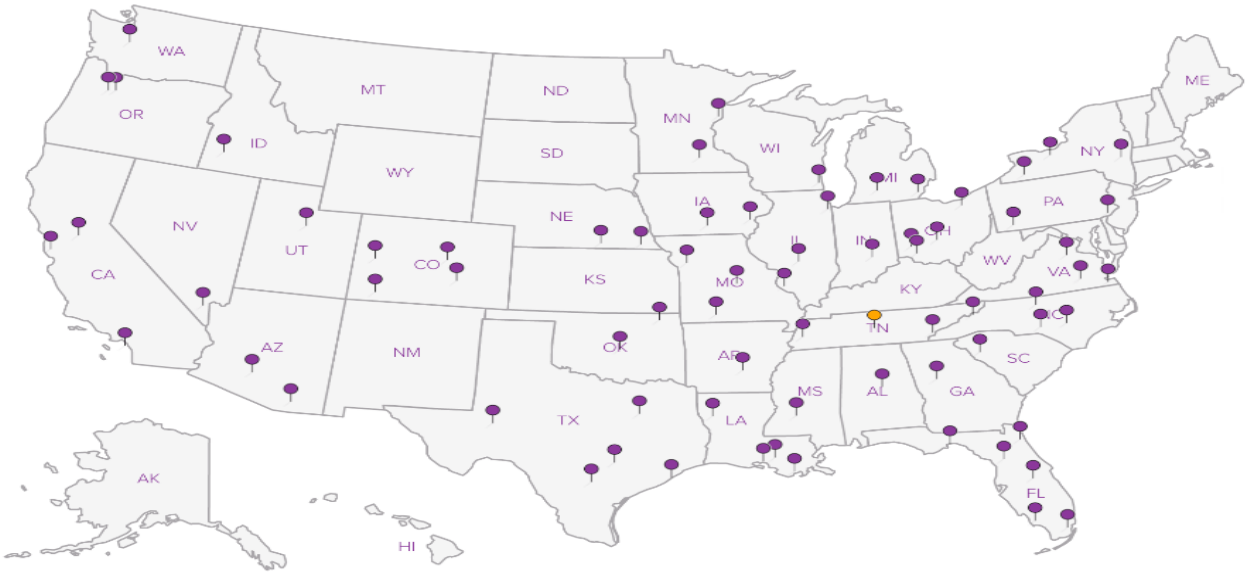
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:
SCS Engineers
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard
Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Ctrs	Lithium, Molybdenom 500ml HDPE+HN03	RA-226, RA-228 1L HDPE+HN03
504	Grab	GW		2/18/16	1020	3	X	X
505	Grab	GW		2/18/16	1055	3	X	X
506	Grab	GW		2/18/16	1140	3	X	X
510	Grab	GW		2/18/16	1450	3	X	X
512	Grab	GW		2/18/16	1330	3	X	X
601	Grab	GW		2/18/16	1255	3	X	X
701	Grab	GW		2/17/16	1250	3	X	X
702	Grab	GW		2/17/16	1155	3	X	X
703	Grab	GW		2/17/16	1230	3	X	X
704	Grab	GW		2/17/16	1345	3	X	X

Analysis / Container / Preservative

Chain of Custody Page 3 of 4

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L818774
I214

Acctnum: AQUAOPKS
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Rem /Contaminant	Sample # (lab only)
	-01
	02
	03
	04
	05
	06
	07
	08
	09
	10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____

Remarks:

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	2/18/16	1600	
Relinquished by : (Signature)	Date: 2/18/16	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: 3.2 °C Bottles Received: 40 38 6R

Date: 2/19/16 Time: 900

Condition: OK (lab use only) GSW

COC Seal Intact: ___Y ___N ___NA

pH Checked: <2 NCF:

Company Name/Address:
SCS Engineers
7311 W. 130th St., Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks
Email To: jfranks@scsengineers.com

Project Description: Sibley Generating Station
City/State Collected: Sibley, MO

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

Client Project # 27213169.15
Lab Project # AQUAOPKS-SIBLEY

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: standard
Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 4 of 4

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

L# 181774
Table #
Acctnum: AQUAOPKS
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. Cntrs	Lithium, Molybdenum 500ml HDPE+HN03	RA-226, RA-228 1L HDPE+HN03	Rem./Contaminant	Sample # (lab only)
801	Grab	GW		2/17/16	1420	3	X	X		11
802	Grab	GW		2/17/16	1340	3	X	X		12
803	Grab	GW		2/17/16	1505	3	X	X		13
804	Grab	GW		2/17/16	1505	3	X	X		14
805	Grab	GW		2/17/16	1400	3	X	X		15
806	Grab	GW		2/17/16	1315	3	X	X		16
Duplicate (512)	Grab	GW		2/18/16	1330	3	X	X		17
MS (512)	Grab	GW		2/18/16	1340	3	X	X		05
MSD (512)	Grab	GW		2/18/16	1340	3	X	X		05
	Grab	GW				3	X	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

pH ___ Temp ___
Flow ___ Other ___

Remarks:

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	2/18/16	1600	
Relinquished by : (Signature)	Date: 2/18/16	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ___
Temp: °C Bottles Received: 38 = DB
Date: 2/19/16 Time: 900

Condition: OK (lab use only) GDO
COC Seal Intact: ___Y ___N ___NA
pH Checked: 2 NCF:

Jared Morrison
December 16, 2022

ATTACHMENT 1-3

May 2016 Sampling Event Laboratory Report

ANALYTICAL REPORT

June 01, 2016

SCS Engineers

Sample Delivery Group:	L838429
Samples Received:	05/28/2016
Project Number:	27213169.16
Description:	KCPL Sibley Gen Station-Groundwater

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

TABLE OF CONTENTS

504 L838429-01 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 14:50 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG876504	1	05/31/16 18:13	06/01/16 10:56	LTB

505 L838429-02 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 15:45 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG876504	1	05/31/16 18:13	06/01/16 10:59	LTB

506 L838429-03 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 14:35 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG876504	1	05/31/16 18:13	06/01/16 11:01	LTB

510 L838429-04 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 12:30 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG876504	1	05/31/16 18:13	06/01/16 10:45	LTB

512 L838429-05 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 12:45 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG876504	1	05/31/16 18:13	06/01/16 11:10	LTB

DUPLICATE L838429-06 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 00:00 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG876504	1	05/31/16 18:13	06/01/16 11:12	LTB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	06/01/2016 10:56	WG876504
Molybdenum	ND		5.00	1	06/01/2016 10:56	WG876504

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	06/01/2016 10:59	WG876504
Molybdenum	ND		5.00	1	06/01/2016 10:59	WG876504

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	06/01/2016 11:01	WG876504
Molybdenum	ND		5.00	1	06/01/2016 11:01	WG876504

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	06/01/2016 10:45	WG876504
Molybdenum	ND		5.00	1	06/01/2016 10:45	WG876504

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	06/01/2016 11:10	WG876504
Molybdenum	ND		5.00	1	06/01/2016 11:10	WG876504

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	06/01/2016 11:12	WG876504
Molybdenum	ND		5.00	1	06/01/2016 11:12	WG876504

Method Blank (MB)

(MB) R3140859-1 06/01/16 10:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Lithium	U		5.30	15.0
Molybdenum	U		1.60	5.00

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

(LCS) R3140859-2 06/01/16 10:40 • (LCSD) R3140859-3 06/01/16 10:42

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	%	%	%			%	%
Lithium	1000	982	984	98	98	80-120			0	20
Molybdenum	1000	1020	1030	102	103	80-120			0	20

L838429-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838429-04 06/01/16 10:45 • (MS) R3140859-5 06/01/16 10:51 • (MSD) R3140859-6 06/01/16 10:53

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	%	%		%			%	%
Lithium	1000	ND	1010	1020	100	102	1	75-125			2	20
Molybdenum	1000	ND	1030	1040	103	104	1	75-125			2	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

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

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

State Accreditations

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

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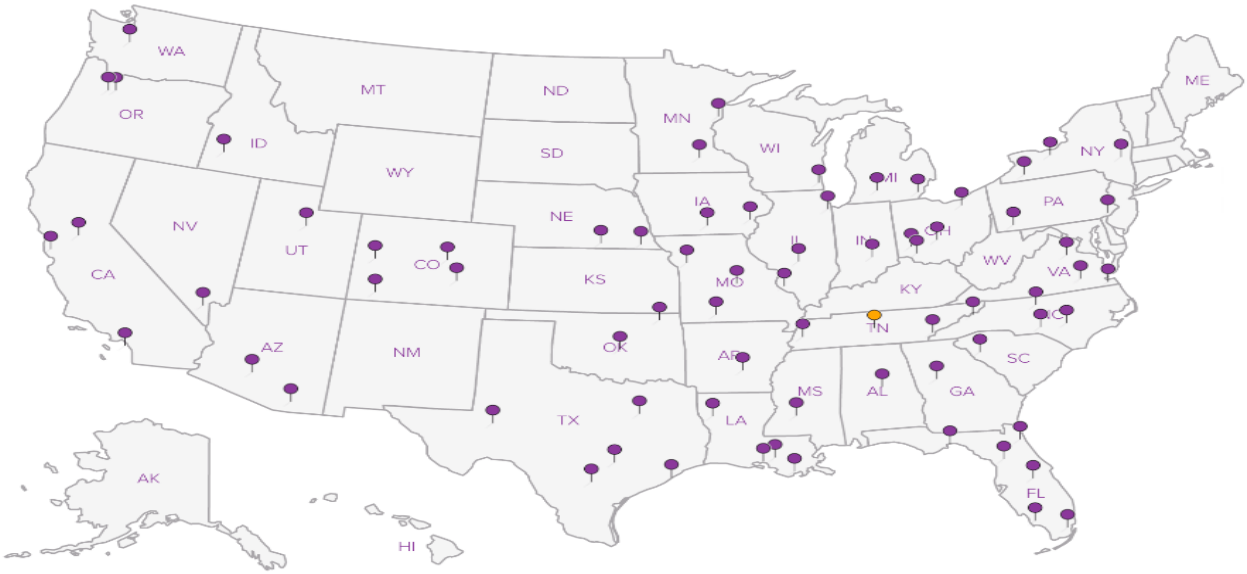


Company Name/Address:
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information:
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to: **Mr. Jason R. Franks**

Email To: **jfranks@scsengineers.com**

Project Description: **KCPL Sibley Gen Station - Groundwater**

City/State Collected: **Sibley, Mo**

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

Client Project # **27213169.16**

Lab Project #

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 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed: **STD**

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Metals** 500mlHDPE-HN03 V2	Radium 226, Radium 228 ** 2x1L HDPE+HN03	Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	05/25/16	1450	3	X	X		01
505	Grab	GW	NA	5/25/16	1545	3	X	X		02
506	Grab	GW	NA	5/25/16	1435	3	X	X		03
510	Grab	GW	NA	5/25/16	1230	3	X	X		04
512	Grab	GW	NA	5/25/16	1245	3	X	X		05
Duplicate	Grab	GW	NA	5/25/16		3	X	X		06
MS 510	Grab	GW	NA	5/25/16	1240	3	X	X		07
MSD 510	Grab	GW	NA	5/25/16	1245	3	X	X		08

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other RAd Samples shipped TO OUTLOOK

pH ____ Temp ____

Remarks: **Metals=Li, Mo ** **Ra 226&Ra228=Report Seperatly and combined Please****

Flow ____ Other ____

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ____

Temp: 1.4 °C Bottles Received: 8:DK

Date: 5-27-16 Time: 0900

Received for lab by: (Signature)

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5-27-16	1200	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 838429

1065

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

4136 7135 4197

Hold #

Condition: NB9 (lab use only) a

COC Seal Intact: ___Y ___N ___NA

pH Checked: ✓ NCF:

ANALYTICAL REPORT

December 05, 2016

SCS Engineers - KS

Sample Delivery Group:	L838454
Samples Received:	05/28/2016
Project Number:	27213169.16
Description:	Sibley Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

TABLE OF CONTENTS

504 L838454-01 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 14:50 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG876449	1	06/01/16 22:51	06/01/16 23:57	JM
Mercury by Method 7470A	WG876763	1	06/01/16 10:20	06/02/16 12:10	NJB
Metals (ICP) by Method 6010B	WG876930	1	06/01/16 18:25	06/02/16 21:03	ST
Metals (ICPMS) by Method 6020	WG877167	1	06/02/16 14:52	06/02/16 15:35	JDG
Wet Chemistry by Method 9056A	WG876616	1	06/02/16 17:52	06/02/16 17:52	SAM

505 L838454-02 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 15:45 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG876449	1	06/01/16 22:51	06/01/16 23:57	JM
Mercury by Method 7470A	WG876763	1	06/01/16 10:20	06/02/16 12:13	NJB
Metals (ICP) by Method 6010B	WG876930	1	06/01/16 18:25	06/02/16 21:06	ST
Metals (ICPMS) by Method 6020	WG877167	1	06/02/16 14:52	06/02/16 15:38	JDG
Wet Chemistry by Method 9056A	WG876616	1	06/02/16 18:06	06/02/16 18:06	SAM

506 L838454-03 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 14:35 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG876449	1	06/01/16 22:51	06/01/16 23:57	JM
Mercury by Method 7470A	WG876763	1	06/01/16 10:20	06/02/16 12:22	NJB
Metals (ICP) by Method 6010B	WG876930	1	06/01/16 18:25	06/02/16 21:08	ST
Metals (ICPMS) by Method 6020	WG877167	1	06/02/16 14:52	06/02/16 15:40	JDG
Wet Chemistry by Method 9056A	WG876618	1	06/01/16 17:00	06/01/16 17:00	KCF

510 L838454-04 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 12:30 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG876449	1	06/01/16 22:51	06/01/16 23:57	JM
Mercury by Method 7470A	WG876763	1	06/01/16 10:20	06/02/16 11:47	NJB
Metals (ICP) by Method 6010B	WG876930	1	06/01/16 18:25	06/02/16 20:32	ST
Metals (ICPMS) by Method 6020	WG877167	1	06/02/16 14:52	06/02/16 15:26	JDG
Wet Chemistry by Method 9056A	WG876618	1	06/01/16 17:27	06/01/16 17:27	KCF

512 L838454-05 GW

Collected by: Jason R. Franks | Collected date/time: 05/25/16 12:45 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG876449	1	06/01/16 22:51	06/01/16 23:57	JM
Mercury by Method 7470A	WG876763	1	06/01/16 10:20	06/02/16 12:25	NJB
Metals (ICP) by Method 6010B	WG876930	1	06/01/16 18:25	06/02/16 21:11	ST
Metals (ICPMS) by Method 6020	WG877167	1	06/02/16 14:52	06/02/16 15:47	JDG
Wet Chemistry by Method 9056A	WG876618	1	06/01/16 18:34	06/01/16 18:34	KCF

DUPLICATE L838454-06 GW

Collected by: Jason R. Franks
Collected date/time: 05/25/16 00:00
Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG876449	1	06/01/16 22:51	06/01/16 23:57	JM
Mercury by Method 7470A	WG876763	1	06/01/16 10:20	06/02/16 12:28	NJB
Metals (ICP) by Method 6010B	WG876930	1	06/01/16 18:25	06/02/16 21:14	ST
Metals (ICPMS) by Method 6020	WG877167	1	06/02/16 14:52	06/02/16 15:49	JDG
Wet Chemistry by Method 9056A	WG876618	1	06/01/16 18:47	06/01/16 18:47	KCF

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	385000		10000	1	06/01/2016 23:57	WG876449

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	06/02/2016 17:52	WG876616
Fluoride	188		100	1	06/02/2016 17:52	WG876616
Sulfate	18900		5000	1	06/02/2016 17:52	WG876616

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	06/02/2016 12:10	WG876763

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	106		5.00	1	06/02/2016 21:03	WG876930
Boron	ND		200	1	06/02/2016 21:03	WG876930
Calcium	30200		1000	1	06/02/2016 21:03	WG876930
Chromium	ND		10.0	1	06/02/2016 21:03	WG876930
Cobalt	ND		10.0	1	06/02/2016 21:03	WG876930

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	06/02/2016 15:35	WG877167
Arsenic	2.11		2.00	1	06/02/2016 15:35	WG877167
Beryllium	ND		2.00	1	06/02/2016 15:35	WG877167
Cadmium	ND		1.00	1	06/02/2016 15:35	WG877167
Lead	ND		2.00	1	06/02/2016 15:35	WG877167
Selenium	2.39		2.00	1	06/02/2016 15:35	WG877167
Thallium	ND		2.00	1	06/02/2016 15:35	WG877167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	172000		10000	1	06/01/2016 23:57	WG876449

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	06/02/2016 18:06	WG876616
Fluoride	143		100	1	06/02/2016 18:06	WG876616
Sulfate	21900		5000	1	06/02/2016 18:06	WG876616

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	06/02/2016 12:13	WG876763

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	87.2		5.00	1	06/02/2016 21:06	WG876930
Boron	ND		200	1	06/02/2016 21:06	WG876930
Calcium	24600		1000	1	06/02/2016 21:06	WG876930
Chromium	ND		10.0	1	06/02/2016 21:06	WG876930
Cobalt	ND		10.0	1	06/02/2016 21:06	WG876930

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	06/02/2016 15:38	WG877167
Arsenic	ND		2.00	1	06/02/2016 15:38	WG877167
Beryllium	ND		2.00	1	06/02/2016 15:38	WG877167
Cadmium	ND		1.00	1	06/02/2016 15:38	WG877167
Lead	ND		2.00	1	06/02/2016 15:38	WG877167
Selenium	2.69		2.00	1	06/02/2016 15:38	WG877167
Thallium	ND		2.00	1	06/02/2016 15:38	WG877167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	133000		10000	1	06/01/2016 23:57	WG876449

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	5760		1000	1	06/01/2016 17:00	WG876618
Fluoride	324		100	1	06/01/2016 17:00	WG876618
Sulfate	71000		5000	1	06/01/2016 17:00	WG876618

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	06/02/2016 12:22	WG876763

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	237		5.00	1	06/02/2016 21:08	WG876930
Boron	ND		200	1	06/02/2016 21:08	WG876930
Calcium	98300		1000	1	06/02/2016 21:08	WG876930
Chromium	ND		10.0	1	06/02/2016 21:08	WG876930
Cobalt	ND		10.0	1	06/02/2016 21:08	WG876930

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	06/02/2016 15:40	WG877167
Arsenic	ND		2.00	1	06/02/2016 15:40	WG877167
Beryllium	ND		2.00	1	06/02/2016 15:40	WG877167
Cadmium	ND		1.00	1	06/02/2016 15:40	WG877167
Lead	ND		2.00	1	06/02/2016 15:40	WG877167
Selenium	8.95		2.00	1	06/02/2016 15:40	WG877167
Thallium	ND		2.00	1	06/02/2016 15:40	WG877167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	451000		10000	1	06/01/2016 23:57	WG876449

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3120		1000	1	06/01/2016 17:27	WG876618
Fluoride	273		100	1	06/01/2016 17:27	WG876618
Sulfate	18100		5000	1	06/01/2016 17:27	WG876618

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	06/02/2016 11:47	WG876763

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	365		5.00	1	06/02/2016 20:32	WG876930
Boron	ND		200	1	06/02/2016 20:32	WG876930
Calcium	119000		1000	1	06/02/2016 20:32	WG876930
Chromium	ND		10.0	1	06/02/2016 20:32	WG876930
Cobalt	ND		10.0	1	06/02/2016 20:32	WG876930

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	06/02/2016 15:26	WG877167
Arsenic	ND		2.00	1	06/02/2016 15:26	WG877167
Beryllium	ND		2.00	1	06/02/2016 15:26	WG877167
Cadmium	ND		1.00	1	06/02/2016 15:26	WG877167
Lead	ND		2.00	1	06/02/2016 15:26	WG877167
Selenium	3.33		2.00	1	06/02/2016 15:26	WG877167
Thallium	ND		2.00	1	06/02/2016 15:26	WG877167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	467000		10000	1	06/01/2016 23:57	WG876449

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	2550		1000	1	06/01/2016 18:34	WG876618
Fluoride	308		100	1	06/01/2016 18:34	WG876618
Sulfate	23100		5000	1	06/01/2016 18:34	WG876618

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	06/02/2016 12:25	WG876763

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	361		5.00	1	06/02/2016 21:11	WG876930
Boron	ND		200	1	06/02/2016 21:11	WG876930
Calcium	98900		1000	1	06/02/2016 21:11	WG876930
Chromium	ND		10.0	1	06/02/2016 21:11	WG876930
Cobalt	ND		10.0	1	06/02/2016 21:11	WG876930

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	06/02/2016 15:47	WG877167
Arsenic	ND		2.00	1	06/02/2016 15:47	WG877167
Beryllium	ND		2.00	1	06/02/2016 15:47	WG877167
Cadmium	ND		1.00	1	06/02/2016 15:47	WG877167
Lead	ND		2.00	1	06/02/2016 15:47	WG877167
Selenium	4.21		2.00	1	06/02/2016 15:47	WG877167
Thallium	ND		2.00	1	06/02/2016 15:47	WG877167

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	420000		10000	1	06/01/2016 23:57	WG876449

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3130		1000	1	06/01/2016 18:47	WG876618
Fluoride	316		100	1	06/01/2016 18:47	WG876618
Sulfate	13300		5000	1	06/01/2016 18:47	WG876618

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	06/02/2016 12:28	WG876763

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	363		5.00	1	06/02/2016 21:14	WG876930
Boron	ND		200	1	06/02/2016 21:14	WG876930
Calcium	118000		1000	1	06/02/2016 21:14	WG876930
Chromium	ND		10.0	1	06/02/2016 21:14	WG876930
Cobalt	ND		10.0	1	06/02/2016 21:14	WG876930

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	06/02/2016 15:49	WG877167
Arsenic	ND		2.00	1	06/02/2016 15:49	WG877167
Beryllium	ND		2.00	1	06/02/2016 15:49	WG877167
Cadmium	ND		1.00	1	06/02/2016 15:49	WG877167
Lead	ND		2.00	1	06/02/2016 15:49	WG877167
Selenium	3.32		2.00	1	06/02/2016 15:49	WG877167
Thallium	ND		2.00	1	06/02/2016 15:49	WG877167

Method Blank (MB)

(MB) R3141545-1 06/01/16 23:57

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

L838545-02 Original Sample (OS) • Duplicate (DUP)

(OS) L838545-02 06/01/16 23:57 • (DUP) R3141545-4 06/01/16 23:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	4230000	4180000	1	1.19		5

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

(LCS) R3141545-2 06/01/16 23:57 • (LCSD) R3141545-3 06/01/16 23:57

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	%	%	%			%	%
Dissolved Solids	8800000	8960000	8690000	102	98.8	85.0-115			3.06	5

Method Blank (MB)

(MB) R3141357-1 06/02/16 06:28

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

L838294-09 Original Sample (OS) • Duplicate (DUP)

(OS) L838294-09 06/02/16 12:57 • (DUP) R3141357-4 06/02/16 13:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	3450	3450	1	0		15
Fluoride	ND	0.000	1	0		15
Sulfate	6760	6740	1	0		15

L838444-03 Original Sample (OS) • Duplicate (DUP)

(OS) L838444-03 06/02/16 16:45 • (DUP) R3141357-6 06/02/16 16:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	21700	21700	1	0		15
Fluoride	2260	2280	1	1		15

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

(LCS) R3141357-2 06/02/16 06:41 • (LCSD) R3141357-3 06/02/16 06:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	38400	37700	96	94	80-120			2	15
Fluoride	8000	7670	7560	96	95	80-120			1	15
Sulfate	40000	41000	40600	103	102	80-120			1	15

L838294-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L838294-10 06/02/16 13:51 • (MS) R3141357-5 06/02/16 14:04

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	ND	50800	102	1	80-120	
Fluoride	5000	ND	5160	102	1	80-120	
Sulfate	50000	ND	54900	110	1	80-120	

L838454-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838454-02 06/02/16 18:06 • (MS) R3141357-7 06/02/16 18:46 • (MSD) R3141357-8 06/02/16 18:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	ND	48900	48800	97	96	1	80-120			0	15
Fluoride	5000	143	5180	5220	101	102	1	80-120			1	15
Sulfate	50000	21900	73600	73600	103	103	1	80-120			0	15

Method Blank (MB)

(MB) R3141049-1 06/01/16 06:57

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

L838454-03 Original Sample (OS) • Duplicate (DUP)

(OS) L838454-03 06/01/16 17:00 • (DUP) R3141049-4 06/01/16 17:13

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5760	5750	1	0		15
Fluoride	324	317	1	2		15
Sulfate	71000	70900	1	0		15

L838473-01 Original Sample (OS) • Duplicate (DUP)

(OS) L838473-01 06/01/16 22:08 • (DUP) R3141049-7 06/01/16 22:22

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	32700	32600	1	0		15
Fluoride	1570	1560	1	1		15
Sulfate	9910	9910	1	0		15

L838484-01 Original Sample (OS) • Duplicate (DUP)

(OS) L838484-01 06/02/16 00:09 • (DUP) R3141049-8 06/02/16 00:23

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	84000	84000	1	0		15
Fluoride	546	546	1	0		15
Sulfate	5000	4990	1	0	J	15

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

(LCS) R3141049-2 06/01/16 07:11 • (LCSD) R3141049-3 06/01/16 07:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39300	39200	98	98	80-120			0	15
Fluoride	8000	7850	7870	98	98	80-120			0	15

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

(LCS) R3141049-2 06/01/16 07:11 • (LCSD) R3141049-3 06/01/16 07:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sulfate	40000	39200	39400	98	98	80-120			1	15

L838454-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838454-04 06/01/16 17:27 • (MS) R3141049-5 06/01/16 17:40 • (MSD) R3141049-6 06/01/16 17:54

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	3120	54500	54500	103	103	1	80-120			0	15
Fluoride	5000	273	5460	5510	104	105	1	80-120			1	15
Sulfate	50000	18100	73000	73100	110	110	1	80-120			0	15

L838486-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L838486-01 06/02/16 00:36 • (MS) R3141049-9 06/02/16 00:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	19300	68300	98	1	80-120	
Fluoride	5000	396	5390	100	1	80-120	
Sulfate	50000	209	53800	107	1	80-120	

Method Blank (MB)

(MB) R3141141-1 06/02/16 11:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3141141-2 06/02/16 11:35 • (LCSD) R3141141-3 06/02/16 11:38

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Mercury	3.00	3.22	3.15	107	105	80-120			2	20

L838454-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838454-04 06/02/16 11:47 • (MS) R3141141-4 06/02/16 11:50 • (MSD) R3141141-5 06/02/16 11:53

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	%	%		%			%	%
Mercury	3.00	ND	3.24	3.13	108	104	1	75-125			3	20

Method Blank (MB)

(MB) R3141296-1 06/02/16 20:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Barium	U		1.70	5.00
Boron	U		12.6	200
Calcium	U		46.3	1000
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0

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

(LCS) R3141296-2 06/02/16 20:27 • (LCSD) R3141296-3 06/02/16 20:30

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	%	%	%			%	%
Barium	1000	1040	1040	104	104	80-120			0	20
Boron	1000	1040	1050	104	105	80-120			1	20
Calcium	10000	10200	10200	102	102	80-120			0	20
Chromium	1000	1020	1010	102	101	80-120			1	20
Cobalt	1000	1050	1050	105	105	80-120			0	20

L838454-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838454-04 06/02/16 20:32 • (MS) R3141296-5 06/02/16 20:38 • (MSD) R3141296-6 06/02/16 20:40

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	%	%		%			%	%
Barium	1000	365	1370	1370	101	100	1	75-125			0	20
Boron	1000	ND	1130	1130	105	105	1	75-125			0	20
Calcium	10000	119000	128000	128000	87	94	1	75-125			1	20
Chromium	1000	ND	1020	1010	101	101	1	75-125			1	20
Cobalt	1000	ND	1060	1060	106	106	1	75-125			0	20

Method Blank (MB)

(MB) R3141231-1 06/02/16 15:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3141231-2 06/02/16 15:21 • (LCSD) R3141231-3 06/02/16 15:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	57.9	52.5	53.1	91	92	80-120			1	20
Arsenic	50.0	48.6	48.4	97	97	80-120			1	20
Beryllium	50.0	49.4	47.9	99	96	80-120			3	20
Cadmium	50.0	51.5	50.7	103	101	80-120			2	20
Lead	50.0	50.6	50.3	101	101	80-120			1	20
Selenium	50.0	48.8	49.8	98	100	80-120			2	20
Thallium	50.0	49.5	50.0	99	100	80-120			1	20

L838454-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838454-04 06/02/16 15:26 • (MS) R3141231-5 06/02/16 15:31 • (MSD) R3141231-6 06/02/16 15:33

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 %
Antimony	57.9	ND	52.1	51.5	90	89	1	75-125			1	20
Arsenic	50.0	ND	48.1	48.1	94	95	1	75-125			0	20
Beryllium	50.0	ND	47.6	46.5	95	93	1	75-125			2	20
Cadmium	50.0	ND	48.6	48.7	97	97	1	75-125			0	20
Lead	50.0	ND	49.6	47.6	99	95	1	75-125			4	20
Selenium	50.0	3.33	51.1	49.4	96	92	1	75-125			4	20
Thallium	50.0	ND	49.2	47.6	98	95	1	75-125			3	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

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

State Accreditations

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

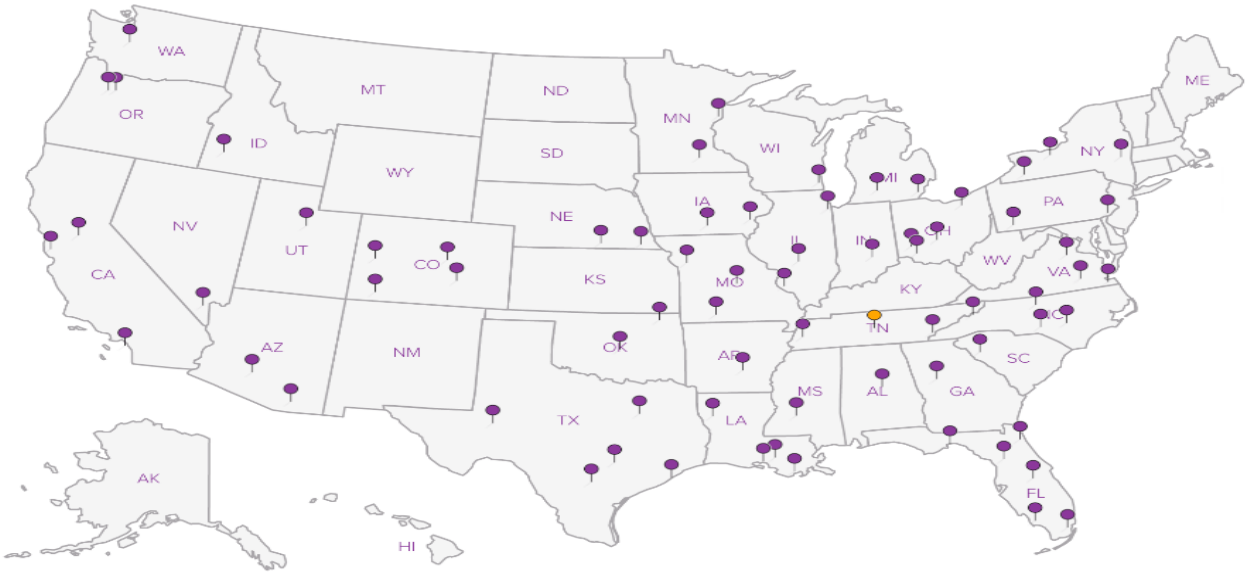
Third Party & Federal Accreditations

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

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

Our Locations

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



Chain of Custody Page ___ of ___

ESC LAB SCIENCES

YOUR LAB OF CHOICE

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

L# 878454

1064

Acctnum: AQUAOPKS

Template:

Prelogin:

TSR: 206-Jeff Carr

PB:

Shipped Via:

Company Name/Address:
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information:
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to:
Mr. Jason R. Franks

Email To:
jfranks@scsengineers.com

Project Description: KCPL Sibley Gen Station - Groundwater

City/State Collected: Sibley, Mo

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

Client Project # 27213169.16

Lab Project #

Collected by (print): Jason R. Franks

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ___Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Metals** 500mlHDPE-HN03 ↓2	Chloride, Fluoride, Sulfate 125ml HDPE-NoPres	TDS 250mlHDPE-NoPres	Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	5/25/16	1450	3	X	X	X		01
505	Grab	GW	NA	5/25/16	1545	3	X	X	X		02
506	Grab	GW	NA	5/25/16	1435	3	X	X	X		03
510	Grab	GW	NA	5/25/16	1230	3	X	X	X		04
512	Grab	GW	NA	5/25/16	1245	3	X	X	X		05
Duplicate	Grab	GW	NA	5/25/16		3	X	X	X		06
MS 510	Grab	GW	NA	5/25/16	1240	3	X	X	X		07
MSD 510	Grab	GW	NA	5/25/16	1245	3	X	X	X		

Analysis / Container / Preservative

6936 7135 9617

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

Remarks: **Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Hg, Se **

pH ___ Temp ___

Flow ___ Other ___

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

Temp: 1.2 °C Bottles Received: 21

Date: 5-27-16 Time: 0900

Hold #

Condition: NCF (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5-27-16	1200	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/27/16	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

NJ TN002

Case Narrative

Lab No: 20160525

This report contains the analytical results for the 23 sample(s) received under chain of custody by ESC Lab Sciences on 5/31/2016 9:38:05 AM. These samples are associated with your 27213169.16 KCPL Sibley Gen Stn -Source project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

DL for Radiochemistry = MDA DL for Metals and Wet Chemistry = MDL DL for Drinking Water = SDWA

Observations / Nonconformances

Report was reissued 4/30/18 to correct Project Name. No other changes were made.

ESC Lab Sciences
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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160525-01**								
Client ID : **504**								
Date Sampled : **5/25/2016 2:50:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		2.88 +/- 0.775	0.943	pCi/l				
Radium-226	SM 7500 Ra B M*	0.023 +/- 0.089	0.164	pCi/l		06/02/16	06/06/16	AK
Radium-228	EPA 904*/9320*	2.86 +/- 0.686	0.779	pCi/l		06/24/16	07/01/16	JR
Lab ID : **20160525-02**								
Client ID : **505**								
Date Sampled : **5/25/2016 3:45:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.427 +/- 0.655	0.832	pCi/l				
Radium-226	SM 7500 Ra B M*	0.161 +/- 0.163	0.230	pCi/l		06/02/16	06/07/16	AK
Radium-228	EPA 904*/9320*	0.266 +/- 0.492	0.602	pCi/l		06/24/16	07/01/16	JR
Lab ID : **20160525-03**								
Client ID : **506**								
Date Sampled : **5/25/2016 2:35:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		3.46 +/- 0.938	1.10	pCi/l				
Radium-226	SM 7500 Ra B M*	0.511 +/- 0.205	0.183	pCi/l		06/02/16	06/07/16	AK
Radium-228	EPA 904*/9320*	2.95 +/- 0.733	0.912	pCi/l		06/24/16	07/01/16	JR
Lab ID : **20160525-04**								
Client ID : **510**								
Date Sampled : **5/25/2016 12:30:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.317 +/- 1.03	0.870	pCi/l				
Radium-226	SM 7500 Ra B M*	0.237 +/- 0.142	0.158	pCi/l		06/02/16	06/07/16	AK
Radium-228	EPA 904*/9320*	0.080 +/- 0.890	0.712	pCi/l		06/24/16	07/07/16	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20160525-05								
Client ID : 512								
Date Sampled : 5/25/2016 12:45:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		2.47 +/- 0.855	1.07	pCi/l				
Radium-226	SM 7500 Ra B M*	0.259 +/- 0.156	0.199	pCi/l		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	2.21 +/- 0.699	0.866	pCi/l		06/24/16	07/01/16	JR
Lab ID : 20160525-06								
Client ID : Duplicate								
Date Sampled : 5/25/2016								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.358 +/- 1.00	0.726	pCi/l				
Radium-226	SM 7500 Ra B M*	0.358 +/- 0.191	0.145	pCi/l		06/07/16	06/07/16	AK
Radium-228	EPA 904*/9320*	-0.614 +/- 0.812	0.581	pCi/l		06/24/16	07/07/16	JR
Lab ID : 20160525-07								
Client ID : 510 MS								
Date Sampled : 5/25/2016 12:40:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	103		% Rec		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	110		% Rec		06/24/16	07/01/16	JR
Lab ID : 20160525-08								
Client ID : 510 MSD								
Date Sampled : 5/25/2016 12:45:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	5.7		RPD		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	1.0		RPD		06/24/16	07/01/16	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160525-09**								
Client ID : **601**								
Date Sampled : **5/26/2016 12:10:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.48 +/- 0.766	0.684	pCi/l				
Radium-226	SM 7500 Ra B M*	0.032 +/- 0.196	0.339	pCi/l		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	1.45 +/- 0.570	0.345	pCi/l		06/24/16	07/05/16	JR
Lab ID : **20160525-10**								
Client ID : **701**								
Date Sampled : **5/26/2016 3:50:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		2.85 +/- 0.853	0.569	pCi/l				
Radium-226	SM 7500 Ra B M*	0.293 +/- 0.140	0.156	pCi/l		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	2.56 +/- 0.713	0.413	pCi/l		06/24/16	07/05/16	JR
Lab ID : **20160525-11**								
Client ID : **702**								
Date Sampled : **5/26/2016 3:40:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.967 +/- 0.614	0.433	pCi/l				
Radium-226	SM 7500 Ra B M*	0.100 +/- 0.093	0.122	pCi/l		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	0.867 +/- 0.521	0.311	pCi/l		06/24/16	07/05/16	JR
Lab ID : **20160525-12**								
Client ID : **703**								
Date Sampled : **5/26/2016 3:10:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		3.42 +/- 0.937	0.662	pCi/l				
Radium-226	SM 7500 Ra B M*	0.331 +/- 0.169	0.200	pCi/l		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	3.09 +/- 0.768	0.462	pCi/l		06/24/16	07/05/16	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160525-13**								
Client ID : **704**								
Date Sampled : **5/26/2016 3:15:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		4.50 +/- 1.22	0.787	pCi/l				
Radium-226	SM 7500 Ra B M*	0.706 +/- 0.188	0.089	pCi/l		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	3.79 +/- 1.03	0.698	pCi/l		06/24/16	07/07/16	JR
Lab ID : **20160525-14**								
Client ID : **801**								
Date Sampled : **5/26/2016 1:40:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.66 +/- 0.82	0.582	pCi/l				
Radium-226	SM 7500 Ra B M*	0.118 +/- 0.093	0.114	pCi/l		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	1.54 +/- 0.727	0.468	pCi/l		06/24/16	07/05/16	JR
Lab ID : **20160525-15**								
Client ID : **802**								
Date Sampled : **5/26/2016 2:30:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		4.22 +/- 1.07	0.809	pCi/l				
Radium-226	SM 7500 Ra B M*	0.242 +/- 0.139	0.154	pCi/l		06/06/16	06/07/16	AK
Radium-228	EPA 904*/9320*	3.98 +/- 0.932	0.655	pCi/l		06/24/16	07/05/16	JR
Lab ID : **20160525-16**								
Client ID : **803**								
Date Sampled : **5/26/2016 11:55:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.441 +/- 0.796	0.681	pCi/l				
Radium-226	SM 7500 Ra B M*	0.287 +/- 0.225	0.286	pCi/l		06/06/16	06/08/16	AK
Radium-228	EPA 904*/9320*	0.154 +/- 0.571	0.395	pCi/l		06/24/16	07/05/16	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160525-17**								
Client ID : **804**								
Date Sampled : **5/26/2016 1:10:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		4.27 +/- 1.45	0.973	pCi/l				
Radium-226	SM 7500 Ra B M*	2.19 +/- 0.544	0.337	pCi/l		06/06/16	06/08/16	AK
Radium-228	EPA 904*/9320*	2.08 +/- 0.905	0.636	pCi/l		06/24/16	07/05/16	JR
Lab ID : **20160525-18**								
Client ID : **805**								
Date Sampled : **5/26/2016 2:25:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.785 +/- 0.660	0.445	pCi/l				
Radium-226	SM 7500 Ra B M*	0.435 +/- 0.161	0.131	pCi/l		06/06/16	06/08/16	AK
Radium-228	EPA 904*/9320*	0.350 +/- 0.499	0.314	pCi/l		06/29/16	07/05/16	JR

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Batch ID
Radium-226	-0.004	98.4			NC	0.060	103.0	97.3	5.7	
Radium-226	-0.007	85.4			NC	0.324	84.5	96.5	13.1	
Radium-228	-0.104	89.1			NC	0.441	101.0	88.4	9.5	R3825
Radium-228	0.955	92.8			NC	0.352	110.0	111.0	1.0	

Lab Approval: Donna Eidson

*NELAC Certified Parameter BDL = Below Detection Limit

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Company Name/Address:	Billing Information:
SCS Engineers 7311 West 130th Street Suite 100 Overland Park, Kansas 66213	Jason Franks SCS Engineers 7311 West 130th Street Suite 100 Overland Park, Kansas 66213
Report to: Mr. Jason R. Franks	Email To: jfranks@scsengineers.com
Project Description: KCPL Sibley Gen Station - Groundwater	City/State Collected: Sibley, Mo
Phone: 913-681-0030 Fax: 913-681-0012	Client Project # 27213169.16
Collected by (print): Jason R. Franks	Site/Facility ID #
Collected by (signature): [signature] Immediately Packed on Ice N ___ Y ✓	*Rush?* (Lab MUST Be Notified) ___ Same Day .....200% ___ Next Day .....100% ___ Two Day .....50% ___ Three Day 25%
	Lab Project #
	P.O. #
	Date Results Needed STD Email? ___No ___Yes FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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Phone: 800-767-5859
Fax: 615-758-5859

L# 838605
Table #
Acctnum: AQUAOPKS
Template:
Prelogin:
TSR: 206-Jeff Carr
PB:
Shipped Via:

	Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Metals** 500mlHDPE+HN03	Radium 226, Radium 228 ** 2x1L HDPE+HN03	Rem./Contaminant	Sample # (lab only)
1	504	Grab	GW	NA	05/25/16	1450	3	X	X		
2	505	Grab	GW	NA	5/25/16	1545	3	X	X		
3	506	Grab	GW	NA	5/25/16	1435	3	X	X		
4	510	Grab	GW	NA	5/25/16	1230	3	X	X		
5	512	Grab	GW	NA	5/25/16	1245	3	X	X		
6	Duplicate	Grab	GW	NA	5/25/16		3	X	X		
7	MS 510	Grab	GW	NA	5/25/16	1240	3	X	X		
8	MSD 510	Grab	GW	NA	5/25/16	1245	3	X	X		

Copy

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____

Remarks: **Metals=Li, Mo ** **Ra 226&Ra228=Report Seperatly and combined Please**

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	5-27-16	8:00	[signature]
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			[signature]

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

Temp: °C Bottles Received:

Date: 5/27/16 Time: 1000

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Chain of Custody

Page ___ of ___

SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information:
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to: Mr. Jason R. Franks
Email To: jfranks@scsengineers.com

Project Description: KCPL Sibley Gen Station - Groundwater
City/State Collected: Sibley, Mo

Phone: 913-681-0030
Fax: 913-681-0012
Client Project # 27213169.16
Lab Project #

Collected by (print): Jason R. Franks
Site/Facility ID #
P.O. #

Collected by (signature):
Immediately Packed on Ice N___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD
Email? ___No ___Yes
FAX? ___No ___Yes

	Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	GCR Anions(Cl, F, SO4) 125mlHDPE-NoPres	*CCR Metals 500mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Ra226/228(reportseperate&comb)-2x1LHDPE-HNO3									
9	601	Grab	GW	NA	5/26/16	1210	5	X	X	X	X									
10	602	Grab	GW	NA	NS	NS	5	X	X	X	X									
11	701	Grab	GW	NA	5/26/16	1550	5	X	X	X	X									
12	702	Grab	GW	NA	5/26/16	1540	5	X	X	X	X									
13	703	Grab	GW	NA	5/26/16	1510	5	X	X	X	X									
14	704	Grab	GW	NA	5/26/16	1515	5	X	X	X	X									
15	801	Grab	GW	NA	5/26/16	1340	5	X	X	X	X									
16	802	Grab	GW	NA	5/26/16	1430	5	X	X	X	X									
17	803	Grab	Other	NA	5/26/16	1155	5	X	X	X	X									
18	804	Grab	Other	NA	5/26/16	1310	5	X	X	X	X									

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

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

Rem./Contaminant	Sample # (lab only)

COPY

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: *CCR Metals: B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	5-27-16	1200	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: °C Bottles Received:
Date: 5/28/16 Time: 1000

Hold #
Condition: (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

20160525-2

Company Name/Address:
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information:
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to: Mr. Jason R. Franks

Email To: jfranks@scsengineers.com

Project Description: KCPL Sibley Gen Station - Source

City/State Collected: Sibley, Mo

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

Client Project # 27213169.16

Lab Project #

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 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed: STD

Email? ___No __Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page _

ESC LAB SCIENCES

YOUR LAB OF CHOICE

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

L #

Table #

Acctnum: AQUAOPI

Template:

Prelogin:

TSR: 206-Jeff Ca

PB:

Shipped Via:

	Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CCR Anions(Cl, F, SO4) 125mlHDPE-NoPres	CCR Metals 500mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Ra226/228(reportseperate&comb)-2x1LHDPE-HNO3	Rem./Contaminant	Sample #
10	Slag Pond	Grab	GW	NA	5/26/16	1445	5	X	X	X	X		
11	Fly Ash Pond	Grab	GW	NA	5/26/16	1300	5	X	X	X	X		
12	Fly Ash Pond Outfall	Grab	GW	NA	5/25/16	1445	5	X	X	X	X		
13	Leachate Pond	Grab	GW	NA	5/25/16	1415	5	X	X	X	X		
14	River	Grab	GW	NA	5/26/16	1400	5	X	X	X	X		

COPY

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: *CCR Metals: B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	5/27/16	1200	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: °C Bottles Received:

Date: 5/25/16 Time: 1000

Condition: (lab use only)

COC Seal Intact: ___Y ___N

pH Checked: NCF:

SAMPLE LOGIN

Date Received: *05/31/16 09:38:05* **Lab Number:** 20160525 **Due:** 06/27/16

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20160525-01 B	504	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-01 A	504	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-02 A	505	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-02 B	505	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-03 A	506	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-03 B	506	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-04 A	510	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-04 B	510	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-05 A	512	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-05 B	512	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-06 A	Duplicate	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-06 B	Duplicate	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-07 B	510 MS	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-07 A	510 MS	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

20160525-08 A	510 MSD	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-08 B	510 MSD	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-09 A	601	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-09 B	601	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-10 A	701	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-10 B	701	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-11 A	702	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-11 B	702	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-12 B	703	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-12 A	703	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-13 A	704	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-13 B	704	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-14 A	801	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-14 B	801	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228	BM 5.31.16		EPA 904*/9320*						
20160525-15 A	802 Time 14:50	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-15 B	802	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-16 A	803	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-16 B	803	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes

Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-17 B	804	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-17 A	804	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-18 A	805	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-18 B	805	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-19 A	Slag Pond	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-19 B	Slag Pond	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-20 A	Fly Ash Pond	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-20 B	Fly Ash Pond	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-21 A	Fly Ash Pond Outfall	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-21 B	Fly Ash Pond Outfall	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-22 A	Leachate Pond	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-22 B	Leachate Pond	NPW	05/25/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160525-23 B	River	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
20160525-23 A	River	NPW	05/26/16	Plastic	1 L	HNO3, pH < 2	☐	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

CONTAINER INSPECTION

Coolers 3 Custody Seals Broken No Temperature: C Ice Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Chain of Custody Record ✓ Labels in Tact Yes Radiation Survey Complete NA

Anomalies

Inspected By: _____ DATE 5/31/16

QA or Designee Review: Raymond Thomas DATE 05/31/16

Sample Custodian Review: Ben Maloney DATE 5.31.16

Project Notes:

Jared Morrison
December 16, 2022

ATTACHMENT 1-4

July – August 2016 Sampling Event Laboratory Report

Case Narrative

Lab No: 20160680

This report contains the analytical results for the 1 sample(s) received under chain of custody by ESC Lab Sciences on 7/20/2016 11:30:00 AM. These samples are associated with your Sibley Generating Station project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160680-01**								
Client ID : **806-R**								
Date Sampled : **7/19/2016 10:55:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.034 +/- 0.896	1.30	pCi/l				
Radium-226	SM 7500 Ra B M*	0.034 +/- 0.200	0.351	pCi/l		07/22/16	07/22/16	AK
Radium-228	EPA 904*/9320*	-0.231 +/- 0.696	0.950	pCi/l		07/28/16	08/03/16	JR

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Batch ID
Radium-226	0.053	107.0			NC	0.529	124.0			R1110
Radium-228	0.353	88.1			NC	0.663	110.0	109.0	0.8	R3837

Lab Approval: 

*NELAC Certified Parameter BDL = Below Detection Limit

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Company Name/Address:
SCS Engineers
7311 West 130th Street, Suite 100
Overland Park, KS 66213

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

Report to: Mr. Jason R. Franks
Email To: JFranks@scsengineers.com, LMeyer@SCSEngineers.com

Project Description: Sibley Generating Station
City/State Collected: Sibley, MO

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

Client Project # 27213169.15
Lab Project #

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard
Email? ___No X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CCR Anions (Cl-, F, SO4) 125mL - NoPres	*CCR Metals 500mL - HNO3	TDS 250mL - NoPres.	Ra 226/228 (report separately) 1x1L HNO3	Rem./Contaminant	Sample # (lab only)
806R	Grab	GW	-	7/19/16	1055	5	X	X	X	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 848322
Table # 201606 80
Acctnum: AQUAOPKS
Template:
Prelogin:
TSR:
Gooler:
Shipped Via:

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	7/19/16	1322	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	7/19/16	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Amber Taylor

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 29 °C Bottles Received: 2
Date: 7/20 Time: 1130

Condition: (lab use only)
COC Seal Intact: ___Y ___N X NA
pH Checked: NCF:

SAMPLE LOGIN

Date Received: *7/20/2016 11:30:0* **Lab Number:** 20160680 **Due:** 8/17/2016

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20160680-01 B	806-R	NPW	07/19/16	Plastic	1 L	HNO3, pH < 2	☑	No	No
20160680-01 A	806-R	NPW	07/19/16	Plastic	1 L	HNO3, pH < 2	☑	No	No
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

CONTAINER INSPECTION

 # Coolers 1 **Custody Seals Broken** N/A **Temperature:** 29 C **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken N **Chain of Custody Record** ☑ **Labels in Tact** ☑ **Radiation Survey Complete** ☑/A

Anomalies

Inspected By: Amber Taylor **DATE** 7/20/16

QA or Designee Review: Raymond Thomas **DATE**

Sample Custodian Review: [signature] **DATE** 7/20/16

Project Notes:

ANALYTICAL REPORT

July 28, 2016

SCS Engineers - KS

Sample Delivery Group:	L848328
Samples Received:	07/20/2016
Project Number:	27213169.15
Description:	Sibley Generating Station

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

TABLE OF CONTENTS

806R L848328-01 GW

Collected by: Whit Martin
Collected date/time: 07/19/16 10:55
Received date/time: 07/20/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG891517	1	07/25/16 01:11	07/25/16 03:28	JM
Mercury by Method 7470A	WG891001	1	07/21/16 10:47	07/21/16 16:39	TRB
Metals (ICP) by Method 6010B	WG891051	1	07/21/16 12:28	07/21/16 16:03	ST
Metals (ICP) by Method 6010B	WG891217	1	07/21/16 19:36	07/22/16 14:43	BRJ
Metals (ICPMS) by Method 6020	WG890940	1	07/21/16 10:26	07/27/16 15:07	JDG
Wet Chemistry by Method 9056A	WG891844	1	07/23/16 17:40	07/23/16 17:40	SAM
Wet Chemistry by Method 9056A	WG892557	10	07/27/16 15:27	07/27/16 15:27	SAM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	624000		10000	1	07/25/2016 03:28	WG891517

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	28400		1000	1	07/23/2016 17:40	WG891844
Fluoride	242		100	1	07/23/2016 17:40	WG891844
Sulfate	139000		50000	10	07/27/2016 15:27	WG892557

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	07/21/2016 16:39	WG891001

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	104		5.00	1	07/22/2016 14:43	WG891217
Boron	4810		200	1	07/22/2016 14:43	WG891217
Calcium	131000		1000	1	07/22/2016 14:43	WG891217
Chromium	ND		10.0	1	07/22/2016 14:43	WG891217
Cobalt	ND		10.0	1	07/22/2016 14:43	WG891217
Lithium	17.0		15.0	1	07/21/2016 16:03	WG891051
Molybdenum	1110		5.00	1	07/22/2016 14:43	WG891217

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	07/27/2016 15:07	WG890940
Arsenic	2.69		2.00	1	07/27/2016 15:07	WG890940
Beryllium	ND		2.00	1	07/27/2016 15:07	WG890940
Cadmium	ND		1.00	1	07/27/2016 15:07	WG890940
Lead	ND		2.00	1	07/27/2016 15:07	WG890940
Selenium	ND		2.00	1	07/27/2016 15:07	WG890940
Thallium	ND		2.00	1	07/27/2016 15:07	WG890940

Method Blank (MB)

(MB) R3152495-1 07/25/16 03:28

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

L848257-01 Original Sample (OS) • Duplicate (DUP)

(OS) L848257-01 07/25/16 03:28 • (DUP) R3152495-4 07/25/16 03:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	4710000	4610000	1	2.15		5

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

(LCS) R3152495-2 07/25/16 03:28 • (LCSD) R3152495-3 07/25/16 03:28

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	%	%	%			%	%
Dissolved Solids	8800000	8540000	8550000	97.0	97.2	85.0-115			0.117	5

Method Blank (MB)

(MB) R3152415-1 07/23/16 06:58

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

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

(LCS) R3152415-2 07/23/16 07:13 • (LCSD) R3152415-3 07/23/16 07:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39100	39200	98	98	80-120			0	15
Fluoride	8000	7840	7850	98	98	80-120			0	15

L848536-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L848536-01 07/23/16 21:16 • (MS) R3152415-4 07/23/16 21:31 • (MSD) R3152415-5 07/23/16 21:45

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	20800	68300	63800	95	86	1	80-120			7	15
Fluoride	5000	358	5430	5360	101	100	1	80-120			1	15

Method Blank (MB)

(MB) R3152658-1 07/27/16 10:19

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

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

(LCS) R3152658-2 07/27/16 10:34 • (LCSD) R3152658-3 07/27/16 10:49

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	%	%	%			%	%
Sulfate	40000	39100	39100	98	98	80-120			0	15

L848787-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L848787-07 07/27/16 15:57 • (MS) R3152658-4 07/27/16 16:12

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Sulfate	50000	10300	58900	97	1	80-120	

Method Blank (MB)

(MB) R3151410-1 07/21/16 15:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3151410-2 07/21/16 16:01 • (LCSD) R3151410-3 07/21/16 16:04

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	%	%	%			%	%
Mercury	3.00	3.10	3.16	103	105	80-120			2	20

L848058-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L848058-01 07/21/16 16:07 • (MS) R3151410-4 07/21/16 16:10 • (MSD) R3151410-5 07/21/16 16:13

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	%	%		%			%	%
Mercury	3.00	ND	3.26	3.19	109	106	1	75-125			2	20

Method Blank (MB)

(MB) R3151408-1 07/21/16 15:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Lithium	U		5.30	15.0

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

(LCS) R3151408-2 07/21/16 15:58 • (LCSD) R3151408-3 07/21/16 16:01

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	%	%	%			%	%
Lithium	1000	982	987	98	99	80-120			0	20

L848328-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L848328-01 07/21/16 16:03 • (MS) R3151408-5 07/21/16 16:09 • (MSD) R3151408-6 07/21/16 16:11

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	%	%		%			%	%
Lithium	1000	17.0	1020	1030	100	102	1	75-125			2	20

Method Blank (MB)

(MB) R3151755-7 07/22/16 16:51

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Barium	U		1.70	5.00
Boron	U		12.6	200
Calcium	U		46.3	1000
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0
Molybdenum	U		1.60	5.00

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

(LCS) R3151755-2 07/22/16 14:27 • (LCSD) R3151755-3 07/22/16 14:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Barium	1000	1010	1010	101	101	80-120			0	20
Boron	1000	1000	988	100	99	80-120			1	20
Calcium	10000	9980	9950	100	99	80-120			0	20
Chromium	1000	993	994	99	99	80-120			0	20
Cobalt	1000	1010	1010	101	101	80-120			0	20
Molybdenum	1000	1020	1020	102	102	80-120			0	20

L848539-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L848539-07 07/22/16 14:32 • (MS) R3151755-5 07/22/16 14:38 • (MSD) R3151755-6 07/22/16 14:40

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 %
Barium	1000	54.4	1060	1050	100	99	1	75-125			1	20
Boron	1000	69.3	1040	1060	97	99	1	75-125			2	20
Calcium	10000	18100	29800	29800	117	117	1	75-125			0	20
Chromium	1000	U	989	984	99	98	1	75-125			1	20
Cobalt	1000	U	1010	1000	101	100	1	75-125			1	20
Molybdenum	1000	U	1020	1010	102	101	1	75-125			0	20

Method Blank (MB)

(MB) R3152702-7 07/27/16 15:00

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3152702-8 07/27/16 15:02 • (LCSD) R3152702-9 07/27/16 15:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	57.9	56.1	55.8	97	96	80-120			0	20
Arsenic	50.0	47.2	49.0	94	98	80-120			4	20
Beryllium	50.0	49.1	47.6	98	95	80-120			3	20
Cadmium	50.0	49.6	50.7	99	101	80-120			2	20
Lead	50.0	49.7	49.5	99	99	80-120			0	20
Selenium	50.0	50.3	49.9	101	100	80-120			1	20
Thallium	50.0	48.3	49.3	97	99	80-120			2	20

L848328-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L848328-01 07/27/16 15:07 • (MS) R3152702-11 07/27/16 15:11 • (MSD) R3152702-12 07/27/16 15:13

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 %
Antimony	57.9	ND	55.4	56.3	96	97	1	75-125			2	20
Arsenic	50.0	2.69	49.8	50.3	94	95	1	75-125			1	20
Beryllium	50.0	ND	46.7	48.8	93	98	1	75-125			4	20
Cadmium	50.0	ND	50.0	50.0	100	100	1	75-125			0	20
Lead	50.0	ND	49.0	49.8	97	99	1	75-125			2	20
Selenium	50.0	ND	51.0	51.2	102	102	1	75-125			0	20
Thallium	50.0	ND	48.8	49.7	98	99	1	75-125			2	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

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

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

State Accreditations

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

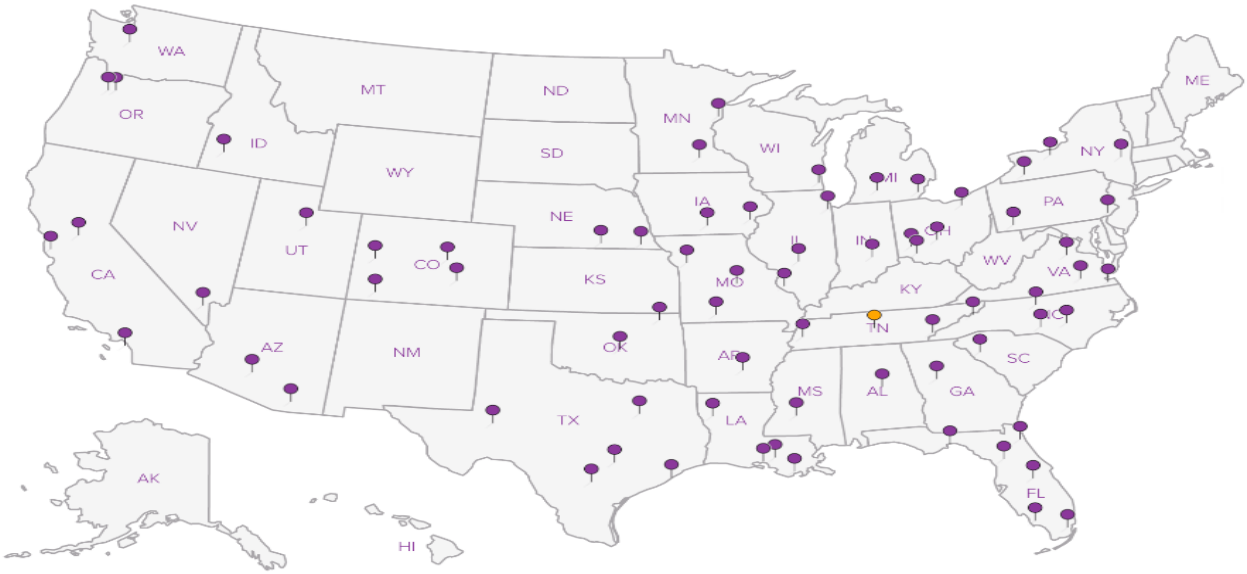
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:
SCS Engineers
7311 West 130th Street, Suite 100
Overland Park, KS 66213

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

Report to: Mr. Jason R. Franks

Email To: JFranks@scsengineers.com
LMeyer@SCSEngineers.com

Project Description: Sibley Generating Station

City/State Collected: Sibley, MO

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

Client Project # 27213169.15

Lab Project #

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

Email? ___No X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	# of Cntrs	CCR Anions (Cl, F, SO4) 125mL - NoPres	*CCR Metals 500mL - HNO3 <2	TDS 250mL - NoPres.	Ra 226/228 (report separately comb.) 2x1L HNO3	Rem./Contaminant	Sample # (lab only)
806R	Grab	GW	-	7/19/16	1055	8	X	X	X	X		-01

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L948328

C238

Acctnum: AQUAOPKS
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

Remarks: RA 226/228 sent to outreach lab

pH ___ Temp ___
Flow ___ Other ___

677700058414

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	7/19/16	1322	
Relinquished by : (Signature)	Date: 7/19/16	Time: 1700	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ___

Temp: 2.1° °C Bottles Received: 3

Date: 7-20-16 Time: 0900

Condition: TDU (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: <2 NCF: ✓

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

Cooler Receipt Checklist

Client: AQUAOPKS SDG# L848328

Cooler Received/Opened On: 7-20-16 By: Dakota Busby

Temperature Upon Receipt: 2.1 °c

DakBy
(Signature)

Cooler Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?			✓
Were custody papers properly filled out (ink, signed, etc.)?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were correct preservatives used?	✓		
Were all applicable sample containers checked for preservation?	✓		
(Any samples not in accepted pH range noted on COC .)			
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated? (If yes see attached NCF)	✓		

Jeremy W. Watkins

ESC Lab Sciences
Non-Conformance Form

Login #: L848328	Client: AQUAOPKS	Date: 7/20/16	Evaluated by: Jeremy

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type	x	Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: What Metals?

Client informed by:		Call		Email		Voice Mail		Date: 7/20/16	Time: 1157
TSR Initials: JC	Client Contact: J. Franks								

Login Instructions: ASG, BAICP, BEG, BICP, CAICP, CDG, COICP, CRICP, HG, LIICP, MOICP, PBG, SBG, SEG, TLG.

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ANALYTICAL REPORT

September 02, 2016

SCS Engineers - KS

Sample Delivery Group:	L855852
Samples Received:	08/25/2016
Project Number:	27213169.16
Description:	Sibley Generating Station

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Nancy McLain
Technical Service Representative

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

504 L855852-01 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 13:55
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902479	1	08/26/16 15:08	08/26/16 16:06	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:26	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 14:34	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 14:48	JDG
Wet Chemistry by Method 9056A	WG903670	1	09/01/16 11:31	09/01/16 11:31	CM

505 L855852-02 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 13:20
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902479	1	08/26/16 15:08	08/26/16 16:06	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:35	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 14:37	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 14:51	JDG
Wet Chemistry by Method 9056A	WG903670	1	09/01/16 11:45	09/01/16 11:45	CM

506 L855852-03 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 13:20
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902479	1	08/26/16 15:08	08/26/16 16:06	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:38	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 14:39	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 14:54	JDG
Wet Chemistry by Method 9056A	WG903670	1	09/01/16 12:00	09/01/16 12:00	CM

510 L855852-04 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 11:25
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902479	1	08/26/16 15:08	08/26/16 16:06	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:41	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 14:47	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:04	JDG
Wet Chemistry by Method 9056A	WG903670	1	09/01/16 12:14	09/01/16 12:14	CM

512 L855852-05 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 10:45
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902479	1	08/26/16 15:08	08/26/16 16:06	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:09	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 14:23	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 14:35	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 12:30	08/31/16 12:30	CM

601 L855852-06 GW

Collected by: Adam Parris | Collected date/time: 08/23/16 12:10 | Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902479	1	08/26/16 15:08	08/26/16 16:06	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:44	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 14:50	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:07	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 07:41	08/31/16 07:41	CM

701 L855852-07 GW

Collected by: Adam Parris | Collected date/time: 08/23/16 11:30 | Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:47	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 14:53	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:11	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 08:10	08/31/16 08:10	CM

702 L855852-08 GW

Collected by: Adam Parris | Collected date/time: 08/23/16 12:15 | Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902754	1	08/27/16 05:51	08/30/16 12:02	NJB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 14:56	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:14	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 09:37	08/31/16 09:37	CM

703 L855852-09 GW

Collected by: Adam Parris | Collected date/time: 08/23/16 12:55 | Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:50	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 14:59	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:17	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 09:51	08/31/16 09:51	CM

704 L855852-10 GW

Collected by: Adam Parris | Collected date/time: 08/23/16 13:30 | Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:53	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 15:02	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:20	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 10:06	08/31/16 10:06	CM

801 L855852-11 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 14:40
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:56	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 15:04	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:24	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 11:47	08/31/16 11:47	CM

802 L855852-12 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 15:25
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 13:59	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 15:07	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:27	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 12:01	08/31/16 12:01	CM

803 L855852-13 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 14:05
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 14:01	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 15:10	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:30	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 12:16	08/31/16 12:16	CM
Wet Chemistry by Method 9056A	WG903670	10	09/01/16 12:43	09/01/16 12:43	CM

804 L855852-14 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 14:45
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 14:10	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 15:13	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:34	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 11:32	08/31/16 11:32	CM

805 L855852-15 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 15:20
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 14:13	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 15:21	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:43	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 14:55	08/31/16 14:55	SAM

806R L855852-16 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 15:50
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902480	1	08/29/16 11:07	08/29/16 12:02	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 14:16	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 15:23	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:47	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 13:28	08/31/16 13:28	CM
Wet Chemistry by Method 9056A	WG903670	10	09/01/16 13:26	09/01/16 13:26	CM

DUPLICATE L855852-17 GW

Collected by: Adam Parris
Collected date/time: 08/23/16 10:50
Received date/time: 08/25/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG902678	1	08/29/16 16:16	08/29/16 16:50	MMF
Mercury by Method 7470A	WG902487	1	08/26/16 09:38	08/26/16 14:19	TRB
Metals (ICP) by Method 6010B	WG902465	1	08/31/16 09:01	08/31/16 15:26	ST
Metals (ICPMS) by Method 6020	WG902960	1	08/31/16 09:40	08/31/16 15:50	JDG
Wet Chemistry by Method 9056A	WG903338	1	08/31/16 15:23	08/31/16 15:23	SAM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Nancy McLain
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	168000		10000	1	08/26/2016 16:06	WG902479

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	09/01/2016 11:31	WG903670
Fluoride	118		100	1	09/01/2016 11:31	WG903670
Sulfate	15400		5000	1	09/01/2016 11:31	WG903670

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:26	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	111		5.00	1	08/31/2016 14:34	WG902465
Boron	ND		200	1	08/31/2016 14:34	WG902465
Cadmium	ND		2.00	1	08/31/2016 14:34	WG902465
Calcium	32200		1000	1	08/31/2016 14:34	WG902465
Chromium	ND		10.0	1	08/31/2016 14:34	WG902465
Cobalt	ND		10.0	1	08/31/2016 14:34	WG902465
Lithium	ND		15.0	1	08/31/2016 14:34	WG902465
Molybdenum	ND		5.00	1	08/31/2016 14:34	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 14:48	WG902960
Arsenic	ND		2.00	1	08/31/2016 14:48	WG902960
Beryllium	ND		2.00	1	08/31/2016 14:48	WG902960
Cadmium	ND		1.00	1	08/31/2016 14:48	WG902960
Lead	ND		2.00	1	08/31/2016 14:48	WG902960
Selenium	2.48		2.00	1	08/31/2016 14:48	WG902960
Thallium	ND		2.00	1	08/31/2016 14:48	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	182000		10000	1	08/26/2016 16:06	WG902479

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	1190		1000	1	09/01/2016 11:45	WG903670
Fluoride	265		100	1	09/01/2016 11:45	WG903670
Sulfate	9730		5000	1	09/01/2016 11:45	WG903670

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:35	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	87.8		5.00	1	08/31/2016 14:37	WG902465
Boron	ND		200	1	08/31/2016 14:37	WG902465
Cadmium	ND		2.00	1	08/31/2016 14:37	WG902465
Calcium	25700		1000	1	08/31/2016 14:37	WG902465
Chromium	ND		10.0	1	08/31/2016 14:37	WG902465
Cobalt	ND		10.0	1	08/31/2016 14:37	WG902465
Lithium	ND		15.0	1	08/31/2016 14:37	WG902465
Molybdenum	ND		5.00	1	08/31/2016 14:37	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 14:51	WG902960
Arsenic	ND		2.00	1	08/31/2016 14:51	WG902960
Beryllium	ND		2.00	1	08/31/2016 14:51	WG902960
Cadmium	ND		1.00	1	08/31/2016 14:51	WG902960
Lead	ND		2.00	1	08/31/2016 14:51	WG902960
Selenium	2.21		2.00	1	08/31/2016 14:51	WG902960
Thallium	ND		2.00	1	08/31/2016 14:51	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	459000		10000	1	08/26/2016 16:06	WG902479

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	6160		1000	1	09/01/2016 12:00	WG903670
Fluoride	312		100	1	09/01/2016 12:00	WG903670
Sulfate	65800		5000	1	09/01/2016 12:00	WG903670

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:38	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	237		5.00	1	08/31/2016 14:39	WG902465
Boron	ND		200	1	08/31/2016 14:39	WG902465
Cadmium	ND		2.00	1	08/31/2016 14:39	WG902465
Calcium	97200		1000	1	08/31/2016 14:39	WG902465
Chromium	ND		10.0	1	08/31/2016 14:39	WG902465
Cobalt	ND		10.0	1	08/31/2016 14:39	WG902465
Lithium	ND		15.0	1	08/31/2016 14:39	WG902465
Molybdenum	ND		5.00	1	08/31/2016 14:39	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 14:54	WG902960
Arsenic	ND		2.00	1	08/31/2016 14:54	WG902960
Beryllium	ND		2.00	1	08/31/2016 14:54	WG902960
Cadmium	ND		1.00	1	08/31/2016 14:54	WG902960
Lead	ND		2.00	1	08/31/2016 14:54	WG902960
Selenium	9.32		2.00	1	08/31/2016 14:54	WG902960
Thallium	ND		2.00	1	08/31/2016 14:54	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	472000		10000	1	08/26/2016 16:06	WG902479

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3580		1000	1	09/01/2016 12:14	WG903670
Fluoride	311		100	1	09/01/2016 12:14	WG903670
Sulfate	12700		5000	1	09/01/2016 12:14	WG903670

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:41	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	367		5.00	1	08/31/2016 14:47	WG902465
Boron	ND		200	1	08/31/2016 14:47	WG902465
Cadmium	ND		2.00	1	08/31/2016 14:47	WG902465
Calcium	122000		1000	1	08/31/2016 14:47	WG902465
Chromium	ND		10.0	1	08/31/2016 14:47	WG902465
Cobalt	ND		10.0	1	08/31/2016 14:47	WG902465
Lithium	ND		15.0	1	08/31/2016 14:47	WG902465
Molybdenum	ND		5.00	1	08/31/2016 14:47	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:04	WG902960
Arsenic	ND		2.00	1	08/31/2016 15:04	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:04	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:04	WG902960
Lead	ND		2.00	1	08/31/2016 15:04	WG902960
Selenium	3.14		2.00	1	08/31/2016 15:04	WG902960
Thallium	ND		2.00	1	08/31/2016 15:04	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	422000		10000	1	08/26/2016 16:06	WG902479

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3230		1000	1	08/31/2016 12:30	WG903338
Fluoride	331		100	1	08/31/2016 12:30	WG903338
Sulfate	24400		5000	1	08/31/2016 12:30	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:09	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	360		5.00	1	08/31/2016 14:23	WG902465
Boron	ND		200	1	08/31/2016 14:23	WG902465
Cadmium	ND		2.00	1	08/31/2016 14:23	WG902465
Calcium	103000		1000	1	08/31/2016 14:23	WG902465
Chromium	11.1	B	10.0	1	08/31/2016 14:23	WG902465
Cobalt	ND		10.0	1	08/31/2016 14:23	WG902465
Lithium	ND		15.0	1	08/31/2016 14:23	WG902465
Molybdenum	ND		5.00	1	08/31/2016 14:23	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 14:35	WG902960
Arsenic	ND		2.00	1	08/31/2016 14:35	WG902960
Beryllium	ND		2.00	1	08/31/2016 14:35	WG902960
Cadmium	ND		1.00	1	08/31/2016 14:35	WG902960
Lead	ND		2.00	1	08/31/2016 14:35	WG902960
Selenium	5.05		2.00	1	08/31/2016 14:35	WG902960
Thallium	ND		2.00	1	08/31/2016 14:35	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	401000		10000	1	08/26/2016 16:06	WG902479

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3410		1000	1	08/31/2016 07:41	WG903338
Fluoride	275		100	1	08/31/2016 07:41	WG903338
Sulfate	9110		5000	1	08/31/2016 07:41	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:44	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	331		5.00	1	08/31/2016 14:50	WG902465
Boron	ND		200	1	08/31/2016 14:50	WG902465
Cadmium	ND		2.00	1	08/31/2016 14:50	WG902465
Calcium	102000		1000	1	08/31/2016 14:50	WG902465
Chromium	ND		10.0	1	08/31/2016 14:50	WG902465
Cobalt	ND		10.0	1	08/31/2016 14:50	WG902465
Lithium	ND		15.0	1	08/31/2016 14:50	WG902465
Molybdenum	ND		5.00	1	08/31/2016 14:50	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:07	WG902960
Arsenic	ND		2.00	1	08/31/2016 15:07	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:07	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:07	WG902960
Lead	ND		2.00	1	08/31/2016 15:07	WG902960
Selenium	6.02		2.00	1	08/31/2016 15:07	WG902960
Thallium	ND		2.00	1	08/31/2016 15:07	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	300000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8180		1000	1	08/31/2016 08:10	WG903338
Fluoride	110		100	1	08/31/2016 08:10	WG903338
Sulfate	15400		5000	1	08/31/2016 08:10	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:47	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	180		5.00	1	08/31/2016 14:53	WG902465
Boron	ND		200	1	08/31/2016 14:53	WG902465
Cadmium	ND		2.00	1	08/31/2016 14:53	WG902465
Calcium	87700		1000	1	08/31/2016 14:53	WG902465
Chromium	ND		10.0	1	08/31/2016 14:53	WG902465
Cobalt	ND		10.0	1	08/31/2016 14:53	WG902465
Lithium	ND		15.0	1	08/31/2016 14:53	WG902465
Molybdenum	ND		5.00	1	08/31/2016 14:53	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:11	WG902960
Arsenic	2.36		2.00	1	08/31/2016 15:11	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:11	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:11	WG902960
Lead	ND		2.00	1	08/31/2016 15:11	WG902960
Selenium	ND		2.00	1	08/31/2016 15:11	WG902960
Thallium	ND		2.00	1	08/31/2016 15:11	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	306000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8970		1000	1	08/31/2016 09:37	WG903338
Fluoride	106		100	1	08/31/2016 09:37	WG903338
Sulfate	20800		5000	1	08/31/2016 09:37	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/30/2016 12:02	WG902754

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	263		5.00	1	08/31/2016 14:56	WG902465
Boron	ND		200	1	08/31/2016 14:56	WG902465
Cadmium	ND		2.00	1	08/31/2016 14:56	WG902465
Calcium	89700		1000	1	08/31/2016 14:56	WG902465
Chromium	ND		10.0	1	08/31/2016 14:56	WG902465
Cobalt	ND		10.0	1	08/31/2016 14:56	WG902465
Lithium	ND		15.0	1	08/31/2016 14:56	WG902465
Molybdenum	ND		5.00	1	08/31/2016 14:56	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:14	WG902960
Arsenic	10.4		2.00	1	08/31/2016 15:14	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:14	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:14	WG902960
Lead	ND		2.00	1	08/31/2016 15:14	WG902960
Selenium	ND		2.00	1	08/31/2016 15:14	WG902960
Thallium	ND		2.00	1	08/31/2016 15:14	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	507000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	20600		1000	1	08/31/2016 09:51	WG903338
Fluoride	358		100	1	08/31/2016 09:51	WG903338
Sulfate	ND		5000	1	08/31/2016 09:51	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:50	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	244		5.00	1	08/31/2016 14:59	WG902465
Boron	763		200	1	08/31/2016 14:59	WG902465
Cadmium	ND		2.00	1	08/31/2016 14:59	WG902465
Calcium	121000		1000	1	08/31/2016 14:59	WG902465
Chromium	ND		10.0	1	08/31/2016 14:59	WG902465
Cobalt	ND		10.0	1	08/31/2016 14:59	WG902465
Lithium	ND		15.0	1	08/31/2016 14:59	WG902465
Molybdenum	ND		5.00	1	08/31/2016 14:59	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:17	WG902960
Arsenic	212		2.00	1	08/31/2016 15:17	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:17	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:17	WG902960
Lead	ND		2.00	1	08/31/2016 15:17	WG902960
Selenium	ND		2.00	1	08/31/2016 15:17	WG902960
Thallium	ND		2.00	1	08/31/2016 15:17	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	345000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13400		1000	1	08/31/2016 10:06	WG903338
Fluoride	146		100	1	08/31/2016 10:06	WG903338
Sulfate	31700		5000	1	08/31/2016 10:06	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:53	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	156		5.00	1	08/31/2016 15:02	WG902465
Boron	ND		200	1	08/31/2016 15:02	WG902465
Cadmium	ND		2.00	1	08/31/2016 15:02	WG902465
Calcium	95200		1000	1	08/31/2016 15:02	WG902465
Chromium	ND		10.0	1	08/31/2016 15:02	WG902465
Cobalt	ND		10.0	1	08/31/2016 15:02	WG902465
Lithium	ND		15.0	1	08/31/2016 15:02	WG902465
Molybdenum	10.1		5.00	1	08/31/2016 15:02	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:20	WG902960
Arsenic	2.03		2.00	1	08/31/2016 15:20	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:20	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:20	WG902960
Lead	ND		2.00	1	08/31/2016 15:20	WG902960
Selenium	ND		2.00	1	08/31/2016 15:20	WG902960
Thallium	ND		2.00	1	08/31/2016 15:20	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	544000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	73800		1000	1	08/31/2016 11:47	WG903338
Fluoride	159		100	1	08/31/2016 11:47	WG903338
Sulfate	58600		5000	1	08/31/2016 11:47	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:56	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	103		5.00	1	08/31/2016 15:04	WG902465
Boron	315		200	1	08/31/2016 15:04	WG902465
Cadmium	ND		2.00	1	08/31/2016 15:04	WG902465
Calcium	137000		1000	1	08/31/2016 15:04	WG902465
Chromium	ND		10.0	1	08/31/2016 15:04	WG902465
Cobalt	ND		10.0	1	08/31/2016 15:04	WG902465
Lithium	15.4		15.0	1	08/31/2016 15:04	WG902465
Molybdenum	ND		5.00	1	08/31/2016 15:04	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:24	WG902960
Arsenic	ND		2.00	1	08/31/2016 15:24	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:24	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:24	WG902960
Lead	ND		2.00	1	08/31/2016 15:24	WG902960
Selenium	2.24		2.00	1	08/31/2016 15:24	WG902960
Thallium	ND		2.00	1	08/31/2016 15:24	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	372000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	46300		1000	1	08/31/2016 12:01	WG903338
Fluoride	202		100	1	08/31/2016 12:01	WG903338
Sulfate	41200		5000	1	08/31/2016 12:01	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 13:59	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	172		5.00	1	08/31/2016 15:07	WG902465
Boron	ND		200	1	08/31/2016 15:07	WG902465
Cadmium	ND		2.00	1	08/31/2016 15:07	WG902465
Calcium	82200		1000	1	08/31/2016 15:07	WG902465
Chromium	ND		10.0	1	08/31/2016 15:07	WG902465
Cobalt	ND		10.0	1	08/31/2016 15:07	WG902465
Lithium	ND		15.0	1	08/31/2016 15:07	WG902465
Molybdenum	ND		5.00	1	08/31/2016 15:07	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:27	WG902960
Arsenic	2.57		2.00	1	08/31/2016 15:27	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:27	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:27	WG902960
Lead	ND		2.00	1	08/31/2016 15:27	WG902960
Selenium	ND		2.00	1	08/31/2016 15:27	WG902960
Thallium	ND		2.00	1	08/31/2016 15:27	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	538000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	14900		1000	1	08/31/2016 12:16	WG903338
Fluoride	295		100	1	08/31/2016 12:16	WG903338
Sulfate	130000		50000	10	09/01/2016 12:43	WG903670

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 14:01	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	129		5.00	1	08/31/2016 15:10	WG902465
Boron	2860		200	1	08/31/2016 15:10	WG902465
Cadmium	ND		2.00	1	08/31/2016 15:10	WG902465
Calcium	120000		1000	1	08/31/2016 15:10	WG902465
Chromium	ND		10.0	1	08/31/2016 15:10	WG902465
Cobalt	ND		10.0	1	08/31/2016 15:10	WG902465
Lithium	ND		15.0	1	08/31/2016 15:10	WG902465
Molybdenum	ND		5.00	1	08/31/2016 15:10	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:30	WG902960
Arsenic	2.96		2.00	1	08/31/2016 15:30	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:30	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:30	WG902960
Lead	ND		2.00	1	08/31/2016 15:30	WG902960
Selenium	ND		2.00	1	08/31/2016 15:30	WG902960
Thallium	ND		2.00	1	08/31/2016 15:30	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	613000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	14400		1000	1	08/31/2016 11:32	WG903338
Fluoride	168		100	1	08/31/2016 11:32	WG903338
Sulfate	ND		5000	1	08/31/2016 11:32	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 14:10	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	329		5.00	1	08/31/2016 15:13	WG902465
Boron	3620		200	1	08/31/2016 15:13	WG902465
Cadmium	ND		2.00	1	08/31/2016 15:13	WG902465
Calcium	157000		1000	1	08/31/2016 15:13	WG902465
Chromium	ND		10.0	1	08/31/2016 15:13	WG902465
Cobalt	ND		10.0	1	08/31/2016 15:13	WG902465
Lithium	23.4		15.0	1	08/31/2016 15:13	WG902465
Molybdenum	ND		5.00	1	08/31/2016 15:13	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:34	WG902960
Arsenic	4.03		2.00	1	08/31/2016 15:34	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:34	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:34	WG902960
Lead	ND		2.00	1	08/31/2016 15:34	WG902960
Selenium	ND		2.00	1	08/31/2016 15:34	WG902960
Thallium	ND		2.00	1	08/31/2016 15:34	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	360000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	10900		1000	1	08/31/2016 14:55	WG903338
Fluoride	172		100	1	08/31/2016 14:55	WG903338
Sulfate	51700		5000	1	08/31/2016 14:55	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 14:13	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	174		5.00	1	08/31/2016 15:21	WG902465
Boron	ND		200	1	08/31/2016 15:21	WG902465
Cadmium	ND		2.00	1	08/31/2016 15:21	WG902465
Calcium	105000		1000	1	08/31/2016 15:21	WG902465
Chromium	ND		10.0	1	08/31/2016 15:21	WG902465
Cobalt	ND		10.0	1	08/31/2016 15:21	WG902465
Lithium	ND		15.0	1	08/31/2016 15:21	WG902465
Molybdenum	ND		5.00	1	08/31/2016 15:21	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:43	WG902960
Arsenic	ND		2.00	1	08/31/2016 15:43	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:43	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:43	WG902960
Lead	ND		2.00	1	08/31/2016 15:43	WG902960
Selenium	ND		2.00	1	08/31/2016 15:43	WG902960
Thallium	ND		2.00	1	08/31/2016 15:43	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	605000		10000	1	08/29/2016 12:02	WG902480

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	22900		1000	1	08/31/2016 13:28	WG903338
Fluoride	253		100	1	08/31/2016 13:28	WG903338
Sulfate	146000		50000	10	09/01/2016 13:26	WG903670

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 14:16	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	102		5.00	1	08/31/2016 15:23	WG902465
Boron	5250		200	1	08/31/2016 15:23	WG902465
Cadmium	ND		2.00	1	08/31/2016 15:23	WG902465
Calcium	141000		1000	1	08/31/2016 15:23	WG902465
Chromium	ND		10.0	1	08/31/2016 15:23	WG902465
Cobalt	ND		10.0	1	08/31/2016 15:23	WG902465
Lithium	18.1		15.0	1	08/31/2016 15:23	WG902465
Molybdenum	1180		5.00	1	08/31/2016 15:23	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:47	WG902960
Arsenic	3.42		2.00	1	08/31/2016 15:47	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:47	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:47	WG902960
Lead	ND		2.00	1	08/31/2016 15:47	WG902960
Selenium	ND		2.00	1	08/31/2016 15:47	WG902960
Thallium	ND		2.00	1	08/31/2016 15:47	WG902960

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	403000		10000	1	08/29/2016 16:50	WG902678

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3220		1000	1	08/31/2016 15:23	WG903338
Fluoride	335		100	1	08/31/2016 15:23	WG903338
Sulfate	24800		5000	1	08/31/2016 15:23	WG903338

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/26/2016 14:19	WG902487

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	362		5.00	1	08/31/2016 15:26	WG902465
Boron	ND		200	1	08/31/2016 15:26	WG902465
Cadmium	ND		2.00	1	08/31/2016 15:26	WG902465
Calcium	104000		1000	1	08/31/2016 15:26	WG902465
Chromium	11.0	B	10.0	1	08/31/2016 15:26	WG902465
Cobalt	ND		10.0	1	08/31/2016 15:26	WG902465
Lithium	ND		15.0	1	08/31/2016 15:26	WG902465
Molybdenum	ND		5.00	1	08/31/2016 15:26	WG902465

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/31/2016 15:50	WG902960
Arsenic	ND		2.00	1	08/31/2016 15:50	WG902960
Beryllium	ND		2.00	1	08/31/2016 15:50	WG902960
Cadmium	ND		1.00	1	08/31/2016 15:50	WG902960
Lead	ND		2.00	1	08/31/2016 15:50	WG902960
Selenium	5.00		2.00	1	08/31/2016 15:50	WG902960
Thallium	ND		2.00	1	08/31/2016 15:50	WG902960

Method Blank (MB)

(MB) R3160318-1 08/26/16 16:06

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

L855388-01 Original Sample (OS) • Duplicate (DUP)

(OS) L855388-01 08/26/16 16:06 • (DUP) R3160318-4 08/26/16 16:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2130000	2120000	1	0.236		5

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

(LCS) R3160318-2 08/26/16 16:06 • (LCSD) R3160318-3 08/26/16 16:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800000	8530000	8540000	96.9	97.0	85.0-115			0.117	5

Method Blank (MB)

(MB) R3160323-1 08/29/16 12:02

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

L855852-07 Original Sample (OS) • Duplicate (DUP)

(OS) L855852-07 08/29/16 12:02 • (DUP) R3160323-4 08/29/16 12:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	300000	299000	1	0.334		5

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

(LCS) R3160323-2 08/29/16 12:02 • (LCSD) R3160323-3 08/29/16 12:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Dissolved Solids	8800000	8630000	8650000	98.1	98.3	85.0-115			0.231	5

Method Blank (MB)

(MB) R3160309-1 08/29/16 16:50

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

L855553-01 Original Sample (OS) • Duplicate (DUP)

(OS) L855553-01 08/29/16 16:50 • (DUP) R3160309-4 08/29/16 16:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	319000	316000	1	0.945		5

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

(LCS) R3160309-2 08/29/16 16:50 • (LCSD) R3160309-3 08/29/16 16:50

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	%	%	%			%	%
Dissolved Solids	8800000	8540000	8620000	97.0	98.0	85.0-115			0.932	5

Method Blank (MB)

(MB) R3160592-1 08/31/16 05:29

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

L855852-06 Original Sample (OS) • Duplicate (DUP)

(OS) L855852-06 08/31/16 07:41 • (DUP) R3160592-4 08/31/16 07:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	3410	3390	1	1		15
Fluoride	275	275	1	0		15
Sulfate	9110	9050	1	1		15

L855852-16 Original Sample (OS) • Duplicate (DUP)

(OS) L855852-16 08/31/16 13:28 • (DUP) R3160592-7 08/31/16 14:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	22900	23100	1	1		15
Fluoride	253	250	1	1		15

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

(LCS) R3160592-2 08/31/16 05:43 • (LCSD) R3160592-3 08/31/16 05:58

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39100	39100	98	98	80-120			0	15
Fluoride	8000	7910	7900	99	99	80-120			0	15
Sulfate	40000	39400	39300	99	98	80-120			0	15

L855852-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855852-05 08/31/16 12:30 • (MS) R3160592-5 08/31/16 12:59 • (MSD) R3160592-6 08/31/16 13:14

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	3230	52800	53100	99	100	1	80-120			1	15
Fluoride	5000	331	5300	5270	99	99	1	80-120			0	15
Sulfate	50000	24400	72800	73000	97	97	1	80-120			0	15

L855852-15 Original Sample (OS) • Matrix Spike (MS)

(OS) L855852-15 08/31/16 14:55 • (MS) R3160592-8 08/31/16 15:09

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	10900	59500	97	1	80-120	
Fluoride	5000	172	5140	99	1	80-120	
Sulfate	50000	51700	98400	93	1	80-120	

Method Blank (MB)

(MB) R3160875-1 09/01/16 07:55

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

L856691-01 Original Sample (OS) • Duplicate (DUP)

(OS) L856691-01 09/01/16 09:51 • (DUP) R3160875-4 09/01/16 10:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	9680	9630	1	1		15
Fluoride	837	849	1	1		15
Sulfate	45700	45800	1	0		15

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

(LCS) R3160875-2 09/01/16 08:09 • (LCSD) R3160875-3 09/01/16 08:24

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	38800	38900	97	97	80-120			0	15
Fluoride	8000	7670	7720	96	96	80-120			1	15
Sulfate	40000	38900	39100	97	98	80-120			1	15

L855852-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L855852-04 09/01/16 12:14 • (MS) R3160875-5 09/01/16 12:29

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	3580	52800	99	1	80-120	
Fluoride	5000	311	4990	94	1	80-120	
Sulfate	50000	12700	61000	97	1	80-120	

Method Blank (MB)

(MB) R3159599-1 08/26/16 13:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3159599-2 08/26/16 13:03 • (LCSD) R3159599-3 08/26/16 13:06

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	%	%	%			%	%
Mercury	3.00	3.11	3.06	104	102	80-120			2	20

L855852-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855852-05 08/26/16 13:09 • (MS) R3159599-4 08/26/16 13:11 • (MSD) R3159599-5 08/26/16 13:14

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	%	%		%			%	%
Mercury	3.00	ND	3.00	2.92	100	97	1	75-125			3	20

Method Blank (MB)

(MB) R3160250-1 08/30/16 11:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3160250-2 08/30/16 11:45 • (LCSD) R3160250-3 08/30/16 11:47

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	%	%	%			%	%
Mercury	3.00	3.01	2.99	100	100	80-120			1	20

L856059-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L856059-01 08/30/16 11:55 • (MS) R3160250-4 08/30/16 11:57 • (MSD) R3160250-5 08/30/16 12:00

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	%	%		%			%	%
Mercury	3.00	ND	2.98	2.98	99	99	1	75-125			0	20

Method Blank (MB)

(MB) R3160693-1 08/31/16 14:14

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Barium	U		1.70	5.00
Boron	U		12.6	200
Cadmium	U		0.700	2.00
Calcium	U		46.3	1000
Chromium	2.64	J	1.40	10.0
Cobalt	U		2.30	10.0
Lithium	U		5.30	15.0
Molybdenum	U		1.60	5.00

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

(LCS) R3160693-2 08/31/16 14:18 • (LCSD) R3160693-3 08/31/16 14:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Barium	1000	1000	1030	100	103	80-120			3	20
Boron	1000	1020	1050	102	105	80-120			3	20
Cadmium	1000	992	1020	99	102	80-120			3	20
Calcium	10000	9730	10100	97	101	80-120			4	20
Chromium	1000	974	1010	97	101	80-120			4	20
Cobalt	1000	1000	1040	100	104	80-120			4	20
Lithium	1000	961	978	96	98	80-120			2	20
Molybdenum	1000	992	1020	99	102	80-120			3	20

L855852-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855852-05 08/31/16 14:23 • (MS) R3160693-5 08/31/16 14:29 • (MSD) R3160693-6 08/31/16 14:31

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	1000	360	1370	1350	101	99	1	75-125			1	20
Boron	1000	ND	1140	1120	106	104	1	75-125			1	20
Cadmium	1000	ND	1030	1020	103	102	1	75-125			1	20
Calcium	10000	103000	111000	111000	79	82	1	75-125			0	20
Chromium	1000	11.1	1020	1000	101	99	1	75-125			1	20
Cobalt	1000	ND	1050	1040	105	104	1	75-125			1	20
Lithium	1000	ND	996	982	99	98	1	75-125			1	20
Molybdenum	1000	ND	1020	1000	102	100	1	75-125			2	20

Method Blank (MB)

(MB) R3160649-1 08/31/16 14:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	0.798	J	0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3160649-2 08/31/16 14:28 • (LCSD) R3160649-3 08/31/16 14:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	57.9	56.0	54.4	97	94	80-120			3	20
Arsenic	50.0	52.6	51.2	105	102	80-120			3	20
Beryllium	50.0	48.8	47.3	98	95	80-120			3	20
Cadmium	50.0	52.6	51.4	105	103	80-120			2	20
Lead	50.0	50.9	49.8	102	100	80-120			2	20
Selenium	50.0	51.1	49.9	102	100	80-120			2	20
Thallium	50.0	50.2	49.3	100	99	80-120			2	20

L855852-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L855852-05 08/31/16 14:35 • (MS) R3160649-5 08/31/16 14:41 • (MSD) R3160649-6 08/31/16 14:44

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 %
Antimony	57.9	ND	56.5	57.2	96	97	1	75-125			1	20
Arsenic	50.0	ND	54.2	53.5	107	106	1	75-125			1	20
Beryllium	50.0	ND	48.6	48.6	97	97	1	75-125			0	20
Cadmium	50.0	ND	52.3	52.2	105	104	1	75-125			0	20
Lead	50.0	ND	50.4	50.7	100	100	1	75-125			1	20
Selenium	50.0	5.05	56.6	58.0	103	106	1	75-125			2	20
Thallium	50.0	ND	50.5	50.4	101	101	1	75-125			0	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

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

State Accreditations

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

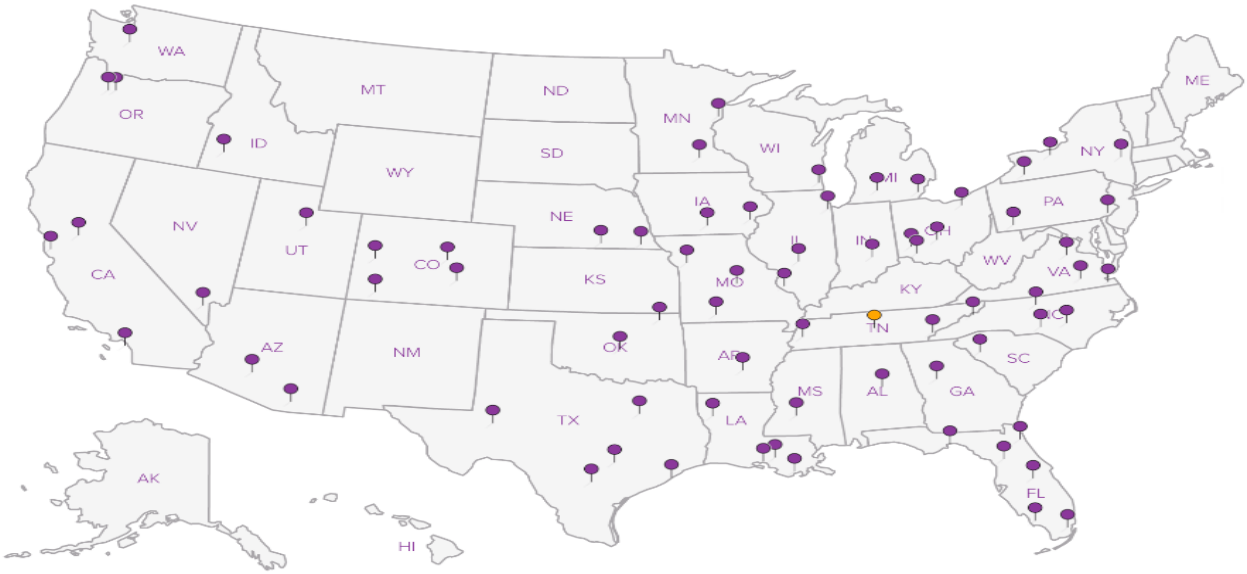
Third Party & Federal Accreditations

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

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

Our Locations

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



SCS Engineers - KS

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

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

Report to: **Mr. Jason R. Franks**

Email To: **jfranks@scsengineers.com; LMeyer@scsengineers.com**

Project Description: **Sibley Generating Station**

City/State Collected:

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

Client Project # **27213169.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): Adam Parris

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed: Standard

Email? ___No X__Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CCR Metals 250mlHDPE-HNO3	Chloride, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Rem./Contaminant	Sample # (lab only)
504	Grab	GW	N/A	8/23/16	1355	3	X	X	X		01
505		GW			1320	3	X	X	X		02
506		GW			1320	3	X	X	X		03
510		GW			1125	3	X	X	X		04
512		GW			1045	3	X	X	X		05
601		GW			1210	3	X	X	X		06
~~602~~		GW				3	X	X	X		
701		GW			1130	3	X	X	X		07
702		GW			1215	3	X	X	X		08
703		GW			1255	3	X	X	X		09

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:6010 Metals-B,CA,CR,CO,LI,MO, 6020 Metals-SB,AS,BE,CD,PB,SE,TL, 7470 Metals-HG.

pH _____ Temp _____

Flow _____ Other _____

Chain of Custody Page 1 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE

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

L # 855852

A227

Acctnum: **AQUAOPKS**
Template: **T115107**
Prelogin: **P565218**
TSR: **206 - Jeff Carr**
PB:
Shipped Via:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/23/16	1700	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/24/16	1200	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☒ SWA

Temp: 3.2 °C Bottles Received: 57

Date: 8.25.16 Time: 0900

Hold #

Condition: (lab use only) OK MR

COC Seal Intact: ____ Y ____ N ____ NA

pH Checked: 22 NCF:

SCS Engineers - KS

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Overland Park, KS 66213

Billing Information:
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Report to: **Mr. Jason R. Franks**

Email To: **jfranks@scsengineers.com; LMeyer@scsengineers.com**

Project Description: **Sibley Generating Station**

City/State Collected:

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

Client Project # **27213169.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): Adam Parris

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

Email? ___No X__Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 855852

Table #

Acctnum: **AQUAOPKS**
Template: **T115107**
Prelogin: **P565218**
TSR: **206 - Jeff Carr**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CCR Metals 250mlHDPE-HNO3	Chloride, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Rem./Contaminant	Sample # (lab only)
704	Grab	GW	N/A	8/23/16	1330	3	X	X	X		10
801		GW			1440	3	X	X	X		11
802		GW			1525	3	X	X	X		12
803		GW			1405	3	X	X	X		13
804		GW			1445	3	X	X	X		14
805		GW			1520	3	X	X	X		15
806R		GW			1550	3	X	X	X		16
DUPLICATE		GW			1050	3	X	X	X		17
512 MS		GW			1055	3	X	X	X		05
512 MSD		GW			1100	3	X	X	X		06

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:6010 Metals-B,CA,CR,CO,LI,MO, 6020 Metals-SB,AS,BE,CD,PB,SE,TL, 7470 Metals-HG.

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/23/16	1700	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/24/16	1200	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☒ SUA

Temp: 3.2 °C Bottles Received: 57

Date: 8.25.16 Time: 0900

Condition: (lab use only) ok

COC Seal Intact: ___Y ___N ___NA

pH Checked: 22 NCF:

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

Cooler Receipt Checklist

Client: AQUAOPLS SDG# 855852

Cooler Received/Opened On: 8/25/2016 By : Nikki Farmer

Temperature Upon Receipt: 3.2 °c

(Signature)

Cooler Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?			✓
Were custody papers properly filled out (ink, signed, etc.)?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were correct preservatives used?	✓		
Were all applicable sample containers checked for preservation? (Any samples not in accepted pH range noted on COC .)			
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated? (If yes see attached NCF)		✓	

Case Narrative

Lab No: 20160828

This report contains the analytical results for the 23 sample(s) received under chain of custody by ESC Lab Sciences on 8/25/2016 10:35:00 AM. These samples are associated with your Sibley Generating Station project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160828-01**								
Client ID : **504**								
Date Sampled : **8/23/2016 1:55:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.957 +/- 0.825	0.498	pCi/l				
Radium-226	SM 7500 Ra B M*	0.398 +/- 0.181	0.119	pCi/l		08/31/16	09/13/16	AK
Radium-228	EPA 904*/9320*	0.559 +/- 0.644	0.378	pCi/l		09/14/16	09/16/16	JR
Lab ID : **20160828-02**								
Client ID : **505**								
Date Sampled : **8/23/2016 1:20:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.388 +/- 0.750	0.498	pCi/l				
Radium-226	SM 7500 Ra B M*	0.098 +/- 0.083	0.103	pCi/l		08/31/16	09/13/16	AK
Radium-228	EPA 904*/9320*	0.290 +/- 0.667	0.395	pCi/l		09/14/16	09/16/16	JR
Lab ID : **20160828-03**								
Client ID : **506**								
Date Sampled : **8/23/2016 1:20:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		1.00 +/- 0.714	0.516	pCi/l				
Radium-226	SM 7500 Ra B M*	0.109 +/- 0.124	0.184	pCi/l		08/31/16	09/13/16	AK
Radium-228	EPA 904*/9320*	0.888 +/- 0.591	0.333	pCi/l		09/14/16	09/16/16	JR
Lab ID : **20160828-04**								
Client ID : **510**								
Date Sampled : **8/23/2016 11:25:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.849 +/- 0.881	0.671	pCi/l				
Radium-226	SM 7500 Ra B M*	0.128 +/- 0.166	0.251	pCi/l		08/31/16	09/13/16	AK
Radium-228	EPA 904*/9320*	0.720 +/- 0.715	0.420	pCi/l		09/14/16	09/16/16	JR

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Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160828-05**								
Client ID : **512**								
Date Sampled : **8/23/2016 10:45:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.529 +/- 0.781	0.499	pCi/l				
Radium-226	SM 7500 Ra B M*	0.279 +/- 0.131	0.126	pCi/l		08/31/16	09/06/16	AK
Radium-228	EPA 904*/9320*	0.250 +/- 0.650	0.372	pCi/l		09/14/16	09/16/16	JR
Lab ID : **20160828-06**								
Client ID : **512 MS**								
Date Sampled : **8/23/2016 10:55:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	90.9		% Rec		08/31/16	09/06/16	AK
Radium-228	EPA 904*/9320*	86.2		% Rec		09/14/16	09/16/16	JR
Lab ID : **20160828-07**								
Client ID : **512 MSD**								
Date Sampled : **8/23/2016 11:00:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	1.1		RPD		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	3.3		RPD		09/14/16	09/16/16	JR
Lab ID : **20160828-08**								
Client ID : **601**								
Date Sampled : **8/23/2016 12:10:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.181 +/- 0.797	0.554	pCi/l				
Radium-226	SM 7500 Ra B M*	0.034 +/- 0.082	0.144	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	0.147 +/- 0.715	0.411	pCi/l		09/14/16	09/16/16	JR
Lab ID : **20160828-09**								
Client ID : **701**								
Date Sampled : **8/23/2016 11:30:00 AM**								
Matrix : **NPW**								

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Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radiochemical Analyses								
Combined Radium		0.291 +/- 0.929	0.654	pCi/l				
Radium-226	SM 7500 Ra B M*	0.140 +/- 0.126	0.172	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	0.151 +/- 0.803	0.482	pCi/l		09/14/16	09/16/16	JR

Lab ID : 20160828-10
Client ID : 702
Date Sampled : 8/23/2016 12:15:00 PM
Matrix : NPW

Radiochemical Analyses								
Combined Radium		0.153 +/- 0.810	0.566	pCi/l				
Radium-226	SM 7500 Ra B M*	0.153 +/- 0.106	0.125	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	-0.150 +/- 0.704	0.441	pCi/l		09/14/16	09/19/16	JR

Lab ID : 20160828-11
Client ID : 703
Date Sampled : 8/23/2016 12:55:00 PM
Matrix : NPW

Radiochemical Analyses								
Combined Radium		0.888 +/- 0.684	0.479	pCi/l				
Radium-226	SM 7500 Ra B M*	0.168 +/- 0.117	0.142	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	0.719 +/- 0.568	0.337	pCi/l		09/14/16	09/19/16	JR

Lab ID : 20160828-12
Client ID : 704
Date Sampled : 8/23/2016 1:30:00 PM
Matrix : NPW

Radiochemical Analyses								
Combined Radium		0.469 +/- 0.808	0.590	pCi/l				
Radium-226	SM 7500 Ra B M*	0.096 +/- 0.106	0.156	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	0.373 +/- 0.701	0.435	pCi/l		09/14/16	09/19/16	JR

Lab ID : 20160828-13
Client ID : 801
Date Sampled : 8/23/2016 2:40:00 PM
Matrix : NPW

Radiochemical Analyses								
Combined Radium		0.146 +/- 0.720	0.560	pCi/l				

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radium-226	SM 7500 Ra B M*	0.146 +/- 0.146	0.211	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	-0.136 +/- 0.574	0.349	pCi/l		09/14/16	09/19/16	JR

Lab ID : 20160828-14
Client ID : 802
Date Sampled : 8/23/2016 3:25:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.287 +/- 0.609	0.399	pCi/l				
Radium-226	SM 7500 Ra B M*	0.287 +/- 0.147	0.108	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	-0.006 +/- 0.462	0.291	pCi/l		09/14/16	09/19/16	JR

Lab ID : 20160828-15
Client ID : 803
Date Sampled : 8/23/2016 2:05:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.741 +/- 0.593	0.389	pCi/l				
Radium-226	SM 7500 Ra B M*	0.218 +/- 0.107	0.093	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	0.523 +/- 0.486	0.296	pCi/l		09/14/16	09/19/16	JR

Lab ID : 20160828-16
Client ID : 804
Date Sampled : 8/23/2016 2:45:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.54 +/- 0.660	0.472	pCi/l				
Radium-226	SM 7500 Ra B M*	0.225 +/- 0.136	0.170	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	1.32 +/- 0.524	0.302	pCi/l		09/14/16	09/19/16	JR

Lab ID : 20160828-17
Client ID : 805
Date Sampled : 8/23/2016 3:20:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.71 +/- 1.26	0.866	pCi/l				
Radium-226	SM 7500 Ra B M*	0.385 +/- 0.166	0.186	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	1.32 +/- 1.10	0.680	pCi/l		09/14/16	09/19/16	JR

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Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20160828-18**								
Client ID : **806R**								
Date Sampled : **8/23/2016 3:50:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.109 +/- 0.585	0.430	pCi/l				
Radium-226	SM 7500 Ra B M*	0.109 +/- 0.093	0.119	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	0.000 +/- 0.493	0.311	pCi/l		09/14/16	09/19/16	JR
Lab ID : **20160828-19**								
Client ID : **DUPLICATE**								
Date Sampled : **8/23/2016 10:50:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		1.54 +/- 0.772	0.537	pCi/l				
Radium-226	SM 7500 Ra B M*	0.125 +/- 0.113	0.160	pCi/l		08/31/16	09/07/16	AK
Radium-228	EPA 904*/9320*	1.42 +/- 0.658	0.377	pCi/l		09/14/16	09/19/16	JR

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Batch ID
Radium-226	0.009	99.1			NC	1.670	86.5	99.4	13.8	R1128
Radium-226	-0.004	101.0			NC	0.614	90.9	91.9	1.1	R1129
Radium-228	0.749	106.0			NC	0.157	89.9	92.9	3.2	R3855
Radium-228	-0.154	96.6			NC	0.701	86.2	89.2	3.3	R3854

Lab Approval:

Ron Eidson
Director of Radiochemistry

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
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SCS Engineers - KS

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

Billing Information:
Accounts Payable
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Overland Park, KS 66213

Report to: Mr. Jason R. Franks

Email To: jfranks@scsengineers.com; LMeyer@scsengineers.com

Project Description: **Sibley Generating Station**

City/State Collected:

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

Client Project # 27213167.16

Lab Project # AQUAOPKS-SIBLEY

Collected by (print): Adam Parris

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

Email? ___No X_Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# P565835

Table #

Acctnum: AQUAOPKS

Template: T115110

Prelogin: P565222

TSR: 206 - Jeff Carr

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226, RA228 1L-HDPE-Add HNO3	Rem./Contaminant	Sample # (lab only)
504	Grab	NPW	N/A	8/23/16	1355	2	X		-01
505		NPW			1320	2	X		-02
506		NPW			1320	2	X		-03
510		NPW			1125	2	X		-04
512		NPW			1045	2	X		-05
601		NPW			1210	2	X		-08
~~602~~		~~NPW~~				2	X		
701		NPW			1130	2	X		-09
702		NPW			1215	2	X		-10
703		NPW			1255	2	X		-11

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:RA 226/228 - Report separately and combined.

pH _____ Temp _____

Flow _____ Other _____

20160828

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/23/16	1700	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/24/16	1200	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Amber Taylor

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

Temp: Amb Bottles Received:

Date: 8/25/16 Time: 1035

Condition: (lab use only)
20160828

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

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

Billing Information:
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Overland Park, KS 66213

Report to: **Mr. Jason R. Franks**
Email To: jfranks@scsengineers.com; LMeyer@scsengineers.com

Project Description: **Sibley Generating Station**
City/State Collected:

Phone: 913-681-0030
Fax: 913-681-0012
Client Project # 27213167.16
Lab Project # AQUAOPKS-SIBLEY

Collected by (print): Adam Parris
Site/Facility ID #
P.O. #

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

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard
Email? ___No X__Yes
FAX? X No ___Yes

Analysis / Container / Preservative
RA226, RA228 1L-HDPE-Add HNO3

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs		Rem./Contaminant	Sample # (lab only)
704	Grab	NPW	N/A	8/23/16	1330	2	X		-12
801		NPW			1440	2	X		-13
802		NPW			1525	2	X		-14
803		NPW			1405	2	X		-15
804		NPW			1445	2	X		-16
805		NPW			1520	2	X		-17
806R		NPW			1550	2	X		-18
DUPLICATE		NPW			1050	2	X		-19
512 MS		NPW			1055	2	X		-06
512 MSD	↓	NPW	↓	↓	1100	2	X		-07

Chain of Custody Page 2 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 85835
Table #
Acctnum: AQUAOPKS
Template: T115110
Prelogin: P565222
TSR: 206 - Jeff Carr
PB:
Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: RA 226/228 - Report separately and combined.

pH _____ Temp _____
Flow _____ Other _____

20160828

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/23/16	1702	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/24/16	1020	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: Amb °C Bottles Received:
Date: 8/25/16 Time: 1035

Condition: (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

SCS Engineers - KS

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

Billing Information:

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

Report to:
Mr. Jason R. Franks

Email To: jfranks@scsengineers.com; LMeyer@scsengineers.com

Project
Description: Sibley Generating Station

City/State
Collected:

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

Client Project #
27213169.16

Lab Project #
AQUAOPKS-SIBLEY

Collected by (print):
Adam Parris

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
Standard

Email? ___No X__Yes
FAX? X No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226, RA228 1L-HDPE-Add HNO3									Rem./Contaminant	Sample # (lab only)
SLAG POND	Grab	NPW	N/A	8/23/16	1615	2	X										-20
FLY ASH POND	↓	NPW	↓	↓	1530	2	X										-21
FLY ASH POND OUTFALL		NPW			1500	2	X										-22
LEACHATE POND		NPW			1550	2	X										-23
~~RIVER~~		~~NPW~~				2	X										

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L855835

Table #

Acctnum: AQUAOPKS
Template: T115126
Prelogin: P565270
TSR: 206 - Jeff Carr
PB:

Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: RA 226/228 - Report separately and combined.

Radium sent to Outreach

pH _____ Temp _____

Flow _____ Other _____

20160828

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/23/16	1700	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/24/16	1200	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: Amb °C Bottles Received:

Date: 8/25/16 Time: 1035

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

SAMPLE LOGIN

Date Received: *8/25/2016 10:35:0* **Lab Number:** 20160828 **Due:** 9/22/2016

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20160828-01 B	504	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20160828-01 A	504	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160828-02 A	505	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20160828-02 B	505	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160828-03 A	506	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20160828-03 B	506	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160828-04 A	510	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20160828-04 B	510	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160828-05 A	512	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20160828-05 B	512	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160828-06 A	512 MS	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20160828-06 B	512 MS	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160828-07 B	512 MSD	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20160828-07 A	512 MSD	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

20160828-08 A	601	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓		
20160828-08 B	601	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*					Yes	Yes
Radium-228			EPA 904*/9320*						
20160828-09 A	701	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓		
20160828-09 B	701	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*					Yes	Yes
Radium-228			EPA 904*/9320*						
20160828-10 A	702	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓		
20160828-10 B	702	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*					Yes	Yes
Radium-228			EPA 904*/9320*						
20160828-11 A	703	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓		
20160828-11 B	703	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*					Yes	Yes
Radium-228			EPA 904*/9320*						
20160828-12 B	704	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓		
20160828-12 A	704	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*					Yes	Yes
Radium-228			EPA 904*/9320*						
20160828-13 A	801	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓		
20160828-13 B	801	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*					Yes	Yes
Radium-228			EPA 904*/9320*						
20160828-14 A	802	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓		
20160828-14 B	802	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*					Yes	Yes
Radium-228			EPA 904*/9320*						
20160828-15 A	803	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓		
20160828-15 B	803	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*					Yes	Yes
Radium-228			EPA 904*/9320*						
20160828-16 A	804	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓		
20160828-16 B	804	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
								Yes	Yes

Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160828-17 B	805	NPW	08/23/16	Plastic	1 L	HNO3, pH 2	✓	Yes	Yes
20160828-17 A	805	NPW	08/23 16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160828-18 A	806R	NPW	08/23 16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
20160828-18 B	806R	NPW	08/23 16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20160828-19 A	DUPLICATE	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	✓	Yes	Yes
20160828-19 B	DUPLICATE	NPW	08/23/16	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

CONTAINER INSPECTION

Coolers 3 Custody Seals Broken N/A Temperature: Amb Ice Radiation Survey: <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Q Chain of Custody Record ✓ Labels in Tact ✓ Radiation Survey Complete N/A

Anomalies

Inspected By: Amber Jayne DATE 8/25/16

QA or Designee Review: Raymond Thomas DATE 08/25/16

Sample Custodian Review: Dustin Mandl DATE 8/25/16

Project Notes:

Y

Jared Morrison
December 16, 2022

ATTACHMENT 1-5

November 2016 Sampling Event Laboratory Report

ANALYTICAL REPORT

November 16, 2016

SCS Engineers - KS

Sample Delivery Group:	L872430
Samples Received:	11/12/2016
Project Number:	27213169.16
Description:	KCPL-Sibley Generating Station

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

504 L872430-01 GW

Collected by: Jason R. Franks | Collected date/time: 11/11/16 12:10 | Received date/time: 11/12/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG926468	1	11/15/16 19:36	11/16/16 04:46	LTB

505 L872430-02 GW

Collected by: Jason R. Franks | Collected date/time: 11/11/16 12:55 | Received date/time: 11/12/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG926468	1	11/15/16 19:36	11/16/16 04:49	LTB

506 L872430-03 GW

Collected by: Jason R. Franks | Collected date/time: 11/11/16 12:30 | Received date/time: 11/12/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG926468	1	11/15/16 19:36	11/16/16 04:52	LTB

510 L872430-04 GW

Collected by: Jason R. Franks | Collected date/time: 11/10/16 15:30 | Received date/time: 11/12/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG926468	1	11/15/16 19:36	11/16/16 04:14	LTB

512 L872430-05 GW

Collected by: Jason R. Franks | Collected date/time: 11/11/16 12:30 | Received date/time: 11/12/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG926468	1	11/15/16 19:36	11/16/16 04:54	LTB

DUPLICATE L872430-06 GW

Collected by: Jason R. Franks | Collected date/time: 11/10/16 00:00 | Received date/time: 11/12/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG926468	1	11/15/16 19:36	11/16/16 04:57	LTB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	11/16/2016 04:46	WG926468
Molybdenum	ND		5.00	1	11/16/2016 04:46	WG926468

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	11/16/2016 04:49	WG926468
Molybdenum	ND		5.00	1	11/16/2016 04:49	WG926468

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	11/16/2016 04:52	WG926468
Molybdenum	ND		5.00	1	11/16/2016 04:52	WG926468

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	11/16/2016 04:14	WG926468
Molybdenum	ND		5.00	1	11/16/2016 04:14	WG926468

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	11/16/2016 04:54	WG926468
Molybdenum	ND		5.00	1	11/16/2016 04:54	WG926468

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	11/16/2016 04:57	WG926468
Molybdenum	ND		5.00	1	11/16/2016 04:57	WG926468

Method Blank (MB)

(MB) R3178321-1 11/16/16 04:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Lithium	U		5.30	15.0
Molybdenum	U		1.60	5.00

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

(LCS) R3178321-2 11/16/16 04:08 • (LCSD) R3178321-3 11/16/16 04:11

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	%	%	%			%	%
Lithium	1000	1020	1020	102	102	80-120			1	20
Molybdenum	1000	1090	1090	109	109	80-120			1	20

L872430-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872430-04 11/16/16 04:14 • (MS) R3178321-5 11/16/16 04:19 • (MSD) R3178321-6 11/16/16 04:21

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	%	%		%			%	%
Lithium	1000	ND	1030	1040	102	103	1	75-125			1	20
Molybdenum	1000	ND	1090	1090	109	109	1	75-125			0	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

Qualifier	Description

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

ACCREDITATIONS & LOCATIONS

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

State Accreditations

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

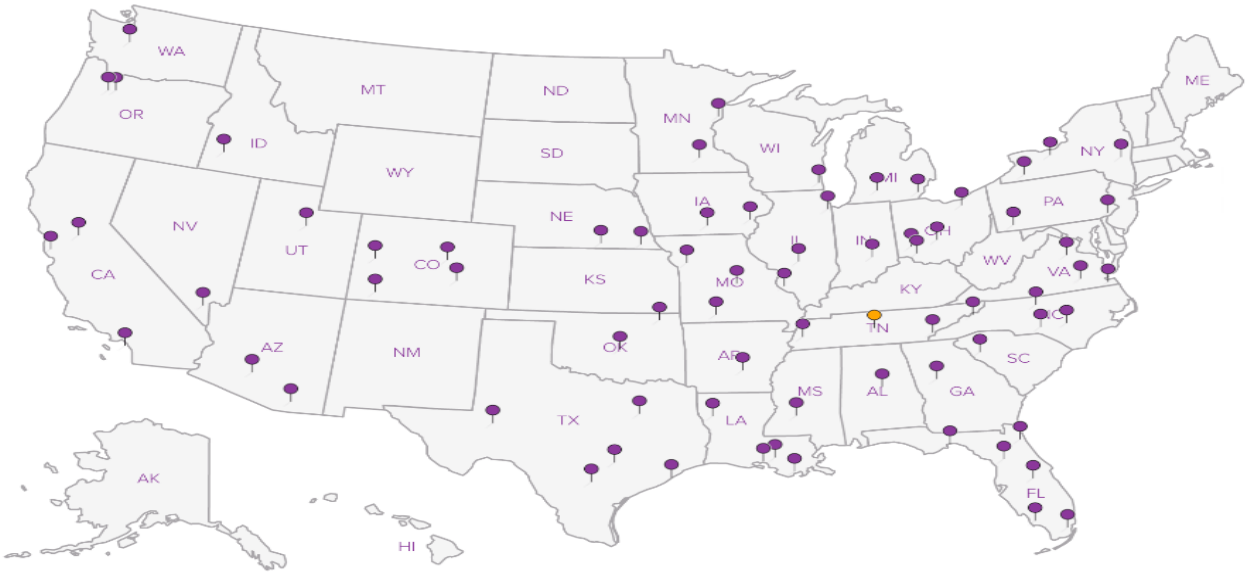
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:
SCS Engineers
7311 West 130th Street, Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: KCPL-Sibley Gen Station-Groundwater

City/State Collected: Sibley,MO

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

Client Project # 27213169.16

Lab Project # AQUAOPKS-SIBLEY

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Metals** 250mlHDPE+HN03										Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	11/11/16	1210	1	X											01
505	Grab	GW	NA	11/11/16	1255	1	X											02
506	Grab	GW	NA	11/11/16	1230	1	X											03
510	Grab	GW	NA	11/10/16	1530	1	X											04
512	Grab	GW	NA	11/11/16	1230	1	X											05
Duplicate	Grab	GW	NA	11/10/16	—	1	X											06
MS -510	Grab	GW	NA	11/10/16	1530	1	X											04
MSD -510	Grab	GW	NA	11/10/16	1530	1	X											04

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 872430
T B096
Acctnum: AQUAOPKS
Template: T59883
Prelogin:
TSR: 206-Jeff Carr
Cooler:
Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: **Metals=Li, Mo**

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	11/11/16	1555	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier DSWA

Temp: 2.2 °C Bottles Received: 8=BR

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

Date:	Time:	pH Checked:	NCF:
11-12-16	1130	<2	

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

Cooler Receipt Form

Client: AQUAOPIS	SDG#	87243
Cooler Received/Opened On: 11/ 12 /16	Temperature Upon Receipt:	2.2 °c
Received by. **Nikki Farmer**		
Signature:		

Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?	✓		
Were custody papers properly filled out?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)	✓		
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated. (If yes see attached NCF)			

ANALYTICAL REPORT

December 06, 2016

SCS Engineers - KS

Sample Delivery Group:	L872441
Samples Received:	11/12/2016
Project Number:	27213169.16
Description:	KCPL Sibley Gen Station-Groundwater

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

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

TABLE OF CONTENTS

504 L872441-01 GW

Collected by: Alex McCormick
Collected date/time: 11/11/16 12:10
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927657	1	11/18/16 01:46	11/18/16 03:55	JM
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:13	NJB
Metals (ICP) by Method 6010B	WG926462	1	11/15/16 21:55	11/16/16 13:55	JDG
Metals (ICPMS) by Method 6020	WG926446	1	11/15/16 17:21	11/17/16 17:43	JDG
Wet Chemistry by Method 9056A	WG926859	1	11/17/16 03:59	11/17/16 03:59	KCF

505 L872441-02 GW

Collected by: Alex McCormick
Collected date/time: 11/11/16 12:55
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927657	1	11/18/16 01:46	11/18/16 03:55	JM
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:15	NJB
Metals (ICP) by Method 6010B	WG926462	1	11/15/16 21:55	11/16/16 13:58	JDG
Metals (ICPMS) by Method 6020	WG926446	1	11/15/16 17:21	11/17/16 17:47	JDG
Wet Chemistry by Method 9056A	WG926859	1	11/17/16 04:30	11/17/16 04:30	KCF

506 L872441-03 GW

Collected by: Alex McCormick
Collected date/time: 11/11/16 12:30
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927657	1	11/18/16 01:46	11/18/16 03:55	JM
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:17	NJB
Metals (ICP) by Method 6010B	WG926462	1	11/15/16 21:55	11/16/16 14:01	JDG
Metals (ICPMS) by Method 6020	WG926446	1	11/15/16 17:21	11/17/16 17:50	JDG
Wet Chemistry by Method 9056A	WG926859	1	11/17/16 06:40	11/17/16 06:40	KCF

510 L872441-04 GW

Collected by: Alex McCormick
Collected date/time: 11/10/16 15:30
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927309	1	11/17/16 13:06	11/17/16 13:39	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 12:52	NJB
Metals (ICP) by Method 6010B	WG926462	1	11/15/16 21:55	11/16/16 14:03	JDG
Metals (ICPMS) by Method 6020	WG926446	1	11/15/16 17:21	11/17/16 17:04	JDG
Wet Chemistry by Method 9056A	WG926859	1	11/17/16 06:55	11/17/16 06:55	KCF

512 L872441-05 GW

Collected by: Alex McCormick
Collected date/time: 11/11/16 12:30
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927658	1	11/18/16 01:51	11/18/16 04:36	JM
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:19	NJB
Metals (ICP) by Method 6010B	WG926462	1	11/15/16 21:55	11/16/16 14:11	JDG
Metals (ICPMS) by Method 6020	WG926446	1	11/15/16 17:21	11/17/16 17:54	JDG
Wet Chemistry by Method 9056A	WG926859	1	11/17/16 07:41	11/17/16 07:41	KCF

DUPLICATE L872441-06 GW

Collected by: Alex McCormick
Collected date/time: 11/10/16 00:00
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927309	1	11/17/16 13:06	11/17/16 13:39	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:22	NJB
Metals (ICP) by Method 6010B	WG926462	1	11/15/16 21:55	11/16/16 14:14	JDG
Metals (ICPMS) by Method 6020	WG926446	1	11/15/16 17:21	11/17/16 17:57	JDG
Wet Chemistry by Method 9056A	WG926859	1	11/17/16 07:57	11/17/16 07:57	KCF

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	173000		10000	1	11/18/2016 03:55	WG927657

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	11/17/2016 03:59	WG926859
Fluoride	171		100	1	11/17/2016 03:59	WG926859
Sulfate	17400		5000	1	11/17/2016 03:59	WG926859

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:13	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	121		5.00	1	11/16/2016 13:55	WG926462
Boron	ND		200	1	11/16/2016 13:55	WG926462
Calcium	36900		1000	1	11/16/2016 13:55	WG926462
Chromium	ND		10.0	1	11/16/2016 13:55	WG926462
Cobalt	ND		10.0	1	11/16/2016 13:55	WG926462

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 17:43	WG926446
Arsenic	ND		2.00	1	11/17/2016 17:43	WG926446
Beryllium	ND		2.00	1	11/17/2016 17:43	WG926446
Cadmium	ND		1.00	1	11/17/2016 17:43	WG926446
Lead	ND		2.00	1	11/17/2016 17:43	WG926446
Selenium	2.68		2.00	1	11/17/2016 17:43	WG926446
Thallium	ND		2.00	1	11/17/2016 17:43	WG926446

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	152000		10000	1	11/18/2016 03:55	WG927657

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	11/17/2016 04:30	WG926859
Fluoride	177		100	1	11/17/2016 04:30	WG926859
Sulfate	15900		5000	1	11/17/2016 04:30	WG926859

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:15	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	88.2		5.00	1	11/16/2016 13:58	WG926462
Boron	ND		200	1	11/16/2016 13:58	WG926462
Calcium	21600		1000	1	11/16/2016 13:58	WG926462
Chromium	ND		10.0	1	11/16/2016 13:58	WG926462
Cobalt	ND		10.0	1	11/16/2016 13:58	WG926462

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 17:47	WG926446
Arsenic	ND		2.00	1	11/17/2016 17:47	WG926446
Beryllium	ND		2.00	1	11/17/2016 17:47	WG926446
Cadmium	ND		1.00	1	11/17/2016 17:47	WG926446
Lead	ND		2.00	1	11/17/2016 17:47	WG926446
Selenium	2.10		2.00	1	11/17/2016 17:47	WG926446
Thallium	ND		2.00	1	11/17/2016 17:47	WG926446

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	477000		10000	1	11/18/2016 03:55	WG927657

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	6130		1000	1	11/17/2016 06:40	WG926859
Fluoride	298		100	1	11/17/2016 06:40	WG926859
Sulfate	65000		5000	1	11/17/2016 06:40	WG926859

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:17	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	250		5.00	1	11/16/2016 14:01	WG926462
Boron	ND		200	1	11/16/2016 14:01	WG926462
Calcium	96500		1000	1	11/16/2016 14:01	WG926462
Chromium	ND		10.0	1	11/16/2016 14:01	WG926462
Cobalt	ND		10.0	1	11/16/2016 14:01	WG926462

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 17:50	WG926446
Arsenic	ND		2.00	1	11/17/2016 17:50	WG926446
Beryllium	ND		2.00	1	11/17/2016 17:50	WG926446
Cadmium	ND		1.00	1	11/17/2016 17:50	WG926446
Lead	ND		2.00	1	11/17/2016 17:50	WG926446
Selenium	10.7		2.00	1	11/17/2016 17:50	WG926446
Thallium	ND		2.00	1	11/17/2016 17:50	WG926446

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	468000		10000	1	11/17/2016 13:39	WG927309

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3490		1000	1	11/17/2016 06:55	WG926859
Fluoride	296		100	1	11/17/2016 06:55	WG926859
Sulfate	16000		5000	1	11/17/2016 06:55	WG926859

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 12:52	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	373		5.00	1	11/16/2016 14:03	WG926462
Boron	ND		200	1	11/16/2016 14:03	WG926462
Calcium	119000		1000	1	11/16/2016 14:03	WG926462
Chromium	ND		10.0	1	11/16/2016 14:03	WG926462
Cobalt	ND		10.0	1	11/16/2016 14:03	WG926462

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 17:04	WG926446
Arsenic	ND		2.00	1	11/17/2016 17:04	WG926446
Beryllium	ND		2.00	1	11/17/2016 17:04	WG926446
Cadmium	ND		1.00	1	11/17/2016 17:04	WG926446
Lead	ND		2.00	1	11/17/2016 17:04	WG926446
Selenium	4.07		2.00	1	11/17/2016 17:04	WG926446
Thallium	ND		2.00	1	11/17/2016 17:04	WG926446

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	443000		10000	1	11/18/2016 04:36	WG927658

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3170		1000	1	11/17/2016 07:41	WG926859
Fluoride	282		100	1	11/17/2016 07:41	WG926859
Sulfate	24000		5000	1	11/17/2016 07:41	WG926859

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:19	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	374		5.00	1	11/16/2016 14:11	WG926462
Boron	ND		200	1	11/16/2016 14:11	WG926462
Calcium	100000		1000	1	11/16/2016 14:11	WG926462
Chromium	10.3		10.0	1	11/16/2016 14:11	WG926462
Cobalt	ND		10.0	1	11/16/2016 14:11	WG926462

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 17:54	WG926446
Arsenic	ND		2.00	1	11/17/2016 17:54	WG926446
Beryllium	ND		2.00	1	11/17/2016 17:54	WG926446
Cadmium	ND		1.00	1	11/17/2016 17:54	WG926446
Lead	ND		2.00	1	11/17/2016 17:54	WG926446
Selenium	4.95		2.00	1	11/17/2016 17:54	WG926446
Thallium	ND		2.00	1	11/17/2016 17:54	WG926446

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	494000		10000	1	11/17/2016 13:39	WG927309

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3530		1000	1	11/17/2016 07:57	WG926859
Fluoride	295		100	1	11/17/2016 07:57	WG926859
Sulfate	15900		5000	1	11/17/2016 07:57	WG926859

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:22	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	372		5.00	1	11/16/2016 14:14	WG926462
Boron	ND		200	1	11/16/2016 14:14	WG926462
Calcium	118000		1000	1	11/16/2016 14:14	WG926462
Chromium	ND		10.0	1	11/16/2016 14:14	WG926462
Cobalt	ND		10.0	1	11/16/2016 14:14	WG926462

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 17:57	WG926446
Arsenic	ND		2.00	1	11/17/2016 17:57	WG926446
Beryllium	ND		2.00	1	11/17/2016 17:57	WG926446
Cadmium	ND		1.00	1	11/17/2016 17:57	WG926446
Lead	ND		2.00	1	11/17/2016 17:57	WG926446
Selenium	3.74		2.00	1	11/17/2016 17:57	WG926446
Thallium	ND		2.00	1	11/17/2016 17:57	WG926446

Method Blank (MB)

(MB) R3179182-1 11/17/16 13:39

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

L872441-04 Original Sample (OS) • Duplicate (DUP)

(OS) L872441-04 11/17/16 13:39 • (DUP) R3179182-4 11/17/16 13:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	468000	471000	1	0.639		5

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

(LCS) R3179182-2 11/17/16 13:39 • (LCSD) R3179182-3 11/17/16 13:39

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	%	%	%			%	%
Dissolved Solids	8800000	8470000	8460000	96.3	96.1	85.0-115			0.118	5

Method Blank (MB)

(MB) R3179384-1 11/18/16 03:55

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

L872335-01 Original Sample (OS) • Duplicate (DUP)

(OS) L872335-01 11/18/16 03:55 • (DUP) R3179384-4 11/18/16 03:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	442000	424000	1	4.16		5

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

(LCS) R3179384-2 11/18/16 03:55 • (LCSD) R3179384-3 11/18/16 03:55

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	%	%	%			%	%
Dissolved Solids	8800000	8230000	8350000	93.5	94.9	85.0-115			1.45	5

Method Blank (MB)

(MB) R3179385-1 11/18/16 04:36

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

L872441-05 Original Sample (OS) • Duplicate (DUP)

(OS) L872441-05 11/18/16 04:36 • (DUP) R3179385-4 11/18/16 04:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	443000	425000	1	4.22		5

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

(LCS) R3179385-2 11/18/16 04:36 • (LCSD) R3179385-3 11/18/16 04:36

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	%	%	%			%	%
Dissolved Solids	8800000	8110000	8500000	92.2	96.6	85.0-115			4.70	5

Method Blank (MB)

(MB) R3178900-1 11/16/16 20:32

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	359	J	77.4	5000

L872382-01 Original Sample (OS) • Duplicate (DUP)

(OS) L872382-01 11/16/16 21:49 • (DUP) R3178900-4 11/16/16 22:05

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	563	550	1	2		15
Sulfate	73500	72400	1	2		15

L872441-01 Original Sample (OS) • Duplicate (DUP)

(OS) L872441-01 11/17/16 03:59 • (DUP) R3178900-6 11/17/16 04:15

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	ND	815	1	0		15
Fluoride	171	171	1	0		15
Sulfate	17400	17500	1	1		15

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

(LCS) R3178900-2 11/16/16 20:48 • (LCSD) R3178900-3 11/16/16 21:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39300	39200	98	98	80-120			0	15
Fluoride	8000	7890	7900	99	99	80-120			0	15
Sulfate	40000	39900	40000	100	100	80-120			0	15

L872424-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L872424-01 11/16/16 22:20 • (MS) R3178900-5 11/16/16 22:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	3370	53400	100	1	80-120	
Fluoride	5000	161	5220	101	1	80-120	
Sulfate	50000	49800	97900	96	1	80-120	

L872441-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872441-04 11/17/16 06:55 • (MS) R3178900-7 11/17/16 07:11 • (MSD) R3178900-8 11/17/16 07:26

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	3490	54400	54300	102	102	1	80-120			0	15
Fluoride	5000	296	5370	5380	101	102	1	80-120			0	15
Sulfate	50000	16000	65800	65700	100	99	1	80-120			0	15

Method Blank (MB)

(MB) R3178166-1 11/15/16 12:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3178166-2 11/15/16 12:47 • (LCSD) R3178166-3 11/15/16 12:50

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	%	%	%			%	%
Mercury	3.00	2.58	2.70	86	90	80-120			4	20

L872441-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872441-04 11/15/16 12:52 • (MS) R3178166-4 11/15/16 12:54 • (MSD) R3178166-5 11/15/16 12:57

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	%	%		%			%	%
Mercury	3.00	ND	2.87	2.79	96	93	1	75-125			3	20

Method Blank (MB)

(MB) R3178595-1 11/16/16 13:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Barium	U		1.70	5.00
Boron	U		12.6	200
Calcium	61.9	J	46.3	1000
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0

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

(LCS) R3178595-2 11/16/16 13:21 • (LCSD) R3178595-3 11/16/16 13:23

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	%	%	%			%	%
Barium	1000	1050	1050	105	105	80-120			0	20
Boron	1000	1010	1010	101	101	80-120			0	20
Calcium	10000	9870	9880	99	99	80-120			0	20
Chromium	1000	1020	1020	102	102	80-120			0	20
Cobalt	1000	1040	1040	104	104	80-120			0	20

L872427-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872427-04 11/16/16 13:26 • (MS) R3178595-5 11/16/16 13:31 • (MSD) R3178595-6 11/16/16 13:34

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	%	%		%			%	%
Barium	1000	371	1380	1380	101	101	1	75-125			0	20
Boron	1000	ND	1090	1100	100	101	1	75-125			1	20
Calcium	10000	118000	126000	126000	78	78	1	75-125			0	20
Chromium	1000	ND	1010	1010	101	100	1	75-125			0	20
Cobalt	1000	ND	1050	1050	105	105	1	75-125			0	20

L872441-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872441-04 11/16/16 14:03 • (MS) R3178595-7 11/16/16 14:06 • (MSD) R3178595-8 11/16/16 14:08

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	%	%		%			%	%
Barium	1000	373	1400	1390	103	102	1	75-125			1	20
Boron	1000	ND	1090	1100	101	102	1	75-125			1	20
Calcium	10000	119000	127000	126000	79	78	1	75-125			0	20
Chromium	1000	ND	1030	1030	102	102	1	75-125			0	20
Cobalt	1000	ND	1060	1060	106	106	1	75-125			0	20

Method Blank (MB)

(MB) R3178964-1 11/17/16 16:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3178964-2 11/17/16 16:42 • (LCSD) R3178964-3 11/17/16 16:46

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	%	%	%			%	%
Antimony	57.9	52.4	51.4	90	89	80-120			2	20
Arsenic	50.0	49.3	49.9	99	100	80-120			1	20
Beryllium	50.0	47.4	47.8	95	96	80-120			1	20
Cadmium	50.0	50.6	50.4	101	101	80-120			0	20
Lead	50.0	46.7	47.0	93	94	80-120			1	20
Selenium	50.0	49.7	51.0	99	102	80-120			2	20
Thallium	50.0	47.0	46.8	94	94	80-120			0	20

L872427-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872427-04 11/17/16 16:49 • (MS) R3178964-5 11/17/16 16:56 • (MSD) R3178964-6 11/17/16 17:00

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	%	%		%			%	%
Antimony	57.9	ND	52.3	51.2	90	88	1	75-125			2	20
Arsenic	50.0	ND	48.0	48.3	96	97	1	75-125			1	20
Beryllium	50.0	ND	47.7	47.8	95	96	1	75-125			0	20
Cadmium	50.0	ND	50.6	50.8	101	102	1	75-125			0	20
Lead	50.0	ND	46.9	46.6	94	93	1	75-125			1	20
Selenium	50.0	4.17	56.2	55.1	104	102	1	75-125			2	20
Thallium	50.0	ND	47.0	46.9	94	94	1	75-125			0	20

L872441-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872441-04 11/17/16 17:04 • (MS) R3178964-7 11/17/16 17:07 • (MSD) R3178964-8 11/17/16 17:10

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 %
Antimony	57.9	ND	52.5	51.3	91	89	1	75-125			2	20
Arsenic	50.0	ND	48.5	48.0	97	96	1	75-125			1	20
Beryllium	50.0	ND	47.8	47.7	96	95	1	75-125			0	20
Cadmium	50.0	ND	51.3	51.1	103	102	1	75-125			0	20
Lead	50.0	ND	47.1	47.0	94	94	1	75-125			0	20
Selenium	50.0	4.07	55.0	56.0	102	104	1	75-125			2	20
Thallium	50.0	ND	47.2	47.1	94	94	1	75-125			0	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

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

State Accreditations

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

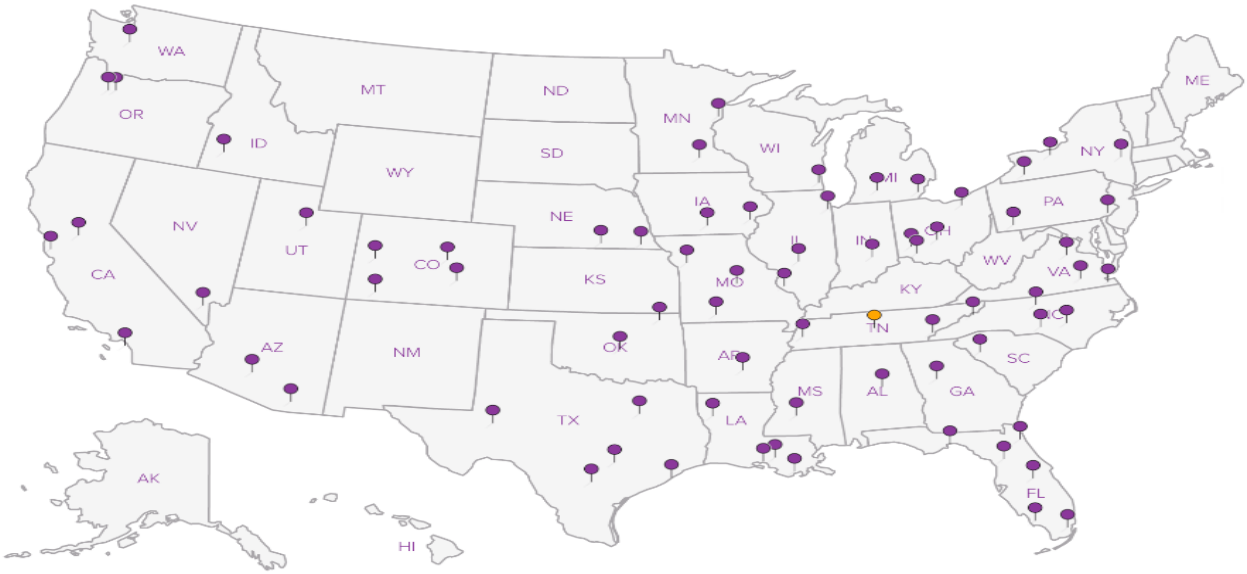
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:	Billing Information:	Analysis / Container / Preservative	Chain of Custody Page 1 of 1
SCS Engineers 7311 West 130th Street, Suite 100 Overland Park, KS 66213	Accounts Payable 7311 West 130th Street, Ste.100 Overland Park, KS 66213		ESC LABORATORY SCIENCES YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859

Report to:	Email To:
Jason Franks	jfranks@scsengineers.com

Project Description:	City/State Collected:
KCPL-Sibley Gen Station-Groundwater	Sibley,MO

Phone:	Client Project #	Lab Project #
(913) 681-0030 Fax: (913) 681-0012	27213169.16	AQUAOPKS-SIBLEY

Collected by (print):	Site/Facility ID #	P.O. #
Alex McCormick		

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Ctnrs	Total Metals** 250mlHDPE+HN03	Chloride, Flouride, Sulfate 125mlHDPE NoPres	TDS 250mlHDPE-NoPres	Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	11/11/16	1210	3	X	X	X		01
505	Grab	GW	NA	11/11/16	1255	3	X	X	X		02
506	Grab	GW	NA	11/11/16	1230	3	X	X	X		03
510	Grab	GW	NA	11/10/16	1530	3	X	X	X		04
512	Grab	GW	NA	11/11/16	1230	3	X	X	X		05
Duplicate	Grab	GW	NA	11/10/16		3	X	X	X		06
MS -510	Grab	GW	NA	11/10/16	1530	3	X	X	X		04MS
MSD -510	Grab	GW	NA	11/10/16	1530	3	X	X	X		04

Acctnum: AQUAOPKS
Template:
Prelogin:
TSR: 206-Jeff Carr
Cooler:
Shipped Via:

L# 872441
T B099

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

Remarks: **Metals=Sb, As,Ba,Be,B, Cd, Cr, Co, Pb, Hg, Se**

pH ___ Temp ___
Flow ___ Other ___

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	11/11/16	1555	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☒ Client
Temp: 2.2 °C Bottles Received: 24
Date: 11-12-16 Time: 1130

Condition: (lab use only) ok
COC Seal Intact: ___Y ___N ___NA
pH Checked: 42 NCF:

ESC
LAB SCIENCES
YOUR LAB OF CHOICE

Cooler Receipt Form

Client: AQUAOPKS	SDG#	87441
Cooler Received/Opened On: 11/ 12 /16	Temperature Upon Receipt:	2.2 °c
Received by. Nikki Farmer		
Signature:		

Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?			
Were custody papers properly filled out?			
Did all bottles arrive in good condition?			
Were correct bottles used for the analyses requested?			
Was sufficient amount of sample sent in each bottle?			
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)			
If applicable, was an observable VOA headspace present?			
Non Conformance Generated. (If yes see attached NCF)			

ANALYTICAL REPORT

November 21, 2016

SCS Engineers - KS

Sample Delivery Group:	L872447
Samples Received:	11/12/2016
Project Number:	27213169.16
Description:	KCPL-Sibley Generating Station-Groundwater

Report To:

Mr. Jason R. Franks
7311 West 130th Street, Ste. 100
Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

601 L872447-01 GW

Collected by: Alex McCormick
Collected date/time: 11/11/16 11:10
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927658	1	11/18/16 01:51	11/18/16 04:36	JM
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:24	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 10:52	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 20:45	JPD
Wet Chemistry by Method 9056A	WG927226	1	11/17/16 14:27	11/17/16 14:27	SAM

701 L872447-02 GW

Collected by: Alex McCormick
Collected date/time: 11/10/16 10:20
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927309	1	11/17/16 13:06	11/17/16 13:39	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:26	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 10:55	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 20:49	JPD
Wet Chemistry by Method 9056A	WG927226	1	11/17/16 14:43	11/17/16 14:43	SAM

702 L872447-03 GW

Collected by: Alex McCormick
Collected date/time: 11/10/16 12:20
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927309	1	11/17/16 13:06	11/17/16 13:39	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:33	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 10:57	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 20:52	JPD
Wet Chemistry by Method 9056A	WG927226	1	11/17/16 14:58	11/17/16 14:58	SAM

703 L872447-04 GW

Collected by: Alex McCormick
Collected date/time: 11/10/16 11:40
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927309	1	11/17/16 13:06	11/17/16 13:39	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:35	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 11:00	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 20:56	JPD
Wet Chemistry by Method 9056A	WG927226	1	11/17/16 15:14	11/17/16 15:14	SAM

704 L872447-05 GW

Collected by: Alex McCormick
Collected date/time: 11/10/16 10:55
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927311	1	11/17/16 10:43	11/17/16 11:06	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:38	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 11:03	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 19:46	JPD
Wet Chemistry by Method 9056A	WG927226	1	11/17/16 15:29	11/17/16 15:29	SAM

801 L872447-06 GW

Collected by: Alex McCormick | Collected date/time: 11/10/16 13:30 | Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927311	1	11/17/16 10:43	11/17/16 11:06	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:40	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 11:06	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 20:59	JPD
Wet Chemistry by Method 9056A	WG927226	1	11/17/16 15:44	11/17/16 15:44	SAM

802 L872447-07 GW

Collected by: Alex McCormick | Collected date/time: 11/10/16 12:50 | Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927311	1	11/17/16 10:43	11/17/16 11:06	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:42	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 11:08	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 21:03	JPD
Wet Chemistry by Method 9056A	WG927226	1	11/17/16 16:00	11/17/16 16:00	SAM

803 L872447-08 GW

Collected by: Alex McCormick | Collected date/time: 11/10/16 14:30 | Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927311	1	11/17/16 10:43	11/17/16 11:06	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:44	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 11:11	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 21:06	JPD
Wet Chemistry by Method 9056A	WG927226	1	11/17/16 16:50	11/17/16 16:50	SAM
Wet Chemistry by Method 9056A	WG928098	5	11/19/16 14:38	11/19/16 14:38	CM

804 L872447-09 GW

Collected by: Alex McCormick | Collected date/time: 11/10/16 15:25 | Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927311	1	11/17/16 10:43	11/17/16 11:06	MMF
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:47	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 11:14	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 21:10	JPD
Wet Chemistry by Method 9056A	WG927227	1	11/17/16 10:50	11/17/16 10:50	SAM

805 L872447-10 GW

Collected by: Alex McCormick | Collected date/time: 11/11/16 09:50 | Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927658	1	11/18/16 01:51	11/18/16 04:36	JM
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:49	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 11:16	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 21:13	JPD
Wet Chemistry by Method 9056A	WG927227	1	11/17/16 11:04	11/17/16 11:04	SAM

806R L872447-11 GW

Collected by: Alex McCormick
Collected date/time: 11/11/16 12:55
Received date/time: 11/12/16 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG927658	1	11/18/16 01:51	11/18/16 04:36	JM
Mercury by Method 7470A	WG926265	1	11/14/16 10:40	11/15/16 13:51	NJB
Metals (ICP) by Method 6010B	WG926575	1	11/15/16 22:44	11/16/16 11:24	LTB
Metals (ICPMS) by Method 6020	WG926582	1	11/16/16 18:51	11/17/16 21:17	JPD
Wet Chemistry by Method 9056A	WG927227	1	11/17/16 11:19	11/17/16 11:19	SAM
Wet Chemistry by Method 9056A	WG928098	5	11/19/16 14:52	11/19/16 14:52	CM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	423000		10000	1	11/18/2016 04:36	WG927658

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3510		1000	1	11/17/2016 14:27	WG927226
Fluoride	273		100	1	11/17/2016 14:27	WG927226
Sulfate	16100		5000	1	11/17/2016 14:27	WG927226

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:24	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	324		5.00	1	11/16/2016 10:52	WG926575
Boron	ND		200	1	11/16/2016 10:52	WG926575
Calcium	105000		1000	1	11/16/2016 10:52	WG926575
Chromium	ND		10.0	1	11/16/2016 10:52	WG926575
Cobalt	ND		10.0	1	11/16/2016 10:52	WG926575
Lithium	ND		15.0	1	11/16/2016 10:52	WG926575
Molybdenum	ND		5.00	1	11/16/2016 10:52	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 20:45	WG926582
Arsenic	ND		2.00	1	11/17/2016 20:45	WG926582
Beryllium	ND		2.00	1	11/17/2016 20:45	WG926582
Cadmium	ND		1.00	1	11/17/2016 20:45	WG926582
Lead	ND		2.00	1	11/17/2016 20:45	WG926582
Selenium	5.21		2.00	1	11/17/2016 20:45	WG926582
Thallium	ND		2.00	1	11/17/2016 20:45	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	307000		10000	1	11/17/2016 13:39	WG927309

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8400		1000	1	11/17/2016 14:43	WG927226
Fluoride	ND		100	1	11/17/2016 14:43	WG927226
Sulfate	15600		5000	1	11/17/2016 14:43	WG927226

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:26	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	184		5.00	1	11/16/2016 10:55	WG926575
Boron	ND		200	1	11/16/2016 10:55	WG926575
Calcium	84000		1000	1	11/16/2016 10:55	WG926575
Chromium	ND		10.0	1	11/16/2016 10:55	WG926575
Cobalt	ND		10.0	1	11/16/2016 10:55	WG926575
Lithium	ND		15.0	1	11/16/2016 10:55	WG926575
Molybdenum	ND		5.00	1	11/16/2016 10:55	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 20:49	WG926582
Arsenic	2.50		2.00	1	11/17/2016 20:49	WG926582
Beryllium	ND		2.00	1	11/17/2016 20:49	WG926582
Cadmium	ND		1.00	1	11/17/2016 20:49	WG926582
Lead	ND		2.00	1	11/17/2016 20:49	WG926582
Selenium	ND		2.00	1	11/17/2016 20:49	WG926582
Thallium	ND		2.00	1	11/17/2016 20:49	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	308000		10000	1	11/17/2016 13:39	WG927309

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8730		1000	1	11/17/2016 14:58	WG927226
Fluoride	ND		100	1	11/17/2016 14:58	WG927226
Sulfate	21500		5000	1	11/17/2016 14:58	WG927226

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:33	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	245		5.00	1	11/16/2016 10:57	WG926575
Boron	ND		200	1	11/16/2016 10:57	WG926575
Calcium	87800		1000	1	11/16/2016 10:57	WG926575
Chromium	ND		10.0	1	11/16/2016 10:57	WG926575
Cobalt	ND		10.0	1	11/16/2016 10:57	WG926575
Lithium	ND		15.0	1	11/16/2016 10:57	WG926575
Molybdenum	ND		5.00	1	11/16/2016 10:57	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 20:52	WG926582
Arsenic	5.34		2.00	1	11/17/2016 20:52	WG926582
Beryllium	ND		2.00	1	11/17/2016 20:52	WG926582
Cadmium	ND		1.00	1	11/17/2016 20:52	WG926582
Lead	ND		2.00	1	11/17/2016 20:52	WG926582
Selenium	ND		2.00	1	11/17/2016 20:52	WG926582
Thallium	ND		2.00	1	11/17/2016 20:52	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	490000		10000	1	11/17/2016 13:39	WG927309

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	20200		1000	1	11/17/2016 15:14	WG927226
Fluoride	318		100	1	11/17/2016 15:14	WG927226
Sulfate	ND		5000	1	11/17/2016 15:14	WG927226

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:35	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	252		5.00	1	11/16/2016 11:00	WG926575
Boron	700		200	1	11/16/2016 11:00	WG926575
Calcium	119000		1000	1	11/16/2016 11:00	WG926575
Chromium	ND		10.0	1	11/16/2016 11:00	WG926575
Cobalt	ND		10.0	1	11/16/2016 11:00	WG926575
Lithium	ND		15.0	1	11/16/2016 11:00	WG926575
Molybdenum	ND		5.00	1	11/16/2016 11:00	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 20:56	WG926582
Arsenic	186		2.00	1	11/17/2016 20:56	WG926582
Beryllium	ND		2.00	1	11/17/2016 20:56	WG926582
Cadmium	ND		1.00	1	11/17/2016 20:56	WG926582
Lead	ND		2.00	1	11/17/2016 20:56	WG926582
Selenium	ND		2.00	1	11/17/2016 20:56	WG926582
Thallium	ND		2.00	1	11/17/2016 20:56	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	393000		10000	1	11/17/2016 11:06	WG927311

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13900		1000	1	11/17/2016 15:29	WG927226
Fluoride	170		100	1	11/17/2016 15:29	WG927226
Sulfate	39800		5000	1	11/17/2016 15:29	WG927226

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:38	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	159		5.00	1	11/16/2016 11:03	WG926575
Boron	ND		200	1	11/16/2016 11:03	WG926575
Calcium	93900		1000	1	11/16/2016 11:03	WG926575
Chromium	ND		10.0	1	11/16/2016 11:03	WG926575
Cobalt	ND		10.0	1	11/16/2016 11:03	WG926575
Lithium	ND		15.0	1	11/16/2016 11:03	WG926575
Molybdenum	9.39		5.00	1	11/16/2016 11:03	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 19:46	WG926582
Arsenic	ND		2.00	1	11/17/2016 19:46	WG926582
Beryllium	ND		2.00	1	11/17/2016 19:46	WG926582
Cadmium	ND		1.00	1	11/17/2016 19:46	WG926582
Lead	ND		2.00	1	11/17/2016 19:46	WG926582
Selenium	ND		2.00	1	11/17/2016 19:46	WG926582
Thallium	ND		2.00	1	11/17/2016 19:46	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	602000		10000	1	11/17/2016 11:06	WG927311

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	88200		1000	1	11/17/2016 15:44	WG927226
Fluoride	182		100	1	11/17/2016 15:44	WG927226
Sulfate	66500		5000	1	11/17/2016 15:44	WG927226

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:40	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	114		5.00	1	11/16/2016 11:06	WG926575
Boron	361		200	1	11/16/2016 11:06	WG926575
Calcium	143000		1000	1	11/16/2016 11:06	WG926575
Chromium	ND		10.0	1	11/16/2016 11:06	WG926575
Cobalt	ND		10.0	1	11/16/2016 11:06	WG926575
Lithium	15.3		15.0	1	11/16/2016 11:06	WG926575
Molybdenum	ND		5.00	1	11/16/2016 11:06	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 20:59	WG926582
Arsenic	ND		2.00	1	11/17/2016 20:59	WG926582
Beryllium	ND		2.00	1	11/17/2016 20:59	WG926582
Cadmium	ND		1.00	1	11/17/2016 20:59	WG926582
Lead	ND		2.00	1	11/17/2016 20:59	WG926582
Selenium	2.18		2.00	1	11/17/2016 20:59	WG926582
Thallium	ND		2.00	1	11/17/2016 20:59	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	277000		10000	1	11/17/2016 11:06	WG927311

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	26600		1000	1	11/17/2016 16:00	WG927226
Fluoride	183		100	1	11/17/2016 16:00	WG927226
Sulfate	38000		5000	1	11/17/2016 16:00	WG927226

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:42	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	133		5.00	1	11/16/2016 11:08	WG926575
Boron	ND		200	1	11/16/2016 11:08	WG926575
Calcium	49600		1000	1	11/16/2016 11:08	WG926575
Chromium	ND		10.0	1	11/16/2016 11:08	WG926575
Cobalt	ND		10.0	1	11/16/2016 11:08	WG926575
Lithium	ND		15.0	1	11/16/2016 11:08	WG926575
Molybdenum	ND		5.00	1	11/16/2016 11:08	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 21:03	WG926582
Arsenic	2.62		2.00	1	11/17/2016 21:03	WG926582
Beryllium	ND		2.00	1	11/17/2016 21:03	WG926582
Cadmium	ND		1.00	1	11/17/2016 21:03	WG926582
Lead	ND		2.00	1	11/17/2016 21:03	WG926582
Selenium	ND		2.00	1	11/17/2016 21:03	WG926582
Thallium	ND		2.00	1	11/17/2016 21:03	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	543000		10000	1	11/17/2016 11:06	WG927311

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	15000		1000	1	11/17/2016 16:50	WG927226
Fluoride	290		100	1	11/17/2016 16:50	WG927226
Sulfate	135000		25000	5	11/19/2016 14:38	WG928098

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:44	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	137		5.00	1	11/16/2016 11:11	WG926575
Boron	2790		200	1	11/16/2016 11:11	WG926575
Calcium	121000		1000	1	11/16/2016 11:11	WG926575
Chromium	ND		10.0	1	11/16/2016 11:11	WG926575
Cobalt	ND		10.0	1	11/16/2016 11:11	WG926575
Lithium	ND		15.0	1	11/16/2016 11:11	WG926575
Molybdenum	ND		5.00	1	11/16/2016 11:11	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 21:06	WG926582
Arsenic	3.36		2.00	1	11/17/2016 21:06	WG926582
Beryllium	ND		2.00	1	11/17/2016 21:06	WG926582
Cadmium	ND		1.00	1	11/17/2016 21:06	WG926582
Lead	3.85		2.00	1	11/17/2016 21:06	WG926582
Selenium	ND		2.00	1	11/17/2016 21:06	WG926582
Thallium	ND		2.00	1	11/17/2016 21:06	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	606000		10000	1	11/17/2016 11:06	WG927311

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	14200		1000	1	11/17/2016 10:50	WG927227
Fluoride	148		100	1	11/17/2016 10:50	WG927227
Sulfate	ND		5000	1	11/17/2016 10:50	WG927227

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:47	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	390		5.00	1	11/16/2016 11:14	WG926575
Boron	3330		200	1	11/16/2016 11:14	WG926575
Calcium	155000		1000	1	11/16/2016 11:14	WG926575
Chromium	ND		10.0	1	11/16/2016 11:14	WG926575
Cobalt	ND		10.0	1	11/16/2016 11:14	WG926575
Lithium	19.5		15.0	1	11/16/2016 11:14	WG926575
Molybdenum	ND		5.00	1	11/16/2016 11:14	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 21:10	WG926582
Arsenic	6.44		2.00	1	11/17/2016 21:10	WG926582
Beryllium	ND		2.00	1	11/17/2016 21:10	WG926582
Cadmium	ND		1.00	1	11/17/2016 21:10	WG926582
Lead	ND		2.00	1	11/17/2016 21:10	WG926582
Selenium	ND		2.00	1	11/17/2016 21:10	WG926582
Thallium	ND		2.00	1	11/17/2016 21:10	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	381000		10000	1	11/18/2016 04:36	WG927658

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	10900		1000	1	11/17/2016 11:04	WG927227
Fluoride	170		100	1	11/17/2016 11:04	WG927227
Sulfate	54700		5000	1	11/17/2016 11:04	WG927227

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:49	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	171		5.00	1	11/16/2016 11:16	WG926575
Boron	ND		200	1	11/16/2016 11:16	WG926575
Calcium	98900		1000	1	11/16/2016 11:16	WG926575
Chromium	ND		10.0	1	11/16/2016 11:16	WG926575
Cobalt	ND		10.0	1	11/16/2016 11:16	WG926575
Lithium	ND		15.0	1	11/16/2016 11:16	WG926575
Molybdenum	ND		5.00	1	11/16/2016 11:16	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 21:13	WG926582
Arsenic	ND		2.00	1	11/17/2016 21:13	WG926582
Beryllium	ND		2.00	1	11/17/2016 21:13	WG926582
Cadmium	ND		1.00	1	11/17/2016 21:13	WG926582
Lead	ND		2.00	1	11/17/2016 21:13	WG926582
Selenium	ND		2.00	1	11/17/2016 21:13	WG926582
Thallium	ND		2.00	1	11/17/2016 21:13	WG926582

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	589000		10000	1	11/18/2016 04:36	WG927658

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	22900		1000	1	11/17/2016 11:19	WG927227
Fluoride	197		100	1	11/17/2016 11:19	WG927227
Sulfate	134000		25000	5	11/19/2016 14:52	WG928098

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	11/15/2016 13:51	WG926265

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	96.6		5.00	1	11/16/2016 11:24	WG926575
Boron	4770		200	1	11/16/2016 11:24	WG926575
Calcium	137000		1000	1	11/16/2016 11:24	WG926575
Chromium	ND		10.0	1	11/16/2016 11:24	WG926575
Cobalt	ND		10.0	1	11/16/2016 11:24	WG926575
Lithium	15.4		15.0	1	11/16/2016 11:24	WG926575
Molybdenum	1180		5.00	1	11/16/2016 11:24	WG926575

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	11/17/2016 21:17	WG926582
Arsenic	3.88		2.00	1	11/17/2016 21:17	WG926582
Beryllium	ND		2.00	1	11/17/2016 21:17	WG926582
Cadmium	ND		1.00	1	11/17/2016 21:17	WG926582
Lead	ND		2.00	1	11/17/2016 21:17	WG926582
Selenium	ND		2.00	1	11/17/2016 21:17	WG926582
Thallium	ND		2.00	1	11/17/2016 21:17	WG926582

Method Blank (MB)

(MB) R3179182-1 11/17/16 13:39

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

L872441-04 Original Sample (OS) • Duplicate (DUP)

(OS) L872441-04 11/17/16 13:39 • (DUP) R3179182-4 11/17/16 13:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	468000	471000	1	0.639		5

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

(LCS) R3179182-2 11/17/16 13:39 • (LCSD) R3179182-3 11/17/16 13:39

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	%	%	%			%	%
Dissolved Solids	8800000	8470000	8460000	96.3	96.1	85.0-115			0.118	5

Method Blank (MB)

(MB) R3179181-1 11/17/16 11:06

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

L872447-05 Original Sample (OS) • Duplicate (DUP)

(OS) L872447-05 11/17/16 11:06 • (DUP) R3179181-4 11/17/16 11:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	393000	397000	1	1.01		5

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

(LCS) R3179181-2 11/17/16 11:06 • (LCSD) R3179181-3 11/17/16 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	%	%	%			%	%
Dissolved Solids	8800000	8420000	8390000	95.7	95.3	85.0-115			0.357	5

Method Blank (MB)

(MB) R3179385-1 11/18/16 04:36

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

L872441-05 Original Sample (OS) • Duplicate (DUP)

(OS) L872441-05 11/18/16 04:36 • (DUP) R3179385-4 11/18/16 04:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	443000	425000	1	4.22		5

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

(LCS) R3179385-2 11/18/16 04:36 • (LCSD) R3179385-3 11/18/16 04:36

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	%	%	%			%	%
Dissolved Solids	8800000	8110000	8500000	92.2	96.6	85.0-115			4.70	5

Method Blank (MB)

(MB) R3179103-1 11/17/16 07:39

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

L872444-05 Original Sample (OS) • Duplicate (DUP)

(OS) L872444-05 11/17/16 13:57 • (DUP) R3179103-6 11/17/16 14:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	28300	28200	1	0		15
Fluoride	393	391	1	0		15
Sulfate	198000	199000	1	0	E	15

L872444-01 Original Sample (OS) • Duplicate (DUP)

(OS) L872444-01 11/17/16 11:53 • (DUP) R3179103-5 11/17/16 13:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	23700	23500	1	1		15
Fluoride	297	296	1	0		15
Sulfate	121000	121000	1	0	E	15

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

(LCS) R3179103-2 11/17/16 07:54 • (LCSD) R3179103-3 11/17/16 08:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39100	39000	98	97	80-120			0	15
Fluoride	8000	7880	7860	98	98	80-120			0	15
Sulfate	40000	40000	39800	100	99	80-120			1	15

L871908-14 Original Sample (OS) • Matrix Spike (MS)

(OS) L871908-14 11/17/16 09:35 • (MS) R3179103-4 11/17/16 09:50

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	1120000	1130000	13	1	80-120	E V
Fluoride	5000	U	3770	75	1	80-120	J6

L871908-14 Original Sample (OS) • Matrix Spike (MS)

(OS) L871908-14 11/17/16 09:35 • (MS) R3179103-4 11/17/16 09:50

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	50000	7360	57000	99	1	80-120	

L872447-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872447-08 11/17/16 16:50 • (MS) R3179103-7 11/17/16 17:05 • (MSD) R3179103-8 11/17/16 17:20

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	15000	65000	66000	100	102	1	80-120			2	15
Fluoride	5000	290	4940	5430	93	103	1	80-120			9	15
Sulfate	50000	143000	185000	185000	83	85	1	80-120	E	E	0	15

Method Blank (MB)

(MB) R3179046-1 11/17/16 07:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Chloride	U		51.9	1000
Fluoride	U		9.90	100
Sulfate	142	J	77.4	5000

L872447-09 Original Sample (OS) • Duplicate (DUP)

(OS) L872447-09 11/17/16 10:50 • (DUP) R3179046-4 11/17/16 11:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	14200	14100	1	0		15
Fluoride	148	143	1	3		15
Sulfate	ND	0.000	1	0		15

L872471-01 Original Sample (OS) • Duplicate (DUP)

(OS) L872471-01 11/17/16 16:46 • (DUP) R3179046-6 11/17/16 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	5510	5390	1	2		15
Fluoride	35.1	34.6	1	1	J	15
Sulfate	14600	14400	1	2		15

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

(LCS) R3179046-2 11/17/16 07:40 • (LCSD) R3179046-3 11/17/16 07:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39700	39700	99	99	80-120			0	15
Fluoride	8000	8020	8010	100	100	80-120			0	15
Sulfate	40000	41000	41000	103	103	80-120			0	15

L872447-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L872447-11 11/17/16 11:19 • (MS) R3179046-5 11/17/16 12:19

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	22900	72900	100	1	80-120	
Fluoride	5000	197	5380	104	1	80-120	

L872480-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872480-03 11/17/16 18:15 • (MS) R3179046-7 11/17/16 18:30 • (MSD) R3179046-8 11/17/16 18:44

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	1730	53200	53200	103	103	1	80-120			0	15
Fluoride	5000	86.5	5320	5390	105	106	1	80-120			1	15
Sulfate	50000	29400	79700	79500	101	100	1	80-120			0	15

Method Blank (MB)

(MB) R3179389-1 11/19/16 07:00

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

L871759-01 Original Sample (OS) • Duplicate (DUP)

(OS) L871759-01 11/19/16 10:10 • (DUP) R3179389-4 11/19/16 10:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	ND	2610	1	0		15

L871809-01 Original Sample (OS) • Duplicate (DUP)

(OS) L871809-01 11/19/16 10:39 • (DUP) R3179389-5 11/19/16 10:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	14700	14800	1	0		15

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

(LCS) R3179389-2 11/19/16 07:15 • (LCSD) R3179389-3 11/19/16 07:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Sulfate	40000	39300	39200	98	98	80-120			0	15

L872191-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L872191-09 11/19/16 11:54 • (MS) R3179389-6 11/19/16 12:09

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Sulfate	50000	ND	51100	101	1	80-120	

L872461-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872461-01 11/19/16 15:07 • (MS) R3179389-7 11/19/16 15:22 • (MSD) R3179389-8 11/19/16 15:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Sulfate	50000	14700	63100	63500	97	98	1	80-120			1	15

Method Blank (MB)

(MB) R3178166-1 11/15/16 12:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3178166-2 11/15/16 12:47 • (LCSD) R3178166-3 11/15/16 12:50

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	%	%	%			%	%
Mercury	3.00	2.58	2.70	86	90	80-120			4	20

L872441-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872441-04 11/15/16 12:52 • (MS) R3178166-4 11/15/16 12:54 • (MSD) R3178166-5 11/15/16 12:57

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	%	%		%			%	%
Mercury	3.00	ND	2.87	2.79	96	93	1	75-125			3	20

Method Blank (MB)

(MB) R3178432-1 11/16/16 10:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Barium	U		1.70	5.00
Boron	U		12.6	200
Calcium	U		46.3	1000
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0
Lithium	U		5.30	15.0
Molybdenum	U		1.60	5.00

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

(LCS) R3178432-2 11/16/16 10:23 • (LCSD) R3178432-3 11/16/16 10:26

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	%	%	%			%	%
Barium	1000	1030	1040	103	104	80-120			0	20
Boron	1000	992	999	99	100	80-120			1	20
Calcium	10000	9900	9920	99	99	80-120			0	20
Chromium	1000	1020	1020	102	102	80-120			0	20
Cobalt	1000	1030	1030	103	103	80-120			1	20
Lithium	1000	1020	1020	102	102	80-120			0	20
Molybdenum	1000	1030	1040	103	104	80-120			0	20

L872560-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872560-02 11/16/16 10:28 • (MS) R3178432-5 11/16/16 10:34 • (MSD) R3178432-6 11/16/16 10:36

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	%	%		%			%	%
Barium	1000	ND	1040	1040	104	104	1	75-125			0	20
Boron	1000	ND	1050	1050	99	100	1	75-125			1	20
Calcium	10000	27600	37700	37600	101	100	1	75-125			0	20
Chromium	1000	ND	1020	1020	102	102	1	75-125			0	20
Cobalt	1000	ND	1040	1040	104	104	1	75-125			0	20
Lithium	1000	ND	1030	1030	103	103	1	75-125			0	20
Molybdenum	1000	ND	1040	1040	104	104	1	75-125			0	20

Method Blank (MB)

(MB) R3178984-1 11/17/16 19:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3178984-2 11/17/16 19:38 • (LCSD) R3178984-3 11/17/16 19:42

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	%	%	%			%	%
Antimony	57.9	52.1	52.1	90	90	80-120			0	20
Arsenic	50.0	50.2	50.0	100	100	80-120			0	20
Beryllium	50.0	47.0	47.2	94	94	80-120			1	20
Cadmium	50.0	49.4	50.1	99	100	80-120			2	20
Lead	50.0	46.8	46.8	94	94	80-120			0	20
Selenium	50.0	51.0	51.6	102	103	80-120			1	20
Thallium	50.0	46.9	46.7	94	93	80-120			1	20

L872447-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L872447-05 11/17/16 19:46 • (MS) R3178984-5 11/17/16 19:53 • (MSD) R3178984-6 11/17/16 19:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Antimony	57.9	ND	50.4	52.6	87	91	1	75-125			4	20
Arsenic	50.0	ND	49.9	49.1	96	95	1	75-125			2	20
Beryllium	50.0	ND	46.0	47.2	92	94	1	75-125			3	20
Cadmium	50.0	ND	50.0	51.0	100	102	1	75-125			2	20
Lead	50.0	ND	46.8	47.3	94	95	1	75-125			1	20
Selenium	50.0	ND	52.6	52.0	103	102	1	75-125			1	20
Thallium	50.0	ND	46.7	47.5	93	95	1	75-125			2	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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

State Accreditations

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

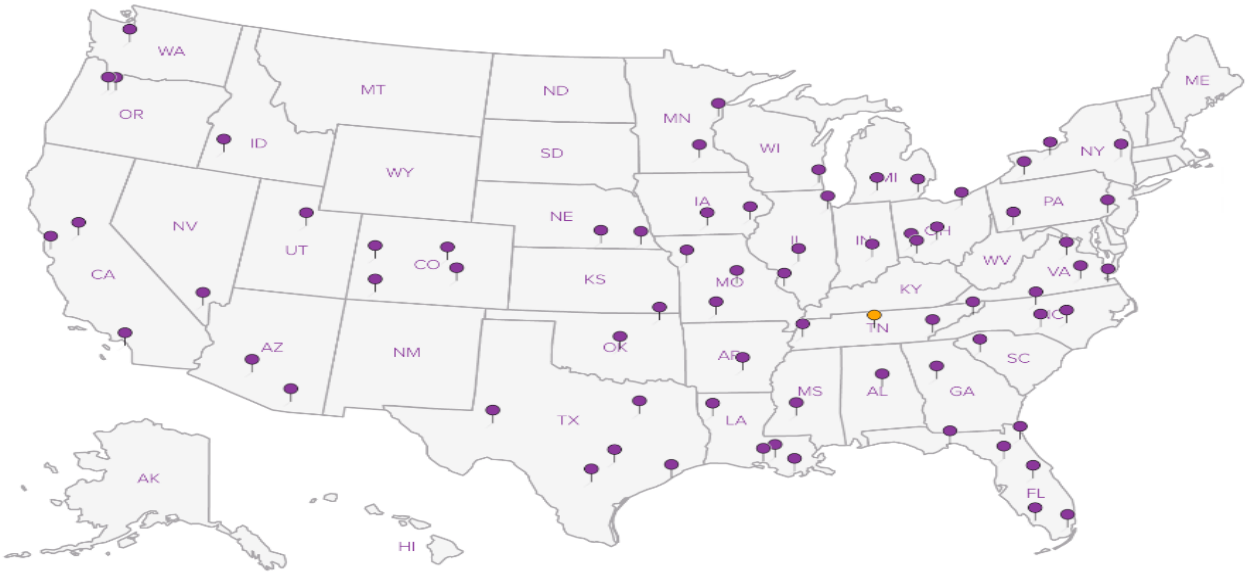
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:	Billing Information:
SCS Engineers 7311 West 130th Street, Suite 100 Overland Park, KS 66213	Accounts Payable 7311 West 130th Street, Ste.100 Overland Park, KS 66213
Report to: **Jason Franks**	Email To: **jfranks@scsengineers.com**
Project Description: **KCPL-Sibley Gen Station-Groundwater**	City/State Collected: **Sibley,MO**
Phone: **(913) 681-0030** Fax: **(913) 681-0012**	Client Project # **27213169.16**
Collected by (print): **Alex McGinnich**	Site/Facility ID #
Collected by (signature): **Immediately** Packed on Ice N ___ Y ✓	**Rush?** (Lab MUST Be Notified) ___ Same Day ....200% ___ Next Day ....100% ___ Two Day ....50% ___ Three Day 25%
	Date Results Needed: **STD** Email? ___No ✓Yes FAX? ___No ___Yes

Lab Project #: **AQUAOPKS-SIBLEY**

P.O. #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CCR Anions(Cl-,F-,SO4) 125mlHDPE-NoPres	*CCR Metals 250mlHDPE-HN03	TDS 250mlHDPE-NoPres	Rem./Contaminant	Sample # (lab only)
601	Grab	GW	NA	11/11/16	1110	3	X	X	X		01
602	Grab	GW	NA			3	X	X	X		
701	Grab	GW	NA	11/10/16	1020	3	X	X	X		
702	Grab	GW	NA		1220	3	X	X	X		02
703	Grab	GW	NA		1140	3	X	X	X		03
704	Grab	GW	NA		1055	3	X	X	X		04
801	Grab	GW	NA		1330	3	X	X	X		05
802	Grab	GW	NA		1250	3	X	X	X		06
803	Grab	GW	NA		1430	3	X	X	X		07
804	Grab	GW	NA	11/10/16	1525	3	X	X	X		08 09

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 872447
T: B101
Acctnum: AQUAOPKS
Template: T115107
Prelogin:
TSR: 206-Jeff Carr
Cooler:
Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: ****Metals=B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl****

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	11/11/16	1555	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ~~USPS~~

Temp: 2.2 °C Bottles Received: 33

Date: 11.12.16 Time: 1130

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Company Name/Address:
SCS Engineers
7311 West 130th Street, Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks
Email To: jfranks@scsengineers.com

Project Description: KCPL-Sibley Gen Station-Groundwater
City/State Collected: Sibley,MO

Phone: (913) 681-0030
Fax: (913) 681-0012
Client Project # 27213169.16
Lab Project # AQUAOPKS-SIBLEY

Collected by (print): Alex McCormick
Site/Facility ID #
P.O. #

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

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD
Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CCR Anions(Cl-,F-,SO4) 125mlHDPE-NoPres	*CCR Metals 250mlHDPE-HN03	TDS 250mlHDPE-NoPres								Rem./Contaminant	Sample # (lab only)
805	Grab	GW	NA	11/11/16	950	3	X	X	X									1
806R	Grab	GW	NA	11/11/16	1255	3	X	X	X									4

Analysis / Container / Preservative

Chain of Custody Page 33 of 33

ESC LABORATORIES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 872447
Table #
Acctnum: AQUAOPKS
Template: T115107
Prelogin:
TSR: 206-Jeff Carr
Cooler:
Shipped Via:

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: **Metals=B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl**

pH ___ Temp ___
Flow ___ Other ___

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier RUSH
Temp: 2.2 °C Bottles Received: 33
Date: 11.12.16 Time: 1130
Received for lab by: (Signature)

Hold #
Condition: (lab use only) a
COC Seal Intact: ___ Y ___ N ___ NA
pH Checked: <2 NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	11/11/16	1555	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

Cooler Receipt Form

Client: AQUAOPKS	SDG#	872447
Cooler Received/Opened On: 11/ 12 /16	Temperature Upon Receipt:	2.7 °c
Received by. Nikki Farmer		
Signature:		

Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?	✓		
Were custody papers properly filled out?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)	✓		
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated. (If yes see attached NCF)			

Case Narrative

Lab No: 20161115

This report contains the analytical results for the 19 sample(s) received under chain of custody by ESC Lab Sciences on 11/14/2016 1:30:00 PM. These samples are associated with your Sibley Generating Station project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances

L873128

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20161115-01**								
Client ID : **504**								
Date Sampled : **11/11/2016 12:10:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.655 +/- 0.605	0.834	pCi/l				
Radium-226	SM 7500 Ra B M*	0.156 +/- 0.122	0.166	pCi/l		11/30/16	12/01/16	AK
Radium-228	EPA 904*/9320*	0.499 +/- 0.483	0.668	pCi/l		11/23/16	11/29/16	JR
Lab ID : **20161115-02**								
Client ID : **505**								
Date Sampled : **11/11/2016 12:55:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.17 +/- 0.483	0.628	pCi/l				
Radium-226	SM 7500 Ra B M*	-0.035 +/- 0.095	0.177	pCi/l		11/30/16	12/01/16	AK
Radium-228	EPA 904*/9320*	1.17 +/- 0.388	0.451	pCi/l		11/23/16	11/29/16	JR
Lab ID : **20161115-03**								
Client ID : **506**								
Date Sampled : **11/11/2016 12:30:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.508 +/- 0.568	0.864	pCi/l				
Radium-226	SM 7500 Ra B M*	0.235 +/- 0.115	0.092	pCi/l		11/30/16	12/01/16	AK
Radium-228	EPA 904*/9320*	0.273 +/- 0.453	0.772	pCi/l		11/23/16	11/29/16	JR
Lab ID : **20161115-04**								
Client ID : **510**								
Date Sampled : **11/10/2016 3:30:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.31 +/- 0.550	0.662	pCi/l				
Radium-226	SM 7500 Ra B M*	0.151 +/- 0.104	0.119	pCi/l		11/30/16	12/01/16	AK
Radium-228	EPA 904*/9320*	1.16 +/- 0.446	0.543	pCi/l		11/23/16	11/29/16	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20161115-05**								
Client ID : **512**								
Date Sampled : **11/11/2016 12:30:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.42 +/- 0.676	0.885	pCi/l				
Radium-226	SM 7500 Ra B M*	0.144 +/- 0.128	0.175	pCi/l		11/30/16	12/01/16	AK
Radium-228	EPA 904*/9320*	1.28 +/- 0.548	0.710	pCi/l		11/23/16	11/29/16	JR
Lab ID : **20161115-06**								
Client ID : **Duplicate**								
Date Sampled : **11/10/2016**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.06 +/- 0.584	0.823	pCi/l				
Radium-226	SM 7500 Ra B M*	0.048 +/- 0.109	0.182	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	1.01 +/- 0.475	0.641	pCi/l		11/23/16	11/29/16	JR
Lab ID : **20161115-07**								
Client ID : **MS - 510**								
Date Sampled : **11/10/2016 3:30:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	107		% Rec		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	93.9		% Rec		11/23/16	11/29/16	JR
Lab ID : **20161115-08**								
Client ID : **MSD - 510**								
Date Sampled : **11/10/2016 3:30:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	3.1		RPD		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	90.0		RPD		11/23/16	11/29/16	JR
Lab ID : **20161115-09**								
Client ID : **601**								
Date Sampled : **11/11/2016 11:10:00 AM**								
Matrix : **NPW**								

*NELAC Certified Parameter BDL = Below Detection Limit

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Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radiochemical Analyses								
Combined Radium		1.30 +/- 0.627	0.885	pCi/l				
Radium-226	SM 7500 Ra B M*	0.187 +/- 0.129	0.159	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	1.11 +/- 0.498	0.726	pCi/l		11/23/16	11/29/16	JR

Lab ID : 20161115-10
Client ID : 701
Date Sampled : 11/10/2016 10:20:00 AM
Matrix : NPW

Radiochemical Analyses								
Combined Radium		1.73 +/- 0.572	0.739	pCi/l				
Radium-226	SM 7500 Ra B M*	0.181 +/- 0.131	0.172	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	1.55 +/- 0.441	0.567	pCi/l		11/23/16	11/29/16	JR

Lab ID : 20161115-11
Client ID : 702
Date Sampled : 11/10/2016 12:20:00 PM
Matrix : NPW

Radiochemical Analyses								
Combined Radium		1.19 +/- 0.543	0.690	pCi/l				
Radium-226	SM 7500 Ra B M*	0.115 +/- 0.128	0.190	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	1.07 +/- 0.415	0.500	pCi/l		11/23/16	11/29/16	JR

Lab ID : 20161115-12
Client ID : 703
Date Sampled : 11/10/2016 11:40:00 AM
Matrix : NPW

Radiochemical Analyses								
Combined Radium		1.16 +/- 0.522	0.662	pCi/l				
Radium-226	SM 7500 Ra B M*	0.159 +/- 0.131	0.181	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	1.00 +/- 0.391	0.481	pCi/l		11/23/16	11/29/16	JR

Lab ID : 20161115-13
Client ID : 704
Date Sampled : 11/10/2016 10:55:00 AM
Matrix : NPW

Radiochemical Analyses								
Combined Radium		1.84 +/- 0.641	0.899	pCi/l				

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radium-226	SM 7500 Ra B M*	-0.166 +/- 0.153	0.313	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	1.84 +/- 0.488	0.586	pCi/l		11/23/16	11/29/16	JR

Lab ID : 20161115-14
Client ID : 801
Date Sampled : 11/10/2016 1:30:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.251 +/- 0.611	0.823	pCi/l				
Radium-226	SM 7500 Ra B M*	0.025 +/- 0.108	0.180	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	0.226 +/- 0.503	0.643	pCi/l		11/23/16	11/30/16	JR

Lab ID : 20161115-15
Client ID : 802
Date Sampled : 11/10/2016 12:50:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.144 +/- 0.517	0.647	pCi/l				
Radium-226	SM 7500 Ra B M*	0.144 +/- 0.092	0.092	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	-0.024 +/- 0.425	0.555	pCi/l		11/23/16	11/30/16	JR

Lab ID : 20161115-16
Client ID : 803
Date Sampled : 11/10/2016 2:30:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.817 +/- 0.527	0.667	pCi/l				
Radium-226	SM 7500 Ra B M*	0.268 +/- 0.129	0.117	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	0.549 +/- 0.398	0.550	pCi/l		11/23/16	11/30/16	JR

Lab ID : 20161115-17
Client ID : 804
Date Sampled : 11/10/2016 3:25:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.00 +/- 0.656	0.808	pCi/l				
Radium-226	SM 7500 Ra B M*	0.185 +/- 0.134	0.171	pCi/l		11/30/16	12/02/16	AK
Radium-228	EPA 904*/9320*	0.815 +/- 0.522	0.637	pCi/l		11/23/16	11/30/16	JR

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20161115-18**								
Client ID : **805**								
Date Sampled : **11/11/2016 9:50:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.668 +/- 0.542	0.651	pCi/l				
Radium-226	SM 7500 Ra B M*	0.321 +/- 0.162	0.181	pCi/l		11/30/16	12/03/16	AK
Radium-228	EPA 904*/9320*	0.347 +/- 0.380	0.470	pCi/l		11/23/16	11/30/16	JR
Lab ID : **20161115-19**								
Client ID : **806R**								
Date Sampled : **11/11/2016 11:10:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.228 +/- 0.610	0.989	pCi/l				
Radium-226	SM 7500 Ra B M*	0.212 +/- 0.156	0.205	pCi/l		11/30/16	12/03/16	AK
Radium-228	EPA 904*/9320*	0.016 +/- 0.454	0.784	pCi/l		11/23/16	11/30/16	JR

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Batch ID
Radium-226	-0.005	114.0			NC	0.874	107.0	104.0	3.1	R1166
Radium-228	-0.059	108.0			NC	1.280	93.9	90.0	3.6	R3887

Lab Approval:

Ron Eidson
Director of Radiochemistry

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
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Company Name/Address:
SCS Engineers
7311 West 130th Street, Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: KCPL-Sibley Gen Station-Groundwater

City/State Collected: Sibley,MO

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

Client Project # 27213169.16

Lab Project # AQUAOPKS-SIBLEY

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___ No ✓ Yes
FAX? ___ No ___ Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES

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

L# 973128

Table #

Acctnum: AQUAOPKS

Template:

Prelogin:

TSR: 206-Jeff Carr

Cooler:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Ra 226/228 1L HDPE+HN03	Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	11/11/16	1210	2	X		
505	Grab	GW	NA	11/11/16	1255	2	X		
506	Grab	GW	NA	11/11/16	1230	2	X		
510	Grab	GW	NA	11/10/16	1530	2	X		
512	Grab	GW	NA	11/11/16	1230	2	X		
Duplicate	Grab	GW	NA	11/10/16		2	X		
MS - 510	Grab	GW	NA	11/10/16	1530	2	X		
MSD - 510	Grab	GW	NA	11/10/16	1530	2	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ____

Remarks:

pH ____ Temp ____

Flow ____ Other ____

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ____

Temp Amb °C Bottles Received 38

Date 11/14/16 Time 1330

20161115

Hold #

Condition good (lab use only)

COC Seal Intact: X Y ___ N ___ NA

pH Checked: ___ NCF: ___

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)
	11/11/16	1955	
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Company Name/Address:
SCS Engineers
7311 West 130th Street, Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: KCPL-Sibley Gen Station-Groundwater

City/State Collected: Sibley,MO

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

Client Project # 27213169.16

Lab Project # AQUAOPKS-SIBLEY

Collected by (print): Alex Mcorick

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD
Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

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

L# 873128

Table #

Acctnum: AQUAOPKS

Template:

Prelogin:

TSR: 206-Jeff Carr

Cooler:

Shipped Via

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Ra226/228 1L HDPE+HN03	Rem./Contaminant	Sample # (lab only)
601	Grab	GW	NA	11/1/16	1110	2	X		
602	Grab	GW	NA			2	X		
701	Grab	GW	NA	11/10/16	1020	2	X		
702	Grab	GW	NA		1220	2	X		
703	Grab	GW	NA		1140	2	X		
704	Grab	GW	NA		1055	2	X		
801	Grab	GW	NA		1330	2	X		
802	Grab	GW	NA		1250	2	X		
803	Grab	GW	NA		1430	2	X		
804	Grab	GW	NA		1525	2	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

20161115

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	11/14/16	1555	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐

Temp: Amb °C Bottles Received: 38

Date: 11/14/16 Time: 1330

Condition: good (lab use only)

COC Seal Intact: X Y N NA

pH Checked NCF

Company Name/Address:
SCS Engineers
7311 West 130th Street, Suite 100
Overland Park, KS 66213

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

Report to: Jason Franks

Email To: jfranks@scsengineers.com

Project Description: KCPL-Sibley Gen Station-Groundwater

City/State Collected: Sibley,MO

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

Client Project #: 27213169.16

Lab Project #: AQUAOPKS-SIBLEY

Collected by (print): Alex McC

Site/Facility ID #

P.O. #

Collected by (signature): Alex McC

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Ra226/228 1LHDPE+HN03
805	Grab	GW	NA	11/11/16	950	2	X
806R	Grab	GW	NA	11/11/16	1210	2	X

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 873128

Table #

Acctnum: AQUAOPKS

Template:

Prelogin:

TSR: 206-Jeff Carr

Cooler:

Shipped Via:

Rem./Contaminant | Sample # (lab only)

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

20161115

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	11/14/16	1555	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: Amb °C Bottles Received: 38

Date: 11/14/16 Time: 1330

Condition: good (lab use only)

COC Seal Intact: ✓Y ___N ___NA

pH Checked: NCF:

SAMPLE LOGIN

Date Received: *11/14/2016 1:30:0*

Lab Number: 20161115

Due: 12/12/2016

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20161115-01 B	504	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-01 A	504	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161115-02 A	505	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-02 B	505	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161115-03 A	506	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-03 B	506	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161115-04 A	510	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-04 B	510	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161115-05 A	512	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-05 B	512	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161115-06 B	Duplicate	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-06 A	Duplicate	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161115-07 A	MS - 510	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-07 B	MS - 510	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

20161115-08 A	MSD - 510	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20161115-08 B	MSD - 510	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20161115-09 A	601	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20161115-09 B	601	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20161115-10 B	701	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20161115-10 A	701	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20161115-11 A	702	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20161115-11 B	702	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20161115-12 A	703	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20161115-12 B	703	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20161115-13 A	704	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20161115-13 B	704	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20161115-14 B	801	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20161115-14 A	801	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20161115-15 A	802	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20161115-15 B	802	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20161115-16 A	803	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20161115-16 B	803	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2	Yes	Yes

Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161115-17 A	804	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-17 B	804	NPW	11/10/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161115-18 A	805	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-18 B	805	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20161115-19 B	806R	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
20161115-19 A	806R	NPW	11/11/16	Plastic	1 L	HNO3, pH < 2		Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

CONTAINER INSPECTION

 # Coolers 3 **Custody Seals Broken** Ø **Temperature:** 4/6 C **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Ø **Chain of Custody Record** ✓ **Labels in Tact** ✓ **Radiation Survey Complete** N/A

Anomalies

Inspected By: _____ **DATE** 11/15/16

QA or Designee Review: Raymond Thomas **DATE** 11/15/16

Sample Custodian Review: Juanita Nunez **DATE** 11/15/16

Project Notes:

Jared Morrison
December 16, 2022

ATTACHMENT 1-6

February 2017 Sampling Event Laboratory Report

ANALYTICAL REPORT

February 17, 2017

SCS Engineers - KS

Sample Delivery Group:	L889450
Samples Received:	02/10/2017
Project Number:	27213169.16
Description:	KCPL Sibley Generating Station-CCR GW BG

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

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

504 L889450-01 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 15:00
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952275	1	02/15/17 13:27	02/15/17 13:59	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 15:55	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 21:37	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 15:36	LAT
Wet Chemistry by Method 9056A	WG952142	1	02/14/17 20:25	02/14/17 20:25	KCF

505 L889450-02 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 15:00
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952275	1	02/15/17 13:27	02/15/17 13:59	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 15:57	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 21:40	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 15:40	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 12:22	02/14/17 12:22	KCF

506 L889450-03 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 12:20
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952275	1	02/15/17 13:27	02/15/17 13:59	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 15:59	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 21:42	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 15:43	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 12:35	02/14/17 12:35	KCF

510 L889450-04 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 10:40
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952275	1	02/15/17 13:27	02/15/17 13:59	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 16:02	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 21:45	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 15:54	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 12:50	02/14/17 12:50	KCF

512 L889450-05 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 10:30
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952275	1	02/15/17 13:27	02/15/17 13:59	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 15:48	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 21:27	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 15:22	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 13:19	02/14/17 13:19	KCF

601 L889450-06 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 11:30
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952275	1	02/15/17 13:27	02/15/17 13:59	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 16:04	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 21:48	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 15:57	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 14:31	02/14/17 14:31	KCF

701 L889450-07 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 14:20
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952277	1	02/15/17 14:04	02/15/17 15:09	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:14	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 21:51	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:01	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 14:45	02/14/17 14:45	KCF

702 L889450-08 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 13:20
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952277	1	02/15/17 14:04	02/15/17 15:09	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:16	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 21:59	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:04	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 15:00	02/14/17 15:00	KCF

703 L889450-09 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 13:50
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952277	1	02/15/17 14:04	02/15/17 15:09	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:30	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 22:01	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:08	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 15:14	02/14/17 15:14	KCF

704 L889450-10 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 13:30
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952277	1	02/15/17 14:04	02/15/17 15:09	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:44	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 22:04	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:11	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 15:28	02/14/17 15:28	KCF

801 L889450-11 GW

Collected by: Adam Parris
Collected date/time: 02/09/17 09:40
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952718	1	02/16/17 01:02	02/16/17 06:30	JM
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:46	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 22:07	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:15	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 15:43	02/14/17 15:43	KCF

802 L889450-12 GW

Collected by: Adam Parris
Collected date/time: 02/09/17 10:40
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952718	1	02/16/17 01:02	02/16/17 06:30	JM
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:48	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 22:10	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:18	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 15:57	02/14/17 15:57	KCF

803 L889450-13 GW

Collected by: Adam Parris
Collected date/time: 02/09/17 11:15
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952718	1	02/16/17 01:02	02/16/17 06:30	JM
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:51	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 22:12	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:28	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 16:55	02/14/17 16:55	KCF
Wet Chemistry by Method 9056A	WG952648	5	02/16/17 22:05	02/16/17 22:05	SAM

804 L889450-14 GW

Collected by: Adam Parris
Collected date/time: 02/09/17 12:00
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952718	1	02/16/17 01:02	02/16/17 06:30	JM
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:53	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 22:15	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:32	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 17:09	02/14/17 17:09	KCF

805 L889450-15 GW

Collected by: Adam Parris
Collected date/time: 02/09/17 12:40
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952718	1	02/16/17 01:02	02/16/17 06:30	JM
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:55	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 22:18	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:36	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 17:24	02/14/17 17:24	KCF

806R L889450-16 GW

Collected by: Adam Parris
Collected date/time: 02/09/17 12:35
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952718	1	02/16/17 01:02	02/16/17 06:30	JM
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 22:57	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 22:20	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:39	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 17:38	02/14/17 17:38	KCF
Wet Chemistry by Method 9056A	WG952648	5	02/16/17 22:20	02/16/17 22:20	SAM

DUPLICATE L889450-17 GW

Collected by: Adam Parris
Collected date/time: 02/08/17 10:35
Received date/time: 02/10/17 14:10

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG952277	1	02/15/17 14:04	02/15/17 15:09	MCG
Mercury by Method 7470A	WG951817	1	02/13/17 13:45	02/14/17 23:00	TRB
Metals (ICP) by Method 6010B	WG951960	1	02/15/17 08:35	02/15/17 22:23	LTB
Metals (ICPMS) by Method 6020	WG952076	1	02/15/17 09:27	02/16/17 16:43	LAT
Wet Chemistry by Method 9056A	WG952143	1	02/14/17 17:53	02/14/17 17:53	KCF

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	174000		10000	1	02/15/2017 13:59	WG952275

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	02/14/2017 20:25	WG952142
Fluoride	151		100	1	02/14/2017 20:25	WG952142
Sulfate	21000		5000	1	02/14/2017 20:25	WG952142

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 15:55	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	123		5.00	1	02/15/2017 21:37	WG951960
Boron	ND		200	1	02/15/2017 21:37	WG951960
Chromium	ND		10.0	1	02/15/2017 21:37	WG951960
Cobalt	ND		10.0	1	02/15/2017 21:37	WG951960
Lithium	ND		15.0	1	02/15/2017 21:37	WG951960
Molybdenum	ND		5.00	1	02/15/2017 21:37	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 15:36	WG952076
Arsenic	ND		2.00	1	02/16/2017 15:36	WG952076
Beryllium	ND		2.00	1	02/16/2017 15:36	WG952076
Cadmium	ND		1.00	1	02/16/2017 15:36	WG952076
Calcium	29600		1000	1	02/16/2017 15:36	WG952076
Lead	ND		2.00	1	02/16/2017 15:36	WG952076
Selenium	2.49		2.00	1	02/16/2017 15:36	WG952076
Thallium	ND		2.00	1	02/16/2017 15:36	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	151000		10000	1	02/15/2017 13:59	WG952275

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	02/14/2017 12:22	WG952143
Fluoride	217		100	1	02/14/2017 12:22	WG952143
Sulfate	14900		5000	1	02/14/2017 12:22	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 15:57	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	91.9		5.00	1	02/15/2017 21:40	WG951960
Boron	ND		200	1	02/15/2017 21:40	WG951960
Chromium	ND		10.0	1	02/15/2017 21:40	WG951960
Cobalt	ND		10.0	1	02/15/2017 21:40	WG951960
Lithium	ND		15.0	1	02/15/2017 21:40	WG951960
Molybdenum	ND		5.00	1	02/15/2017 21:40	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 15:40	WG952076
Arsenic	ND		2.00	1	02/16/2017 15:40	WG952076
Beryllium	ND		2.00	1	02/16/2017 15:40	WG952076
Cadmium	ND		1.00	1	02/16/2017 15:40	WG952076
Calcium	23500		1000	1	02/16/2017 15:40	WG952076
Lead	ND		2.00	1	02/16/2017 15:40	WG952076
Selenium	2.31		2.00	1	02/16/2017 15:40	WG952076
Thallium	ND		2.00	1	02/16/2017 15:40	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	451000		10000	1	02/15/2017 13:59	WG952275

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	5890		1000	1	02/14/2017 12:35	WG952143
Fluoride	317		100	1	02/14/2017 12:35	WG952143
Sulfate	76500		5000	1	02/14/2017 12:35	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 15:59	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	233		5.00	1	02/15/2017 21:42	WG951960
Boron	ND		200	1	02/15/2017 21:42	WG951960
Chromium	ND		10.0	1	02/15/2017 21:42	WG951960
Cobalt	ND		10.0	1	02/15/2017 21:42	WG951960
Lithium	ND		15.0	1	02/15/2017 21:42	WG951960
Molybdenum	ND		5.00	1	02/15/2017 21:42	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 15:43	WG952076
Arsenic	ND		2.00	1	02/16/2017 15:43	WG952076
Beryllium	ND		2.00	1	02/16/2017 15:43	WG952076
Cadmium	ND		1.00	1	02/16/2017 15:43	WG952076
Calcium	83600		1000	1	02/16/2017 15:43	WG952076
Lead	ND		2.00	1	02/16/2017 15:43	WG952076
Selenium	10.1		2.00	1	02/16/2017 15:43	WG952076
Thallium	ND		2.00	1	02/16/2017 15:43	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	462000		10000	1	02/15/2017 13:59	WG952275

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3490		1000	1	02/14/2017 12:50	WG952143
Fluoride	320		100	1	02/14/2017 12:50	WG952143
Sulfate	16100		5000	1	02/14/2017 12:50	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 16:02	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	355		5.00	1	02/15/2017 21:45	WG951960
Boron	ND		200	1	02/15/2017 21:45	WG951960
Chromium	ND		10.0	1	02/15/2017 21:45	WG951960
Cobalt	ND		10.0	1	02/15/2017 21:45	WG951960
Lithium	ND		15.0	1	02/15/2017 21:45	WG951960
Molybdenum	ND		5.00	1	02/15/2017 21:45	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 15:54	WG952076
Arsenic	ND		2.00	1	02/16/2017 15:54	WG952076
Beryllium	ND		2.00	1	02/16/2017 15:54	WG952076
Cadmium	ND		1.00	1	02/16/2017 15:54	WG952076
Calcium	103000		1000	1	02/16/2017 15:54	WG952076
Lead	ND		2.00	1	02/16/2017 15:54	WG952076
Selenium	3.41		2.00	1	02/16/2017 15:54	WG952076
Thallium	ND		2.00	1	02/16/2017 15:54	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	404000		10000	1	02/15/2017 13:59	WG952275

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3140		1000	1	02/14/2017 13:19	WG952143
Fluoride	302		100	1	02/14/2017 13:19	WG952143
Sulfate	27800		5000	1	02/14/2017 13:19	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 15:48	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	364		5.00	1	02/15/2017 21:27	WG951960
Boron	ND		200	1	02/15/2017 21:27	WG951960
Chromium	10.5		10.0	1	02/15/2017 21:27	WG951960
Cobalt	ND		10.0	1	02/15/2017 21:27	WG951960
Lithium	ND		15.0	1	02/15/2017 21:27	WG951960
Molybdenum	ND		5.00	1	02/15/2017 21:27	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 15:22	WG952076
Arsenic	ND		2.00	1	02/16/2017 15:22	WG952076
Beryllium	ND		2.00	1	02/16/2017 15:22	WG952076
Cadmium	ND		1.00	1	02/16/2017 15:22	WG952076
Calcium	86400	V	1000	1	02/16/2017 15:22	WG952076
Lead	ND		2.00	1	02/16/2017 15:22	WG952076
Selenium	4.46		2.00	1	02/16/2017 15:22	WG952076
Thallium	ND		2.00	1	02/16/2017 15:22	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	396000		10000	1	02/15/2017 13:59	WG952275

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3190		1000	1	02/14/2017 14:31	WG952143
Fluoride	260		100	1	02/14/2017 14:31	WG952143
Sulfate	10500		5000	1	02/14/2017 14:31	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 16:04	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	331		5.00	1	02/15/2017 21:48	WG951960
Boron	ND		200	1	02/15/2017 21:48	WG951960
Chromium	ND		10.0	1	02/15/2017 21:48	WG951960
Cobalt	ND		10.0	1	02/15/2017 21:48	WG951960
Lithium	ND		15.0	1	02/15/2017 21:48	WG951960
Molybdenum	ND		5.00	1	02/15/2017 21:48	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 15:57	WG952076
Arsenic	ND		2.00	1	02/16/2017 15:57	WG952076
Beryllium	ND		2.00	1	02/16/2017 15:57	WG952076
Cadmium	ND		1.00	1	02/16/2017 15:57	WG952076
Calcium	87500		1000	1	02/16/2017 15:57	WG952076
Lead	ND		2.00	1	02/16/2017 15:57	WG952076
Selenium	4.82		2.00	1	02/16/2017 15:57	WG952076
Thallium	ND		2.00	1	02/16/2017 15:57	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	301000		10000	1	02/15/2017 15:09	WG952277

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8640		1000	1	02/14/2017 14:45	WG952143
Fluoride	105		100	1	02/14/2017 14:45	WG952143
Sulfate	17300		5000	1	02/14/2017 14:45	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:14	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	177		5.00	1	02/15/2017 21:51	WG951960
Boron	ND		200	1	02/15/2017 21:51	WG951960
Chromium	ND		10.0	1	02/15/2017 21:51	WG951960
Cobalt	ND		10.0	1	02/15/2017 21:51	WG951960
Lithium	ND		15.0	1	02/15/2017 21:51	WG951960
Molybdenum	ND		5.00	1	02/15/2017 21:51	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:01	WG952076
Arsenic	2.24		2.00	1	02/16/2017 16:01	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:01	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:01	WG952076
Calcium	74400		1000	1	02/16/2017 16:01	WG952076
Lead	ND		2.00	1	02/16/2017 16:01	WG952076
Selenium	ND		2.00	1	02/16/2017 16:01	WG952076
Thallium	ND		2.00	1	02/16/2017 16:01	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	300000		10000	1	02/15/2017 15:09	WG952277

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8690		1000	1	02/14/2017 15:00	WG952143
Fluoride	113		100	1	02/14/2017 15:00	WG952143
Sulfate	22800		5000	1	02/14/2017 15:00	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:16	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	237		5.00	1	02/15/2017 21:59	WG951960
Boron	ND		200	1	02/15/2017 21:59	WG951960
Chromium	ND		10.0	1	02/15/2017 21:59	WG951960
Cobalt	ND		10.0	1	02/15/2017 21:59	WG951960
Lithium	ND		15.0	1	02/15/2017 21:59	WG951960
Molybdenum	ND		5.00	1	02/15/2017 21:59	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:04	WG952076
Arsenic	4.52		2.00	1	02/16/2017 16:04	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:04	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:04	WG952076
Calcium	78200		1000	1	02/16/2017 16:04	WG952076
Lead	ND		2.00	1	02/16/2017 16:04	WG952076
Selenium	ND		2.00	1	02/16/2017 16:04	WG952076
Thallium	ND		2.00	1	02/16/2017 16:04	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	494000		10000	1	02/15/2017 15:09	WG952277

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	19600		1000	1	02/14/2017 15:14	WG952143
Fluoride	293		100	1	02/14/2017 15:14	WG952143
Sulfate	ND		5000	1	02/14/2017 15:14	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:30	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	294		5.00	1	02/15/2017 22:01	WG951960
Boron	652		200	1	02/15/2017 22:01	WG951960
Chromium	ND		10.0	1	02/15/2017 22:01	WG951960
Cobalt	ND		10.0	1	02/15/2017 22:01	WG951960
Lithium	ND		15.0	1	02/15/2017 22:01	WG951960
Molybdenum	ND		5.00	1	02/15/2017 22:01	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:08	WG952076
Arsenic	247		2.00	1	02/16/2017 16:08	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:08	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:08	WG952076
Calcium	113000		1000	1	02/16/2017 16:08	WG952076
Lead	ND		2.00	1	02/16/2017 16:08	WG952076
Selenium	ND		2.00	1	02/16/2017 16:08	WG952076
Thallium	ND		2.00	1	02/16/2017 16:08	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	343000		10000	1	02/15/2017 15:09	WG952277

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13400		1000	1	02/14/2017 15:28	WG952143
Fluoride	149		100	1	02/14/2017 15:28	WG952143
Sulfate	37700		5000	1	02/14/2017 15:28	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:44	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	150		5.00	1	02/15/2017 22:04	WG951960
Boron	ND		200	1	02/15/2017 22:04	WG951960
Chromium	ND		10.0	1	02/15/2017 22:04	WG951960
Cobalt	ND		10.0	1	02/15/2017 22:04	WG951960
Lithium	ND		15.0	1	02/15/2017 22:04	WG951960
Molybdenum	8.24		5.00	1	02/15/2017 22:04	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:11	WG952076
Arsenic	ND		2.00	1	02/16/2017 16:11	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:11	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:11	WG952076
Calcium	80900		1000	1	02/16/2017 16:11	WG952076
Lead	ND		2.00	1	02/16/2017 16:11	WG952076
Selenium	ND		2.00	1	02/16/2017 16:11	WG952076
Thallium	ND		2.00	1	02/16/2017 16:11	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	564000		10000	1	02/16/2017 06:30	WG952718

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	78600		1000	1	02/14/2017 15:43	WG952143
Fluoride	117		100	1	02/14/2017 15:43	WG952143
Sulfate	66600		5000	1	02/14/2017 15:43	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:46	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	110		5.00	1	02/15/2017 22:07	WG951960
Boron	321		200	1	02/15/2017 22:07	WG951960
Chromium	ND		10.0	1	02/15/2017 22:07	WG951960
Cobalt	ND		10.0	1	02/15/2017 22:07	WG951960
Lithium	ND		15.0	1	02/15/2017 22:07	WG951960
Molybdenum	ND		5.00	1	02/15/2017 22:07	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:15	WG952076
Arsenic	ND		2.00	1	02/16/2017 16:15	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:15	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:15	WG952076
Calcium	115000		1000	1	02/16/2017 16:15	WG952076
Lead	ND		2.00	1	02/16/2017 16:15	WG952076
Selenium	ND		2.00	1	02/16/2017 16:15	WG952076
Thallium	ND		2.00	1	02/16/2017 16:15	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	432000		10000	1	02/16/2017 06:30	WG952718

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	58600		1000	1	02/14/2017 15:57	WG952143
Fluoride	113		100	1	02/14/2017 15:57	WG952143
Sulfate	88900		5000	1	02/14/2017 15:57	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:48	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	198		5.00	1	02/15/2017 22:10	WG951960
Boron	ND		200	1	02/15/2017 22:10	WG951960
Chromium	ND		10.0	1	02/15/2017 22:10	WG951960
Cobalt	ND		10.0	1	02/15/2017 22:10	WG951960
Lithium	ND		15.0	1	02/15/2017 22:10	WG951960
Molybdenum	ND		5.00	1	02/15/2017 22:10	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:18	WG952076
Arsenic	2.00		2.00	1	02/16/2017 16:18	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:18	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:18	WG952076
Calcium	71400		1000	1	02/16/2017 16:18	WG952076
Lead	ND		2.00	1	02/16/2017 16:18	WG952076
Selenium	ND		2.00	1	02/16/2017 16:18	WG952076
Thallium	ND		2.00	1	02/16/2017 16:18	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	594000		10000	1	02/16/2017 06:30	WG952718

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	15100		1000	1	02/14/2017 16:55	WG952143
Fluoride	262		100	1	02/14/2017 16:55	WG952143
Sulfate	157000		25000	5	02/16/2017 22:05	WG952648

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:51	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	126		5.00	1	02/15/2017 22:12	WG951960
Boron	2790		200	1	02/15/2017 22:12	WG951960
Chromium	ND		10.0	1	02/15/2017 22:12	WG951960
Cobalt	ND		10.0	1	02/15/2017 22:12	WG951960
Lithium	ND		15.0	1	02/15/2017 22:12	WG951960
Molybdenum	ND		5.00	1	02/15/2017 22:12	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:28	WG952076
Arsenic	2.82		2.00	1	02/16/2017 16:28	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:28	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:28	WG952076
Calcium	105000		1000	1	02/16/2017 16:28	WG952076
Lead	ND		2.00	1	02/16/2017 16:28	WG952076
Selenium	ND		2.00	1	02/16/2017 16:28	WG952076
Thallium	ND		2.00	1	02/16/2017 16:28	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	561000		10000	1	02/16/2017 06:30	WG952718

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	15200		1000	1	02/14/2017 17:09	WG952143
Fluoride	119		100	1	02/14/2017 17:09	WG952143
Sulfate	ND		5000	1	02/14/2017 17:09	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:53	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	342		5.00	1	02/15/2017 22:15	WG951960
Boron	3580		200	1	02/15/2017 22:15	WG951960
Chromium	ND		10.0	1	02/15/2017 22:15	WG951960
Cobalt	ND		10.0	1	02/15/2017 22:15	WG951960
Lithium	20.4		15.0	1	02/15/2017 22:15	WG951960
Molybdenum	ND		5.00	1	02/15/2017 22:15	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:32	WG952076
Arsenic	6.40		2.00	1	02/16/2017 16:32	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:32	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:32	WG952076
Calcium	132000		1000	1	02/16/2017 16:32	WG952076
Lead	ND		2.00	1	02/16/2017 16:32	WG952076
Selenium	ND		2.00	1	02/16/2017 16:32	WG952076
Thallium	ND		2.00	1	02/16/2017 16:32	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	417000		10000	1	02/16/2017 06:30	WG952718

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	11200		1000	1	02/14/2017 17:24	WG952143
Fluoride	178		100	1	02/14/2017 17:24	WG952143
Sulfate	59800		5000	1	02/14/2017 17:24	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:55	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	163		5.00	1	02/15/2017 22:18	WG951960
Boron	ND		200	1	02/15/2017 22:18	WG951960
Chromium	ND		10.0	1	02/15/2017 22:18	WG951960
Cobalt	ND		10.0	1	02/15/2017 22:18	WG951960
Lithium	ND		15.0	1	02/15/2017 22:18	WG951960
Molybdenum	ND		5.00	1	02/15/2017 22:18	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:36	WG952076
Arsenic	ND		2.00	1	02/16/2017 16:36	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:36	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:36	WG952076
Calcium	88800		1000	1	02/16/2017 16:36	WG952076
Lead	ND		2.00	1	02/16/2017 16:36	WG952076
Selenium	ND		2.00	1	02/16/2017 16:36	WG952076
Thallium	ND		2.00	1	02/16/2017 16:36	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	633000		10000	1	02/16/2017 06:30	WG952718

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	24600		1000	1	02/14/2017 17:38	WG952143
Fluoride	205		100	1	02/14/2017 17:38	WG952143
Sulfate	165000		25000	5	02/16/2017 22:20	WG952648

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 22:57	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	91.9		5.00	1	02/15/2017 22:20	WG951960
Boron	4640		200	1	02/15/2017 22:20	WG951960
Chromium	ND		10.0	1	02/15/2017 22:20	WG951960
Cobalt	ND		10.0	1	02/15/2017 22:20	WG951960
Lithium	18.0		15.0	1	02/15/2017 22:20	WG951960
Molybdenum	1090		5.00	1	02/15/2017 22:20	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:39	WG952076
Arsenic	3.57		2.00	1	02/16/2017 16:39	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:39	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:39	WG952076
Calcium	123000		1000	1	02/16/2017 16:39	WG952076
Lead	ND		2.00	1	02/16/2017 16:39	WG952076
Selenium	ND		2.00	1	02/16/2017 16:39	WG952076
Thallium	ND		2.00	1	02/16/2017 16:39	WG952076

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	411000		10000	1	02/15/2017 15:09	WG952277

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3260		1000	1	02/14/2017 17:53	WG952143
Fluoride	222		100	1	02/14/2017 17:53	WG952143
Sulfate	27900		5000	1	02/14/2017 17:53	WG952143

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	02/14/2017 23:00	WG951817

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	359		5.00	1	02/15/2017 22:23	WG951960
Boron	ND		200	1	02/15/2017 22:23	WG951960
Chromium	10.0		10.0	1	02/15/2017 22:23	WG951960
Cobalt	ND		10.0	1	02/15/2017 22:23	WG951960
Lithium	ND		15.0	1	02/15/2017 22:23	WG951960
Molybdenum	ND		5.00	1	02/15/2017 22:23	WG951960

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	02/16/2017 16:43	WG952076
Arsenic	ND		2.00	1	02/16/2017 16:43	WG952076
Beryllium	ND		2.00	1	02/16/2017 16:43	WG952076
Cadmium	ND		1.00	1	02/16/2017 16:43	WG952076
Calcium	89600		1000	1	02/16/2017 16:43	WG952076
Lead	ND		2.00	1	02/16/2017 16:43	WG952076
Selenium	4.73		2.00	1	02/16/2017 16:43	WG952076
Thallium	ND		2.00	1	02/16/2017 16:43	WG952076

Method Blank (MB)

(MB) R3197322-1 02/15/17 13:59

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

L889323-15 Original Sample (OS) • Duplicate (DUP)

(OS) L889323-15 02/15/17 13:59 • (DUP) R3197322-4 02/15/17 13:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	587000	600000	1	2.25		5

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

(LCS) R3197322-2 02/15/17 13:59 • (LCSD) R3197322-3 02/15/17 13:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800000	8520000	8510000	96.8	96.7	85.0-115			0.117	5

Method Blank (MB)

(MB) R3197313-1 02/15/17 15:09

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

L889664-01 Original Sample (OS) • Duplicate (DUP)

(OS) L889664-01 02/15/17 15:09 • (DUP) R3197313-4 02/15/17 15:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	580000	596000	1	2.72		5

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

(LCS) R3197313-2 02/15/17 15:09 • (LCSD) R3197313-3 02/15/17 15:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800000	8500000	8560000	96.6	97.3	85.0-115			0.703	5

Method Blank (MB)

(MB) R3197393-1 02/16/17 06:30

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

L889377-01 Original Sample (OS) • Duplicate (DUP)

(OS) L889377-01 02/16/17 06:30 • (DUP) R3197393-4 02/16/17 06:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	130000	131000	1	0.766		5

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

(LCS) R3197393-2 02/16/17 06:30 • (LCSD) R3197393-3 02/16/17 06:30

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	%	%	%			%	%
Dissolved Solids	8800000	8040000	8210000	91.4	93.3	85.0-115			2.09	5

Method Blank (MB)

(MB) R3196829-1 02/14/17 13:56

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

L889355-01 Original Sample (OS) • Duplicate (DUP)

(OS) L889355-01 02/14/17 17:30 • (DUP) R3196829-6 02/14/17 17:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	55400	55100	1	1		15
Fluoride	2870	2890	1	0		15

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

(LCS) R3196829-2 02/14/17 14:09 • (LCSD) R3196829-3 02/14/17 14:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39400	39400	99	98	80-120			0	15
Fluoride	8000	7970	7940	100	99	80-120			0	15
Sulfate	40000	39900	39700	100	99	80-120			0	15

L888883-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L888883-03 02/14/17 15:30 • (MS) R3196829-5 02/14/17 15:43

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	8430	59700	103	1	80-120	
Fluoride	5000	165	5270	102	1	80-120	
Sulfate	50000	74600	120000	92	1	80-120	E

L889368-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L889368-07 02/14/17 19:31 • (MS) R3196829-7 02/14/17 19:44 • (MSD) R3196829-8 02/14/17 19:58

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	U	51400	51500	103	103	1	80-120			0	15
Fluoride	5000	U	5170	5160	103	103	1	80-120			0	15
Sulfate	50000	U	52000	51400	104	103	1	80-120			1	15

Method Blank (MB)

(MB) R3196826-1 02/14/17 10:35

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

L889450-04 Original Sample (OS) • Duplicate (DUP)

(OS) L889450-04 02/14/17 12:50 • (DUP) R3196826-4 02/14/17 13:04

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3490	3450	1	1		15
Fluoride	320	317	1	1		15
Sulfate	16100	15900	1	1		15

L889450-12 Original Sample (OS) • Duplicate (DUP)

(OS) L889450-12 02/14/17 15:57 • (DUP) R3196826-7 02/14/17 16:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	58600	58600	1	0		15
Fluoride	113	120	1	6		15
Sulfate	88900	89200	1	0		15

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

(LCS) R3196826-2 02/14/17 10:50 • (LCSD) R3196826-3 02/14/17 11:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39600	39600	99	99	80-120			0	15
Fluoride	8000	8050	8010	101	100	80-120			0	15
Sulfate	40000	41700	41400	104	104	80-120			1	15

L889450-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L889450-05 02/14/17 13:19 • (MS) R3196826-5 02/14/17 14:02 • (MSD) R3196826-6 02/14/17 14:16

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	3140	54800	54800	103	103	1	80-120			0	15
Fluoride	5000	302	5330	5600	101	106	1	80-120			5	15

L889450-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L889450-05 02/14/17 13:19 • (MS) R3196826-5 02/14/17 14:02 • (MSD) R3196826-6 02/14/17 14:16

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	50000	27800	76300	77500	97	99	1	80-120			1	15

L889450-17 Original Sample (OS) • Matrix Spike (MS)

(OS) L889450-17 02/14/17 17:53 • (MS) R3196826-8 02/14/17 18:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	3260	54100	102	1	80-120	
Fluoride	5000	222	5290	101	1	80-120	
Sulfate	50000	27900	76600	97	1	80-120	

Method Blank (MB)

(MB) R3197458-1 02/16/17 18:15

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

L889344-06 Original Sample (OS) • Duplicate (DUP)

(OS) L889344-06 02/16/17 20:10 • (DUP) R3197458-4 02/16/17 20:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	1400000	1350000	20	4		15

L889401-01 Original Sample (OS) • Duplicate (DUP)

(OS) L889401-01 02/16/17 21:36 • (DUP) R3197458-6 02/17/17 00:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	5330	5250	1	2		15

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

(LCS) R3197458-2 02/16/17 18:29 • (LCSD) R3197458-3 02/16/17 18:43

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Sulfate	40000	41400	41300	103	103	80-120			0	15

L889779-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L889779-04 02/16/17 22:48 • (MS) R3197458-5 02/16/17 23:03

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Sulfate	50000	12600	64000	103	1	80-120	

Method Blank (MB)

(MB) R3196746-1 02/14/17 15:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3196746-2 02/14/17 15:43 • (LCSD) R3196746-3 02/14/17 15:45

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	%	%	%			%	%
Mercury	3.00	3.01	2.80	100	93	80-120			7	20

L889450-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L889450-05 02/14/17 15:48 • (MS) R3196746-4 02/14/17 15:50 • (MSD) R3196746-5 02/14/17 15:52

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	%	%		%			%	%
Mercury	3.00	ND	2.90	2.41	97	80	1	75-125			18	20

Method Blank (MB)

(MB) R3197053-1 02/15/17 21:13

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Barium	U		1.70	5.00
Boron	U		12.6	200
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0
Lithium	U		5.30	15.0
Molybdenum	U		1.60	5.00

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

(LCS) R3197053-2 02/15/17 21:16 • (LCSD) R3197053-3 02/15/17 21:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Barium	1000	1000	1000	100	100	80-120			0	20
Boron	1000	981	975	98	97	80-120			1	20
Chromium	1000	1030	1030	103	103	80-120			0	20
Cobalt	1000	997	998	100	100	80-120			0	20
Lithium	1000	954	949	95	95	80-120			1	20
Molybdenum	1000	974	977	97	98	80-120			0	20

L889450-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L889450-05 02/15/17 21:27 • (MS) R3197053-5 02/15/17 21:32 • (MSD) R3197053-6 02/15/17 21:34

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 %
Barium	1000	364	1350	1330	99	96	1	75-125			2	20
Boron	1000	ND	1070	1050	99	96	1	75-125			2	20
Chromium	1000	10.5	1040	1010	103	100	1	75-125			3	20
Cobalt	1000	ND	1010	992	101	99	1	75-125			2	20
Lithium	1000	ND	961	943	95	94	1	75-125			2	20
Molybdenum	1000	ND	984	965	98	96	1	75-125			2	20

Method Blank (MB)

(MB) R3197421-7 02/16/17 15:05

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Calcium	U		46.0	1000
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3197421-8 02/16/17 15:15 • (LCSD) R3197421-9 02/16/17 15:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	57.9	49.5	48.8	85	84	80-120			1	20
Arsenic	50.0	47.5	48.2	95	96	80-120			1	20
Beryllium	50.0	43.2	41.7	86	83	80-120			3	20
Cadmium	50.0	50.4	50.1	101	100	80-120			1	20
Calcium	5000	4840	4810	97	96	80-120			1	20
Lead	50.0	48.0	48.2	96	96	80-120			0	20
Selenium	50.0	48.9	49.7	98	99	80-120			2	20
Thallium	50.0	47.3	46.9	95	94	80-120			1	20

L889450-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L889450-05 02/16/17 15:22 • (MS) R3197421-11 02/16/17 15:29 • (MSD) R3197421-12 02/16/17 15:33

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 %
Antimony	57.9	ND	49.5	50.1	86	87	1	75-125			1	20
Arsenic	50.0	ND	48.0	48.2	95	95	1	75-125			0	20
Beryllium	50.0	ND	42.5	42.5	85	85	1	75-125			0	20
Cadmium	50.0	ND	51.6	51.1	103	102	1	75-125			1	20
Calcium	5000	86400	89700	88500	65	42	1	75-125	V	V	1	20
Lead	50.0	ND	49.1	49.4	97	98	1	75-125			1	20
Selenium	50.0	4.46	53.5	53.9	98	99	1	75-125			1	20
Thallium	50.0	ND	48.5	48.7	97	97	1	75-125			0	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

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.

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

State Accreditations

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

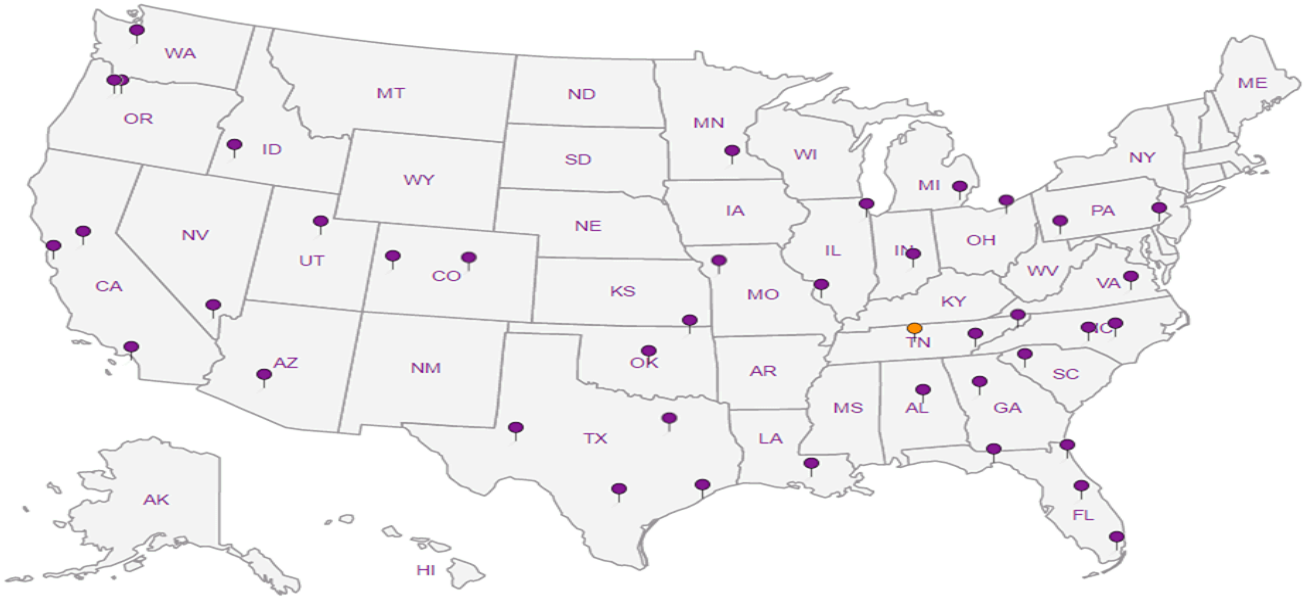
Third Party & Federal Accreditations

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

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

Our Locations

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



SCS Engineers - KS

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

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

Report to: **Jason Franks**

Email To: jfranks@scsengineers.com

Project: KCPL
Description: **Sibley Generating Station - CCR GW BG**

City/State Collected:

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

Client Project # **27213169.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): **Adam Parris**

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Quote #

Date Results Needed: **Standard**

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions - Cld, F, SO4 125mlHDPE-NoPres	Chloride, F, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Rem./Contaminant	Sample # (lab only)
504	Grab	GW	-	2/8/17	1500	3	X		X	X		-01
505		GW	-		1500	3	X		X	X		-02
506		GW	-		1220	3	X		X	X		-03
510		GW	-		1040	3	X		X	X		-04
512		GW	-		1030	3	X		X	X		-05
601		GW	-		1130	3	X		X	X		-06
~~602~~		~~GW~~				~~3~~	~~X~~		~~X~~	~~X~~		
701		GW	-		1420	3	X		X	X		-07
702		GW	-		1320	3	X		X	X		-08
703		GW	-		1350	3	X		X	X		-09

Chain of Custody Page 1 of 3

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L889450
J157

Acctnum: **AQUAOPKS**
Template: **T115107**
Prelogin: **P585802**
TSR: **206 - Jeff Carr**
PB:

Shipped Via:

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

Remarks:6010 Metals-B,BA,CR,CO,LI,MO, 6020 Metals-SB,AS,BE,CA,CD,PB,SE,TL, 7470 Metals-HG.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier SWA

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)
	2/9/17	1410	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.2 °C Bottles Received: 72

Date: 2-10-17 Time: 14110

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

SCS Engineers - KS

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

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

Pres Chk

Report to: **Jason Franks**

Email To: **jfranks@scsengineers.com**

Project Description: **Sibley Generating Station - CCR GW BG** KCP&L

City/State Collected:

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

Client Project # **27213169.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): **Adam Parris**

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Quote #

Date Results Needed: Standard

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions - Cld, F, SO4 125mlHDPE-NoPres	Chloride, F, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Rem./Contaminant	Sample # (lab only)
704	Grab	GW	-	2/8/17	1330	3	X		X	X		-10
801		GW	-	2/9/17	0940	3		X	X	X		-11
802		GW	-		1040	3		X	X	X		-12
803		GW	-		1115	3		X	X	X		-13
804		GW	-		1200	3		X	X	X		-14
805		GW	-		1240	3		X	X	X		-15
806R		GW	-		1235	3		X	X	X		-16
DUPLICATE		GW	-	2/8/17	1035	3		X	X	X		-17
512 MS		GW	-		1040	3		X	X	X		-18
512 MSD		GW	-		1045	3		X	X	X		-19

Chain of Custody Page 2 of 3

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L889450

Table #

Acctnum: **AQUAOPKS**
Template: **T115107**
Prelogin: **P585802**
TSR: **206 - Jeff Carr**
PB:

Shipped Via:

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

Remarks:6010 Metals-B,BA,CR,CO,LI,MO, 6020 Metals-SB,AS,BE,CA,CD,PB,SE,TL, 7470 Metals-HG.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __UPS __FedEx __Courier __ _____

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	2/9/17	1410	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: 3.2 °C Bottles Received: 12

Date: 2-10-17 Time: 1410

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Case Narrative

Lab No: 20170096

This report contains the analytical results for the 19 sample(s) received under chain of custody by ESC Lab Sciences on 2/10/2017 10:04:34 AM. These samples are associated with your 27213167.16 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

Observations / Nonconformances

L889746

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20170096-01								
Client ID : 504								
Date Sampled : 2/8/2017 3:00:00 PM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.499 +/- 0.813	0.800	pCi/l				
Radium-226	SM 7500 Ra B M*	0.499 +/- 0.289	0.195	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	-0.294 +/- 0.524	0.605	pCi/l		02/24/17	03/07/17	JR
Lab ID : 20170096-02								
Client ID : 505								
Date Sampled : 2/8/2017 3:00:00 PM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.000 +/- 0.832	1.13	pCi/l				
Radium-226	SM 7500 Ra B M*	-0.121 +/- 0.300	0.504	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	-0.327 +/- 0.532	0.630	pCi/l		02/24/17	03/07/17	JR
Lab ID : 20170096-03								
Client ID : 506								
Date Sampled : 2/8/2017 12:20:00 PM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.177 +/- 0.782	0.945	pCi/l				
Radium-226	SM 7500 Ra B M*	0.177 +/- 0.194	0.256	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	-0.457 +/- 0.588	0.689	pCi/l		02/24/17	03/07/17	JR
Lab ID : 20170096-04								
Client ID : 510								
Date Sampled : 2/8/2017 10:40:00 AM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.344 +/- 0.823	1.03	pCi/l				
Radium-226	SM 7500 Ra B M*	0.186 +/- 0.276	0.414	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	0.158 +/- 0.547	0.616	pCi/l		02/24/17	03/07/17	JR

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170096-05**								
Client ID : **512**								
Date Sampled : **2/8/2017 10:30:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		1.41 +/- 0.771	0.884	pCi/l				
Radium-226	SM 7500 Ra B M*	0.195 +/- 0.206	0.236	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	1.21 +/- 0.565	0.648	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-06**								
Client ID : **601**								
Date Sampled : **2/8/2017 11:30:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.103 +/- 0.692	0.966	pCi/l				
Radium-226	SM 7500 Ra B M*	0.103 +/- 0.130	0.170	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	0.000 +/- 0.562	0.796	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-07**								
Client ID : **701**								
Date Sampled : **2/8/2017 2:20:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.098 +/- 0.650	0.890	pCi/l				
Radium-226	SM 7500 Ra B M*	-0.010 +/- 0.148	0.354	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	0.098 +/- 0.502	0.536	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-08**								
Client ID : **702**								
Date Sampled : **2/8/2017 1:20:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.995 +/- 0.906	1.03	pCi/l				
Radium-226	SM 7500 Ra B M*	0.308 +/- 0.272	0.309	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	0.687 +/- 0.634	0.723	pCi/l		02/24/17	03/07/17	JR

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170096-09**								
Client ID : **703**								
Date Sampled : **2/8/2017 1:50:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.200 +/- 0.914	1.21	pCi/l				
Radium-226	SM 7500 Ra B M*	0.200 +/- 0.292	0.440	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	-0.933 +/- 0.622	0.767	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-10**								
Client ID : **704**								
Date Sampled : **2/8/2017 1:30:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.181 +/- 0.921	1.13	pCi/l				
Radium-226	SM 7500 Ra B M*	0.181 +/- 0.226	0.298	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	-0.548 +/- 0.695	0.833	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-11**								
Client ID : **801**								
Date Sampled : **2/9/2017 9:40:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.170 +/- 0.927	1.27	pCi/l				
Radium-226	SM 7500 Ra B M*	0.170 +/- 0.323	0.562	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	-0.432 +/- 0.604	0.710	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-12**								
Client ID : **802**								
Date Sampled : **2/9/2017 10:40:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		2.23 +/- 0.843	0.938	pCi/l				
Radium-226	SM 7500 Ra B M*	0.247 +/- 0.230	0.237	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	1.98 +/- 0.613	0.701	pCi/l		02/24/17	03/07/17	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170096-13**								
Client ID : **803**								
Date Sampled : **2/9/2017 11:15:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.717 +/- 0.992	1.27	pCi/l				
Radium-226	SM 7500 Ra B M*	0.543 +/- 0.476	0.602	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	0.174 +/- 0.516	0.668	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-14**								
Client ID : **804**								
Date Sampled : **2/9/2017 12:00:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.749 +/- 0.718	0.910	pCi/l				
Radium-226	SM 7500 Ra B M*	0.272 +/- 0.275	0.362	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	0.477 +/- 0.443	0.548	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-15**								
Client ID : **805**								
Date Sampled : **2/9/2017 12:40:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.338 +/- 0.801	0.921	pCi/l				
Radium-226	SM 7500 Ra B M*	0.338 +/- 0.315	0.325	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	-0.097 +/- 0.486	0.596	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-16**								
Client ID : **806R**								
Date Sampled : **2/9/2017 12:35:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.731 +/- 1.26	1.624	pCi/l				
Radium-226	SM 7500 Ra B M*	0.716 +/- 0.691	0.908	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	0.015 +/- 0.571	0.716	pCi/l		02/24/17	03/07/17	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170096-17**								
Client ID : **DUPLICATE**								
Date Sampled : **2/8/2017 10:35:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.374 +/- 0.623	0.844	pCi/l				
Radium-226	SM 7500 Ra B M*	0.157 +/- 0.156	0.181	pCi/l		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	0.217 +/- 0.467	0.663	pCi/l		02/24/17	03/07/17	JR
Lab ID : **20170096-18**								
Client ID : **512 MS**								
Date Sampled : **2/8/2017 10:40:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	97.6		% Rec		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	91.9		% Rec		02/24/17	03/07/17	JR
Lab ID : **20170096-19**								
Client ID : **512 MSD**								
Date Sampled : **2/8/2017 10:45:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	17.3		RPD		03/07/17	03/08/17	AK
Radium-228	EPA 904*/9320*	17.4		RPD		02/24/17	03/07/17	JR

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QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Batch ID
Radium-226	0.009	101.0			NC	0.460	97.6	81.9	17.3	R1197
Radium-228	-0.053	103.0			NC	0.850	91.9	110.0	17.4	R3927

Lab Approval:

Ron Eidson
Director of Radiochemistry

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

SCS Engineers - KS

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

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

Pres Chk

Report to: **Jason Franks**

Email To: **jfranks@scsengineers.com**

Project: KCPL
Description: **Sibley Generating Station - CCR GW BG**

City/State Collected:

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

Client Project # **27213167.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): **Adam Parris**

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Quote #

Date Results Needed: **Standard**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226, RA228 1L-HDPE-Add HNO3									
704	Grab	NPW	-	2/8/17	1330	2	X									
801		NPW	-	2/9/17	0940	2	X									
802		NPW	-		1040	2	X									
803		NPW	-		1115	2	X									
804		NPW	-		1200	2	X									
805		NPW	-		1240	2	X									
806R		NPW	-		1235	2	X									
DUPLICATE		NPW	-	2/8/17	1035	2	X									
512 MS		NPW	-		1040	2	X									
512 MSD		NPW	-		1045	2	X									

copy

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

ESC LAB SCIENCES

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

L# 889746

Table #

Acctnum: **AQUAOPKS**
Template: **T115110**
Prelogin: **P585796**
TSR: **206 - Jeff Carr**
PB:

Shipped Via:

Rem./Contaminant | Sample # (lab only)

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

Remarks: RA 226/228 - Report separately and combined.

pH _____ Temp _____
Flow _____ Other _____

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

Samples returned via: ___UPS ___FedEx ___Courier ___ _____

Tracking #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	2/9/17	1410	
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 Amb °C Bottles Received: 38

Date: 2/10/17 Time: 1004

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

20170096

CS Engineers - KS

311 West 130th Street, Ste. 100
verland Park, KS 66213

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

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

ESC LABORATORIES

YOUR LAB OF CHOICE

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

eport to:
ison Franks

Email To: jfranks@scsengineers.com

oject KCPL
escription: **Sibley Generating Station** – CCR GW BG

City/State Collected:

hone: **913-681-0030**
ax: **913-681-0012**

Client Project # **27213167.16**

Lab Project # **AQUAOPKS-SIBLEY**

L# 887746

Table #

Acctnum: **AQUAOPKS**
Template: **T115110**
Prelogin: **P585796**
TSR: **206 - Jeff Carr**
PB:

Shipped Via:

ollected by (print): Adam Parris

Site/Facility ID #

P.O. #

ollected by (signature):

Quote #

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: Standard

mmediately acked on Ice N ___ Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226, RA228 1L HDPE Add HNO3	Rem./Contaminant	Sample # (lab only)
504	Grab	NPW	–	2/8/17	1500	2	X		
505		NPW	–		1500	2	X		
506		NPW	–		1220	2	X		
510		NPW	–		1040	2	X		
512		NPW	–		1030	2	X		
501		NPW	–		1130	2	X		
~~502~~		~~NPW~~				2	X		
701		NPW	–		1420	2	X		
702		NPW	–		1320	2	X		
703		NPW	–		1350	2	X		

Copy

* Matrix:
iS - Soil AIR - Air
GW - Groundwater
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: RA 226/228 - Report separately and combined.

pH _____ Temp _____

Flow _____ Other _____

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

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

	Date:	Time:	
Relinquished by : (Signature)	2/9/17	1410	Received by: (Signature)
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: 4.6 °C Bottles Received: 38

Date: 2/10/17 Time: 1004

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

20170096

SAMPLE LOGIN

Date Received: *2/10/2017 10:04:3* **Lab Number:** 20170096 **Due:** 3/10/2017

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20170096-01 B	504	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-01 A	504	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20170096-02 A	505	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-02 B	505	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20170096-03 A	506	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-03 B	506	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20170096-04 A	510	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-04 B	510	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20170096-05 A	512	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-05 B	512	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20170096-06 B	601	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-06 A	601	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20170096-07 A	701	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-07 B	701	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

20170096-08 A	702	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20170096-08 B	702	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20170096-09 A	703	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20170096-09 B	703	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20170096-10 B	704	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20170096-10 A	704	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20170096-11 A	801	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20170096-11 B	801	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20170096-12 A	802	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20170096-12 B	802	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20170096-13 A	803	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20170096-13 B	803	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20170096-14 B	804	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20170096-14 A	804	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20170096-15 A	805	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20170096-15 B	805	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*/9320*					
20170096-16 A	806R	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes
20170096-16 B	806R	NPW	02/09/17	Plastic	1 L	HNO3, pH < 2	Yes	Yes

Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20170096-17 A	DUPLICATE	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-17 B	DUPLICATE	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20170096-18 A	512 MS	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-18 B	512 MS	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						
20170096-19 B	512 MSD	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170096-19 A	512 MSD	NPW	02/08/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*/9320*						

CONTAINER INSPECTION

 # Coolers 4 **Custody Seals Broken** ☒ **Temperature:** Amb °C **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken ☒ **Chain of Custody Record** ☑ **Labels in Tact** ☑ **Radiation Survey Complete** ☑ N/A

Anomalies Sample -04A broke during receiving Enough volume remains for re-test + unabated

Inspected By: _____ **DATE** 2/10/17

QA or Designee Review: Raymond Thomas **DATE** 02/10/17

Sample Custodian Review: _____ **DATE** 2/10/17

Project Notes:

Jared Morrison
December 16, 2022

ATTACHMENT 1-7

May 2017 Sampling Event Laboratory Report

ANALYTICAL REPORT

May 11, 2017

SCS Engineers - KS

Sample Delivery Group:	L907568
Samples Received:	05/06/2017
Project Number:	27213169.16
Description:	Sibley Generating Station

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

Entire Report Reviewed By:

Jason Romer
Technical Service Representative

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

TABLE OF CONTENTS

504 L907568-01 GW

Collected by	Collected date/time	Received date/time
	05/04/17 10:45	05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG977936	1	05/10/17 11:01	05/10/17 15:56	ST

505 L907568-02 GW

Collected by	Collected date/time	Received date/time
	05/04/17 11:40	05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG977936	1	05/10/17 11:01	05/10/17 15:59	ST

506 L907568-03 GW

Collected by	Collected date/time	Received date/time
	05/04/17 11:35	05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG977936	1	05/10/17 11:01	05/10/17 16:02	ST

510 L907568-04 GW

Collected by	Collected date/time	Received date/time
	05/03/17 11:50	05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG977936	1	05/10/17 11:01	05/10/17 15:45	ST

512 L907568-05 GW

Collected by	Collected date/time	Received date/time
	05/03/17 15:05	05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG977936	1	05/10/17 11:01	05/10/17 16:11	ST

DUPLICATE L907568-06 GW

Collected by	Collected date/time	Received date/time
	05/03/17 11:55	05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG977936	1	05/10/17 11:01	05/10/17 16:14	ST

601 L907568-07 GW

Collected by	Collected date/time	Received date/time
	05/04/17 09:35	05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG977936	1	05/10/17 11:01	05/10/17 16:16	ST

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jason Romer
Technical Service Representative

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	05/10/2017 15:56	WG977936
Molybdenum	ND		5.00	1	05/10/2017 15:56	WG977936

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	05/10/2017 15:59	WG977936
Molybdenum	ND		5.00	1	05/10/2017 15:59	WG977936

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	05/10/2017 16:02	WG977936
Molybdenum	ND		5.00	1	05/10/2017 16:02	WG977936

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	05/10/2017 15:45	WG977936
Molybdenum	ND		5.00	1	05/10/2017 15:45	WG977936

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	05/10/2017 16:11	WG977936
Molybdenum	ND		5.00	1	05/10/2017 16:11	WG977936

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	05/10/2017 16:14	WG977936
Molybdenum	ND		5.00	1	05/10/2017 16:14	WG977936

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	05/10/2017 16:16	WG977936
Molybdenum	ND		5.00	1	05/10/2017 16:16	WG977936

Method Blank (MB)

(MB) R3217144-1 05/10/17 15:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Lithium	U		5.30	15.0
Molybdenum	U		1.60	5.00

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

(LCS) R3217144-2 05/10/17 15:40 • (LCSD) R3217144-3 05/10/17 15:43

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	%	%	%			%	%
Lithium	1000	1010	1010	101	101	80-120			0	20
Molybdenum	1000	992	1000	99	100	80-120			1	20

L907568-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907568-04 05/10/17 15:45 • (MS) R3217144-5 05/10/17 15:51 • (MSD) R3217144-6 05/10/17 15:54

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	%	%		%			%	%
Lithium	1000	ND	1050	1060	104	105	1	75-125			1	20
Molybdenum	1000	ND	996	1000	100	100	1	75-125			0	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

Qualifier	Description

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

ACCREDITATIONS & LOCATIONS

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

State Accreditations

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

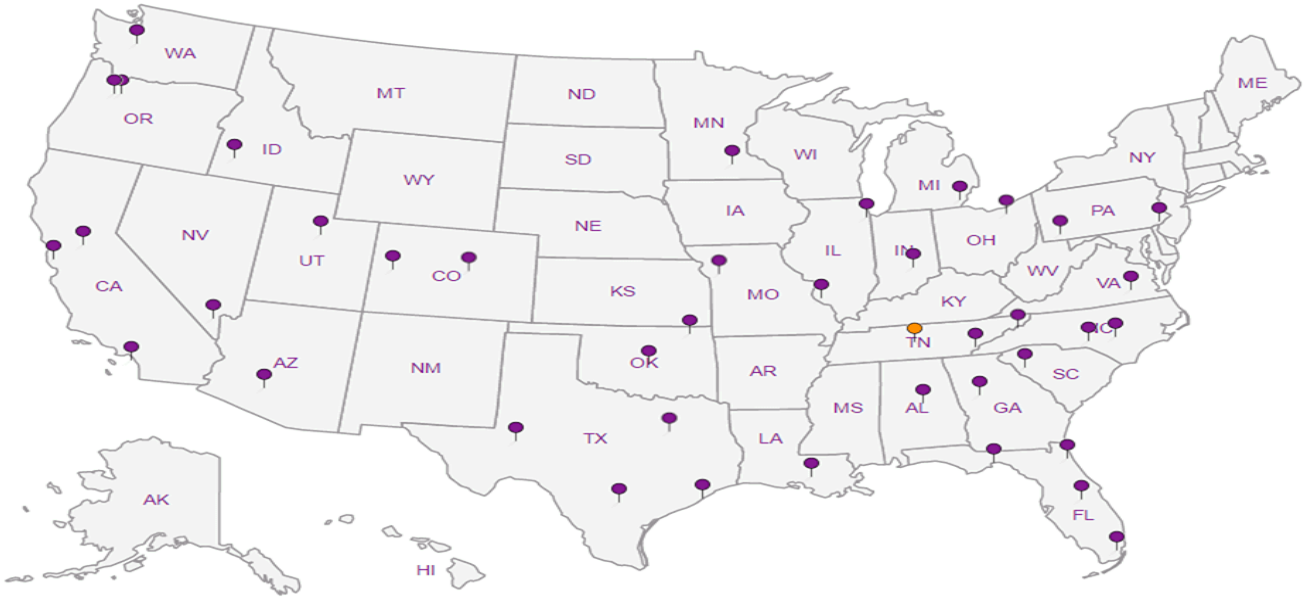
Third Party & Federal Accreditations

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

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

Our Locations

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



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

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

Pres Chk

Report to: **Jason Franks**

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

Project Description: **Sibley Generating Station**

City/State Collected:

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

Client Project # **27213169.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): Adam Parris

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	Metals - Li, Mo 250ml HDPE-HNO3	Remarks	Sample # (lab only)
504	Grab	GW	-	5/4/17	1045	1	X		-01
505		GW	-		1140	1	X		02
506		GW	-		1135	1	X		03
510		GW	-	5/3/17	1150	1	X		04
512		GW	-		1505	1	X		05
DUPLICATE		GW	-		1155	1	X		06
510 MS		GW	-		1200	1	X		07
510 MSD		GW	-		1205	1	X		04
601		GW	-	5/4/17	0935	1	X		07

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L907568
H008

Acctnum: **AQUAOPKS**
Template: **T117409**
Prelogin: **P598841**
TSR: **206 - Jeff Carr**
PB:
Shipped Via:

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

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

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/5/17	1202	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/5/17	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.1 °C Bottles Received: 9

Date: 5-6-17 Time: 845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

May 16, 2017

SCS Engineers - KS

Sample Delivery Group:	L907569
Samples Received:	05/06/2017
Project Number:	27213169.16
Description:	Sibley Generating Station

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

Entire Report Reviewed By:

John Hawkins
Technical Service Representative

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

TABLE OF CONTENTS

504 L907569-01 GW

Collected by: Adam Parris
Collected date/time: 05/04/17 10:45
Received date/time: 05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG978364	1	05/11/17 12:11	05/11/17 14:00	MMF
Wet Chemistry by Method 9056A	WG977535	1	05/09/17 15:19	05/09/17 15:19	KCF
Mercury by Method 7470A	WG977771	1	05/09/17 11:37	05/10/17 16:42	TRB
Metals (ICP) by Method 6010B	WG978115	1	05/10/17 17:44	05/10/17 20:40	NJB
Metals (ICPMS) by Method 6020	WG977927	1	05/10/17 08:59	05/16/17 00:01	VSS

505 L907569-02 GW

Collected by: Adam Parris
Collected date/time: 05/04/17 11:40
Received date/time: 05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG978364	1	05/11/17 12:11	05/11/17 14:00	MMF
Wet Chemistry by Method 9056A	WG977535	1	05/09/17 15:34	05/09/17 15:34	KCF
Mercury by Method 7470A	WG977771	1	05/09/17 11:37	05/10/17 16:45	TRB
Metals (ICP) by Method 6010B	WG978115	1	05/10/17 17:44	05/10/17 20:43	NJB
Metals (ICPMS) by Method 6020	WG977927	1	05/10/17 08:59	05/16/17 00:05	VSS

506 L907569-03 GW

Collected by: Adam Parris
Collected date/time: 05/04/17 11:35
Received date/time: 05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG978364	1	05/11/17 12:11	05/11/17 14:00	MMF
Wet Chemistry by Method 9056A	WG977535	1	05/09/17 15:49	05/09/17 15:49	KCF
Mercury by Method 7470A	WG977771	1	05/09/17 11:37	05/10/17 16:47	TRB
Metals (ICP) by Method 6010B	WG978115	1	05/10/17 17:44	05/10/17 20:52	NJB
Metals (ICPMS) by Method 6020	WG977927	1	05/10/17 08:59	05/16/17 00:08	VSS

510 L907569-04 GW

Collected by: Adam Parris
Collected date/time: 05/03/17 11:50
Received date/time: 05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG978022	1	05/10/17 16:17	05/10/17 17:11	MMF
Wet Chemistry by Method 9056A	WG977535	1	05/09/17 16:05	05/09/17 16:05	KCF
Mercury by Method 7470A	WG977771	1	05/09/17 11:37	05/10/17 16:26	TRB
Metals (ICP) by Method 6010B	WG978115	1	05/10/17 17:44	05/10/17 20:26	NJB
Metals (ICPMS) by Method 6020	WG977927	1	05/10/17 08:59	05/15/17 23:23	VSS

512 L907569-05 GW

Collected by: Adam Parris
Collected date/time: 05/03/17 15:05
Received date/time: 05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG978022	1	05/10/17 16:17	05/10/17 17:11	MMF
Wet Chemistry by Method 9056A	WG977535	1	05/09/17 16:51	05/09/17 16:51	KCF
Mercury by Method 7470A	WG977771	1	05/09/17 11:37	05/10/17 16:54	TRB
Metals (ICP) by Method 6010B	WG978115	1	05/10/17 17:44	05/10/17 20:55	NJB
Metals (ICPMS) by Method 6020	WG977927	1	05/10/17 08:59	05/16/17 00:12	VSS

DUPLICATE L907569-06 GW

Collected by: Adam Parris
Collected date/time: 05/03/17 11:55
Received date/time: 05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG978022	1	05/10/17 16:17	05/10/17 17:11	MMF
Wet Chemistry by Method 9056A	WG977535	1	05/09/17 17:37	05/09/17 17:37	KCF
Mercury by Method 7470A	WG977771	1	05/09/17 11:37	05/10/17 16:56	TRB
Metals (ICP) by Method 6010B	WG978115	1	05/10/17 17:44	05/10/17 20:58	NJB
Metals (ICPMS) by Method 6020	WG977927	1	05/10/17 08:59	05/16/17 00:15	VSS

601 L907569-07 GW

Collected by: Adam Parris
Collected date/time: 05/03/17 09:35
Received date/time: 05/06/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG978022	1	05/10/17 16:17	05/10/17 17:11	MMF
Wet Chemistry by Method 9056A	WG978330	1	05/11/17 15:51	05/11/17 15:51	MCG
Mercury by Method 7470A	WG977771	1	05/09/17 11:37	05/10/17 16:58	TRB
Metals (ICP) by Method 6010B	WG978115	1	05/10/17 17:44	05/10/17 21:01	NJB
Metals (ICPMS) by Method 6020	WG977927	1	05/10/17 08:59	05/16/17 00:19	VSS

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

John Hawkins
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	181000		10000	1	05/11/2017 14:00	WG978364

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	1270		1000	1	05/09/2017 15:19	WG977535
Fluoride	157		100	1	05/09/2017 15:19	WG977535
Sulfate	21800		5000	1	05/09/2017 15:19	WG977535

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	05/10/2017 16:42	WG977771

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	110		5.00	1	05/10/2017 20:40	WG978115
Boron	ND		200	1	05/10/2017 20:40	WG978115
Calcium	27700		1000	1	05/10/2017 20:40	WG978115
Chromium	ND		10.0	1	05/10/2017 20:40	WG978115
Cobalt	ND		10.0	1	05/10/2017 20:40	WG978115

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	05/16/2017 00:01	WG977927
Arsenic	2.02		2.00	1	05/16/2017 00:01	WG977927
Beryllium	ND		2.00	1	05/16/2017 00:01	WG977927
Cadmium	ND		1.00	1	05/16/2017 00:01	WG977927
Lead	ND		2.00	1	05/16/2017 00:01	WG977927
Selenium	3.11		2.00	1	05/16/2017 00:01	WG977927
Thallium	ND		2.00	1	05/16/2017 00:01	WG977927

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	159000		10000	1	05/11/2017 14:00	WG978364

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	05/09/2017 15:34	WG977535
Fluoride	160		100	1	05/09/2017 15:34	WG977535
Sulfate	19200		5000	1	05/09/2017 15:34	WG977535

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	05/10/2017 16:45	WG977771

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	89.0		5.00	1	05/10/2017 20:43	WG978115
Boron	ND		200	1	05/10/2017 20:43	WG978115
Calcium	23200		1000	1	05/10/2017 20:43	WG978115
Chromium	ND		10.0	1	05/10/2017 20:43	WG978115
Cobalt	ND		10.0	1	05/10/2017 20:43	WG978115

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	05/16/2017 00:05	WG977927
Arsenic	ND		2.00	1	05/16/2017 00:05	WG977927
Beryllium	ND		2.00	1	05/16/2017 00:05	WG977927
Cadmium	ND		1.00	1	05/16/2017 00:05	WG977927
Lead	ND		2.00	1	05/16/2017 00:05	WG977927
Selenium	3.00		2.00	1	05/16/2017 00:05	WG977927
Thallium	ND		2.00	1	05/16/2017 00:05	WG977927

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	462000		10000	1	05/11/2017 14:00	WG978364

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	6150		1000	1	05/09/2017 15:49	WG977535
Fluoride	338		100	1	05/09/2017 15:49	WG977535
Sulfate	69200		5000	1	05/09/2017 15:49	WG977535

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	05/10/2017 16:47	WG977771

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	319		5.00	1	05/10/2017 20:52	WG978115
Boron	ND		200	1	05/10/2017 20:52	WG978115
Calcium	96400		1000	1	05/10/2017 20:52	WG978115
Chromium	15.2		10.0	1	05/10/2017 20:52	WG978115
Cobalt	ND		10.0	1	05/10/2017 20:52	WG978115

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	05/16/2017 00:08	WG977927
Arsenic	3.92		2.00	1	05/16/2017 00:08	WG977927
Beryllium	ND		2.00	1	05/16/2017 00:08	WG977927
Cadmium	ND		1.00	1	05/16/2017 00:08	WG977927
Lead	8.22		2.00	1	05/16/2017 00:08	WG977927
Selenium	11.6		2.00	1	05/16/2017 00:08	WG977927
Thallium	ND		2.00	1	05/16/2017 00:08	WG977927

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	486000		10000	1	05/10/2017 17:11	WG978022

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3630		1000	1	05/09/2017 16:05	WG977535
Fluoride	290		100	1	05/09/2017 16:05	WG977535
Sulfate	15000		5000	1	05/09/2017 16:05	WG977535

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	05/10/2017 16:26	WG977771

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	353		5.00	1	05/10/2017 20:26	WG978115
Boron	ND		200	1	05/10/2017 20:26	WG978115
Calcium	116000		1000	1	05/10/2017 20:26	WG978115
Chromium	ND		10.0	1	05/10/2017 20:26	WG978115
Cobalt	ND		10.0	1	05/10/2017 20:26	WG978115

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	05/15/2017 23:23	WG977927
Arsenic	ND		2.00	1	05/15/2017 23:23	WG977927
Beryllium	ND		2.00	1	05/15/2017 23:23	WG977927
Cadmium	ND		1.00	1	05/15/2017 23:23	WG977927
Lead	ND		2.00	1	05/15/2017 23:23	WG977927
Selenium	3.61		2.00	1	05/15/2017 23:23	WG977927
Thallium	ND		2.00	1	05/15/2017 23:23	WG977927

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	436000		10000	1	05/10/2017 17:11	WG978022

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3700		1000	1	05/09/2017 16:51	WG977535
Fluoride	277		100	1	05/09/2017 16:51	WG977535
Sulfate	27300		5000	1	05/09/2017 16:51	WG977535

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	05/10/2017 16:54	WG977771

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	391		5.00	1	05/10/2017 20:55	WG978115
Boron	ND		200	1	05/10/2017 20:55	WG978115
Calcium	98400		1000	1	05/10/2017 20:55	WG978115
Chromium	14.7		10.0	1	05/10/2017 20:55	WG978115
Cobalt	ND		10.0	1	05/10/2017 20:55	WG978115

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	05/16/2017 00:12	WG977927
Arsenic	ND		2.00	1	05/16/2017 00:12	WG977927
Beryllium	ND		2.00	1	05/16/2017 00:12	WG977927
Cadmium	ND		1.00	1	05/16/2017 00:12	WG977927
Lead	ND		2.00	1	05/16/2017 00:12	WG977927
Selenium	5.17		2.00	1	05/16/2017 00:12	WG977927
Thallium	ND		2.00	1	05/16/2017 00:12	WG977927

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	477000		10000	1	05/10/2017 17:11	WG978022

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3890		1000	1	05/09/2017 17:37	WG977535
Fluoride	294		100	1	05/09/2017 17:37	WG977535
Sulfate	15800		5000	1	05/09/2017 17:37	WG977535

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	05/10/2017 16:56	WG977771

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	356		5.00	1	05/10/2017 20:58	WG978115
Boron	ND		200	1	05/10/2017 20:58	WG978115
Calcium	117000		1000	1	05/10/2017 20:58	WG978115
Chromium	ND		10.0	1	05/10/2017 20:58	WG978115
Cobalt	ND		10.0	1	05/10/2017 20:58	WG978115

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	05/16/2017 00:15	WG977927
Arsenic	ND		2.00	1	05/16/2017 00:15	WG977927
Beryllium	ND		2.00	1	05/16/2017 00:15	WG977927
Cadmium	ND		1.00	1	05/16/2017 00:15	WG977927
Lead	ND		2.00	1	05/16/2017 00:15	WG977927
Selenium	3.79		2.00	1	05/16/2017 00:15	WG977927
Thallium	ND		2.00	1	05/16/2017 00:15	WG977927

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	406000		10000	1	05/10/2017 17:11	WG978022

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3500		1000	1	05/11/2017 15:51	WG978330
Fluoride	247		100	1	05/11/2017 15:51	WG978330
Sulfate	8710		5000	1	05/11/2017 15:51	WG978330

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	05/10/2017 16:58	WG977771

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	355		5.00	1	05/10/2017 21:01	WG978115
Boron	ND		200	1	05/10/2017 21:01	WG978115
Calcium	100000		1000	1	05/10/2017 21:01	WG978115
Chromium	ND		10.0	1	05/10/2017 21:01	WG978115
Cobalt	ND		10.0	1	05/10/2017 21:01	WG978115

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	05/16/2017 00:19	WG977927
Arsenic	ND		2.00	1	05/16/2017 00:19	WG977927
Beryllium	ND		2.00	1	05/16/2017 00:19	WG977927
Cadmium	ND		1.00	1	05/16/2017 00:19	WG977927
Lead	ND		2.00	1	05/16/2017 00:19	WG977927
Selenium	5.95		2.00	1	05/16/2017 00:19	WG977927
Thallium	ND		2.00	1	05/16/2017 00:19	WG977927

Method Blank (MB)

(MB) R3217420-1 05/10/17 17:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Dissolved Solids	3000		2820	10000

L907562-05 Original Sample (OS) • Duplicate (DUP)

(OS) L907562-05 05/10/17 17:11 • (DUP) R3217420-4 05/10/17 17:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	622000	613000	1	1.46		5

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

(LCS) R3217420-2 05/10/17 17:11 • (LCSD) R3217420-3 05/10/17 17:11

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	%	%	%			%	%
Dissolved Solids	8800000	8710000	8700000	99.0	98.9	85.0-115			0.115	5

Method Blank (MB)

(MB) R3217730-1 05/11/17 14:00

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

L907567-04 Original Sample (OS) • Duplicate (DUP)

(OS) L907567-04 05/11/17 14:00 • (DUP) R3217730-4 05/11/17 14:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2730000	2730000	1	0.000		5

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

(LCS) R3217730-2 05/11/17 14:00 • (LCSD) R3217730-3 05/11/17 14:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800000	8520000	8600000	96.8	97.7	85.0-115			0.935	5

Method Blank (MB)

(MB) R3216827-1 05/09/17 06:45

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

L907562-09 Original Sample (OS) • Duplicate (DUP)

(OS) L907562-09 05/09/17 12:45 • (DUP) R3216827-5 05/09/17 13:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	11500	11900	1	4		15
Fluoride	161	227	1	34	P1	15
Sulfate	54400	54500	1	0		15

L907569-06 Original Sample (OS) • Duplicate (DUP)

(OS) L907569-06 05/09/17 17:37 • (DUP) R3216827-8 05/09/17 17:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	3890	3670	1	6		15
Fluoride	294	289	1	2		15
Sulfate	15800	15800	1	0		15

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

(LCS) R3216827-2 05/09/17 07:00 • (LCSD) R3216827-3 05/09/17 07:16

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39600	39600	99	99	80-120			0	15
Fluoride	8000	8050	8050	101	101	80-120			0	15
Sulfate	40000	40200	40300	101	101	80-120			0	15

L907562-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L907562-05 05/09/17 10:41 • (MS) R3216827-4 05/09/17 11:12

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Fluoride	5000	150	5190	101	1	80-120	
Sulfate	50000	67200	114000	94	1	80-120	E

L907569-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907569-04 05/09/17 16:05 • (MS) R3216827-6 05/09/17 16:20 • (MSD) R3216827-7 05/09/17 16:36

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	3630	53900	54600	101	102	1	80-120			1	15
Sulfate	50000	15000	64500	64500	99	99	1	80-120			0	15

Method Blank (MB)

(MB) R3217647-1 05/11/17 08:12

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

L907485-01 Original Sample (OS) • Duplicate (DUP)

(OS) L907485-01 05/11/17 11:07 • (DUP) R3217647-4 05/11/17 11:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	30000	30200	1	1		15
Fluoride	441	440	1	0		15
Sulfate	ND	309	1	0		15

L907485-10 Original Sample (OS) • Duplicate (DUP)

(OS) L907485-10 05/11/17 13:37 • (DUP) R3217647-6 05/11/17 13:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	46400	56200	20	19	P1	15
Fluoride	ND	0.000	20	0		15
Sulfate	732000	715000	20	2		15

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

(LCS) R3217647-2 05/11/17 08:27 • (LCSD) R3217647-3 05/11/17 08:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39800	39900	100	100	80-120			0	15
Fluoride	8000	8270	8250	103	103	80-120			0	15
Sulfate	40000	39800	39800	99	99	80-120			0	15

L907485-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L907485-03 05/11/17 12:52 • (MS) R3217647-5 05/11/17 13:07

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	97400	144000	94	1	80-120	E
Fluoride	5000	315	5270	99	1	80-120	

L907485-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L907485-03 05/11/17 12:52 • (MS) R3217647-5 05/11/17 13:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	50000	34300	84500	101	1	80-120	

L907485-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907485-06 05/11/17 16:51 • (MS) R3217647-7 05/11/17 17:35 • (MSD) R3217647-8 05/11/17 17:50

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	53400	103000	103000	99	99	1	80-120	E	E	0	15
Fluoride	5000	389	5520	5510	103	102	1	80-120			0	15
Sulfate	50000	59300	105000	105000	91	91	1	80-120	E	E	0	15

Method Blank (MB)

(MB) R3217129-1 05/10/17 16:13

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3217129-2 05/10/17 16:15 • (LCSD) R3217129-3 05/10/17 16:17

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	%	%	%			%	%
Mercury	3.00	2.74	2.59	91	86	80-120			6	20

L907569-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907569-04 05/10/17 16:26 • (MS) R3217129-4 05/10/17 16:29 • (MSD) R3217129-5 05/10/17 16:31

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	%	%		%			%	%
Mercury	3.00	ND	2.65	2.87	88	96	1	75-125			8	20

Method Blank (MB)

(MB) R3217203-1 05/10/17 20:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Barium	U		1.70	5.00
Boron	U		12.6	200
Calcium	U		46.3	1000
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0

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

(LCS) R3217203-2 05/10/17 20:21 • (LCSD) R3217203-3 05/10/17 20:23

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	%	%	%			%	%
Barium	1000	989	997	99	100	80-120			1	20
Boron	1000	912	934	91	93	80-120			2	20
Calcium	10000	9590	9740	96	97	80-120			2	20
Chromium	1000	963	967	96	97	80-120			1	20
Cobalt	1000	989	996	99	100	80-120			1	20

L907569-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907569-04 05/10/17 20:26 • (MS) R3217203-5 05/10/17 20:32 • (MSD) R3217203-6 05/10/17 20:35

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	%	%		%			%	%
Barium	1000	353	1320	1320	97	97	1	75-125			0	20
Boron	1000	ND	978	990	90	92	1	75-125			1	20
Calcium	10000	116000	124000	123000	78	75	1	75-125			0	20
Chromium	1000	ND	957	954	95	95	1	75-125			0	20
Cobalt	1000	ND	1000	1000	100	100	1	75-125			0	20

Method Blank (MB)

(MB) R3218211-1 05/15/17 23:13

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3218211-2 05/15/17 23:16 • (LCSD) R3218211-3 05/15/17 23:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	50.5	50.4	101	101	80-120			0	20
Arsenic	50.0	51.6	49.5	103	99	80-120			4	20
Beryllium	50.0	48.5	47.7	97	95	80-120			2	20
Cadmium	50.0	50.8	50.8	102	102	80-120			0	20
Lead	50.0	51.0	50.4	102	101	80-120			1	20
Selenium	50.0	52.4	51.4	105	103	80-120			2	20
Thallium	50.0	52.3	51.3	105	103	80-120			2	20

L907569-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907569-04 05/15/17 23:23 • (MS) R3218211-5 05/15/17 23:30 • (MSD) R3218211-6 05/15/17 23:34

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 %
Antimony	50.0	ND	52.1	51.8	104	104	1	75-125			1	20
Arsenic	50.0	ND	50.1	50.4	100	100	1	75-125			1	20
Beryllium	50.0	ND	48.6	48.6	97	97	1	75-125			0	20
Cadmium	50.0	ND	51.9	52.7	104	105	1	75-125			2	20
Lead	50.0	ND	50.2	50.7	100	101	1	75-125			1	20
Selenium	50.0	3.61	55.8	57.2	104	107	1	75-125			2	20
Thallium	50.0	ND	51.5	51.6	103	103	1	75-125			0	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

ACCREDITATIONS & LOCATIONS

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

State Accreditations

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

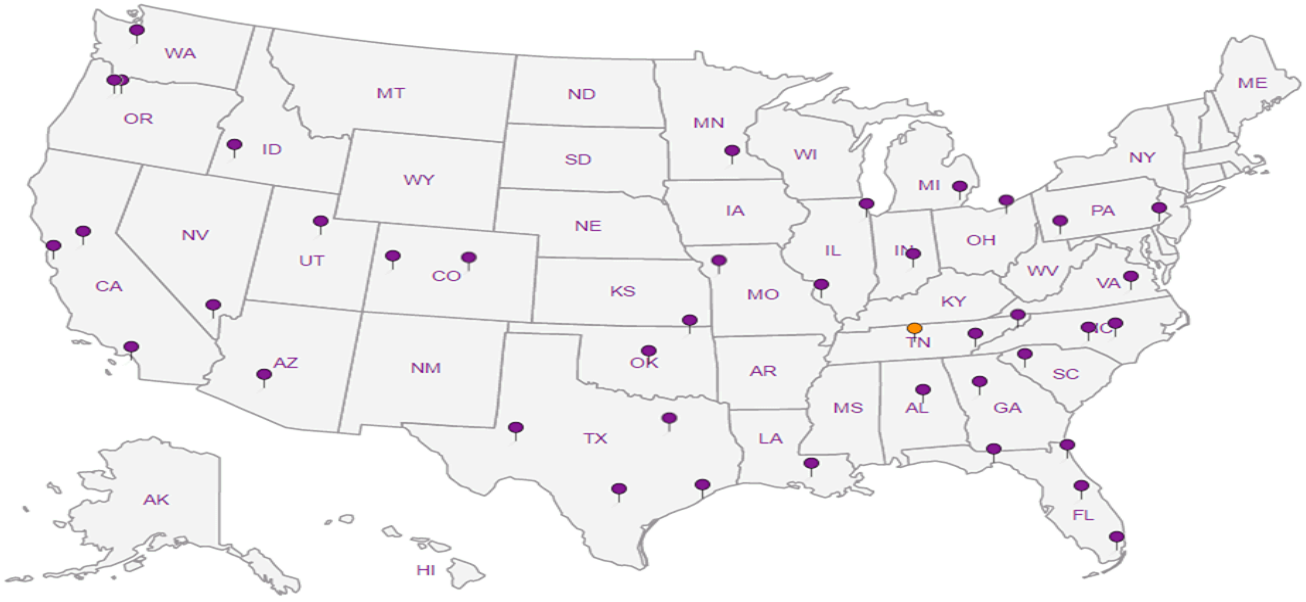
Third Party & Federal Accreditations

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

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

Our Locations

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



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

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

Report to: **Jason Franks**

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

Project Description: **Sibley Generating Station**

City/State Collected:

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

Client Project # **27213169.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): Adam Parris

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

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

Date Results Needed: Standard

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions - Cld, F, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
504	Grab	GW	-	5/4/17	1045	3	X	X	X		-01
505		GW	-		1140	3	X	X	X		02
506		GW	-		1135	3	X	X	X		03
510		GW	-	5/3/17	1150	3	X	X	X		04
512		GW	-		1505	3	X	X	X		05
DUPLICATE		GW	-		1155	3	X	X	X		06
510 MS		GW	-		1200	3	X	X	X		04
510 MSD		GW	-		1205	3	X	X	X		04
601		GW	-	5/4/17	0935	3	X	X	X		07

Chain of Custody Page 1 of 1

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

L# L907569

Table # H009

Acctnum: AQUAOPKS
Template: T115107
Prelogin: P598883
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:6010 Metals-B,BA,CA,CR,CO, 6020 Metals-SB,AS,BE,CD,PB,SE,TL, 7470 Metals-HG.

pH _____ Temp _____
Flow _____ Other _____

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

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/5/17	1200	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/5/17	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.1M °C Bottles Received: 27

Date: 5-8-17 Time: 8:45

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

ESC LAB SCIENCES
YOUR LAB OF CHOICE

ACCREDITED IN ACCORDANCE WITH nelac
NJ OK001

Case Narrative

Lab No: 20170405

This report contains the analytical results for the 19 sample(s) received under chain of custody by ESC Lab Sciences on 5/8/2017 2:29:18 PM. These samples are associated with your 27213167.16 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

DL for Radiochemistry = MDA DL for Metals and Wet Chemistry = MDL DL for Drinking Water = SDWA

Observations / Nonconformances

L907770
The following QC parameters are outside method control limits:
MSD Radium-226 SDG R1233

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20170405-01								
Client ID : 504								
Date Sampled : 5/4/2017 10:45:00 AM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.965 +/- 0.555	0.677	pCi/l				
Radium-226	SM 7500 Ra B M*	0.120 +/- 0.111	0.151	pCi/l		06/01/17	06/03/17	SD
Radium-228	EPA 904*	0.845 +/- 0.444	0.526	pCi/l		05/23/17	05/26/17	JR
Lab ID : 20170405-02								
Client ID : 505								
Date Sampled : 5/4/2017 11:40:00 AM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.292 +/- 0.693	0.845	pCi/l				
Radium-226	SM 7500 Ra B M*	0.059 +/- 0.128	0.217	pCi/l		06/01/17	06/03/17	SD
Radium-228	EPA 904*	0.233 +/- 0.565	0.628	pCi/l		05/23/17	05/26/17	JR
Lab ID : 20170405-03								
Client ID : 506								
Date Sampled : 5/4/2017 11:35:00 AM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.841 +/- 0.512	0.679	pCi/l				
Radium-226	SM 7500 Ra B M*	0.164 +/- 0.107	0.131	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.677 +/- 0.405	0.548	pCi/l		05/23/17	05/26/17	JR
Lab ID : 20170405-04								
Client ID : 510								
Date Sampled : 5/3/2017 11:50:00 AM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.711 +/- 0.651	0.979	pCi/l				
Radium-226	SM 7500 Ra B M*	0.155 +/- 0.172	0.252	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.556 +/- 0.479	0.727	pCi/l		05/23/17	05/26/17	JR

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170405-05**								
Client ID : **510 MS**								
Date Sampled : **5/3/2017 12:00:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	86.1		% Rec		06/01/17	06/05/17	AK
Radium-228	EPA 904*	71.3		% REC		05/23/17	05/26/17	JR
Lab ID : **20170405-06**								
Client ID : **510 MSD**								
Date Sampled : **5/3/2017 12:05:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	12.3		RPD		06/01/17	06/05/17	AK
Radium-228	EPA 904*	9.31		RPD		05/23/17	05/26/17	JR
Lab ID : **20170405-07**								
Client ID : **512**								
Date Sampled : **5/3/2017 3:05:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.13 +/- 0.717	0.833	pCi/l				
Radium-226	SM 7500 Ra B M*	0.176 +/- 0.116	0.135	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.951 +/- 0.601	0.698	pCi/l		05/23/17	05/26/17	JR
Lab ID : **20170405-08**								
Client ID : **601**								
Date Sampled : **5/3/2017 9:35:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.14 +/- 0.755	0.939	pCi/l				
Radium-226	SM 7500 Ra B M*	0.081 +/- 0.139	0.222	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	1.06 +/- 0.616	0.717	pCi/l		05/23/17	05/26/17	JR
Lab ID : **20170405-09**								
Client ID : **701**								
Date Sampled : **5/3/2017 11:20:00 AM**								
Matrix : **NPW**								

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Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radiochemical Analyses								
Combined Radium		0.391 +/- 0.600	0.698	pCi/l				
Radium-226	SM 7500 Ra B M*	0.153 +/- 0.111	0.141	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.238 +/- 0.489	0.557	pCi/l		05/23/17	05/26/17	JR

Lab ID : **20170405-10**
Client ID : **702**
Date Sampled : **5/3/2017 1:25:00 PM**
Matrix : **NPW**

Radiochemical Analyses								
Combined Radium		0.596 +/- 0.591	0.679	pCi/l				
Radium-226	SM 7500 Ra B M*	0.090 +/- 0.091	0.128	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.506 +/- 0.500	0.551	pCi/l		05/23/17	05/26/17	JR

Lab ID : **20170405-11**
Client ID : **703**
Date Sampled : **5/3/2017 12:45:00 PM**
Matrix : **NPW**

Radiochemical Analyses								
Combined Radium		1.16 +/- 0.743	0.919	pCi/l				
Radium-226	SM 7500 Ra B M*	0.282 +/- 0.215	0.298	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.878 +/- 0.528	0.621	pCi/l		05/23/17	05/26/17	JR

Lab ID : **20170405-12**
Client ID : **704**
Date Sampled : **5/3/2017 12:05:00 PM**
Matrix : **NPW**

Radiochemical Analyses								
Combined Radium		0.307 +/- 0.709	0.958	pCi/l				
Radium-226	SM 7500 Ra B M*	-0.053 +/- 0.178	0.309	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.307 +/- 0.531	0.649	pCi/l		05/23/17	05/26/17	JR

Lab ID : **20170405-13**
Client ID : **801**
Date Sampled : **5/3/2017 2:40:00 PM**
Matrix : **NPW**

Radiochemical Analyses								
Combined Radium		0.582 +/- 0.612	0.862	pCi/l				

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Radium-226	SM 7500 Ra B M*	0.062 +/- 0.156	0.248	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.520 +/- 0.456	0.614	pCi/l		05/23/17	05/26/17	JR

Lab ID : 20170405-14
Client ID : 802
Date Sampled : 5/3/2017 2:10:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.48 +/- 0.556	0.685	pCi/l				
Radium-226	SM 7500 Ra B M*	0.126 +/- 0.143	0.211	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	1.35 +/- 0.413	0.474	pCi/l		05/23/17	05/26/17	JR

Lab ID : 20170405-15
Client ID : 803
Date Sampled : 5/3/2017 3:30:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.000 +/- 0.660	0.876	pCi/l				
Radium-226	SM 7500 Ra B M*	-0.014 +/- 0.187	0.317	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	-0.327 +/- 0.473	0.559	pCi/l		05/23/17	05/26/17	JR

Lab ID : 20170405-16
Client ID : 804
Date Sampled : 5/3/2017 4:00:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		0.822 +/- 0.599	0.752	pCi/l				
Radium-226	SM 7500 Ra B M*	0.216 +/- 0.154	0.206	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.606 +/- 0.445	0.546	pCi/l		05/23/17	05/26/17	JR

Lab ID : 20170405-17
Client ID : 805
Date Sampled : 5/3/2017 4:30:00 PM
Matrix : NPW

Radiochemical Analyses

Combined Radium		1.20 +/- 0.620	0.706	pCi/l				
Radium-226	SM 7500 Ra B M*	0.245 +/- 0.154	0.195	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.954 +/- 0.466	0.511	pCi/l		05/23/17	05/26/17	JR

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170405-18**								
Client ID : **806R**								
Date Sampled : **5/3/2017 5:00:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.131 +/- 0.634	0.767	pCi/l				
Radium-226	SM 7500 Ra B M*	0.058 +/- 0.136	0.231	pCi/l		06/01/17	06/05/17	AK
Radium-228	EPA 904*	0.073 +/- 0.498	0.536	% Rec		05/23/17	05/26/17	JR
Lab ID : **20170405-19**								
Client ID : **DUPLICATE**								
Date Sampled : **5/3/2017 11:55:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.824 +/- 0.637	0.802	pCi/l				
Radium-226	SM 7500 Ra B M*	0.100 +/- 0.142	0.215	pCi/l		06/01/17	06/06/17	AK
Radium-228	EPA 904*	0.724 +/- 0.495	0.587	RPD		05/23/17	05/30/17	JR

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Batch ID
Radium-226	-0.018	80.7			NC	0.539	86.1	97.5	12.3	R1234
Radium-226	-0.029	107.0			NC	0.731	112.0	132.0	15.9	R1233
Radium-228	-0.133	84.8			NC	0.022	71.3	79.1	9.3	R3963

Lab Approval: 

Ron Eidson
Director of Radiochemistry

*NELAC Certified Parameter BDL = Below Detection Limit

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

SCS Engineers - KS

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

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

Pres Chk

Report to: **Jason Franks**

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

Project Description: **Sibley Generating Station**

City/State Collected:

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

Client Project # **27213167.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): Alex McCormick

Site/Facility ID #

P.O. #

Collected by (signature): Alex M
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

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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

L# 907770

Table #

Acctnum: **AQUAOPKS**
Template: **T115110**
Prelogin: **P598754**
TSR: **206 - Jeff Carr**
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226, RA228 1L-HDPE-Add HNO3	Remarks	Sample # (lab only)
504	Grab	NPW		5/4/17	1045	2	X		
505		NPW			1140	2	X		
506		NPW			1135	2	X		
510		NPW		5/3/17	1150	2	X		
512		NPW			1505	2	X		
601		NPW		5/3/17	955	2	X		
~~602~~		NPW				2	X		
701		NPW			1120	2	X		
702		NPW			1325	2	X		
703		NPW			1245	2	X		

COPY

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

Remarks: RA 226/228 - Report separately and combined.

pH _____ Temp _____
Flow _____ Other _____

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

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Alex M	5/4/17	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
	5/5/17	1700		Ab 38	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK
				5/8/17 1429	

20170405

SCS Engineers - KS

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

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

Pres Chk

Report to: **Jason Franks**

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

Project Description: **Sibley Generating Station**

City/State Collected:

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

Client Project # **27213167.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): Alex McGonigle

Site/Facility ID #

P.O. #

Collected by (signature): Alex McG

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226, RA228 1L-HDPE-Add HNO3	Remarks	Sample # (lab only)
704	Grab	NPW		5/3/17	1205	2	X		
801		NPW			1440	2	X		
802		NPW			1410	2	X		
803		NPW			1530	2	X		
804		NPW			1600	2	X		
805		NPW			1630	2	X		
806R		NPW			1700	2	X		
DUPLICATE		NPW			1155	2	X		
510 MS		NPW			1200	2	X		
510 MSD		NPW			1205	2	X		

Analysis / Container / Preservative

Chain of Custody

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 907790

Table #

Acctnum: **AQUAOPKS**

Template: **T115110**

Prelogin: **P598754**

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: RA 226/228 - Report separately and combined.

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Alex McG	5/4/17	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: Ab °C Bottles Received: 38	
	5/5/17	1700			
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/8/17 Time: 1425	Hold: / Condition: NCF / OK

20170405

SAMPLE LOGIN

Date Received: *5/8/2017 2:29:18* **Lab Number:** 20170405 **Due:**

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20170405-01 B	504	NPW	05/04/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-01 A	504	NPW	05/04/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-02 A	505	NPW	05/04/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-02 B	505	NPW	05/04/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-03 A	506	NPW	05/04/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-03 B	506	NPW	05/04/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-04 A	510	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-04 B	510	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-05 A	510 MS	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-05 B	510 MS	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-06 B	510 MSD	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-06 A	510 MSD	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-07 A	512	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-07 B	512	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						

20170405-08 A	601	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-08 B	601	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-09 A	701	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-09 B	701	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-10 B	702	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-10 A	702	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-11 A	703	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-11 B	703	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-12 A	704	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-12 B	704	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-13 A	801	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-13 B	801	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-14 B	802	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-14 A	802	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-15 A	803	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-15 B	803	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-16 A	804	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-16 B	804	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes

Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-17 A	805	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-17 B	805	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-18 A	806R	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-18 B	806R	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170405-19 B	DUPLICATE	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
20170405-19 A	DUPLICATE	NPW	05/03/17	Plastic	1 L	HNO3, pH < 2	✔	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						

CONTAINER INSPECTION

 # Coolers 4 **Custody Seals Broken** 0 **Temperature:** 4.6 C **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken 0 **Chain of Custody Record** ✓ **Labels in Tact** ✓ **Radiation Survey Complete** N/A

Anomalies Sample time discrepancy for -16 and 17. Labels say 1400 and 1430 while CoC shows 1600 and 1630. times from CoC used

Inspected By: _____ **DATE** 5/8/17

QA or Designee Review: Raymond Thomas **DATE** 05/08/17

Sample Custodian Review: _____ **DATE** 5/8/17

Project Notes:

Jared Morrison
December 16, 2022

ATTACHMENT 1-8

August 2017 Sampling Event Laboratory Report

Case Narrative

Lab No: 20170728

This report contains the analytical results for the 18 sample(s) received under chain of custody by ESC Lab Sciences on 8/3/2017 2:22:51 PM. These samples are associated with your 27213167.16 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

DL for Radiochemistry = MDA DL for Metals and Wet Chemistry = MDL DL for Drinking Water = SDWA

Observations / Nonconformances

L926674

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170728-01**								
Client ID : **504**								
Date Sampled : **8/1/2017 4:10:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.08 +/- 0.672	1.09	pCi/l				
Radium-226	SM 7500 Ra B M*	0.118 +/- 0.159	0.230	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	0.965 +/- 0.513	0.858	pCi/l		08/24/17	08/30/17	JR
Lab ID : **20170728-02**								
Client ID : **505**								
Date Sampled : **8/1/2017 4:25:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0 +/- 0.702	1.07	pCi/l				
Radium-226	SM 7500 Ra B M*	-0.013 +/- 0.159	0.309	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	-0.471 +/- 0.543	0.765	pCi/l		08/24/17	08/30/17	JR
Lab ID : **20170728-03**								
Client ID : **510**								
Date Sampled : **8/1/2017 10:35:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.862 +/- 0.621	0.981	pCi/l				
Radium-226	SM 7500 Ra B M*	0.105 +/- 0.140	0.203	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	0.757 +/- 0.481	0.778	pCi/l		08/24/17	08/30/17	JR
Lab ID : **20170728-04**								
Client ID : **510 MS**								
Date Sampled : **8/1/2017 10:45:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	103		% Rec		08/14/17	08/18/17	RE
Radium-228	EPA 904*	76.3		% Rec		08/24/17	08/30/17	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20170728-05								
Client ID : 510 MSD								
Date Sampled : 8/1/2017 10:50:00 AM								
Matrix : NPW								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	11.5		RPD		08/14/17	08/18/17	RE
Radium-228	EPA 904*	2.2		RPD		08/24/17	08/30/17	JR
Lab ID : 20170728-06								
Client ID : 512								
Date Sampled : 8/2/2017 2:00:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		1.31 +/- 0.528	0.797	pCi/l				
Radium-226	SM 7500 Ra B M*	0.040 +/- 0.109	0.208	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	1.27 +/- 0.419	0.589	pCi/l		08/24/17	08/30/17	JR
Lab ID : 20170728-07								
Client ID : 601								
Date Sampled : 8/2/2017 12:55:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		1.38 +/- 0.598	0.957	pCi/l				
Radium-226	SM 7500 Ra B M*	0.065 +/- 0.176	0.300	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	1.31 +/- 0.422	0.657	pCi/l		08/24/17	08/30/17	JR
Lab ID : 20170728-08								
Client ID : 701								
Date Sampled : 8/1/2017 10:25:00 AM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.997 +/- 0.708	1.01	pCi/l				
Radium-226	SM 7500 Ra B M*	0.000 +/- 0.215	0.357	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	0.997 +/- 0.493	0.651	pCi/l		08/24/17	08/30/17	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170728-09**								
Client ID : **702**								
Date Sampled : **8/1/2017 11:10:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.02 +/- 0.608	0.762	pCi/l				
Radium-226	SM 7500 Ra B M*	0.337 +/- 0.242	0.255	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	0.686 +/- 0.366	0.507	pCi/l		08/24/17	08/30/17	JR
Lab ID : **20170728-10**								
Client ID : **703**								
Date Sampled : **8/1/2017 11:50:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.36 +/- 0.675	0.990	pCi/l				
Radium-226	SM 7500 Ra B M*	0.158 +/- 0.189	0.260	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	1.20 +/- 0.486	0.730	pCi/l		08/24/17	08/30/17	JR
Lab ID : **20170728-11**								
Client ID : **704**								
Date Sampled : **8/1/2017 1:00:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.598 +/- 0.734	0.937	pCi/l				
Radium-226	SM 7500 Ra B M*	0.199 +/- 0.202	0.258	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	0.399 +/- 0.532	0.679	pCi/l		08/24/17	08/30/17	JR
Lab ID : **20170728-12**								
Client ID : **801**								
Date Sampled : **8/1/2017 2:50:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.681 +/- 0.682	0.796	pCi/l				
Radium-226	SM 7500 Ra B M*	0.292 +/- 0.211	0.201	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	0.389 +/- 0.471	0.595	pCi/l		08/24/17	08/30/17	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20170728-13								
Client ID : 802								
Date Sampled : 8/1/2017 2:10:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.650 +/- 0.653	0.951	pCi/l				
Radium-226	SM 7500 Ra B M*	0.041 +/- 0.259	0.412	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	0.609 +/- 0.394	0.539	pCi/l		08/24/17	08/30/17	JR
Lab ID : 20170728-14								
Client ID : 803								
Date Sampled : 8/1/2017 1:55:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		1.73 +/- 0.750	1.04	pCi/l				
Radium-226	SM 7500 Ra B M*	0.380 +/- 0.278	0.324	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	1.35 +/- 0.472	0.713	pCi/l		08/24/17	08/30/17	JR
Lab ID : 20170728-15								
Client ID : 804								
Date Sampled : 8/1/2017 2:35:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		1.28 +/- 0.672	0.922	pCi/l				
Radium-226	SM 7500 Ra B M*	0.171 +/- 0.169	0.196	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	1.11 +/- 0.503	0.726	pCi/l		08/24/17	08/30/17	JR
Lab ID : 20170728-16								
Client ID : 805								
Date Sampled : 8/1/2017 3:20:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.387 +/- 0.745	0.935	pCi/l				
Radium-226	SM 7500 Ra B M*	0.364 +/- 0.224	0.240	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	0.023 +/- 0.521	0.695	pCi/l		08/24/17	08/30/17	JR

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Client	:	SCS Engineers
Client Project	:	27213167.16
Lab Number	:	20170728
Date Reported	:	08/31/17
Date Received	:	08/03/17
Page Number	:	6 of 6

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170728-17**								
Client ID : **806R**								
Date Sampled : **8/1/2017 3:30:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.494 +/- 0.564	0.963	pCi/l				
Radium-226	SM 7500 Ra B M*	0.083 +/- 0.146	0.233	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	0.411 +/- 0.418	0.730	pCi/l		08/24/17	08/30/17	JR
Lab ID : **20170728-18**								
Client ID : **DUPLICATE**								
Date Sampled : **8/1/2017 10:40:00 AM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		1.21 +/- 0.662	0.907	pCi/l				
Radium-226	SM 7500 Ra B M*	0.162 +/- 0.160	0.186	pCi/l		08/14/17	08/18/17	RE
Radium-228	EPA 904*	1.05 +/- 0.502	0.721	pCi/l		08/24/17	08/30/17	JR

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Batch ID
Radium-226	0.000	116.0			NC	1.070	103.0	116.0	11.5	R1267
Radium-228	0.279	84.6			27.2	0.611	76.3	74.4	0.1	R3994

Lab Approval:

Ron Eidson
Director of Radiochemistry

*NELAC Certified Parameter BDL = Below Detection Limit

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Engineers - KS

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

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

Pres Chk

Report to: Jason Franks

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

Project Description: Sibley Generating Station

City/State Collected:

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

Client Project # 27213167.16

Lab Project # AQUAOPKS-SIBLEY

Collected by (print): Adam Parris

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	RA226, RA228 1L-HDPE-Add HNO3
-01 504	Grab	NPW	-	8/1/17	1610	2	X
-02 505		NPW	-	8/1/17	1625	2	X
506		NPW	-	8/2/17	0940	2	X
-03 510		NPW	-	8/1/17	1035	2	X
-06 512		NPW	-	8/2/17	1400	2	X
-07 601		NPW	-	↓	1235	2	X
603		NPW				2	X
-08 701	Grab	NPW	-	8/1/17	1025	2	X
-09 702	Grab	NPW	-	8/1/17	1110	2	X
-10 703	Grab	NPW	-	8/1/17	1150	2	X

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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

L# 926674

Table#

Acctnum: AQUAOPKS
Template: T115110
Prelogin: P610583
TSR: 206 - Jeff Carr
PB:

Shipped Via:

Remarks	Sample # (lab only)

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

Remarks: RA 226/228 - Report separately and combined.

ESC KC

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/2/2017	1530	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/2/17	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: Amb °C Bottles Received: 36

Date: 8/3/17 Time: 1422

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

20170728

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

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

Pres Chk

Report to: Jason Franks

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

Project Description: Sibley Generating Station

City/State Collected:

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

Client Project # 27213167.16

Lab Project # AQUAOPKS-SIBLEY

Collected by (print): Adam Parris

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

No. of Cntrs

Analysis / Container / Preservative

RA226, RA228 1L-HDPE-Add HNO3

	Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226, RA228 1L-HDPE-Add HNO3
-11	704	Grab	NPW	-	8/1/17	1300	2	X
-12	801	Grab	NPW	-	8/1/17	1450	2	X
-13	802		NPW	-		1410	2	X
-14	803		NPW	-		1355	2	X
-15	804		NPW	-		1435	2	X
-16	805		NPW	-		1520	2	X
-17	806R		NPW	-		1530	2	X
-18	DUPLICATE		NPW	-		1040	2	X
-04	510 MS		NPW	-		1045	2	X
-05	510 MSD		NPW	-		1050	2	X

Chain of Custody Page 2 of 2

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

L# 926674

Table #

Acctnum: AQUAOPKS
Template: T115110
Prelogin: P610583
TSR: 206 - Jeff Carr
PB:

Shipped Via:

Remarks | Sample # (lab only)

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

Remarks: RA 226/228 - Report separately and combined.

FSC KC

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/2/2017	1530	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/2/17	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 4.6 °C Bottles Received: 36

If preservation required by Login: Date/Time

Date: 8/3/17 Time: 1422

Hold:

Condition: NCF / OK

20170727

SAMPLE LOGIN

Date Received: *8/3/2017 2:22:51*

Lab Number: 20170728

Due: 8/31/2017

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20170728-01 B	504	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170728-01 A	504	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170728-02 A	505	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170728-02 B	505	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170728-03 A	510	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170728-03 B	510	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170728-04 A	510 MS	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170728-04 B	510 MS	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170728-05 A	510 MSD	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170728-05 B	510 MSD	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170728-06 B	512	NPW	08/02/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170728-06 A	512	NPW	08/02/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170728-07 A	601	NPW	08/02/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170728-07 B	601	NPW	08/02/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						

20170728-08 A	701	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	✔	Yes Yes
20170728-08 B	701	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	✔	Yes Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*					
20170728-09 A	702	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
20170728-09 B	702	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*					
20170728-10 B	703	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
20170728-10 A	703	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*					
20170728-11 A	704	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
20170728-11 B	704	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*					
20170728-12 A	801	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
20170728-12 B	801	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*					
20170728-13 A	802	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
20170728-13 B	802	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*					
20170728-14 A	803	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
20170728-14 B	803	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*					
20170728-15 B	804	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
20170728-15 A	804	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes Yes
Radium-226			SM 7500 Ra B M*					
Radium-228			EPA 904*					
20170728-16 A	805	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	✔	Yes Yes
20170728-16 B	805	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	✔	Yes Yes

Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170728-17 A	806R	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170728-17 B	806R	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170728-18 B	DUPLICATE	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170728-18 A	DUPLICATE	NPW	08/01/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						

CONTAINER INSPECTION

 # Coolers 3 **Custody Seals Broken** Ø **Temperature:** 4.5 C **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Ø **Chain of Custody Record** ✓ **Labels in Tact** ✓ **Radiation Survey Complete** N/A

Anomalies

Inspected By: _____ **DATE** 8/3/17

QA or Designee Review: Raymond Thomas **DATE** 08/03/17

Sample Custodian Review: _____ **DATE** 8/3/17

Project Notes:

ANALYTICAL REPORT

August 14, 2017

SCS Engineers - KS

Sample Delivery Group:	L926752
Samples Received:	08/03/2017
Project Number:	27213169.16
Description:	Sibley Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

504 L926752-01 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 16:10
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 20:15	08/04/17 20:15	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:13	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:10	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:01	LAT

505 L926752-02 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 16:25
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 20:29	08/04/17 20:29	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:15	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:13	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:04	LAT

510 L926752-03 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 10:35
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 20:44	08/04/17 20:44	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 12:31	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:00	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 18:46	LAT

512 L926752-04 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 14:00
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 22:10	08/04/17 22:10	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:17	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:15	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:08	LAT

601 L926752-05 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 12:55
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 22:25	08/04/17 22:25	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:19	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:23	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:19	LAT

701 L926752-06 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 10:25
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 22:39	08/04/17 22:39	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:30	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:26	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:22	LAT

702 L926752-07 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 11:10
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 22:54	08/04/17 22:54	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:32	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:29	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:26	LAT

703 L926752-08 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 11:50
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 23:08	08/04/17 23:08	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:35	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:31	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:30	LAT

704 L926752-09 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 13:00
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 23:22	08/04/17 23:22	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:39	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:34	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:33	LAT

801 L926752-10 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 14:50
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 23:37	08/04/17 23:37	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:41	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:37	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:37	LAT

802 L926752-11 GW

Collected by: Adam Parris | Collected date/time: 08/01/17 14:10 | Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/04/17 23:51	08/04/17 23:51	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:44	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:39	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:40	LAT

803 L926752-12 GW

Collected by: Adam Parris | Collected date/time: 08/01/17 13:55 | Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/05/17 01:03	08/05/17 01:03	SAM
Wet Chemistry by Method 9056A	WG1006400	5	08/07/17 22:26	08/07/17 22:26	NJM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:46	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:42	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:44	LAT

804 L926752-13 GW

Collected by: Adam Parris | Collected date/time: 08/01/17 14:35 | Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005851	1	08/05/17 01:18	08/05/17 01:18	SAM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:48	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:44	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:47	LAT

805 L926752-14 GW

Collected by: Adam Parris | Collected date/time: 08/01/17 15:20 | Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005852	1	08/05/17 15:06	08/05/17 15:06	DR
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:50	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:47	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 19:58	LAT

806R L926752-15 GW

Collected by: Adam Parris | Collected date/time: 08/01/17 15:30 | Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005835	1	08/04/17 15:18	08/04/17 15:54	EG
Wet Chemistry by Method 9056A	WG1005852	1	08/05/17 15:21	08/05/17 15:21	DR
Wet Chemistry by Method 9056A	WG1006943	5	08/08/17 19:20	08/08/17 19:20	NJM
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 13:57	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:55	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 20:02	LAT

DUPLICATE L926752-16 GW

Collected by: Adam Parris
Collected date/time: 08/01/17 10:40
Received date/time: 08/03/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1005836	1	08/04/17 17:51	08/04/17 18:23	EG
Wet Chemistry by Method 9056A	WG1005852	1	08/05/17 15:35	08/05/17 15:35	DR
Mercury by Method 7470A	WG1005785	1	08/04/17 10:18	08/07/17 14:00	ABL
Metals (ICP) by Method 6010B	WG1007110	1	08/09/17 15:20	08/10/17 02:57	CCE
Metals (ICPMS) by Method 6020	WG1007208	1	08/09/17 09:12	08/12/17 20:05	LAT

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	156000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	ND		1000	1	08/04/2017 20:15	WG1005851
Fluoride	189		100	1	08/04/2017 20:15	WG1005851
Sulfate	23300		5000	1	08/04/2017 20:15	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:13	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	116		5.00	1	08/10/2017 02:10	WG1007110
Boron	ND		200	1	08/10/2017 02:10	WG1007110
Calcium	30500		1000	1	08/10/2017 02:10	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:10	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:10	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:10	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:10	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:01	WG1007208
Arsenic	ND		2.00	1	08/12/2017 19:01	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:01	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:01	WG1007208
Lead	ND		2.00	1	08/12/2017 19:01	WG1007208
Selenium	3.42		2.00	1	08/12/2017 19:01	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:01	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	156000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	1180	B	1000	1	08/04/2017 20:29	WG1005851
Fluoride	206		100	1	08/04/2017 20:29	WG1005851
Sulfate	14400		5000	1	08/04/2017 20:29	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:15	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	93.7		5.00	1	08/10/2017 02:13	WG1007110
Boron	ND		200	1	08/10/2017 02:13	WG1007110
Calcium	25100		1000	1	08/10/2017 02:13	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:13	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:13	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:13	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:13	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:04	WG1007208
Arsenic	ND		2.00	1	08/12/2017 19:04	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:04	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:04	WG1007208
Lead	ND		2.00	1	08/12/2017 19:04	WG1007208
Selenium	2.30		2.00	1	08/12/2017 19:04	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:04	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	456000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3530		1000	1	08/04/2017 20:44	WG1005851
Fluoride	315		100	1	08/04/2017 20:44	WG1005851
Sulfate	16800		5000	1	08/04/2017 20:44	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 12:31	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	362		5.00	1	08/10/2017 02:00	WG1007110
Boron	ND		200	1	08/10/2017 02:00	WG1007110
Calcium	120000	V	1000	1	08/10/2017 02:00	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:00	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:00	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:00	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:00	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 18:46	WG1007208
Arsenic	ND		2.00	1	08/12/2017 18:46	WG1007208
Beryllium	ND		2.00	1	08/12/2017 18:46	WG1007208
Cadmium	ND		1.00	1	08/12/2017 18:46	WG1007208
Lead	ND		2.00	1	08/12/2017 18:46	WG1007208
Selenium	3.50		2.00	1	08/12/2017 18:46	WG1007208
Thallium	ND		2.00	1	08/12/2017 18:46	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	414000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3530		1000	1	08/04/2017 22:10	WG1005851
Fluoride	301		100	1	08/04/2017 22:10	WG1005851
Sulfate	28100		5000	1	08/04/2017 22:10	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:17	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	409		5.00	1	08/10/2017 02:15	WG1007110
Boron	ND		200	1	08/10/2017 02:15	WG1007110
Calcium	102000		1000	1	08/10/2017 02:15	WG1007110
Chromium	13.4		10.0	1	08/10/2017 02:15	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:15	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:15	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:15	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:08	WG1007208
Arsenic	ND		2.00	1	08/12/2017 19:08	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:08	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:08	WG1007208
Lead	2.73	B	2.00	1	08/12/2017 19:08	WG1007208
Selenium	5.48		2.00	1	08/12/2017 19:08	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:08	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	393000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3370		1000	1	08/04/2017 22:25	WG1005851
Fluoride	257		100	1	08/04/2017 22:25	WG1005851
Sulfate	9330		5000	1	08/04/2017 22:25	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:19	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	345		5.00	1	08/10/2017 02:23	WG1007110
Boron	ND		200	1	08/10/2017 02:23	WG1007110
Calcium	102000		1000	1	08/10/2017 02:23	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:23	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:23	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:23	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:23	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:19	WG1007208
Arsenic	ND		2.00	1	08/12/2017 19:19	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:19	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:19	WG1007208
Lead	ND		2.00	1	08/12/2017 19:19	WG1007208
Selenium	5.00		2.00	1	08/12/2017 19:19	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:19	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	298000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8260		1000	1	08/04/2017 22:39	WG1005851
Fluoride	130		100	1	08/04/2017 22:39	WG1005851
Sulfate	15100		5000	1	08/04/2017 22:39	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:30	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	186		5.00	1	08/10/2017 02:26	WG1007110
Boron	ND		200	1	08/10/2017 02:26	WG1007110
Calcium	85600		1000	1	08/10/2017 02:26	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:26	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:26	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:26	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:26	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:22	WG1007208
Arsenic	4.83		2.00	1	08/12/2017 19:22	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:22	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:22	WG1007208
Lead	ND		2.00	1	08/12/2017 19:22	WG1007208
Selenium	ND		2.00	1	08/12/2017 19:22	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:22	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	298000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8830		1000	1	08/04/2017 22:54	WG1005851
Fluoride	127		100	1	08/04/2017 22:54	WG1005851
Sulfate	20200		5000	1	08/04/2017 22:54	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:32	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	348		5.00	1	08/10/2017 02:29	WG1007110
Boron	ND		200	1	08/10/2017 02:29	WG1007110
Calcium	90000		1000	1	08/10/2017 02:29	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:29	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:29	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:29	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:29	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:26	WG1007208
Arsenic	24.1		2.00	1	08/12/2017 19:26	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:26	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:26	WG1007208
Lead	ND		2.00	1	08/12/2017 19:26	WG1007208
Selenium	ND		2.00	1	08/12/2017 19:26	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:26	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	564000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	22500		1000	1	08/04/2017 23:08	WG1005851
Fluoride	373		100	1	08/04/2017 23:08	WG1005851
Sulfate	ND		5000	1	08/04/2017 23:08	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:35	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	281		5.00	1	08/10/2017 02:31	WG1007110
Boron	596		200	1	08/10/2017 02:31	WG1007110
Calcium	138000		1000	1	08/10/2017 02:31	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:31	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:31	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:31	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:31	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:30	WG1007208
Arsenic	250		2.00	1	08/12/2017 19:30	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:30	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:30	WG1007208
Lead	ND		2.00	1	08/12/2017 19:30	WG1007208
Selenium	ND		2.00	1	08/12/2017 19:30	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:30	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	346000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	13600		1000	1	08/04/2017 23:22	WG1005851
Fluoride	162		100	1	08/04/2017 23:22	WG1005851
Sulfate	33400		5000	1	08/04/2017 23:22	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:39	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	147		5.00	1	08/10/2017 02:34	WG1007110
Boron	ND		200	1	08/10/2017 02:34	WG1007110
Calcium	92000		1000	1	08/10/2017 02:34	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:34	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:34	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:34	WG1007110
Molybdenum	9.22		5.00	1	08/10/2017 02:34	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:33	WG1007208
Arsenic	ND		2.00	1	08/12/2017 19:33	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:33	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:33	WG1007208
Lead	3.38	B	2.00	1	08/12/2017 19:33	WG1007208
Selenium	ND		2.00	1	08/12/2017 19:33	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:33	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	527000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	91800		1000	1	08/04/2017 23:37	WG1005851
Fluoride	174		100	1	08/04/2017 23:37	WG1005851
Sulfate	56500		5000	1	08/04/2017 23:37	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:41	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	111		5.00	1	08/10/2017 02:37	WG1007110
Boron	307		200	1	08/10/2017 02:37	WG1007110
Calcium	138000		1000	1	08/10/2017 02:37	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:37	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:37	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:37	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:37	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:37	WG1007208
Arsenic	ND		2.00	1	08/12/2017 19:37	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:37	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:37	WG1007208
Lead	ND		2.00	1	08/12/2017 19:37	WG1007208
Selenium	ND		2.00	1	08/12/2017 19:37	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:37	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	357000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	43500		1000	1	08/04/2017 23:51	WG1005851
Fluoride	174		100	1	08/04/2017 23:51	WG1005851
Sulfate	54200		5000	1	08/04/2017 23:51	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:44	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	162		5.00	1	08/10/2017 02:39	WG1007110
Boron	ND		200	1	08/10/2017 02:39	WG1007110
Calcium	78900		1000	1	08/10/2017 02:39	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:39	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:39	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:39	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:39	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:40	WG1007208
Arsenic	2.06		2.00	1	08/12/2017 19:40	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:40	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:40	WG1007208
Lead	ND		2.00	1	08/12/2017 19:40	WG1007208
Selenium	2.37		2.00	1	08/12/2017 19:40	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:40	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	500000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	16300		1000	1	08/05/2017 01:03	WG1005851
Fluoride	281		100	1	08/05/2017 01:03	WG1005851
Sulfate	124000		25000	5	08/07/2017 22:26	WG1006400

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:46	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	125		5.00	1	08/10/2017 02:42	WG1007110
Boron	2690		200	1	08/10/2017 02:42	WG1007110
Calcium	117000		1000	1	08/10/2017 02:42	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:42	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:42	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:42	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:42	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:44	WG1007208
Arsenic	2.57		2.00	1	08/12/2017 19:44	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:44	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:44	WG1007208
Lead	ND		2.00	1	08/12/2017 19:44	WG1007208
Selenium	ND		2.00	1	08/12/2017 19:44	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:44	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	602000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	17100		1000	1	08/05/2017 01:18	WG1005851
Fluoride	206		100	1	08/05/2017 01:18	WG1005851
Sulfate	ND		5000	1	08/05/2017 01:18	WG1005851

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:48	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	365		5.00	1	08/10/2017 02:44	WG1007110
Boron	5080		200	1	08/10/2017 02:44	WG1007110
Calcium	153000		1000	1	08/10/2017 02:44	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:44	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:44	WG1007110
Lithium	23.2		15.0	1	08/10/2017 02:44	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:44	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:47	WG1007208
Arsenic	4.18		2.00	1	08/12/2017 19:47	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:47	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:47	WG1007208
Lead	ND		2.00	1	08/12/2017 19:47	WG1007208
Selenium	ND		2.00	1	08/12/2017 19:47	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:47	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	347000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	10800		1000	1	08/05/2017 15:06	WG1005852
Fluoride	194		100	1	08/05/2017 15:06	WG1005852
Sulfate	54200		5000	1	08/05/2017 15:06	WG1005852

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:50	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	163		5.00	1	08/10/2017 02:47	WG1007110
Boron	ND		200	1	08/10/2017 02:47	WG1007110
Calcium	100000		1000	1	08/10/2017 02:47	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:47	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:47	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:47	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:47	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 19:58	WG1007208
Arsenic	ND		2.00	1	08/12/2017 19:58	WG1007208
Beryllium	ND		2.00	1	08/12/2017 19:58	WG1007208
Cadmium	ND		1.00	1	08/12/2017 19:58	WG1007208
Lead	ND		2.00	1	08/12/2017 19:58	WG1007208
Selenium	ND		2.00	1	08/12/2017 19:58	WG1007208
Thallium	ND		2.00	1	08/12/2017 19:58	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	599000		10000	1	08/04/2017 15:54	WG1005835

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	27300		1000	1	08/05/2017 15:21	WG1005852
Fluoride	223		100	1	08/05/2017 15:21	WG1005852
Sulfate	181000		25000	5	08/08/2017 19:20	WG1006943

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 13:57	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	93.0		5.00	1	08/10/2017 02:55	WG1007110
Boron	4610		200	1	08/10/2017 02:55	WG1007110
Calcium	149000		1000	1	08/10/2017 02:55	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:55	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:55	WG1007110
Lithium	17.5		15.0	1	08/10/2017 02:55	WG1007110
Molybdenum	1330		5.00	1	08/10/2017 02:55	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 20:02	WG1007208
Arsenic	6.85		2.00	1	08/12/2017 20:02	WG1007208
Beryllium	ND		2.00	1	08/12/2017 20:02	WG1007208
Cadmium	ND		1.00	1	08/12/2017 20:02	WG1007208
Lead	ND		2.00	1	08/12/2017 20:02	WG1007208
Selenium	ND		2.00	1	08/12/2017 20:02	WG1007208
Thallium	ND		2.00	1	08/12/2017 20:02	WG1007208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	476000		10000	1	08/04/2017 18:23	WG1005836

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3420		1000	1	08/05/2017 15:35	WG1005852
Fluoride	319		100	1	08/05/2017 15:35	WG1005852
Sulfate	16800		5000	1	08/05/2017 15:35	WG1005852

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/07/2017 14:00	WG1005785

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	362		5.00	1	08/10/2017 02:57	WG1007110
Boron	ND		200	1	08/10/2017 02:57	WG1007110
Calcium	120000		1000	1	08/10/2017 02:57	WG1007110
Chromium	ND		10.0	1	08/10/2017 02:57	WG1007110
Cobalt	ND		10.0	1	08/10/2017 02:57	WG1007110
Lithium	ND		15.0	1	08/10/2017 02:57	WG1007110
Molybdenum	ND		5.00	1	08/10/2017 02:57	WG1007110

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/12/2017 20:05	WG1007208
Arsenic	ND		2.00	1	08/12/2017 20:05	WG1007208
Beryllium	ND		2.00	1	08/12/2017 20:05	WG1007208
Cadmium	ND		1.00	1	08/12/2017 20:05	WG1007208
Lead	ND		2.00	1	08/12/2017 20:05	WG1007208
Selenium	4.05		2.00	1	08/12/2017 20:05	WG1007208
Thallium	ND		2.00	1	08/12/2017 20:05	WG1007208

Method Blank (MB)

(MB) R3239794-1 08/04/17 15:54

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

L926752-03 Original Sample (OS) • Duplicate (DUP)

(OS) L926752-03 08/04/17 15:54 • (DUP) R3239794-4 08/04/17 15:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	456000	458000	1	0.438		5

L926752-10 Original Sample (OS) • Duplicate (DUP)

(OS) L926752-10 08/04/17 15:54 • (DUP) R3239794-5 08/04/17 15:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	527000	535000	1	1.51		5

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

(LCS) R3239794-2 08/04/17 15:54 • (LCSD) R3239794-3 08/04/17 15:54

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	%	%	%			%	%
Dissolved Solids	8800000	8450000	8550000	96.0	97.2	85.0-115			1.18	5

Method Blank (MB)

(MB) R3239734-1 08/04/17 18:23

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

L926569-01 Original Sample (OS) • Duplicate (DUP)

(OS) L926569-01 08/04/17 18:23 • (DUP) R3239734-4 08/04/17 18:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	643000	625000	1	2.73		5

L926756-04 Original Sample (OS) • Duplicate (DUP)

(OS) L926756-04 08/04/17 18:23 • (DUP) R3239734-5 08/04/17 18:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	2130000	2100000	1	1.42		5

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

(LCS) R3239734-2 08/04/17 18:23 • (LCSD) R3239734-3 08/04/17 18:23

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	%	%	%			%	%
Dissolved Solids	8800000	8570000	8580000	97.4	97.5	85.0-115			0.117	5

Method Blank (MB)

(MB) R3238769-1 08/04/17 10:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	120	J	51.9	1000
Fluoride	10.3	J	9.90	100
Sulfate	U		77.4	5000

L926752-03 Original Sample (OS) • Duplicate (DUP)

(OS) L926752-03 08/04/17 20:44 • (DUP) R3238769-4 08/04/17 20:58

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3530	3400	1	4		15
Sulfate	16800	16700	1	0		15

L926752-11 Original Sample (OS) • Duplicate (DUP)

(OS) L926752-11 08/04/17 23:51 • (DUP) R3238769-7 08/05/17 00:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	43500	43600	1	0		15
Sulfate	54200	54200	1	0		15

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

(LCS) R3238769-2 08/04/17 10:41 • (LCSD) R3238769-3 08/04/17 10:56

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39500	39500	99	99	80-120			0	15
Fluoride	8000	8080	8060	101	101	80-120			0	15
Sulfate	40000	39800	39700	100	99	80-120			0	15

L926752-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L926752-03 08/04/17 20:44 • (MS) R3238769-5 08/04/17 21:13 • (MSD) R3238769-6 08/04/17 21:27

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	3530	51100	51000	95	95	1	80-120			0	15
Sulfate	50000	16800	63100	63000	93	92	1	80-120			0	15

L926752-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L926752-11 08/04/17 23:51 • (MS) R3238769-8 08/05/17 00:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	43500	86400	86	1	80-120	
Sulfate	50000	54200	96000	84	1	80-120	

Method Blank (MB)

(MB) R3239097-1 08/05/17 12:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	131	J	51.9	1000
Fluoride	12.9	J	9.90	100
Sulfate	U		77.4	5000

L926704-01 Original Sample (OS) • Duplicate (DUP)

(OS) L926704-01 08/05/17 14:38 • (DUP) R3239097-4 08/05/17 14:52

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	9240	9270	1	0		15
Fluoride	731	765	1	5		15
Sulfate	ND	3600	1	0		15

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

(LCS) R3239097-2 08/05/17 13:11 • (LCSD) R3239097-3 08/05/17 13:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39600	39600	99	99	80-120			0	15
Fluoride	8000	8090	8080	101	101	80-120			0	15
Sulfate	40000	39800	39700	99	99	80-120			0	15

L926752-16 Original Sample (OS) • Matrix Spike (MS)

(OS) L926752-16 08/05/17 15:35 • (MS) R3239097-5 08/05/17 16:19

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	3420	58900	111	1	80-120	
Fluoride	5000	319	5660	107	1	80-120	
Sulfate	50000	16800	71300	109	1	80-120	

L926794-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L926794-10 08/05/17 19:55 • (MS) R3239097-6 08/05/17 20:09 • (MSD) R3239097-7 08/05/17 20:24

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	47400	104000	104000	114	112	1	80-120	E	E	1	15
Fluoride	5000	375	6080	5990	114	112	1	80-120			1	15

L926794-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L926794-10 08/05/17 19:55 • (MS) R3239097-6 08/05/17 20:09 • (MSD) R3239097-7 08/05/17 20:24

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	17300	73900	73200	113	112	1	80-120			1	15

Method Blank (MB)

(MB) R3239201-1 08/07/17 21:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Sulfate	88.8	J	77.4	5000

L926984-01 Original Sample (OS) • Duplicate (DUP)

(OS) L926984-01 08/07/17 22:40 • (DUP) R3239201-4 08/07/17 22:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	ND	202	1	0		15

L926984-14 Original Sample (OS) • Duplicate (DUP)

(OS) L926984-14 08/08/17 03:24 • (DUP) R3239201-6 08/08/17 03:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	ND	0.000	1	0		15

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

(LCS) R3239201-2 08/07/17 21:26 • (LCSD) R3239201-3 08/07/17 21:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Sulfate	40000	40000	40100	100	100	80-120			0	15

L926984-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L926984-01 08/07/17 22:40 • (MS) R3239201-5 08/07/17 23:10

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Sulfate	50000	ND	43200	86	1	80-120	

L927108-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L927108-03 08/08/17 04:38 • (MS) R3239201-7 08/08/17 04:53 • (MSD) R3239201-8 08/08/17 05:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Sulfate	50000	41200	85300	85200	88	88	1	80-120			0	15

Method Blank (MB)

(MB) R3239615-1 08/08/17 06:59

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

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

(LCS) R3239615-2 08/08/17 07:12 • (LCSD) R3239615-3 08/08/17 07:25

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	%	%	%			%	%
Sulfate	40000	40300	40100	101	100	80-120			1	15

Method Blank (MB)

(MB) R3239005-4 08/07/17 12:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3239005-5 08/07/17 12:22 • (LCSD) R3239005-6 08/07/17 12:24

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	%	%	%			%	%
Mercury	3.00	2.90	2.74	97	91	80-120			6	20

L926752-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L926752-03 08/07/17 12:31 • (MS) R3239005-7 08/07/17 12:34 • (MSD) R3239005-8 08/07/17 12:36

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	%	%		%			%	%
Mercury	3.00	ND	2.99	2.74	100	91	1	75-125			9	20

Method Blank (MB)

(MB) R3239925-1 08/10/17 01:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Barium	U		1.70	5.00
Boron	U		12.6	200
Calcium	U		46.3	1000
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0
Lithium	U		5.30	15.0
Molybdenum	U		1.60	5.00

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

(LCS) R3239925-2 08/10/17 01:55 • (LCSD) R3239925-3 08/10/17 01:57

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	%	%	%			%	%
Barium	1000	1020	999	102	100	80-120			2	20
Boron	1000	925	918	93	92	80-120			1	20
Calcium	10000	9670	9530	97	95	80-120			1	20
Chromium	1000	969	955	97	95	80-120			1	20
Cobalt	1000	996	986	100	99	80-120			1	20
Lithium	1000	1040	1020	104	102	80-120			1	20
Molybdenum	1000	1010	999	101	100	80-120			1	20

L926752-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L926752-03 08/10/17 02:00 • (MS) R3239925-5 08/10/17 02:05 • (MSD) R3239925-6 08/10/17 02:07

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	%	%		%			%	%
Barium	1000	362	1370	1370	101	101	1	75-125			0	20
Boron	1000	ND	986	984	91	91	1	75-125			0	20
Calcium	10000	120000	128000	127000	79	69	1	75-125		V	1	20
Chromium	1000	ND	967	965	96	96	1	75-125			0	20
Cobalt	1000	ND	981	975	98	97	1	75-125			1	20
Lithium	1000	ND	1040	1030	103	102	1	75-125			0	20
Molybdenum	1000	ND	1020	1020	102	102	1	75-125			0	20

Method Blank (MB)

(MB) R3240736-1 08/12/17 18:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Lead	1.26	J	0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3240736-2 08/12/17 18:39 • (LCSD) R3240736-3 08/12/17 18:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	52.4	52.3	105	105	80-120			0	20
Arsenic	50.0	50.8	49.6	102	99	80-120			2	20
Beryllium	50.0	52.7	52.6	105	105	80-120			0	20
Cadmium	50.0	52.5	53.0	105	106	80-120			1	20
Lead	50.0	50.8	50.1	102	100	80-120			1	20
Selenium	50.0	51.0	51.2	102	102	80-120			0	20
Thallium	50.0	49.2	48.4	98	97	80-120			2	20

L926752-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L926752-03 08/12/17 18:46 • (MS) R3240736-5 08/12/17 18:54 • (MSD) R3240736-6 08/12/17 18:57

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 %
Antimony	50.0	ND	54.2	53.5	108	107	1	75-125			1	20
Arsenic	50.0	ND	49.5	49.8	99	100	1	75-125			1	20
Beryllium	50.0	ND	51.6	52.3	103	105	1	75-125			1	20
Cadmium	50.0	ND	53.6	52.9	107	106	1	75-125			1	20
Lead	50.0	ND	50.3	50.8	99	100	1	75-125			1	20
Selenium	50.0	3.50	55.8	54.7	105	102	1	75-125			2	20
Thallium	50.0	ND	49.3	49.6	99	99	1	75-125			1	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

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

ACCREDITATIONS & LOCATIONS

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

State Accreditations

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

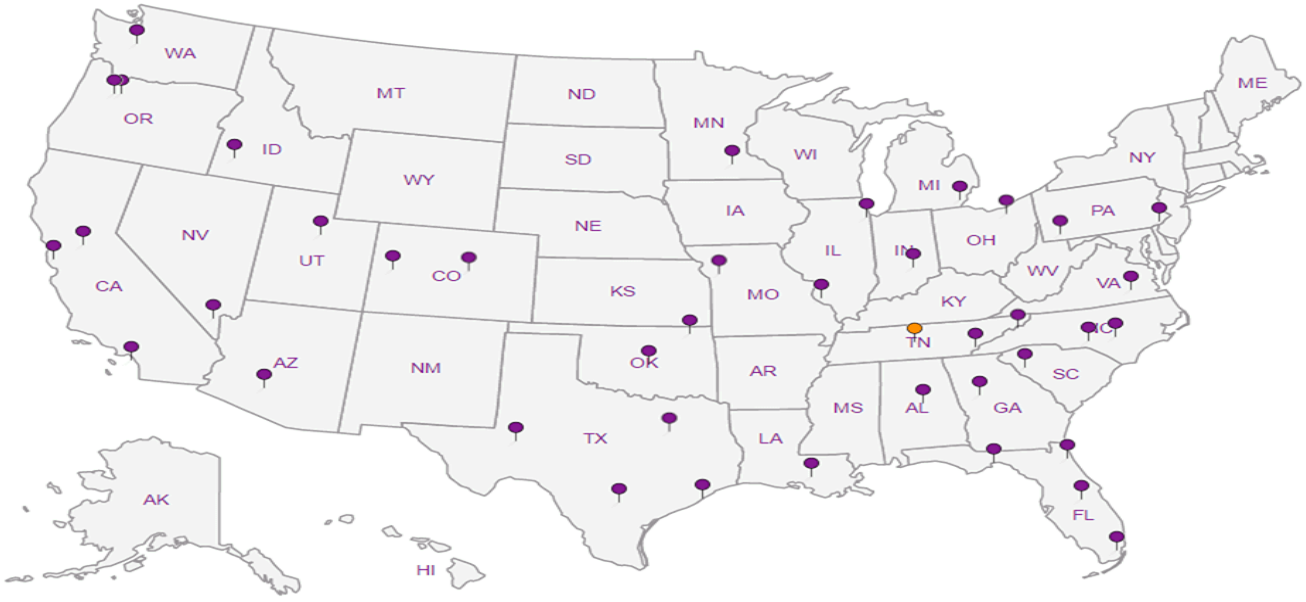
Third Party & Federal Accreditations

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

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

Our Locations

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



SCS Engineers - KS

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

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

Pres Chk

Report to: **Jason Franks**

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

Project Description: **Sibley Generating Station**

City/State Collected:

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

Client Project # **27213169.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): Adam Parris

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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions - Cld, F, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
504	Grab	GW	-	8/1/17	1610	3	X	X	X		-01
505	↓	GW	-	↓	1625	3	X	X	X		02
~~506~~		GW	-	8/2/17	0940	3	X	X	X		
510		GW	-	8/1/17	1035	3	X	X	X		03
512		GW	-	8/2/17	1400	3	X	X	X		04
510 MS		GW	-	8/1/17	1045	3	X	X	X		03
510 MSD		GW	-	↓	1050	3	X	X	X		03
601		GW	-	8/2/17	1255	3	X	X	X		05
~~602~~		GW	-	↓		3	X	X	X		
701	Grab	GW	-	8/1/17	1025	3	X	X	X		06

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

Remarks:6010 Metals-B,BA,CA,CR,CO, 6020 Metals-SB,AS,BE,CD,PB,SE,TL, 7470 Metals-HG.

ESC KC

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 7384 4200 1051

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/2/2017	1530	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/2/17	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Olivia S

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.4 °C Bottles Received: 06 94

Date: 8/3/17 Time: 0845

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 1 of 2

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

L# L926752
E023
Acctnum: AQUAOPKS
Template: T115107
Prelogin: P610597
TSR: 206 - Jeff Carr
PB:
Shipped Via:

SCS Engineers - KS

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

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

Pres Chk

Report to: **Jason Franks**

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

Project Description: **Sibley Generating Station**

City/State Collected:

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

Client Project # **27213169.16**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): Adam Parris

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	Anions - Cld, F, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres							Remarks	Sample # (lab only)
								12									
702	Grab	GW	-	8/1/17	1110	3	X	X	X								-09
703	Grab	GW	-	8/1/17	1150	3	X	X	X								08
704	Grab	GW	-	8/1/17	1300	3	X	X	X								09
801	Grab	GW	-	8/1/17	1450	3	X	X	X								10
802	Grab	GW	-	8/1/17	1410	3	X	X	X								11
803	↓	GW	-	↓	1355	3	X	X	X								12
804		GW	-		1435	3	X	X	X								13
805		GW	-		1520	3	X	X	X								14
806R		GW	-		1530	3	X	X	X								15
DUPLICATE	↓	GW	-	↓	1040	3	X	X	X								16

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

Remarks: 6010 Metals-B,BA,CA,CR,CO, 6020 Metals-SB,AS,BE,CD,PB,SE,TL, 7470 Metals-HG.

ESCYC

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 7384 4200 1051

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/2/2017	F00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/2/17	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.4 °C Bottles Received: 06 SL

Date: 8/3/17 Time: 0845

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

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

L# L926752

Table #

Acctnum: AQUAOPKS
Template: T115107
Prelogin: P610597
TSR: 206 - Jeff Carr
PB:

Shipped Via:

Case Narrative

Lab No: 20170738

This report contains the analytical results for the 1 sample(s) received under chain of custody by ESC Lab Sciences on 8/8/2017 12:57:46 PM. These samples are associated with your 27213167.17 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

DL for Radiochemistry = MDA DL for Metals and Wet Chemistry = MDL DL for Drinking Water = SDWA

Observations / Nonconformances

L927573

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

Client	:	SCS Engineers
Client Project	:	27213167.17
Lab Number	:	20170738
Date Reported	:	08/30/17
Date Received	:	08/08/17
Page Number	:	2 of 2

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170738-01**								
Client ID : **506**								
Date Sampled : **8/4/2017 4:30:00 PM**								
Matrix : **NPW**								
Radiochemical Analyses								
Combined Radium		0.480 +/- 0.712	0.897	pCi/l				
Radium-226	SM 7500 Ra B M*	0.480 +/- 0.289	0.324	pCi/l		08/16/17	08/18/17	RE
Radium-228	EPA 904*	-0.454 +/- 0.423	0.573	pCi/l		08/21/17	08/29/17	JR

QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Batch ID
Radium-226	0.048	116.0			NC	1.140	104.0	112.0	6.9	R1268
Radium-228	0.160	86.9			NC	0.573	76.4	82.3	6.5	R3993

Lab Approval:

Ron Eidson
Director of Radiochemistry

*NELAC Certified Parameter BDL = Below Detection Limit

OUTREACH LABORATORY, A Divsion of ESC Lab Sciences
Address: 311 North Aspen Avenue, Broken Arrow, OK, 74012 - EMail: outreach@esclabsciences.com - Tel: (918) 251-2515

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

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

Pres Chk

Report to: **Jason Franks**

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

Project Description: **Sibley Generating Station**

City/State Collected: SIBLEY, MO

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

Client Project # **27213167.17**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

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

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226, RA228 1L-HDPE-Add HNO3
504		NPW				2	X
505		NPW				2	X
506		GW				2	X
510		NPW				2	X
512		NPW				2	X
601		NPW				2	X
602		NPW				2	X
603		NPW				2	X
702		NPW				2	X
703		NPW				2	X

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

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

L# 927573

Table #

Acctnum: **AQUAOPKS**
Template: **T115110**
Prelogin: **P610583**
TSR: **206 - Jeff Carr**
PB:

Shipped Via:

Remarks | Sample # (lab only)

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

Remarks: RA 226/228 - Report separately and combined.

ESCKC

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	08/04/17	1720	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/7/17	1200	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.4 °C Bottles Received: 2

Date: 8/8/17 Time: 1257

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

20170738

SAMPLE LOGIN

Date Received: *8/8/2017 12:57:46* **Lab Number:** 20170738 **Due:** 9/6/2017

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20170738-01 B	506	NPW	08/04/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170738-01 A	506	NPW	08/04/17	Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						

CONTAINER INSPECTION

 # Coolers 1 **Custody Seals Broken** Ø **Temperature:** 4.5 C **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Ø **Chain of Custody Record** ☑ **Labels in Tact** ☑ **Radiation Survey Complete** NA

Anomalies No sample time/date on CoC, taken from containers. No sample ID on containers, taken from CoC.

Inspected By: _____ **DATE** 8/8/17

QA or Designee Review: Raymond Thomas **DATE** 08/08/17

Sample Custodian Review: _____ **DATE** 8/8/17

Project Notes:

ANALYTICAL REPORT

August 14, 2017

SCS Engineers - KS

Sample Delivery Group:	L927577
Samples Received:	08/08/2017
Project Number:	27213169.17
Description:	Sibley Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

TABLE OF CONTENTS

506 L927577-01 GW

Collected by: Jason R. Franks
Collected date/time: 08/04/17 16:30
Received date/time: 08/08/17 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1007382	1	08/09/17 21:18	08/09/17 21:50	EG
Wet Chemistry by Method 9056A	WG1007375	1	08/10/17 02:18	08/10/17 02:18	SAM
Mercury by Method 7470A	WG1007327	1	08/09/17 07:27	08/10/17 02:51	EL
Metals (ICP) by Method 6010B	WG1008639	1	08/12/17 00:05	08/12/17 02:33	ST
Metals (ICPMS) by Method 6020	WG1008536	1	08/11/17 17:47	08/13/17 16:39	LAT
Metals (ICPMS) by Method 6020	WG1008536	1	08/11/17 17:47	08/14/17 14:13	LAT

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	480000		10000	1	08/09/2017 21:50	WG1007382

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	5450		1000	1	08/10/2017 02:18	WG1007375
Fluoride	359		100	1	08/10/2017 02:18	WG1007375
Sulfate	73300		5000	1	08/10/2017 02:18	WG1007375

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	08/10/2017 02:51	WG1007327

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	236		5.00	1	08/12/2017 02:33	WG1008639
Boron	ND		200	1	08/12/2017 02:33	WG1008639
Calcium	99000		1000	1	08/12/2017 02:33	WG1008639
Chromium	ND		10.0	1	08/12/2017 02:33	WG1008639
Cobalt	ND		10.0	1	08/12/2017 02:33	WG1008639
Lithium	ND		15.0	1	08/12/2017 02:33	WG1008639
Molybdenum	ND		5.00	1	08/12/2017 02:33	WG1008639

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	08/13/2017 16:39	WG1008536
Arsenic	ND		2.00	1	08/13/2017 16:39	WG1008536
Beryllium	ND		2.00	1	08/14/2017 14:13	WG1008536
Cadmium	ND		1.00	1	08/13/2017 16:39	WG1008536
Lead	ND		2.00	1	08/14/2017 14:13	WG1008536
Selenium	10.6		2.00	1	08/13/2017 16:39	WG1008536
Thallium	ND		2.00	1	08/14/2017 14:13	WG1008536

Method Blank (MB)

(MB) R3240206-1 08/09/17 21:50

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

L927098-01 Original Sample (OS) • Duplicate (DUP)

(OS) L927098-01 08/09/17 21:50 • (DUP) R3240206-4 08/09/17 21:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	3310000	3290000	1	0.455		5

L927516-01 Original Sample (OS) • Duplicate (DUP)

(OS) L927516-01 08/09/17 21:50 • (DUP) R3240206-5 08/09/17 21:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	631000	611000	1	3.22		5

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

(LCS) R3240206-2 08/09/17 21:50 • (LCSD) R3240206-3 08/09/17 21:50

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	%	%	%			%	%
Dissolved Solids	8800000	8460000	8590000	96.1	97.6	85.0-115			1.52	5

Method Blank (MB)

(MB) R3239957-1 08/09/17 07:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	117	J	51.9	1000
Fluoride	U		9.90	100
Sulfate	101	J	77.4	5000

L927742-01 Original Sample (OS) • Duplicate (DUP)

(OS) L927742-01 08/10/17 04:02 • (DUP) R3239957-6 08/10/17 04:47

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	51700	51900	1	0		15
Fluoride	191	188	1	1		15

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

(LCS) R3239957-2 08/09/17 08:09 • (LCSD) R3239957-3 08/09/17 08:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39900	39700	100	99	80-120			0	15
Fluoride	8000	8040	8000	100	100	80-120			0	15
Sulfate	40000	39900	39900	100	100	80-120			0	15

L927742-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L927742-01 08/10/17 04:02 • (MS) R3239957-7 08/10/17 05:02 • (MSD) R3239957-8 08/10/17 05:17

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	51700	96400	96400	89	89	1	80-120			0	15
Fluoride	5000	191	4880	4880	94	94	1	80-120			0	15

Method Blank (MB)

(MB) R3239883-1 08/10/17 01:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3239883-2 08/10/17 02:01 • (LCSD) R3239883-3 08/10/17 02:03

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	%	%	%			%	%
Mercury	3.00	2.94	2.97	98	99	80-120			1	20

L927347-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L927347-01 08/10/17 02:05 • (MS) R3239883-4 08/10/17 02:07 • (MSD) R3239883-5 08/10/17 02:10

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	%	%		%			%	%
Mercury	3.00	U	3.10	3.03	103	101	1	75-125			2	20

Method Blank (MB)

(MB) R3240788-1 08/12/17 02:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Barium	U		1.70	5.00
Boron	U		12.6	200
Calcium	U		46.3	1000
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0
Lithium	U		5.30	15.0
Molybdenum	U		1.60	5.00

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

(LCS) R3240788-2 08/12/17 02:13 • (LCSD) R3240788-3 08/12/17 02:15

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	%	%	%			%	%
Barium	1000	1020	1020	102	102	80-120			0	20
Boron	1000	974	984	97	98	80-120			1	20
Calcium	10000	10000	10100	100	101	80-120			1	20
Chromium	1000	1010	1020	101	102	80-120			1	20
Cobalt	1000	1030	1020	103	102	80-120			0	20
Lithium	1000	991	999	99	100	80-120			1	20
Molybdenum	1000	1000	1000	100	100	80-120			0	20

L927500-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L927500-01 08/12/17 02:18 • (MS) R3240788-5 08/12/17 02:23 • (MSD) R3240788-6 08/12/17 02:25

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	%	%		%			%	%
Barium	1000	108	1130	1130	102	102	1	75-125			0	20
Boron	1000	ND	1030	1020	99	98	1	75-125			1	20
Calcium	10000	6670	16700	16700	100	101	1	75-125			0	20
Chromium	1000	ND	1020	1030	102	103	1	75-125			1	20
Cobalt	1000	ND	1040	1040	104	104	1	75-125			0	20
Lithium	1000	ND	1000	1010	100	101	1	75-125			0	20
Molybdenum	1000	ND	1000	1010	100	101	1	75-125			0	20

Method Blank (MB)

(MB) R3240854-1 08/13/17 15:26

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Cadmium	U		0.160	1.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

Method Blank (MB)

(MB) R3241010-1 08/14/17 12:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Beryllium	U		0.120	2.00

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

(LCS) R3240854-2 08/13/17 15:30 • (LCSD) R3240854-3 08/13/17 15:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	52.2	51.6	104	103	80-120			1	20
Arsenic	50.0	50.6	50.9	101	102	80-120			1	20
Cadmium	50.0	53.5	52.5	107	105	80-120			2	20
Lead	50.0	50.1	48.6	100	97	80-120			3	20
Selenium	50.0	49.9	48.3	100	97	80-120			3	20
Thallium	50.0	48.9	48.6	98	97	80-120			1	20

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

(LCS) R3241010-2 08/14/17 12:53 • (LCSD) R3241010-3 08/14/17 12:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Beryllium	50.0	51.5	52.1	103	104	80-120			1	20

L927650-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L927650-01 08/13/17 15:37 • (MS) R3240854-5 08/13/17 15:44 • (MSD) R3240854-6 08/13/17 15:47

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 %
Antimony	50.0	ND	51.7	52.0	103	104	1	75-125			1	20
Arsenic	50.0	ND	49.6	50.9	99	101	1	75-125			3	20
Cadmium	50.0	ND	55.2	55.2	110	110	1	75-125			0	20
Lead	50.0	ND	49.4	49.3	98	98	1	75-125			0	20
Selenium	50.0	ND	50.6	50.2	98	97	1	75-125			1	20
Thallium	50.0	ND	48.2	48.5	96	97	1	75-125			1	20

L927650-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L927650-01 08/14/17 13:00 • (MS) R3241010-5 08/14/17 13:07 • (MSD) R3241010-6 08/14/17 13:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Beryllium	50.0	ND	50.6	51.0	101	102	1	75-125			1	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

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

State Accreditations

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

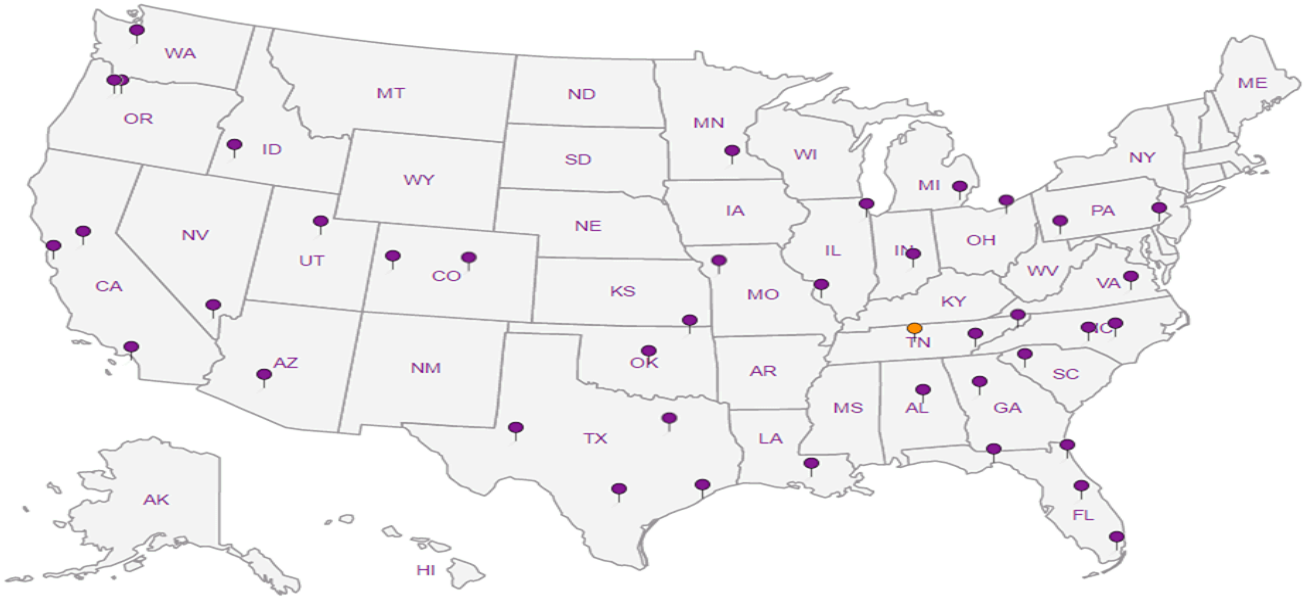
Third Party & Federal Accreditations

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

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

Our Locations

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



SCS Engineers - KS

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

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

Report to: **Jason Franks**

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

Project Description: **Sibley Generating Station**

City/State Collected: Sibley, MO

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

Client Project # **27213169.17**

Lab Project # **AQUAOPKS-SIBLEY**

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

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

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions - Cl, F, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	TDS 250mlHDPE-NoPres	Remarks	Sample # (lab only)
~~504~~		~~GW~~				3	X	X	X		
~~505~~		~~GW~~				3	X	X	X		
506	GRAB	GW	-	08/04/17	1630	3	X	X	X		-01
~~510~~		~~GW~~				3	X	X	X		
~~512~~		~~GW~~				3	X	X	X		
~~MS~~		~~GW~~				3	X	X	X		
~~MSD~~		~~GW~~				3	X	X	X		
~~601~~		~~GW~~				3	X	X	X		
~~602~~		~~GW~~				3	X	X	X		
~~701~~		~~GW~~				3	X	X	X		

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

Remarks: 6010 Metals-B,BA,CA,CR,CO, 6020 Metals-SB,AS,BE,CD,PB,SE,TL, 7470 Metals-HG. Li, Mo

ESCKC

pH ___ Temp ___

Flow ___ Other ___

Samples returned via:
__ UPS __ FedEx __ Courier ___

Tracking #

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

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	08/07/17	1120	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	8/07/17	1700	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

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

Temp: 1.9 °C Bottles Received: 3

Date: 8/8/17 Time: 0930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Chain of Custody Page 1 of 1

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

L# L927577

C067

Acctnum: **AQUAOPKS**
Template: **T115107**
Prelogin: **P610597**
TSR: **206 - Jeff Carr**
PB:
Shipped Via:

Jared Morrison
December 16, 2022

ATTACHMENT 1-9

October 2017 Background Sampling Event Laboratory Report

ANALYTICAL REPORT

October 16, 2017

SCS Engineers - KS

Sample Delivery Group:	L941477
Samples Received:	10/05/2017
Project Number:	27213169.17
Description:	Sibley Generating Station

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

Entire Report Reviewed By:

Jason Romer
Technical Service Representative

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

TABLE OF CONTENTS

504 L941477-01 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 13:00 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1028613	1	10/08/17 09:37	10/09/17 09:16	ABL
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 21:54	TRB
Metals (ICPMS) by Method 6020	WG1029554	1	10/10/17 15:05	10/13/17 18:21	JPD

505 L941477-02 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 13:50 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1028613	1	10/08/17 09:37	10/09/17 09:18	ABL
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 21:56	TRB
Metals (ICPMS) by Method 6020	WG1029554	1	10/10/17 15:05	10/13/17 18:24	JPD

506 L941477-03 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 15:25 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1028613	1	10/08/17 09:37	10/09/17 09:20	ABL
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 21:59	TRB
Metals (ICPMS) by Method 6020	WG1029554	1	10/10/17 15:05	10/13/17 18:35	JPD

510 L941477-04 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 14:10 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1028613	1	10/08/17 09:37	10/09/17 08:42	ABL
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 21:28	TRB
Metals (ICPMS) by Method 6020	WG1029554	1	10/10/17 15:05	10/13/17 17:21	JPD

512 L941477-05 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 10:05 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1028613	1	10/08/17 09:37	10/09/17 09:22	ABL
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 22:01	TRB
Metals (ICPMS) by Method 6020	WG1029554	1	10/10/17 15:05	10/13/17 18:38	JPD

601 L941477-06 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 15:50 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1028613	1	10/08/17 09:37	10/09/17 09:29	ABL
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 22:04	TRB
Metals (ICPMS) by Method 6020	WG1029554	1	10/10/17 15:05	10/13/17 18:42	JPD

DUPLICATE L941477-07 GW

Collected by	Collected date/time	Received date/time
Jason R. Franks	10/03/17 00:00	10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1028613	1	10/08/17 09:37	10/09/17 09:31	ABL
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 22:07	TRB
Metals (ICPMS) by Method 6020	WG1029554	1	10/10/17 15:05	10/13/17 18:45	JPD

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

Jason Romer
Technical Service Representative

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/09/2017 09:16	WG1028613

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	121		5.00	1	10/11/2017 21:54	WG1029565
Chromium	ND		10.0	1	10/11/2017 21:54	WG1029565
Cobalt	ND		10.0	1	10/11/2017 21:54	WG1029565

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/13/2017 18:21	WG1029554
Arsenic	ND		2.00	1	10/13/2017 18:21	WG1029554
Beryllium	ND		2.00	1	10/13/2017 18:21	WG1029554
Cadmium	ND		1.00	1	10/13/2017 18:21	WG1029554
Lead	ND		2.00	1	10/13/2017 18:21	WG1029554
Selenium	3.07		2.00	1	10/13/2017 18:21	WG1029554
Thallium	ND		2.00	1	10/13/2017 18:21	WG1029554

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/09/2017 09:18	WG1028613

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	101		5.00	1	10/11/2017 21:56	WG1029565
Chromium	ND		10.0	1	10/11/2017 21:56	WG1029565
Cobalt	ND		10.0	1	10/11/2017 21:56	WG1029565

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/13/2017 18:24	WG1029554
Arsenic	ND		2.00	1	10/13/2017 18:24	WG1029554
Beryllium	ND		2.00	1	10/13/2017 18:24	WG1029554
Cadmium	ND		1.00	1	10/13/2017 18:24	WG1029554
Lead	ND		2.00	1	10/13/2017 18:24	WG1029554
Selenium	2.44		2.00	1	10/13/2017 18:24	WG1029554
Thallium	ND		2.00	1	10/13/2017 18:24	WG1029554

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	10/09/2017 09:20	WG1028613

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Barium	250		5.00	1	10/11/2017 21:59	WG1029565
Chromium	ND		10.0	1	10/11/2017 21:59	WG1029565
Cobalt	ND		10.0	1	10/11/2017 21:59	WG1029565

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	ND		2.00	1	10/13/2017 18:35	WG1029554
Arsenic	ND		2.00	1	10/13/2017 18:35	WG1029554
Beryllium	ND		2.00	1	10/13/2017 18:35	WG1029554
Cadmium	ND		1.00	1	10/13/2017 18:35	WG1029554
Lead	ND		2.00	1	10/13/2017 18:35	WG1029554
Selenium	11.5		2.00	1	10/13/2017 18:35	WG1029554
Thallium	ND		2.00	1	10/13/2017 18:35	WG1029554

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	10/09/2017 08:42	WG1028613

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Barium	393	O1	5.00	1	10/11/2017 21:28	WG1029565
Chromium	ND		10.0	1	10/11/2017 21:28	WG1029565
Cobalt	ND		10.0	1	10/11/2017 21:28	WG1029565

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	ND		2.00	1	10/13/2017 17:21	WG1029554
Arsenic	ND		2.00	1	10/13/2017 17:21	WG1029554
Beryllium	ND		2.00	1	10/13/2017 17:21	WG1029554
Cadmium	ND		1.00	1	10/13/2017 17:21	WG1029554
Lead	ND		2.00	1	10/13/2017 17:21	WG1029554
Selenium	4.90		2.00	1	10/13/2017 17:21	WG1029554
Thallium	ND		2.00	1	10/13/2017 17:21	WG1029554

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/09/2017 09:22	WG1028613

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	419		5.00	1	10/11/2017 22:01	WG1029565
Chromium	12.0		10.0	1	10/11/2017 22:01	WG1029565
Cobalt	ND		10.0	1	10/11/2017 22:01	WG1029565

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/13/2017 18:38	WG1029554
Arsenic	ND		2.00	1	10/13/2017 18:38	WG1029554
Beryllium	ND		2.00	1	10/13/2017 18:38	WG1029554
Cadmium	ND		1.00	1	10/13/2017 18:38	WG1029554
Lead	ND		2.00	1	10/13/2017 18:38	WG1029554
Selenium	4.75		2.00	1	10/13/2017 18:38	WG1029554
Thallium	ND		2.00	1	10/13/2017 18:38	WG1029554

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/09/2017 09:29	WG1028613

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	357		5.00	1	10/11/2017 22:04	WG1029565
Chromium	ND		10.0	1	10/11/2017 22:04	WG1029565
Cobalt	ND		10.0	1	10/11/2017 22:04	WG1029565

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/13/2017 18:42	WG1029554
Arsenic	ND		2.00	1	10/13/2017 18:42	WG1029554
Beryllium	ND		2.00	1	10/13/2017 18:42	WG1029554
Cadmium	ND		1.00	1	10/13/2017 18:42	WG1029554
Lead	ND		2.00	1	10/13/2017 18:42	WG1029554
Selenium	6.46		2.00	1	10/13/2017 18:42	WG1029554
Thallium	ND		2.00	1	10/13/2017 18:42	WG1029554

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/09/2017 09:31	WG1028613

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	394		5.00	1	10/11/2017 22:07	WG1029565
Chromium	ND		10.0	1	10/11/2017 22:07	WG1029565
Cobalt	ND		10.0	1	10/11/2017 22:07	WG1029565

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/13/2017 18:45	WG1029554
Arsenic	ND		2.00	1	10/13/2017 18:45	WG1029554
Beryllium	ND		2.00	1	10/13/2017 18:45	WG1029554
Cadmium	ND		1.00	1	10/13/2017 18:45	WG1029554
Lead	ND		2.00	1	10/13/2017 18:45	WG1029554
Selenium	4.15		2.00	1	10/13/2017 18:45	WG1029554
Thallium	ND		2.00	1	10/13/2017 18:45	WG1029554

Method Blank (MB)

(MB) R3255856-1 10/09/17 08:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3255856-2 10/09/17 08:37 • (LCSD) R3255856-3 10/09/17 08:39

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	%	%	%			%	%
Mercury	3.00	3.04	3.02	101	101	80-120			1	20

L941477-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941477-04 10/09/17 08:42 • (MS) R3255856-4 10/09/17 08:44 • (MSD) R3255856-5 10/09/17 08:46

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	%	%		%			%	%
Mercury	3.00	ND	3.11	2.92	104	97	1	75-125			6	20

Method Blank (MB)

(MB) R3256705-1 10/11/17 21:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Barium	U		1.70	5.00
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0

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

(LCS) R3256705-2 10/11/17 21:23 • (LCSD) R3256705-3 10/11/17 21:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Barium	1000	1100	1100	110	110	80-120			0	20
Chromium	1000	1070	1070	107	107	80-120			0	20
Cobalt	1000	1110	1110	111	111	80-120			0	20

L941477-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941477-04 10/11/17 21:28 • (MS) R3256705-5 10/11/17 21:33 • (MSD) R3256705-6 10/11/17 21:36

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 %
Barium	1000	393	1480	1470	108	108	1	75-125			0	20
Chromium	1000	ND	1070	1070	106	106	1	75-125			0	20
Cobalt	1000	ND	1130	1120	113	112	1	75-125			0	20

L941493-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941493-04 10/11/17 21:38 • (MS) R3256705-7 10/11/17 21:41 • (MSD) R3256705-8 10/11/17 21:43

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 %
Barium	1000	393	1460	1480	107	109	1	75-125			1	20
Chromium	1000	ND	1060	1070	105	106	1	75-125			1	20
Cobalt	1000	ND	1110	1130	111	113	1	75-125			2	20

Method Blank (MB)

(MB) R3257409-1 10/13/17 17:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3257409-2 10/13/17 17:14 • (LCSD) R3257409-3 10/13/17 17:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	50.3	50.1	101	100	80-120			0	20
Arsenic	50.0	49.1	49.3	98	99	80-120			0	20
Beryllium	50.0	40.7	41.4	81	83	80-120			2	20
Cadmium	50.0	52.0	51.3	104	103	80-120			1	20
Lead	50.0	49.7	49.1	99	98	80-120			1	20
Selenium	50.0	52.7	51.5	105	103	80-120			2	20
Thallium	50.0	49.1	48.6	98	97	80-120			1	20

L941477-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941477-04 10/13/17 17:21 • (MS) R3257409-5 10/13/17 17:28 • (MSD) R3257409-6 10/13/17 17:32

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	ND	50.8	52.7	102	105	1	75-125			4	20
Arsenic	50.0	ND	48.0	48.6	96	97	1	75-125			1	20
Beryllium	50.0	ND	42.2	43.3	84	87	1	75-125			3	20
Cadmium	50.0	ND	51.4	52.6	103	105	1	75-125			2	20
Lead	50.0	ND	49.3	50.0	99	100	1	75-125			1	20
Selenium	50.0	4.90	56.3	57.9	103	106	1	75-125			3	20
Thallium	50.0	ND	49.5	49.7	99	99	1	75-125			0	20

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

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

State Accreditations

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

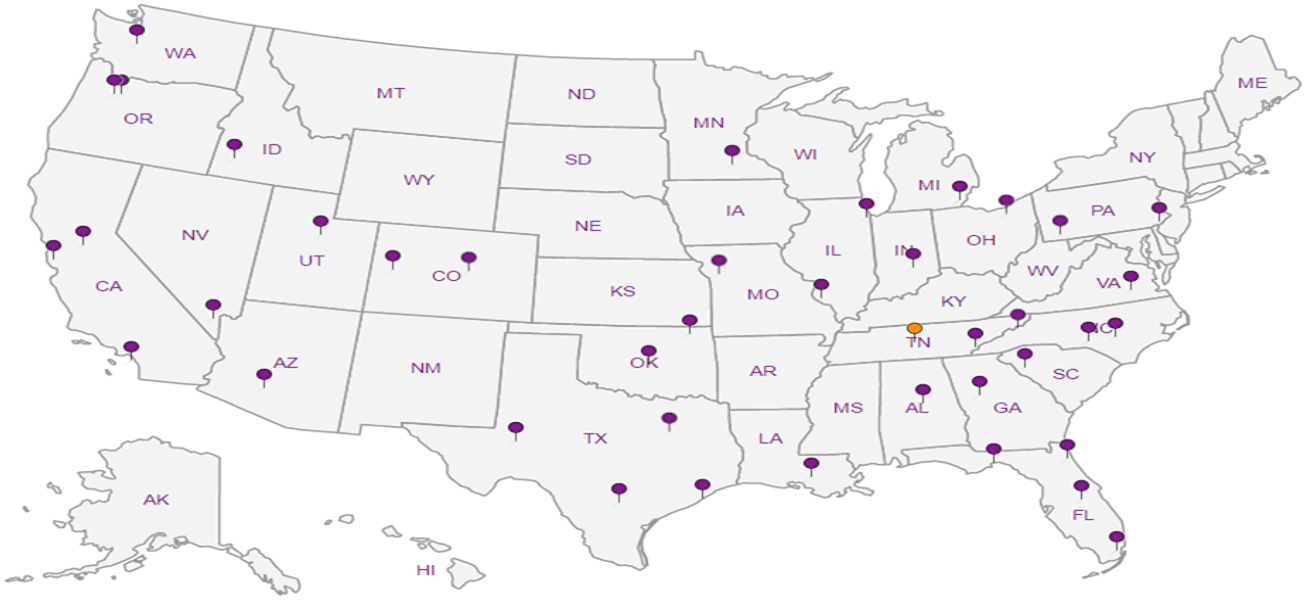
Third Party & Federal Accreditations

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

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

Our Locations

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



Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 941477
A143

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

Company Name/Address:
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information:
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to:
Mr. Jason R. Franks

Email To:
jfranks@scsengineers.com

Project Description: KCPL Sibley Gen Station - Groundwater

City/State Collected: Sibley, Mo

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

Client Project #
27213169.17

Lab Project #

Collected by (print):
Jason R. Franks

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
STD

Email? ___No X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Metals* 250mlHDPE-HN03	Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	10/3/17	1300	1	X		01
505	Grab	GW	NA	10/3/17	1350	1	X		02
506	Grab	GW	NA	10/3/17	1525	1	X		03
510	Grab	GW	NA	10/3/17	1410	1	X		04
512	Grab	GW	NA	10/4/17	1005	1	X		05
601	Grab	GW	NA	10/3/17	1550	1	X		06
Duplicate	Grab	GW	NA	10/3/17	—	1	X		07
MS 510	Grab	GW	NA	10/3/17	1420	1	X		04
MSD 510	Grab	GW	NA	10/3/17	1425	1	X		04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: *Metals (6010): Ba,Cr,Co - (6020): Pb,As,Be,Cd,Sb,Se,Tl - (7470): Hg

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/4/17	1545	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: Ice °C Bottles Received: 4=BP
Date: 10-5-17 Time: 0945

Condition: (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client: AQUATICS	SDG#	94147	
Cooler Received/Opened On: 10/5/17	Temperature:	1.6	
Received by : Michael Witherspoon			
Signature:			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?	✓		
Preservation Correct / Checked?		✓	

ANALYTICAL REPORT

October 31, 2017

SCS Engineers - KS

Sample Delivery Group:	L941488
Samples Received:	10/05/2017
Project Number:	27213168.17
Description:	Sibley Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

TABLE OF CONTENTS

701 L941488-01 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 13:05 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:30	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 22:44	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 17:26	LAT

703 L941488-02 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 14:55 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:32	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 22:47	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 17:40	LAT

702 L941488-03 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 14:20 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:34	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 22:50	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 17:44	LAT

704 L941488-04 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 13:45 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:36	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 22:59	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 17:47	LAT

801 L941488-05 GW

Collected by: Jason R. Franks | Collected date/time: 10/04/17 10:50 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:39	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:02	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 17:58	LAT

802 L941488-06 GW

Collected by: Jason R. Franks | Collected date/time: 10/04/17 11:40 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:46	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:05	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 18:01	LAT

803 L941488-07 GW

Collected by: Jason R. Franks | Collected date/time: 10/04/17 10:50 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:48	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:09	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 18:05	LAT

804 L941488-08 GW

Collected by: Jason R. Franks | Collected date/time: 10/04/17 11:45 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:50	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:12	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 18:08	LAT

805 L941488-09 GW

Collected by: Jason R. Franks | Collected date/time: 10/04/17 11:50 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:52	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:15	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 18:12	LAT

806R L941488-10 GW

Collected by: Jason R. Franks | Collected date/time: 10/04/17 12:25 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG1029252	1	10/09/17 14:44	10/10/17 20:55	EL
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:18	TRB
Metals (ICPMS) by Method 6020	WG1029556	1	10/11/17 17:38	10/17/17 18:15	LAT

504 L941488-11 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 13:00 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:21	TRB

505 L941488-12 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 13:50 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:24	TRB

506 L941488-13 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 15:25 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:27	TRB

510 L941488-14 GW

Collected by: Jason R. Franks
Collected date/time: 10/03/17 14:10
Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 22:31	TRB

512 L941488-15 GW

Collected by: Jason R. Franks
Collected date/time: 10/04/17 10:05
Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:37	TRB

601 L941488-16 GW

Collected by: Jason R. Franks
Collected date/time: 10/03/17 15:50
Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:40	TRB

DUPLICATE L941488-17 GW

Collected by: Jason R. Franks
Collected date/time: 10/03/17 00:00
Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG1029567	1	10/11/17 10:54	10/11/17 23:43	TRB

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

Jeff Carr
Technical Service Representative

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:30	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	184		5.00	1	10/11/2017 22:44	WG1029567
Chromium	ND		10.0	1	10/11/2017 22:44	WG1029567
Cobalt	ND		10.0	1	10/11/2017 22:44	WG1029567
Lithium	ND		15.0	1	10/11/2017 22:44	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 22:44	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 17:26	WG1029556
Arsenic	2.49		2.00	1	10/17/2017 17:26	WG1029556
Beryllium	ND		2.00	1	10/17/2017 17:26	WG1029556
Cadmium	ND		1.00	1	10/17/2017 17:26	WG1029556
Lead	ND		2.00	1	10/17/2017 17:26	WG1029556
Selenium	ND		2.00	1	10/17/2017 17:26	WG1029556
Thallium	ND		2.00	1	10/17/2017 17:26	WG1029556

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:32	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	266		5.00	1	10/11/2017 22:47	WG1029567
Chromium	ND		10.0	1	10/11/2017 22:47	WG1029567
Cobalt	ND		10.0	1	10/11/2017 22:47	WG1029567
Lithium	ND		15.0	1	10/11/2017 22:47	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 22:47	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 17:40	WG1029556
Arsenic	199		2.00	1	10/17/2017 17:40	WG1029556
Beryllium	ND		2.00	1	10/17/2017 17:40	WG1029556
Cadmium	ND		1.00	1	10/17/2017 17:40	WG1029556
Lead	ND		2.00	1	10/17/2017 17:40	WG1029556
Selenium	ND		2.00	1	10/17/2017 17:40	WG1029556
Thallium	ND		2.00	1	10/17/2017 17:40	WG1029556

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:34	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	276		5.00	1	10/11/2017 22:50	WG1029567
Chromium	ND		10.0	1	10/11/2017 22:50	WG1029567
Cobalt	ND		10.0	1	10/11/2017 22:50	WG1029567
Lithium	ND		15.0	1	10/11/2017 22:50	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 22:50	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 17:44	WG1029556
Arsenic	8.52		2.00	1	10/17/2017 17:44	WG1029556
Beryllium	ND		2.00	1	10/17/2017 17:44	WG1029556
Cadmium	ND		1.00	1	10/17/2017 17:44	WG1029556
Lead	ND		2.00	1	10/17/2017 17:44	WG1029556
Selenium	ND		2.00	1	10/17/2017 17:44	WG1029556
Thallium	ND		2.00	1	10/17/2017 17:44	WG1029556

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:36	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	152		5.00	1	10/11/2017 22:59	WG1029567
Chromium	ND		10.0	1	10/11/2017 22:59	WG1029567
Cobalt	ND		10.0	1	10/11/2017 22:59	WG1029567
Lithium	ND		15.0	1	10/11/2017 22:59	WG1029567
Molybdenum	7.73		5.00	1	10/11/2017 22:59	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 17:47	WG1029556
Arsenic	2.00		2.00	1	10/17/2017 17:47	WG1029556
Beryllium	ND		2.00	1	10/17/2017 17:47	WG1029556
Cadmium	ND		1.00	1	10/17/2017 17:47	WG1029556
Lead	ND		2.00	1	10/17/2017 17:47	WG1029556
Selenium	ND		2.00	1	10/17/2017 17:47	WG1029556
Thallium	ND		2.00	1	10/17/2017 17:47	WG1029556

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:39	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	127		5.00	1	10/11/2017 23:02	WG1029567
Chromium	ND		10.0	1	10/11/2017 23:02	WG1029567
Cobalt	ND		10.0	1	10/11/2017 23:02	WG1029567
Lithium	ND		15.0	1	10/11/2017 23:02	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:02	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 17:58	WG1029556
Arsenic	ND		2.00	1	10/17/2017 17:58	WG1029556
Beryllium	ND		2.00	1	10/17/2017 17:58	WG1029556
Cadmium	ND		1.00	1	10/17/2017 17:58	WG1029556
Lead	ND		2.00	1	10/17/2017 17:58	WG1029556
Selenium	ND		2.00	1	10/17/2017 17:58	WG1029556
Thallium	ND		2.00	1	10/17/2017 17:58	WG1029556

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:46	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	154		5.00	1	10/11/2017 23:05	WG1029567
Chromium	ND		10.0	1	10/11/2017 23:05	WG1029567
Cobalt	ND		10.0	1	10/11/2017 23:05	WG1029567
Lithium	ND		15.0	1	10/11/2017 23:05	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:05	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 18:01	WG1029556
Arsenic	ND		2.00	1	10/17/2017 18:01	WG1029556
Beryllium	ND		2.00	1	10/17/2017 18:01	WG1029556
Cadmium	ND		1.00	1	10/17/2017 18:01	WG1029556
Lead	ND		2.00	1	10/17/2017 18:01	WG1029556
Selenium	2.66		2.00	1	10/17/2017 18:01	WG1029556
Thallium	ND		2.00	1	10/17/2017 18:01	WG1029556

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:48	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	131		5.00	1	10/11/2017 23:09	WG1029567
Chromium	ND		10.0	1	10/11/2017 23:09	WG1029567
Cobalt	ND		10.0	1	10/11/2017 23:09	WG1029567
Lithium	ND		15.0	1	10/11/2017 23:09	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:09	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 18:05	WG1029556
Arsenic	2.70		2.00	1	10/17/2017 18:05	WG1029556
Beryllium	ND		2.00	1	10/17/2017 18:05	WG1029556
Cadmium	ND		1.00	1	10/17/2017 18:05	WG1029556
Lead	ND		2.00	1	10/17/2017 18:05	WG1029556
Selenium	ND		2.00	1	10/17/2017 18:05	WG1029556
Thallium	ND		2.00	1	10/17/2017 18:05	WG1029556

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:50	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	406		5.00	1	10/11/2017 23:12	WG1029567
Chromium	ND		10.0	1	10/11/2017 23:12	WG1029567
Cobalt	ND		10.0	1	10/11/2017 23:12	WG1029567
Lithium	22.0		15.0	1	10/11/2017 23:12	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:12	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 18:08	WG1029556
Arsenic	5.45		2.00	1	10/17/2017 18:08	WG1029556
Beryllium	ND		2.00	1	10/17/2017 18:08	WG1029556
Cadmium	ND		1.00	1	10/17/2017 18:08	WG1029556
Lead	ND		2.00	1	10/17/2017 18:08	WG1029556
Selenium	ND		2.00	1	10/17/2017 18:08	WG1029556
Thallium	ND		2.00	1	10/17/2017 18:08	WG1029556

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:52	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	168		5.00	1	10/11/2017 23:15	WG1029567
Chromium	ND		10.0	1	10/11/2017 23:15	WG1029567
Cobalt	ND		10.0	1	10/11/2017 23:15	WG1029567
Lithium	ND		15.0	1	10/11/2017 23:15	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:15	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 18:12	WG1029556
Arsenic	ND		2.00	1	10/17/2017 18:12	WG1029556
Beryllium	ND		2.00	1	10/17/2017 18:12	WG1029556
Cadmium	ND		1.00	1	10/17/2017 18:12	WG1029556
Lead	ND		2.00	1	10/17/2017 18:12	WG1029556
Selenium	ND		2.00	1	10/17/2017 18:12	WG1029556
Thallium	ND		2.00	1	10/17/2017 18:12	WG1029556

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/10/2017 20:55	WG1029252

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Barium	90.1		5.00	1	10/11/2017 23:18	WG1029567
Chromium	ND		10.0	1	10/11/2017 23:18	WG1029567
Cobalt	ND		10.0	1	10/11/2017 23:18	WG1029567
Lithium	18.2		15.0	1	10/11/2017 23:18	WG1029567
Molybdenum	1330		5.00	1	10/11/2017 23:18	WG1029567

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Antimony	ND		2.00	1	10/17/2017 18:15	WG1029556
Arsenic	5.55		2.00	1	10/17/2017 18:15	WG1029556
Beryllium	ND		2.00	1	10/17/2017 18:15	WG1029556
Cadmium	ND		1.00	1	10/17/2017 18:15	WG1029556
Lead	ND		2.00	1	10/17/2017 18:15	WG1029556
Selenium	ND		2.00	1	10/17/2017 18:15	WG1029556
Thallium	ND		2.00	1	10/17/2017 18:15	WG1029556

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Lithium	ND		15.0	1	10/11/2017 23:21	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:21	WG1029567

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Lithium	ND		15.0	1	10/11/2017 23:24	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:24	WG1029567

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	10/11/2017 23:27	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:27	WG1029567

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Lithium	ND		15.0	1	10/11/2017 22:31	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 22:31	WG1029567

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Lithium	ND		15.0	1	10/11/2017 23:37	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:37	WG1029567

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lithium	ND		15.0	1	10/11/2017 23:40	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:40	WG1029567

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Lithium	ND		15.0	1	10/11/2017 23:43	WG1029567
Molybdenum	ND		5.00	1	10/11/2017 23:43	WG1029567

Method Blank (MB)

(MB) R3256340-1 10/10/17 20:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

(LCS) R3256340-2 10/10/17 20:05 • (LCSD) R3256340-3 10/10/17 20:07

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	%	%	%			%	%
Mercury	3.00	3.09	3.04	103	101	80-120			2	20

L941483-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941483-01 10/10/17 20:09 • (MS) R3256340-4 10/10/17 20:11 • (MSD) R3256340-5 10/10/17 20:18

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	%	%		%			%	%
Mercury	3.00	ND	3.18	3.14	106	105	1	75-125			1	20

Method Blank (MB)

(MB) R3256712-1 10/11/17 22:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Barium	U		1.70	5.00
Chromium	U		1.40	10.0
Cobalt	U		2.30	10.0
Lithium	U		5.30	15.0
Molybdenum	U		1.60	5.00

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

(LCS) R3256712-2 10/11/17 22:25 • (LCSD) R3256712-3 10/11/17 22:28

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Barium	1000	1060	1060	106	106	80-120			0	20
Chromium	1000	997	1000	100	100	80-120			1	20
Cobalt	1000	1020	1010	102	101	80-120			1	20
Lithium	1000	965	970	96	97	80-120			0	20
Molybdenum	1000	1060	1050	106	105	80-120			1	20

L941488-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941488-14 10/11/17 22:31 • (MS) R3256712-5 10/11/17 22:37 • (MSD) R3256712-6 10/11/17 22:40

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 %
Barium	1000	377	1430	1420	105	104	1	75-125			1	20
Chromium	1000	ND	1000	993	100	99	1	75-125			1	20
Cobalt	1000	ND	1020	1010	102	101	1	75-125			1	20
Lithium	1000	ND	987	976	98	97	1	75-125			1	20
Molybdenum	1000	ND	1070	1060	107	106	1	75-125			1	20

Method Blank (MB)

(MB) R3258252-1 10/17/17 17:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		0.754	2.00
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Lead	U		0.240	2.00
Selenium	U		0.380	2.00
Thallium	U		0.190	2.00

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

(LCS) R3258252-2 10/17/17 17:19 • (LCSD) R3258252-3 10/17/17 17:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	53.7	54.8	107	110	80-120			2	20
Arsenic	50.0	48.6	50.0	97	100	80-120			3	20
Beryllium	50.0	48.3	49.7	97	99	80-120			3	20
Cadmium	50.0	47.1	48.7	94	97	80-120			3	20
Lead	50.0	47.9	47.6	96	95	80-120			1	20
Selenium	50.0	44.7	46.2	89	92	80-120			3	20
Thallium	50.0	47.3	47.5	95	95	80-120			0	20

L941488-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941488-01 10/17/17 17:26 • (MS) R3258252-5 10/17/17 17:33 • (MSD) R3258252-6 10/17/17 17:37

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 %
Antimony	50.0	ND	54.3	56.5	109	113	1	75-125			4	20
Arsenic	50.0	2.49	52.9	53.3	101	102	1	75-125			1	20
Beryllium	50.0	ND	50.0	51.2	100	102	1	75-125			2	20
Cadmium	50.0	ND	48.9	50.6	98	101	1	75-125			3	20
Lead	50.0	ND	47.8	48.9	96	98	1	75-125			2	20
Selenium	50.0	ND	46.9	49.6	92	97	1	75-125			6	20
Thallium	50.0	ND	47.6	49.0	95	98	1	75-125			3	20

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description

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

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

State Accreditations

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

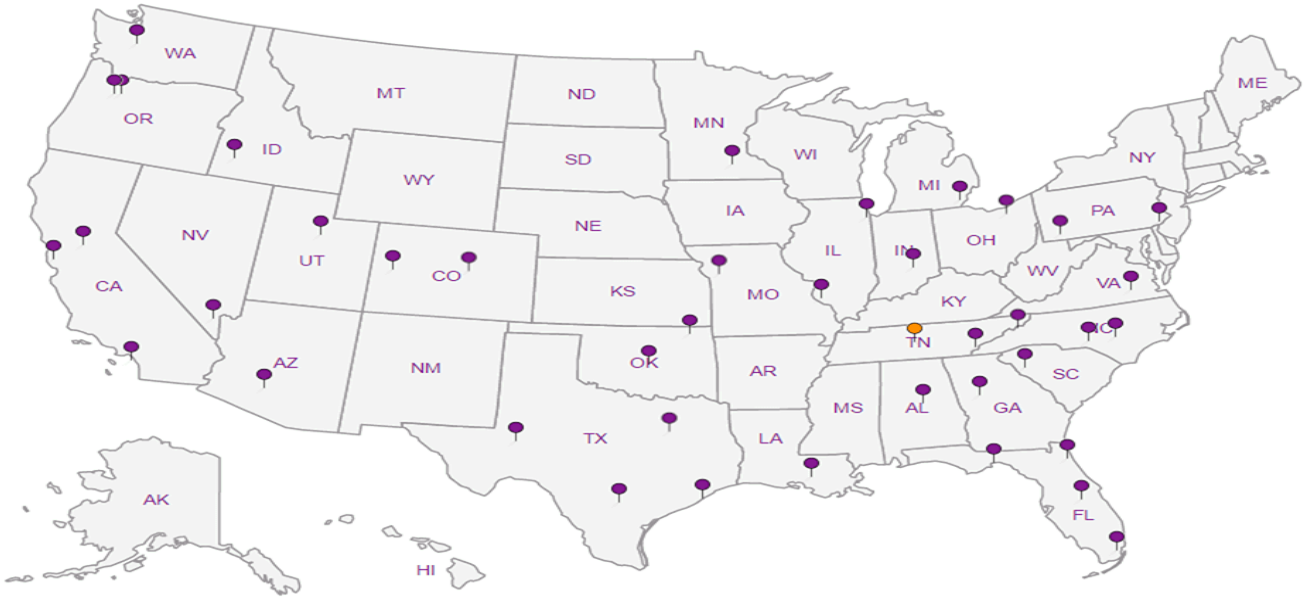
Third Party & Federal Accreditations

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

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

Our Locations

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



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Chain of Custody

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 941488

A142

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

Company Name/Address:
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information:
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to:
Mr. Jason R. Franks

Email To:
jfranks@scsengineers.com

Project Description: KCPL Sibley Gen Station - Groundwater

City/State Collected: Sibley, Mo

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

Client Project # 27213169.17

Lab Project #

Collected by (print): Jason R. Franks

Site/Facility ID #

P.O. #

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

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

L2

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*CCR Metals 250mlHDPE-HNO3	Rem./Contaminant	Sample # (lab only)
701	Grab	GW	NA	10/3/17	1305	1	X		01
702	Grab	GW	NA	10/3/17	1455	1	X		-03
703	Grab	GW	NA	10/3/17	1420	1	X		-02
704	Grab	GW	NA	10/3/17	1345	1	X		04
801	Grab	GW	NA	10/4/17	1050	1	X		05
802	Grab	GW	NA	10/4/17	1140	1	X		06
803	Grab	GW	NA	10/4/17	1050	1	X		07
804	Grab	GW	NA	10/4/17	1145	1	X		08
805	Grab	Other	NA	10/4/17	1150	1	X		09
806R	Grab	Other	NA	10/4/17	1225	1	X		10

TD 10/30

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: *CCR App IV Metals (6010): Ba,Cr,Co,Li,Mo - (6020): Pb,As,Be,Cd,Sb,Se,Tl - (7470): Hg

pH ____ Temp ____
Flow ____ Other ____

Hold #

Condition: (lab use only) OK

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/4/17	1545	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ____

Temp: 1.4 °C Bottles Received: 19=BR

Date: 10-5-17 Time: 0845

COC Seal Intact: ___Y ___N ___NA

pH Checked: L2 NCF:

Company Name/Address:
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information:
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to: **Mr. Jason R. Franks**

Email To: **jfranks@scsengineers.com**

Project Description: **KCPL Sibley Gen Station - Groundwater**

City/State Collected: **Sibley, Mo**

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

Client Project # **27213169.17**

Lab Project #

Collected by (print): **Jason R. Franks**

Site/Facility ID #

P.O. #

Collected by (signature): Whit Martin
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD

Email? ___No X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Metals** 250mlHDPE-HN03									Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	10/3/17	1300	1	X										11
505	Grab	GW	NA	10/3/17	1350	1	X										12
506	Grab	GW	NA	10/3/17	1525	1	X										13
510	Grab	GW	NA	10/3/17	1410	1	X										14
512	Grab	GW	NA	10/4/17	1005	1	X										15
601	Grab	GW	NA	10/3/17	1550	1	X										16
Duplicate	Grab	GW	NA	10/3/17	—	1	X										17
MS 510	Grab	GW	NA	10/3/17	1420	1	X										14
MSD 510	Grab	GW	NA	10/3/17	1425	1	X										14

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks: ****Metals (6010): Li and Mo**

pH _____ Temp _____
Flow _____ Other _____

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	10/4/17	1545	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			MW

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 1.6 °C Bottles Received: 19=38
Date: 10-5-17 Time: 0845

Hold #
Condition: (lab use only) a
COC Seal Intact: ___ Y ___ N ___ NA
pH Checked: NCF:

Chain of Custody Page 2 of 2

ESC LABORATORIES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 94148
Table #
Acctnum: **AQUAOPKS**
Template:
Prelogin:
TSR: **206-Jeff Carr**
PB:
Shipped Via:

ESC LAB SCIENCES
Cooler Receipt Form

Client: ADJACOPKS	SDG#		
Cooler Received/Opened On: 10/ 5 /17	Temperature:	1.6	
Received by : Michael Witherspoon			
Signature: Mwt			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

Case Narrative

Lab No: 20170940

This report contains the analytical results for the 19 sample(s) received under chain of custody by ESC Lab Sciences on 10/5/2017 11:11:01 AM. These samples are associated with your 27213167.17 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below:

The test results in this report meet all NELAC requirements unless noted below:

This report shall not be reproduced, except in full, without the written approval of ESC Lab Sciences.

All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client.

Results have been reviewed by the Director of Radiochemistry or their designees and is approved for release.

DL for Radiochemistry = MDA DL for Metals and Wet Chemistry = MDL DL for Drinking Water = SDWA

Observations / Nonconformances

L941852

ESC Lab Sciences
12065 Lebanon Rd, Mt. Juliet, TN 37122 (1-800) 767-5859 www.ESCLabSciences.com

Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20170940-01								
Client ID : 504								
Date Sampled : 10/3/2017 1:00:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		1.94 +/- 0.853	0.680	pCi/l				
Radium-226	SM 7500 Ra B M*	0.518 +/- 0.240	0.147	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	1.42 +/- 0.613	0.533	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-02								
Client ID : 505								
Date Sampled : 10/3/2017 1:50:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.063 +/- 0.730	0.851	pCi/l				
Radium-226	SM 7500 Ra B M*	0.063 +/- 0.140	0.242	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	-0.053 +/- 0.590	0.609	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-03								
Client ID : 506								
Date Sampled : 10/3/2017 3:25:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.693 +/- 0.834	0.549	pCi/l				
Radium-226	SM 7500 Ra B M*	0.627 +/- 0.257	0.140	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	0.066 +/- 0.577	0.409	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-04								
Client ID : 510								
Date Sampled : 10/3/2017 2:10:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		1.08 +/- 0.746	0.758	pCi/l				
Radium-226	SM 7500 Ra B M*	0.111 +/- 0.165	0.248	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	0.964 +/- 0.581	0.510	pCi/l		10/31/17	11/15/17	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : **20170940-05**								
Client ID : **510MS**								
Date Sampled : **10/3/2017 2:20:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	125		% Rec				RE
Radium-228	EPA 904*	78.4		% Rec				JR
Lab ID : **20170940-06**								
Client ID : **510MSD**								
Date Sampled : **10/3/2017 2:25:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Radium-226	SM 7500 Ra B M*	1.9		RPD				RE
Radium-228	EPA 904*	2.4		RPD				JR
Lab ID : **20170940-07**								
Client ID : **512**								
Date Sampled : **10/4/2017 10:05:00 AM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		1.23 +/- 0.726	0.864	pCi/l				
Radium-226	SM 7500 Ra B M*	0.625 +/- 0.300	0.244	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	0.605 +/- 0.426	0.620	pCi/l		10/31/17	11/15/17	JR
Lab ID : **20170940-08**								
Client ID : **601**								
Date Sampled : **10/3/2017 3:50:00 PM**								
Matrix : **NPW**								
		Radiochemical Analyses						
Combined Radium		0.718 +/- 0.645	0.783	pCi/l				
Radium-226	SM 7500 Ra B M*	0.178 +/- 0.175	0.213	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	0.540 +/- 0.470	0.570	pCi/l		10/31/17	11/15/17	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20170940-09								
Client ID : 701								
Date Sampled : 10/3/2017 1:05:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.073 +/- 0.715	1.02	pCi/l				
Radium-226	SM 7500 Ra B M*	0.073 +/- 0.175	0.296	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	-0.305 +/- 0.540	0.727	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-10								
Client ID : 702								
Date Sampled : 10/3/2017 2:55:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.000 +/- 0.794	1.42	pCi/l				
Radium-226	SM 7500 Ra B M*	-0.114 +/- 0.240	0.449	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	-0.448 +/- 0.554	0.970	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-11								
Client ID : 703								
Date Sampled : 10/3/2017 2:20:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.385 +/- 0.755	1.21	pCi/l				
Radium-226	SM 7500 Ra B M*	0.385 +/- 0.294	0.341	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	-0.196 +/- 0.461	0.865	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-12								
Client ID : 704								
Date Sampled : 10/3/2017 1:45:00 PM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		1.30 +/- 0.770	0.836	pCi/l				
Radium-226	SM 7500 Ra B M*	0.785 +/- 0.292	0.145	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	0.519 +/- 0.478	0.691	pCi/l		10/31/17	11/15/17	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20170940-13								
Client ID : 801								
Date Sampled : 10/4/2017 10:50:00 AM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		1.22 +/- 0.590	1.09	pCi/l				
Radium-226	SM 7500 Ra B M*	-0.055 +/- 0.086	0.261	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	1.22 +/- 0.504	0.831	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-14								
Client ID : 802								
Date Sampled : 10/4/2017 11:40:00 AM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.066 +/- 0.667	1.04	pCi/l				
Radium-226	SM 7500 Ra B M*	0.066 +/- 0.126	0.219	pCi/l		10/17/17	11/03/17	RE
Radium-228	EPA 904*	-0.429 +/- 0.541	0.816	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-15								
Client ID : 803								
Date Sampled : 10/4/2017 10:50:00 AM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.826 +/- 0.749	1.12	pCi/l				
Radium-226	SM 7500 Ra B M*	0.266 +/- 0.214	0.237	pCi/l		10/18/17	10/20/17	RT
Radium-228	EPA 904*	0.560 +/- 0.535	0.878	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-16								
Client ID : 804								
Date Sampled : 10/4/2017 11:45:00 AM								
Matrix : NPW								
		Radiochemical Analyses						
Combined Radium		0.511 +/- 0.668	1.06	pCi/l				
Radium-226	SM 7500 Ra B M*	0.152 +/- 0.208	0.299	pCi/l		10/18/17	10/20/17	RT
Radium-228	EPA 904*	0.359 +/- 0.460	0.759	pCi/l		10/31/17	11/15/17	JR

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Analytical Report

	Method	Result	DL	Units	Qual	Prep Date	Analysis Date	Analyst
Lab ID : 20170940-17								
Client ID : 805								
Date Sampled : 10/4/2017 11:50:00 AM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.605 +/- 0.723	1.03	pCi/l				
Radium-226	SM 7500 Ra B M*	0.378 +/- 0.261	0.278	pCi/l		10/18/17	10/20/17	RT
Radium-228	EPA 904*	0.227 +/- 0.462	0.747	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-18								
Client ID : 806R								
Date Sampled : 10/4/2017 12:25:00 PM								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		2.35 +/- 0.694	0.905	pCi/l				
Radium-226	SM 7500 Ra B M*	0.262 +/- 0.253	0.332	pCi/l		10/18/17	10/20/17	RT
Radium-228	EPA 904*	2.09 +/- 0.441	0.573	pCi/l		10/31/17	11/15/17	JR
Lab ID : 20170940-19								
Client ID : DUPLICATE								
Date Sampled : 10/3/2017								
Matrix : NPW								
Radiochemical Analyses								
Combined Radium		0.214 +/- 0.671	1.04	pCi/l				
Radium-226	SM 7500 Ra B M*	0.214 +/- 0.232	0.311	pCi/l		10/18/17	10/20/17	RT
Radium-228	EPA 904*	-0.367 +/- 0.439	0.731	pCi/l		10/31/17	11/15/17	JR

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QC Report

Parameter	Blank	LCS %REC	LCSD %REC	LCSD RPD	DUP RPD	RER, NAD or DER	MS %REC	MSD %REC	MSD RPD	Batch ID
Radium-226	0.013	119.0			NC	0.342	125.0	122.0	1.9	R1289
Radium-226	0.028	119.0			NC	0.101	121.0	121.0	0.0	R1290
Radium-228	-0.703	83.1			NC	0.436	78.4	76.1	2.4	R4014

Lab Approval:

Ron Eidson
Director of Radiochemistry

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

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

Pres Chk

Report to: Jason Franks

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

Project Description: Sibley Generating Station

City/State Collected: SIBLEY, MO

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

Client Project # 27213167.17

Lab Project # AQUAOPKS-SIBLEY

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature):

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

Quote #

Date Results Needed: STD

Immediately Packed on Ice N ___ Y ___

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA226, RA228, 1-HDPE-Add HNO3	Remarks	Sample # (lab only)
504	GRAB	NPW	-	10/3/17	1300	2	X		
505		NPW	-	10/3/17	1350	2	X		
506		NPW	-	10/3/17	1525	2	X		
510		NPW	-	10/3/17	1410	2	X		
512		NPW	-	10/4/17	1005	2	X		
601		NPW	-	10/3/17	1550	2	X		
701		NPW	-	10/3/17	1305	2	X		
702		NPW	-	10/3/17	1455	2	X		
703		NPW	-	10/3/17	1420	2	X		
704		NPW	-	10/3/17	1345	2	X		

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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# 941852

Table#

Acctnum: AQUAOPKS

Template: T115110

Prelogin: P620052

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: RA 226/228 - Report separately and combined.

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	10/4/17	1545	
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: 4.6 °C Bottles Received: 38

Date: 10/5/17 Time: 114

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

20120940

SCS Engineers - KS

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

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

Pres Chk

Report to: Jason Franks

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

Project Description: Sibley Generating Station

City/State Collected: SIBLEY MO

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

Client Project # 27213167.17

Lab Project # AQUAOPKS-SIBLEY

Collected by (print): JASON R. FRANKS

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y ___

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

Date Results Needed: STD

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative: RA226, RA228 1L-HDPE-Add HNO3
801	GRAB	NPW	-	10/4/17	1050	2	X
802		NPW	-	10/4/17	1140	2	X
803		NPW	-	10/4/17	1050	2	X
804		NPW	-	10/4/17	1145	2	X
805		NPW	-	10/4/17	1150	2	X
806R		NPW	-	10/4/17	1225	2	X
DUPLICATE		NPW	-	10/3/17	-	2	X
510 MS		NPW	-	10/3/17	1420	2	X
510 MSD		NPW	-	10/3/17	1425	2	X

COPY

Chain of Custody Page 2 of 2

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

L# 941852

Table #

Acctnum: AQUAOPKS
Template: T115110
Prelogin: P620052
TSR: 206 - Jeff Carr
PB:

Shipped Via:

Remarks | Sample # (lab only)

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

Remarks: RA 226/228 - Report separately and combined.

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	10/4/17	1545			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: Hub °C Bottles Received: 32	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/5/17 Time: 1111	Hold: / Condition: NCF / OK

20170545

SAMPLE LOGIN

Date Received: *10/5/2017 11:11:0* **Lab Number:** 20170940 **Due:** 11/2/2017

Sample Number	Client Sample ID	Matrix	Date Sampled	Container Type	Container Size	Preservation	Preserved Upon Receipt	Custody Seal	Seal Intact
20170940-01 B	504	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-01 A	504	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-02 A	505	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-02 B	505	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-03 A	506	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-03 B	506	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-04 A	510	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-04 B	510	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-05 A	510MS	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-05 B	510MS	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-06 B	510MSD	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-06 A	510MSD	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-07 A	512	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-07 B	512	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						

20170940-08 A	601	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-08 B	601	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-09 A	701	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-09 B	701	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-10 B	702	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-10 A	702	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-11 A	703	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-11 B	703	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-12 A	704	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-12 B	704	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-13 A	801	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-13 B	801	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-14 B	802	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-14 A	802	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-15 A	803	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-15 B	803	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-16 A	804	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-16 B	804	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes

Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-17 A	805	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-17 B	805	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-18 A	806R	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-18 B	806R	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						
20170940-19 B	DUPLICATE	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
20170940-19 A	DUPLICATE	NPW		Plastic	1 L	HNO3, pH < 2	☑	Yes	Yes
Radium-226			SM 7500 Ra B M*						
Radium-228			EPA 904*						

CONTAINER INSPECTION

 # Coolers 4 **Custody Seals Broken** Ø **Temperature:** 4.6 C **Ice** **Radiation Survey:** <300 cpm

SAMPLE INSPECTION

Sample Seal Broken Ø **Chain of Custody Record** ☑ **Labels in Tact** ☑ **Radiation Survey Complete** ☑

Anomalies

Inspected By: _____ **DATE** 10/5/17

QA or Designee Review: _____ **DATE** _____

Sample Custodian Review: 10/5/17 **DATE** 10/5/17

Project Notes:

Jared Morrison
December 16, 2022

ATTACHMENT 1-10

October 2017 Detection Sampling Event Laboratory Report

ANALYTICAL REPORT

October 12, 2017

SCS Engineers - KS

Sample Delivery Group:	L941493
Samples Received:	10/05/2017
Project Number:	27213169.17
Description:	Sibley Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

TABLE OF CONTENTS

504 L941493-01 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 13:00 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1028970	1	10/09/17 09:51	10/09/17 10:39	BS
Wet Chemistry by Method 9056A	WG1029612	1	10/10/17 21:56	10/10/17 21:56	KCF
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 22:25	TRB

505 L941493-02 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 13:50 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1028970	1	10/09/17 09:51	10/09/17 10:39	BS
Wet Chemistry by Method 9056A	WG1029612	1	10/10/17 22:06	10/10/17 22:06	KCF
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 22:28	TRB

506 L941493-03 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 15:25 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1028970	1	10/09/17 09:51	10/09/17 10:39	BS
Wet Chemistry by Method 9056A	WG1029612	1	10/10/17 22:37	10/10/17 22:37	KCF
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 22:31	TRB

510 L941493-04 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 14:10 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1028970	1	10/09/17 09:51	10/09/17 10:39	BS
Wet Chemistry by Method 9056A	WG1029612	1	10/10/17 22:47	10/10/17 22:47	KCF
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 21:38	TRB

512 L941493-05 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 10:05 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1028970	1	10/09/17 09:51	10/09/17 10:39	BS
Wet Chemistry by Method 9056A	WG1029612	1	10/10/17 23:27	10/10/17 23:27	KCF
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 22:33	TRB

601 L941493-06 GW

Collected by: Jason R. Franks | Collected date/time: 10/03/17 15:50 | Received date/time: 10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1028970	1	10/09/17 09:51	10/09/17 10:39	BS
Wet Chemistry by Method 9056A	WG1029612	1	10/10/17 23:37	10/10/17 23:37	KCF
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 22:36	TRB

DUPLICATE L941493-07 GW

Collected by	Collected date/time	Received date/time
Jason R. Franks	10/03/17 00:00	10/05/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1028970	1	10/09/17 09:51	10/09/17 10:39	BS
Wet Chemistry by Method 9056A	WG1029612	1	10/10/17 23:48	10/10/17 23:48	KCF
Metals (ICP) by Method 6010B	WG1029565	1	10/11/17 08:44	10/11/17 22:38	TRB

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

Jeff Carr
Technical Service Representative

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	181000		10000	1	10/09/2017 10:39	WG1028970

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3910		1000	1	10/10/2017 21:56	WG1029612
Fluoride	117		100	1	10/10/2017 21:56	WG1029612
Sulfate	24300		5000	1	10/10/2017 21:56	WG1029612

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	10/11/2017 22:25	WG1029565
Calcium	33200		1000	1	10/11/2017 22:25	WG1029565

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	158000		10000	1	10/09/2017 10:39	WG1028970

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3130		1000	1	10/10/2017 22:06	WG1029612
Fluoride	124		100	1	10/10/2017 22:06	WG1029612
Sulfate	13400		5000	1	10/10/2017 22:06	WG1029612

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	10/11/2017 22:28	WG1029565
Calcium	26600		1000	1	10/11/2017 22:28	WG1029565

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	450000		10000	1	10/09/2017 10:39	WG1028970

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	8740		1000	1	10/10/2017 22:37	WG1029612
Fluoride	182		100	1	10/10/2017 22:37	WG1029612
Sulfate	71300		5000	1	10/10/2017 22:37	WG1029612

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	10/11/2017 22:31	WG1029565
Calcium	105000		1000	1	10/11/2017 22:31	WG1029565

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	485000		10000	1	10/09/2017 10:39	WG1028970

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3360	J3	1000	1	10/10/2017 22:47	WG1029612
Fluoride	271	J6 P1	100	1	10/10/2017 22:47	WG1029612
Sulfate	16900		5000	1	10/10/2017 22:47	WG1029612

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	10/11/2017 21:38	WG1029565
Calcium	130000		1000	1	10/11/2017 21:38	WG1029565

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	423000		10000	1	10/09/2017 10:39	WG1028970

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	6590		1000	1	10/10/2017 23:27	WG1029612
Fluoride	172		100	1	10/10/2017 23:27	WG1029612
Sulfate	28200		5000	1	10/10/2017 23:27	WG1029612

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	10/11/2017 22:33	WG1029565
Calcium	110000		1000	1	10/11/2017 22:33	WG1029565

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	397000		10000	1	10/09/2017 10:39	WG1028970

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	6100		1000	1	10/10/2017 23:37	WG1029612
Fluoride	154		100	1	10/10/2017 23:37	WG1029612
Sulfate	9760		5000	1	10/10/2017 23:37	WG1029612

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	10/11/2017 22:36	WG1029565
Calcium	111000		1000	1	10/11/2017 22:36	WG1029565

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	495000		10000	1	10/09/2017 10:39	WG1028970

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	5830		1000	1	10/10/2017 23:48	WG1029612
Fluoride	181		100	1	10/10/2017 23:48	WG1029612
Sulfate	16600		5000	1	10/10/2017 23:48	WG1029612

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Boron	ND		200	1	10/11/2017 22:38	WG1029565
Calcium	131000		1000	1	10/11/2017 22:38	WG1029565

Method Blank (MB)

(MB) R3256614-1 10/09/17 10:39

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

L941493-04 Original Sample (OS) • Duplicate (DUP)

(OS) L941493-04 10/09/17 10:39 • (DUP) R3256614-4 10/09/17 10:39

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	485000	477000	1	1.66		5

L941496-03 Original Sample (OS) • Duplicate (DUP)

(OS) L941496-03 10/09/17 10:39 • (DUP) R3256614-5 10/09/17 10:39

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	509000	516000	1	1.37		5

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

(LCS) R3256614-2 10/09/17 10:39 • (LCSD) R3256614-3 10/09/17 10:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800000	8650000	8550000	98.3	97.2	85.0-115			1.16	5

Method Blank (MB)

(MB) R3256451-1 10/10/17 18:00

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

L941412-01 Original Sample (OS) • Duplicate (DUP)

(OS) L941412-01 10/10/17 19:03 • (DUP) R3256451-5 10/10/17 19:13

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	2670	5000	1	61	J3	15
Fluoride	124	87.4	1	35	P1	15
Sulfate	ND	2360	1	0		15

L941493-04 Original Sample (OS) • Duplicate (DUP)

(OS) L941493-04 10/10/17 22:47 • (DUP) R3256451-9 10/10/17 22:57

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3360	6290	1	61	J3	15
Fluoride	271	174	1	43	P1	15
Sulfate	16900	16900	1	0		15

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

(LCS) R3256451-2 10/10/17 18:10 • (LCSD) R3256451-3 10/10/17 18:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39100	39100	98	98	80-120			0	15
Fluoride	8000	8090	8090	101	101	80-120			0	15
Sulfate	40000	39800	39600	100	99	80-120			1	15

L941412-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L941412-01 10/10/17 19:03 • (MS) R3256451-8 10/10/17 19:23

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	2670	44000	83	1	80-120	
Fluoride	5000	124	4270	83	1	80-120	
Sulfate	50000	ND	44800	84	1	80-120	

L941493-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941493-04 10/10/17 22:47 • (MS) R3256451-10 10/10/17 23:07 • (MSD) R3256451-11 10/10/17 23:17

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	3360	45200	52100	84	97	1	80-120			14	15
Fluoride	5000	271	4460	3990	84	74	1	80-120		J6	11	15
Sulfate	50000	16900	59000	58600	84	83	1	80-120			1	15

Method Blank (MB)

(MB) R3256705-1 10/11/17 21:20

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) R3256705-2 10/11/17 21:23 • (LCSD) R3256705-3 10/11/17 21:25

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	1100	1100	110	110	80-120			0	20
Calcium	10000	10800	10900	108	109	80-120			0	20

L941477-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941477-04 10/11/17 21:28 • (MS) R3256705-5 10/11/17 21:33 • (MSD) R3256705-6 10/11/17 21:36

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	1180	1180	111	112	1	75-125			0	20
Calcium	10000	130000	139000	139000	88	87	1	75-125			0	20

L941493-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L941493-04 10/11/17 21:38 • (MS) R3256705-7 10/11/17 21:41 • (MSD) R3256705-8 10/11/17 21:43

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	1150	1180	108	111	1	75-125			3	20
Calcium	10000	130000	139000	140000	87	98	1	75-125			1	20

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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

State Accreditations

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

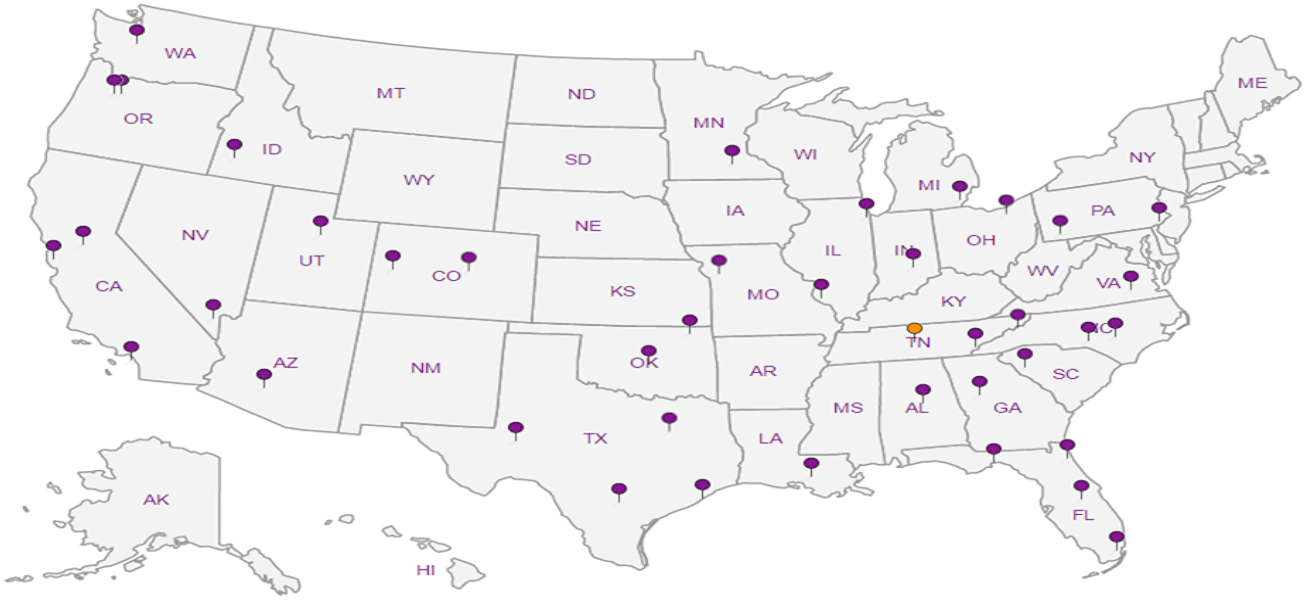
Third Party & Federal Accreditations

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

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

Our Locations

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



Chain of Custody Page 1 of 1

ESC LAB SCIENCES — YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 941493
A141

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

Company Name/Address:
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information:
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to: **Mr. Jason R. Franks**
Email To: **jfranks@scsengineers.com**

Project Description: **KCPL Sibley Gen Station - Groundwater**
City/State Collected: **Sibley, Mo**

Phone: **913-681-0030**
Fax: **913-681-0012**
Client Project # **27213169.17**
Lab Project #

Collected by (print): **Jason R. Franks**
Site/Facility ID #
P.O. #

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

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: STD
Email? ___No X Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions(Cl-, F-, SO4) 125mlHDPE-NoPres	Total Metals* 250mlHDPE-HN03 (12)	TDS 250mlHDPE-NoPres	Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	10/3/17	1300	3	X	X	X		01
505	Grab	GW	NA	10/3/17	1350	3	X	X	X		02
506	Grab	GW	NA	10/3/17	1525	3	X	X	X		03
510	Grab	GW	NA	10/3/17	1410	3	X	X	X		04
512	Grab	GW	NA	10/4/17	1005	3	X	X	X		05
601	Grab	GW	NA	10/3/17	1550	3	X	X	X		06
Duplicate	Grab	GW	NA	10/3/17	—	3	X	X	X		07
MS 510	Grab	GW	NA	10/3/17	1420	3	X	X	X		08
MSD 510	Grab	GW	NA	10/3/17	1425	3	X	X	X		09

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks: ***Metals (6010): B and Ca**

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	10/4/17	1545	[signature]
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			[signature]

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____
Temp: 1.6 °C Bottles Received: 27
Date: 10-5-17 Time: 0845

Condition: (lab use only) 0
COC Seal Intact: ___Y ___N ___NA
pH Checked: C2 NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client: AQUAOPCS	SDG#	941493	
Cooler Received/Opened On: 10/5 /17	Temperature:	1.6	
Received by : Michael Witherspoon			
Signature: MWL			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

Jared Morrison
December 16, 2022

ATTACHMENT 1-11

November 2017 Sampling Event Laboratory Report

ANALYTICAL REPORT

November 20, 2017

SCS Engineers - KS

Sample Delivery Group:	L952194
Samples Received:	11/18/2017
Project Number:	27213169.17
Description:	Sibley Generating Station

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

Entire Report Reviewed By:

Jeff Carr
Technical Service Representative

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

TABLE OF CONTENTS

504 L952194-01 GW

Collected by: Jason R. Franks | Collected date/time: 11/16/17 11:50 | Received date/time: 11/18/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1044470	1	11/18/17 17:26	11/18/17 17:26	KCF
Metals (ICP) by Method 6010B	WG1044590	1	11/19/17 09:14	11/20/17 04:53	CCE

505 L952194-02 GW

Collected by: Jason R. Franks | Collected date/time: 11/16/17 11:55 | Received date/time: 11/18/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1044470	1	11/18/17 17:39	11/18/17 17:39	KCF
Metals (ICP) by Method 6010B	WG1044590	1	11/19/17 09:14	11/20/17 04:55	CCE

506 L952194-03 GW

Collected by: Jason R. Franks | Collected date/time: 11/16/17 12:35 | Received date/time: 11/18/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1044470	1	11/18/17 17:52	11/18/17 17:52	KCF
Metals (ICP) by Method 6010B	WG1044590	1	11/19/17 09:14	11/20/17 04:58	CCE

510 L952194-04 GW

Collected by: Jason R. Franks | Collected date/time: 11/16/17 10:10 | Received date/time: 11/18/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1044470	1	11/18/17 18:06	11/18/17 18:06	KCF
Metals (ICP) by Method 6010B	WG1044590	1	11/19/17 09:14	11/20/17 04:19	CCE

512 L952194-05 GW

Collected by: Jason R. Franks | Collected date/time: 11/16/17 13:15 | Received date/time: 11/18/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1044470	1	11/18/17 19:26	11/18/17 19:26	KCF
Metals (ICP) by Method 6010B	WG1044590	1	11/19/17 09:14	11/20/17 05:01	CCE

601 L952194-06 GW

Collected by: Jason R. Franks | Collected date/time: 11/16/17 13:05 | Received date/time: 11/18/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1044470	1	11/18/17 19:40	11/18/17 19:40	KCF
Metals (ICP) by Method 6010B	WG1044590	1	11/19/17 09:14	11/20/17 05:03	CCE

DUPLICATE L952194-07 GW

Collected by: Jason R. Franks | Collected date/time: 11/16/17 00:00 | Received date/time: 11/18/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1044470	1	11/18/17 19:53	11/18/17 19:53	KCF
Metals (ICP) by Method 6010B	WG1044590	1	11/19/17 09:14	11/20/17 05:06	CCE

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

Jeff Carr
Technical Service Representative

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	1520		1000	1	11/18/2017 17:26	WG1044470

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	37600		1000	1	11/20/2017 04:53	WG1044590

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	1590		1000	1	11/18/2017 17:39	WG1044470

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	26000		1000	1	11/20/2017 04:55	WG1044590

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	6150		1000	1	11/18/2017 17:52	WG1044470

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	96000		1000	1	11/20/2017 04:58	WG1044590

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3910	P1	1000	1	11/18/2017 18:06	WG1044470

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	119000		1000	1	11/20/2017 04:19	WG1044590

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3970		1000	1	11/18/2017 19:26	WG1044470

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	101000		1000	1	11/20/2017 05:01	WG1044590

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3870		1000	1	11/18/2017 19:40	WG1044470

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	101000		1000	1	11/20/2017 05:03	WG1044590

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3900		1000	1	11/18/2017 19:53	WG1044470

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Calcium	119000		1000	1	11/20/2017 05:06	WG1044590

Method Blank (MB)

(MB) R3266904-1 11/18/17 11:36

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

L952194-04 Original Sample (OS) • Duplicate (DUP)

(OS) L952194-04 11/18/17 18:06 • (DUP) R3266904-4 11/18/17 18:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	3910	3110	1	23	P1	15

L952199-11 Original Sample (OS) • Duplicate (DUP)

(OS) L952199-11 11/18/17 23:14 • (DUP) R3266904-7 11/18/17 23:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	44200	43700	1	1		15

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

(LCS) R3266904-2 11/18/17 11:50 • (LCSD) R3266904-3 11/18/17 12:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	36800	36800	92	92	80-120			0	15

L952194-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L952194-04 11/18/17 18:06 • (MS) R3266904-5 11/18/17 18:33 • (MSD) R3266904-6 11/18/17 19:13

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	3910	52200	51700	96	96	1	80-120			1	15

L952199-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L952199-11 11/18/17 23:14 • (MS) R3266904-8 11/18/17 23:41

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	44200	90600	93	1	80-120	

Method Blank (MB)

(MB) R3266922-1 11/20/17 04:11

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

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

(LCS) R3266922-2 11/20/17 04:14 • (LCSD) R3266922-3 11/20/17 04:16

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	%	%	%			%	%
Calcium	10000	9320	9360	93	94	80-120			1	20

L952194-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L952194-04 11/20/17 04:19 • (MS) R3266922-5 11/20/17 04:24 • (MSD) R3266922-6 11/20/17 04:27

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Calcium	10000	119000	127000	128000	79	93	1	75-125			1	20

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

ACCREDITATIONS & LOCATIONS

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

State Accreditations

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

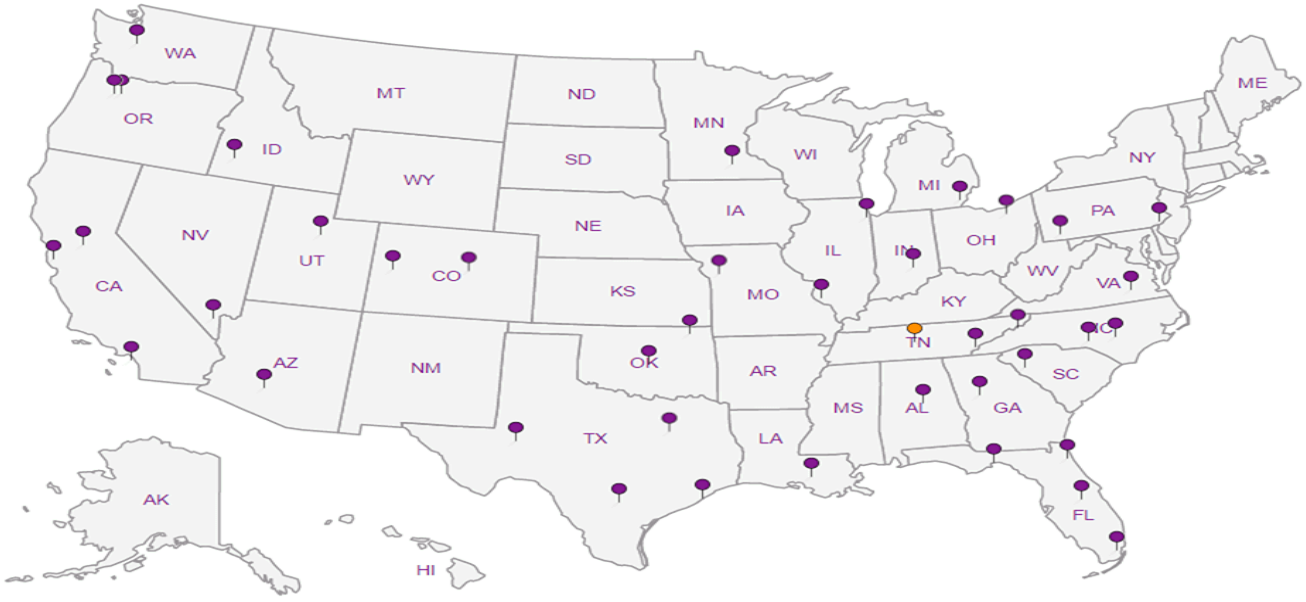
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information: Rush
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to: Mr. Jason R. Franks

Email To: jfranks@scsengineers.com

Project Description: KCPL Sibley Gen Station - Groundwater

City/State Collected: Sibley, Mo

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

Client Project #: 27213169.17

Lab Project #

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 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: 3 Day

Email? ___No ✓Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Chloride - 9056 125mlHDPE-NoPres	Calcium - 6010 250mlHDPE-HNO3 <2									Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	11/16/17	1150	2	X	X										-01
505	Grab	GW	NA	11/16/17	1155	2	X	X										02
506	Grab	GW	NA	11/16/17	1235	2	X	X										03
510	Grab	GW	NA	11/16/17	1010	2	X	X										04
512	Grab	GW	NA	11/16/17	1315	2	X	X										05
601	Grab	GW	NA	11/16/17	1305	2	X	X										06
Duplicate	Grab	GW	NA	11/16/17	—	2	X	X										07
MS (510)	Grab	GW	NA	11/16/17	1020	2	X	X										04
MSD (510)	Grab	GW	NA	11/16/17	1025	2	X	X										04

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L952194
Table E006
Acctnum: AQUAOPKS
Template:
Prelogin:
TSR: 206-Jeff Carr
PB:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Remarks:

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Jason R. Franks	11/17/17	1415	Anne K Honyouth
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____

Temp: 3.8 °C Bottles Received: 18

Date: 11/18/17 Time: 8:45

Condition: (lab use only) (OK)

COC Seal Intact: ___Y ___N ___NA

pH Checked: <2 NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client: AQUAOPKS	SDG#	L952194	
Cooler Received/Opened On: 11/18/17	Temperature:	3.8	
Received by :Christian Kacar			
Signature:			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

Jared Morrison
December 16, 2022

ATTACHMENT 1-12

December 2017 Sampling Event Laboratory Report

ANALYTICAL REPORT

January 08, 2018

SCS Engineers - KS

Sample Delivery Group:	L960373
Samples Received:	12/29/2017
Project Number:	27213169.17
Description:	KCPL Sibley Gen Station- Groundwater

Report To:

Jason Franks

7311 West 130th Street, Ste. 100

Overland Park, KS 66213

Entire Report Reviewed By:

Jeff Carr

Technical Service Representative

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

TABLE OF CONTENTS

504 L960373-01 GW

Collected by: Whit Martin
Collected date/time: 12/28/17 11:25
Received date/time: 12/29/17 13:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1059886	1	01/05/18 14:47	01/05/18 14:47	MAJ

505 L960373-02 GW

Collected by: Whit Martin
Collected date/time: 12/28/17 11:55
Received date/time: 12/29/17 13:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1058429	1	12/29/17 20:34	12/29/17 20:34	MAJ

512 L960373-03 GW

Collected by: Whit Martin
Collected date/time: 12/28/17 13:20
Received date/time: 12/29/17 13:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1058604	1	12/30/17 16:31	12/30/17 16:31	DR

601 L960373-04 GW

Collected by: Whit Martin
Collected date/time: 12/28/17 12:45
Received date/time: 12/29/17 13:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1058604	1	12/30/17 16:45	12/30/17 16:45	DR

801 L960373-05 GW

Collected by: Whit Martin
Collected date/time: 12/28/17 14:05
Received date/time: 12/29/17 13:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1059021	5	01/02/18 23:36	01/02/18 23:36	CSU

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

Jeff Carr
Technical Service Representative

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	1000		1000	1	01/05/2018 14:47	WG1059886

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	2120		1000	1	12/29/2017 20:34	WG1058429

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3580		1000	1	12/30/2017 16:31	WG1058604

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	3950		1000	1	12/30/2017 16:45	WG1058604

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Chloride	136000		5000	5	01/02/2018 23:36	WG1059021

Method Blank (MB)

(MB) R3276736-1 12/29/17 07:04

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

L960280-15 Original Sample (OS) • Duplicate (DUP)

(OS) L960280-15 12/29/17 17:27 • (DUP) R3276736-4 12/29/17 17:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	14000	13500	1	4.19		15

L960373-02 Original Sample (OS) • Duplicate (DUP)

(OS) L960373-02 12/29/17 20:34 • (DUP) R3276736-7 12/29/17 20:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	2120	1860	1	13.2		15

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

(LCS) R3276736-2 12/29/17 07:19 • (LCSD) R3276736-3 12/29/17 07:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39300	39300	98.2	98.4	80-120			0.212	15

L960280-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L960280-15 12/29/17 17:27 • (MS) R3276736-5 12/29/17 17:55 • (MSD) R3276736-6 12/29/17 18:39

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	14000	64700	63700	101	99.4	1	80-120			1.49	15

Method Blank (MB)

(MB) R3277059-1 12/30/17 13:01

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

L960408-08 Original Sample (OS) • Duplicate (DUP)

(OS) L960408-08 12/30/17 20:21 • (DUP) R3277059-7 12/30/17 20:36

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5280	5030	1	4.7		15

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

(LCS) R3277059-2 12/30/17 13:16 • (LCSD) R3277059-3 12/30/17 13:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40000	39500	39300	98.6	98.3	80-120			0.392	15

L960408-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L960408-08 12/30/17 20:21 • (MS) R3277059-8 12/30/17 21:19

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	5280	55800	101	1	80-120	

Method Blank (MB)

(MB) R3277201-1 01/02/18 21:43

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

L960503-04 Original Sample (OS) • Duplicate (DUP)

(OS) L960503-04 01/03/18 01:29 • (DUP) R3277201-4 01/03/18 01:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	13700	13500	1	1		15

L960503-09 Original Sample (OS) • Duplicate (DUP)

(OS) L960503-09 01/03/18 03:50 • (DUP) R3277201-7 01/03/18 04:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	ND	736	1	0		15

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

(LCS) R3277201-2 01/02/18 21:57 • (LCSD) R3277201-3 01/02/18 22:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39100	39100	98	98	80-120			0	15

L960503-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L960503-04 01/03/18 01:29 • (MS) R3277201-5 01/03/18 01:57 • (MSD) R3277201-6 01/03/18 02:11

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	13700	58900	57400	90	87	1	80-120			3	15

L960503-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L960503-09 01/03/18 03:50 • (MS) R3277201-8 01/03/18 04:18

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	ND	51700	102	1	80-120	

Method Blank (MB)

(MB) R3277746-1 01/05/18 06:42

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

L961002-01 Original Sample (OS) • Duplicate (DUP)

(OS) L961002-01 01/05/18 16:33 • (DUP) R3277746-4 01/05/18 16:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	9420	9170	1	3		15

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

(LCS) R3277746-2 01/05/18 06:57 • (LCSD) R3277746-3 01/05/18 07:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Chloride	40000	39300	39400	98	99	80-120			0	15

L961002-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L961002-01 01/05/18 16:33 • (MS) R3277746-5 01/05/18 17:02

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	50000	9420	61500	104	1	80-120	

Guide to Reading and Understanding Your Laboratory Report

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

Abbreviations and Definitions

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

Qualifier	Description

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

ACCREDITATIONS & LOCATIONS

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

State Accreditations

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

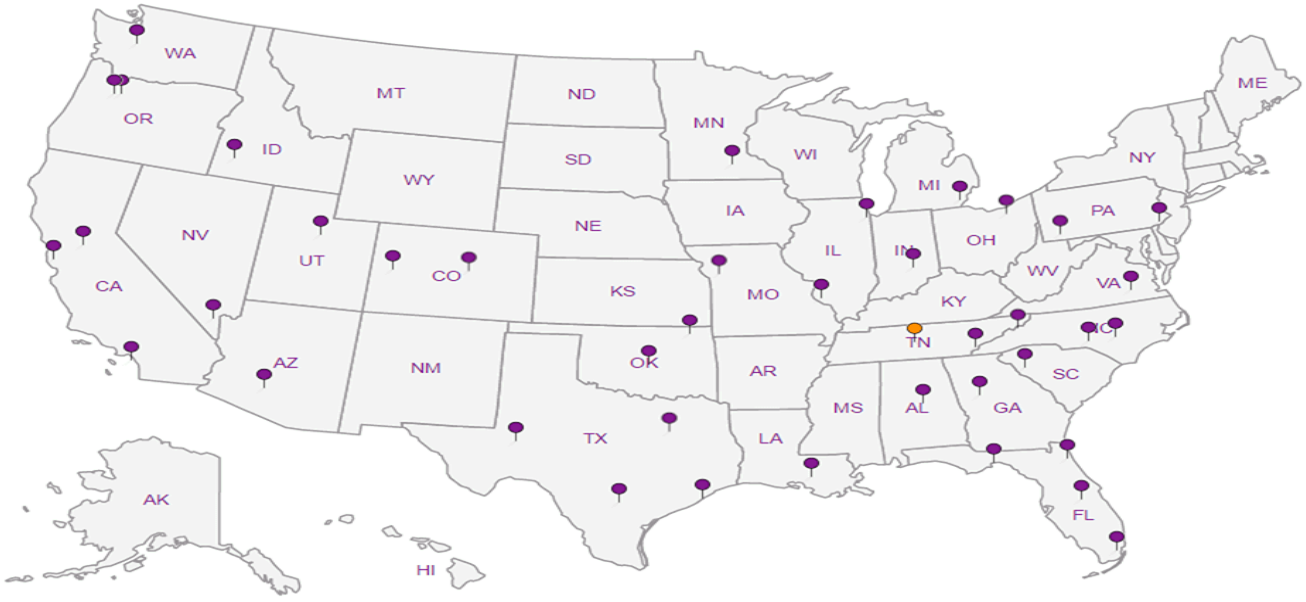
Third Party & Federal Accreditations

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

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

Our Locations

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



Company Name/Address:
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Billing Information:
Jason Franks
SCS Engineers
7311 West 130th Street
Suite 100
Overland Park, Kansas 66213

Report to:
Mr. Jason R. Franks

Email To:
jfranks@scsengineers.com

Project Description: KCPL Sibley Gen Station - Groundwater

City/State Collected: Sibley, Mo

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

Client Project #
27213169.17

Lab Project #

Collected by (print):
Whit Martin

Site/Facility ID #

P.O. #

Collected by (signature):
Whit Martin
Immediately
Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed
STD

Email? ___No X Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Chloride - 9056 125mlHDPE-NoPres										Rem./Contaminant	Sample # (lab only)
504	Grab	GW	NA	12/28/17	1125	1	X											-01
505	Grab	GW	NA	12/28/17	1155	1	X											-02
512	Grab	GW	NA	12/28/17	1320	1	X											-03
601	Grab	GW	NA	12/28/17	1245	1	X											-04
801	Grab	GW	NA	12/28/17	1405	1	X											-05

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABS
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 96037B

Table # F100

Acctnum: AQUAOPKS

Template:

Prelogin:

TSR: 206-Jeff Carr

PB:

Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Whit Martin	12/28/17	1525	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) B. Mar SDG

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

Temp: ~~4~~ 2.2 °C Bottles Received: 5

Date: 12.29.17 Time: 845

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

9049 8305 5263

ESC LAB SCIENCES
Cooler Receipt Form

Client: AQUAPORS	SDG#		
Cooler Received/Opened On: 12/29 /17	Temperature:	2.2	
Received by : *Branford Shaw*			
Signature: B. Shaw			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Jared Morrison
December 16, 2022

ATTACHMENT 2

Statistical Analyses

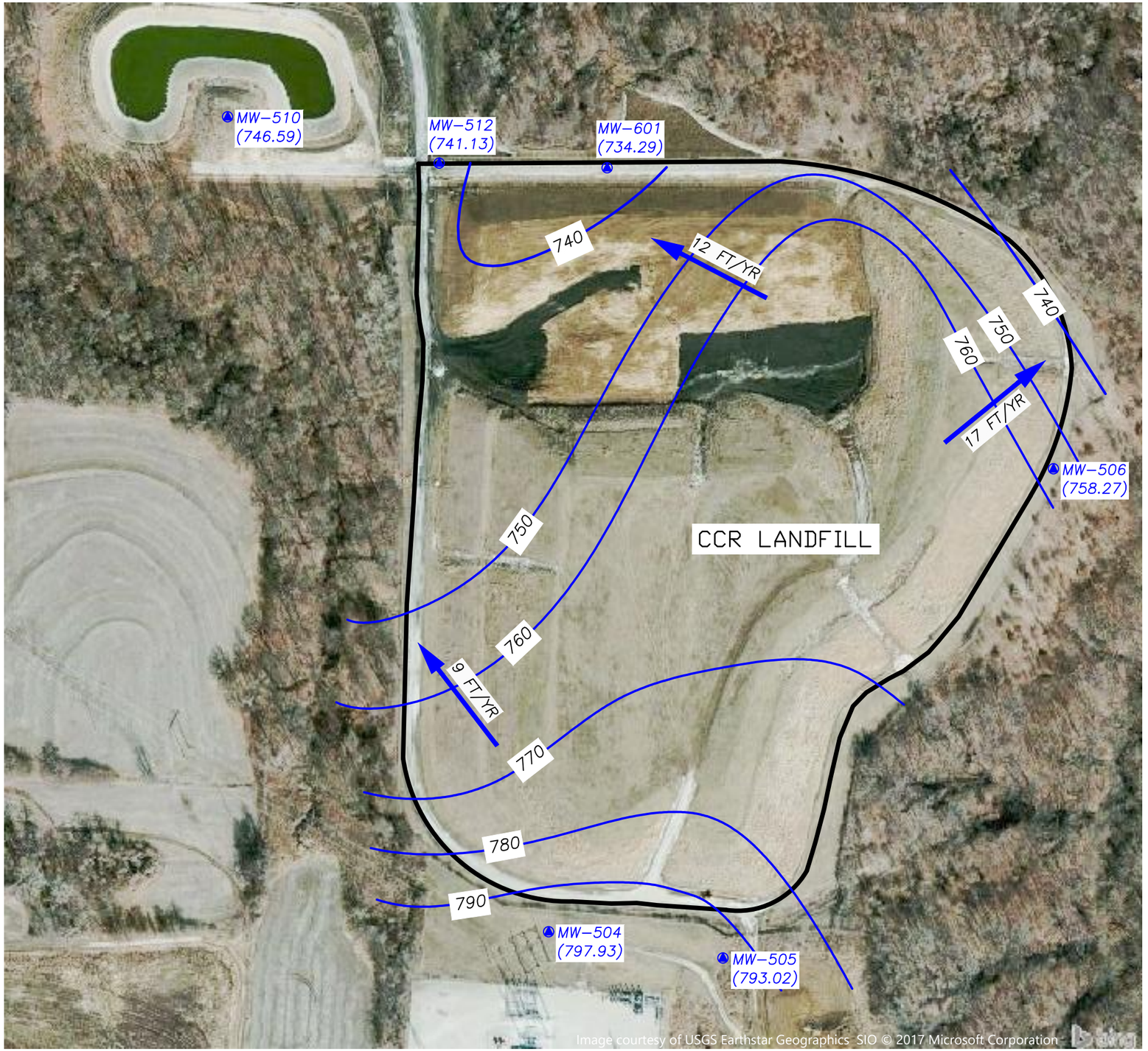
Statistical analyses were not completed in 2017. Statistical analyses of the background sampling events were completed following data verification in 2018.

Jared Morrison
December 16, 2022

ATTACHMENT 3

Groundwater Potentiometric Surface Maps

- December 2015 – First background sampling event.
- February 2016 – Second background sampling event.
- May 2016 - Third background sampling event.
- August 2016 - Fourth background sampling event.
- November 2016 - Fifth background sampling event.
- February 2017 - Sixth background sampling event.
- May 2017 - Seventh background sampling event.
- August 2017 - Eighth background sampling event.
- October 2017 – Ninth background sampling event and Fall semiannual detection monitoring sampling event.
- November 2017 – First verification sampling event for the Fall 2017 detection monitoring sampling event.



LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- 875 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON DECEMBER 15 & 16, 2015

200 0 200 400
SCALE FEET

REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (DECEMBER 2015)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

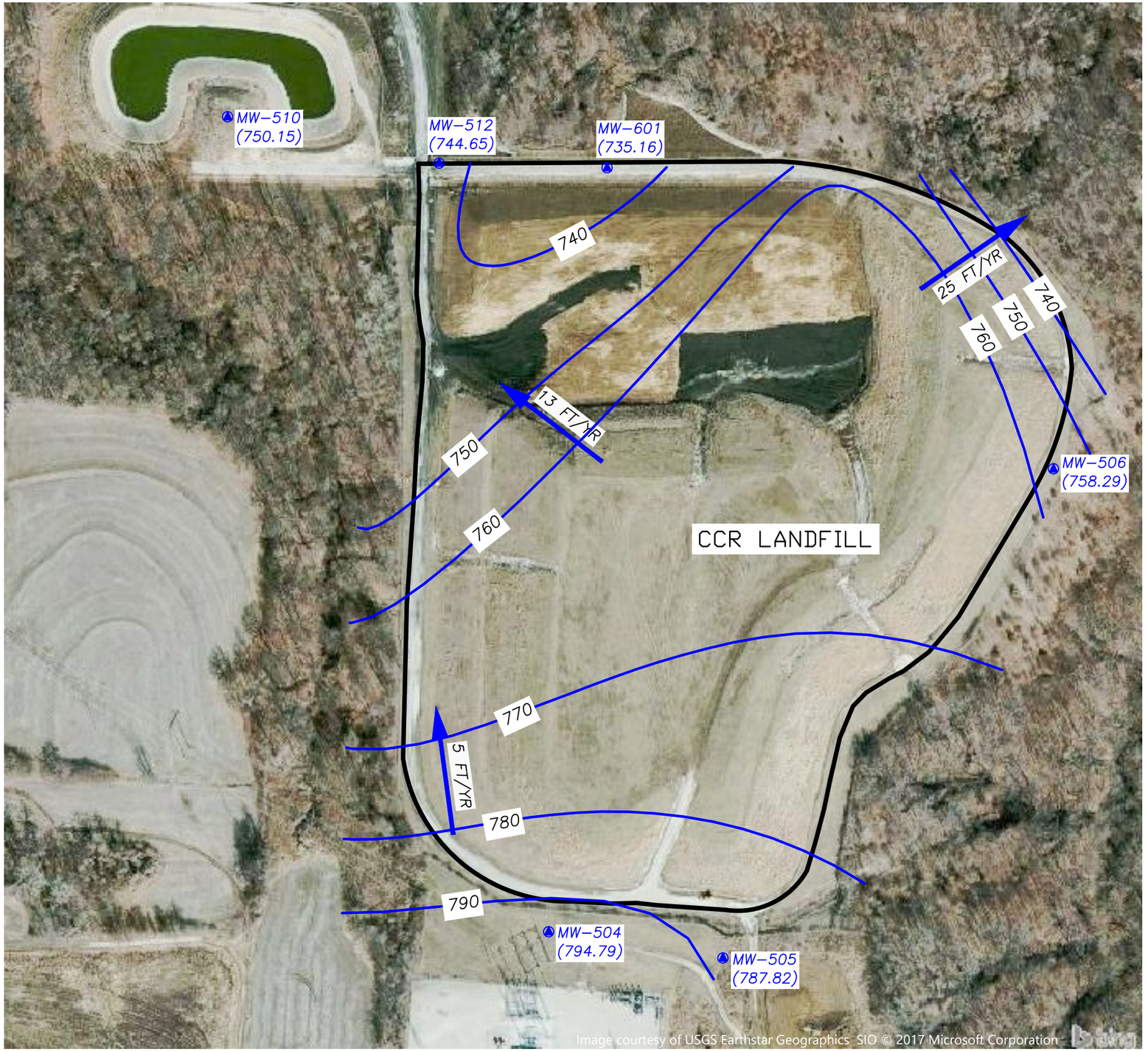
PROJ. NO. 27213169.15 | DSN. BY: RCW | DWN. BY: RCW | CHK. BY: JRF | Q/A REW BY: JRF | PROJ. MGR. JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2015-12.DWG

DATE: 12/13/22

DRAWING NO. **1**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2015-12.DWG



LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- 875 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON FEBRUARY 18, 2016

200 0 200 400
SCALE FEET

REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (FEBRUARY 2016)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

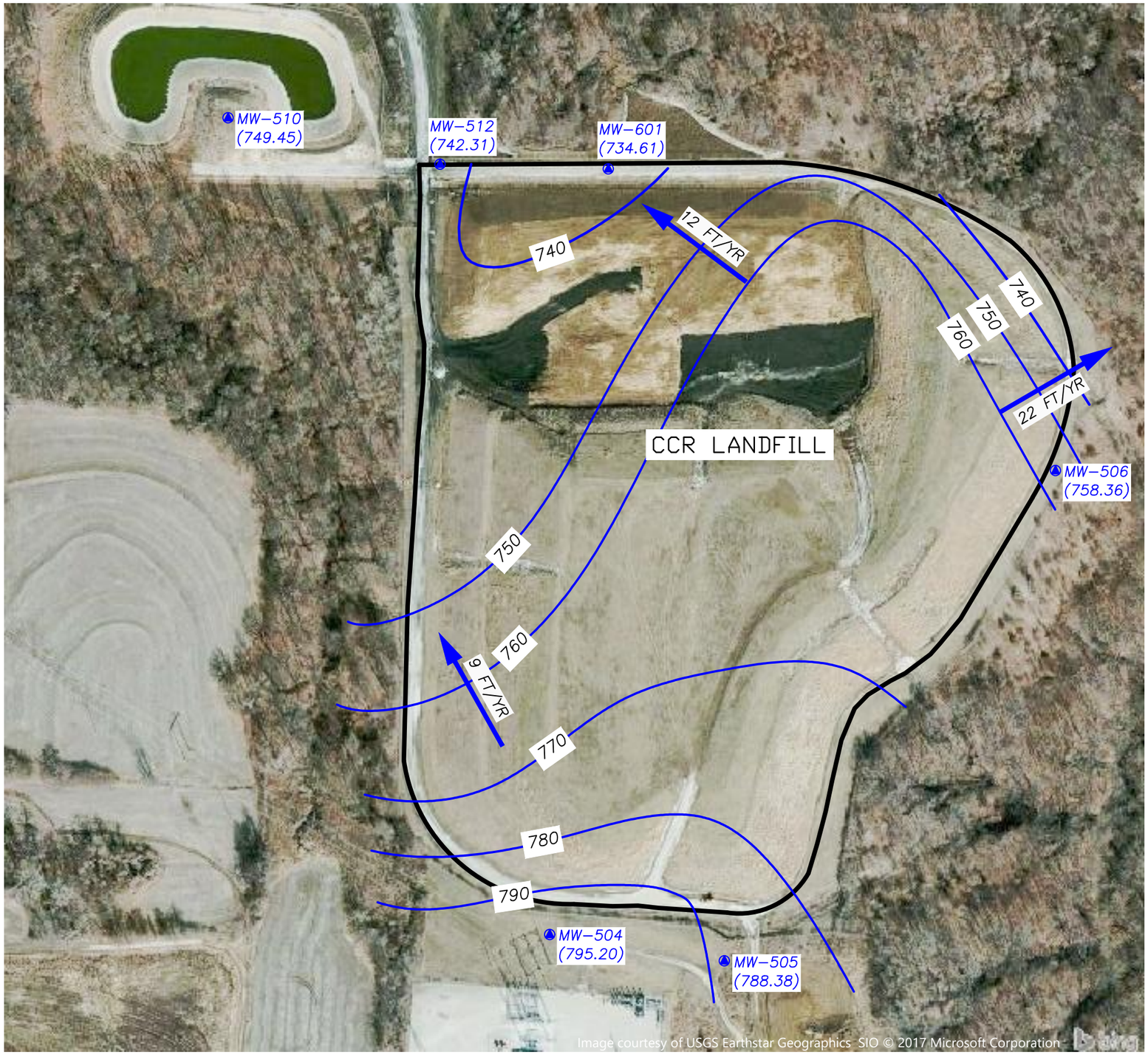
PROJ. NO.	DWN. BY:	CHK. BY:	DSN. BY:	Q/A REW BY:	PROJ. MGR
27213169.15	RCW	JRF	RCW	JRF	JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2016-2.DWG

DATE: 12/13/22

DRAWING NO. **2**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2016-2.DWG



LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- -875- GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON MAY 25 & 26, 2016

200 0 200 400
SCALE FEET

REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (MAY 2016)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

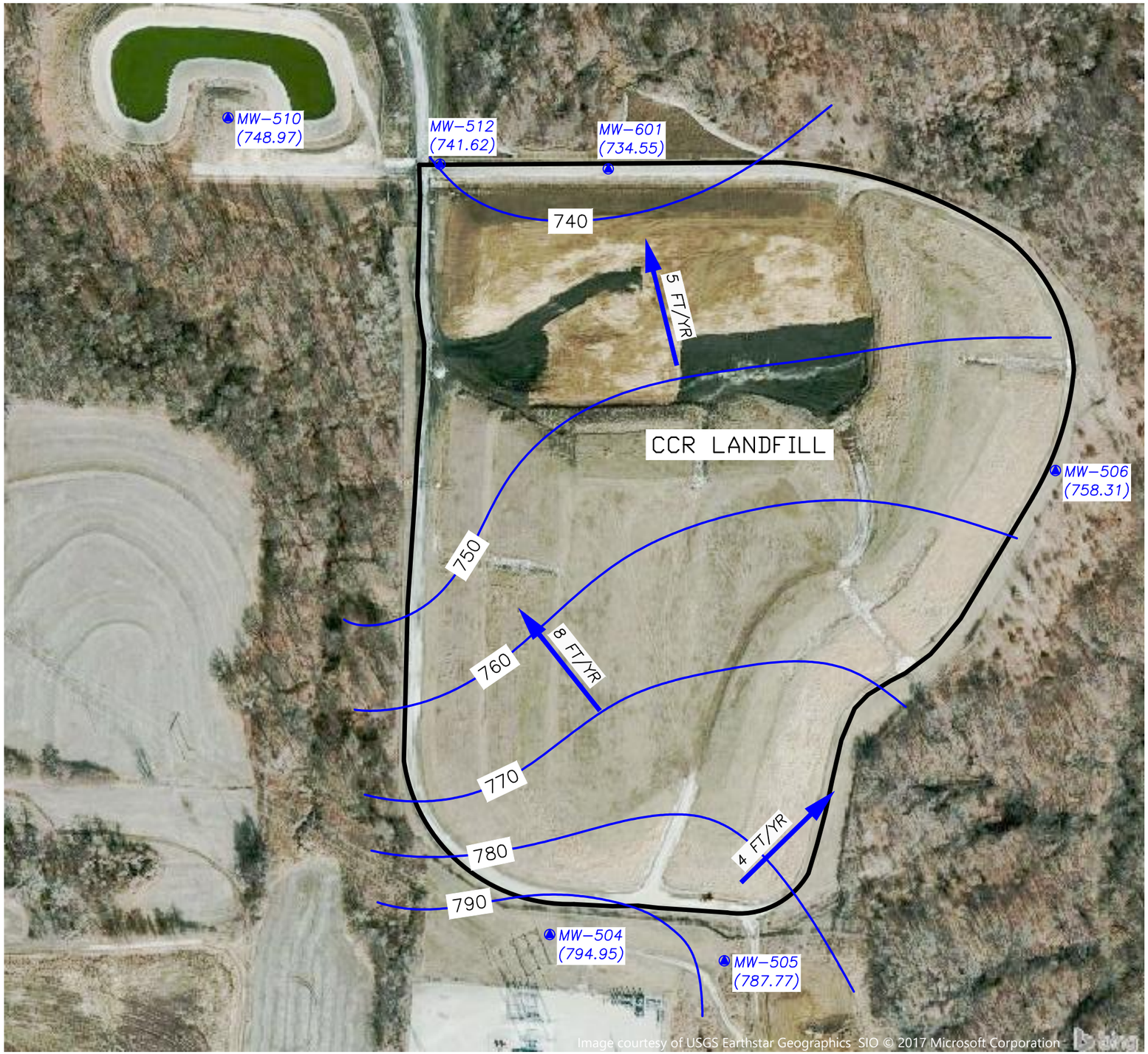
PROJ. NO. 27213169.15 | DSN. BY: RCW | DWN. BY: RCW | CHK. BY: JRF | Q/A RVW BY: JRF | PROJ. MGR: JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2016-5.DWG

DATE: 12/13/22

DRAWING NO. **3**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2016-5.DWG



LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- 875 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON AUGUST 23, 2016

200 0 200 400
SCALE FEET

REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (AUGUST 2016)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

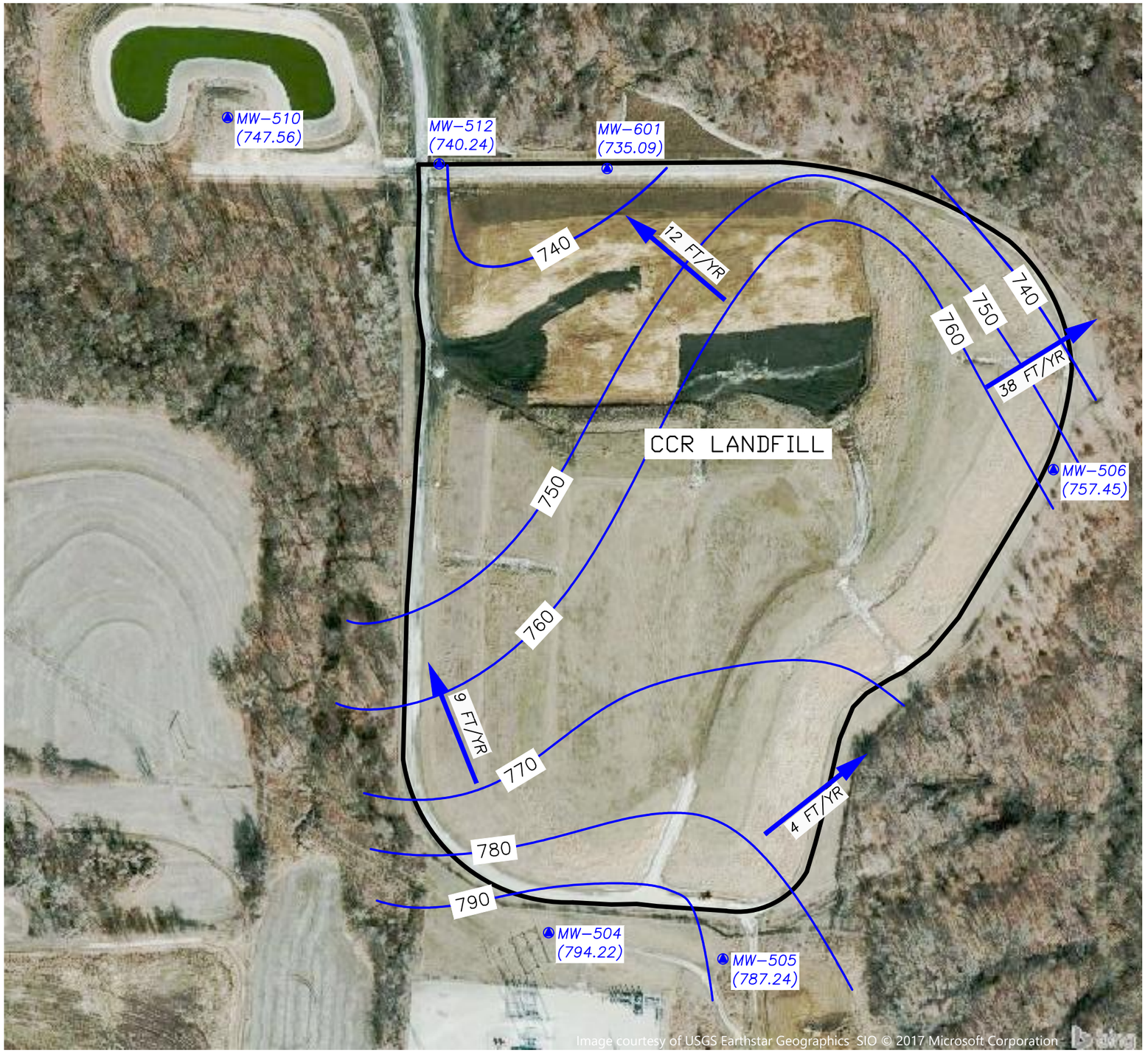
PROJ. NO.	DSN. BY:	CHK. BY:	Q/A REVIEW BY:	PROJ. MGR.
27213169.15	RCW	JRF	JRF	JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2016-8.DWG

DATE: 12/13/22

DRAWING NO. **4**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2016-8.DWG



LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- 875 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON NOVEMBER 11, 2016

200 0 200 400
SCALE FEET

REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (NOVEMBER 2016)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

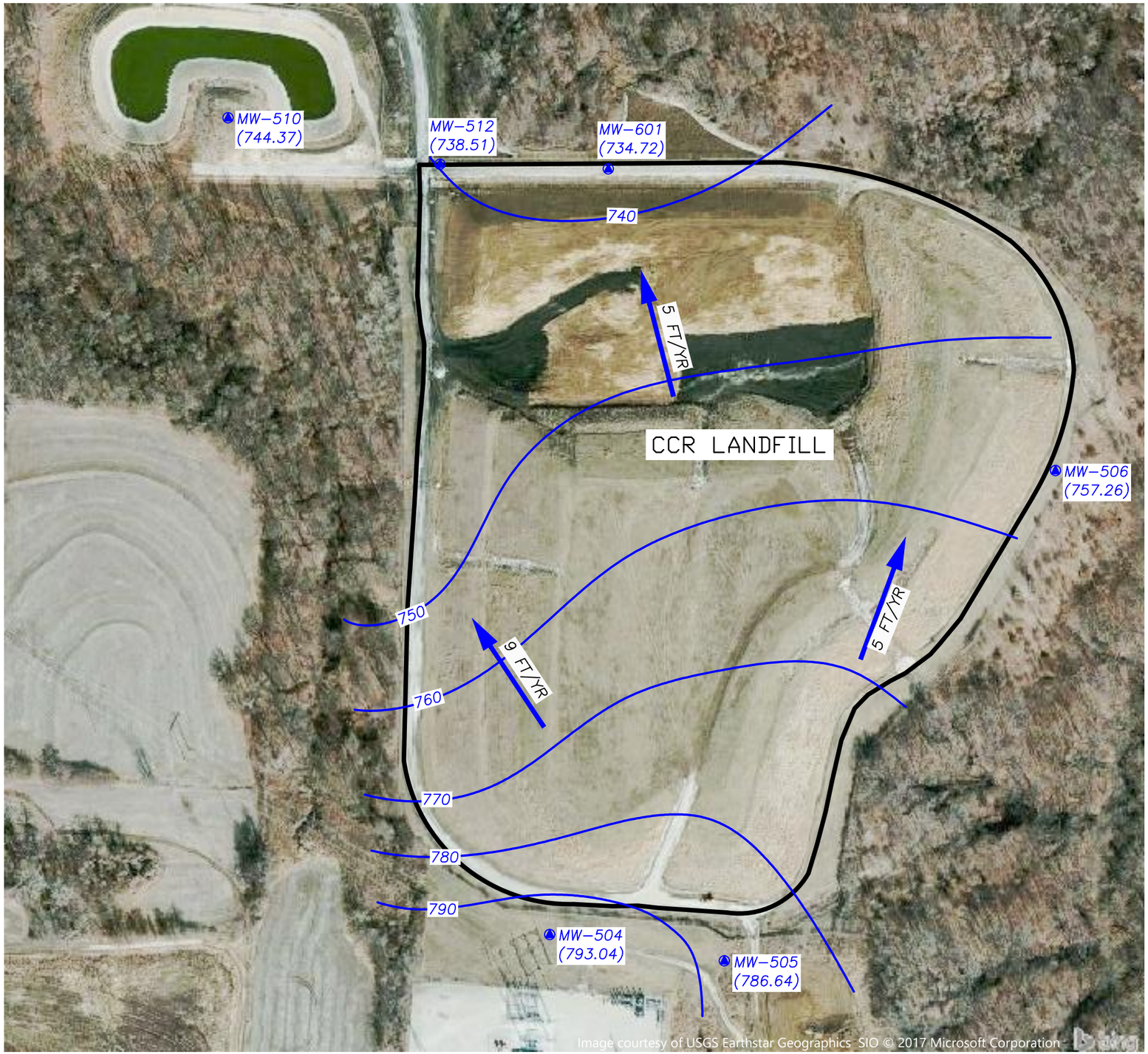
PROJ. NO. 27213169.15 | DSN. BY: RCW | DWN. BY: RCW | CHK. BY: JRF | Q/A RVW BY: JRF | PROJ. MGR: JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2016-11.DWG

DATE: 12/13/22

DRAWING NO. **5**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2016-11.DWG



LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- -875- GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON FEBRUARY 8, 2017

200 0 200 400
SCALE FEET

REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (FEBRUARY 2017)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

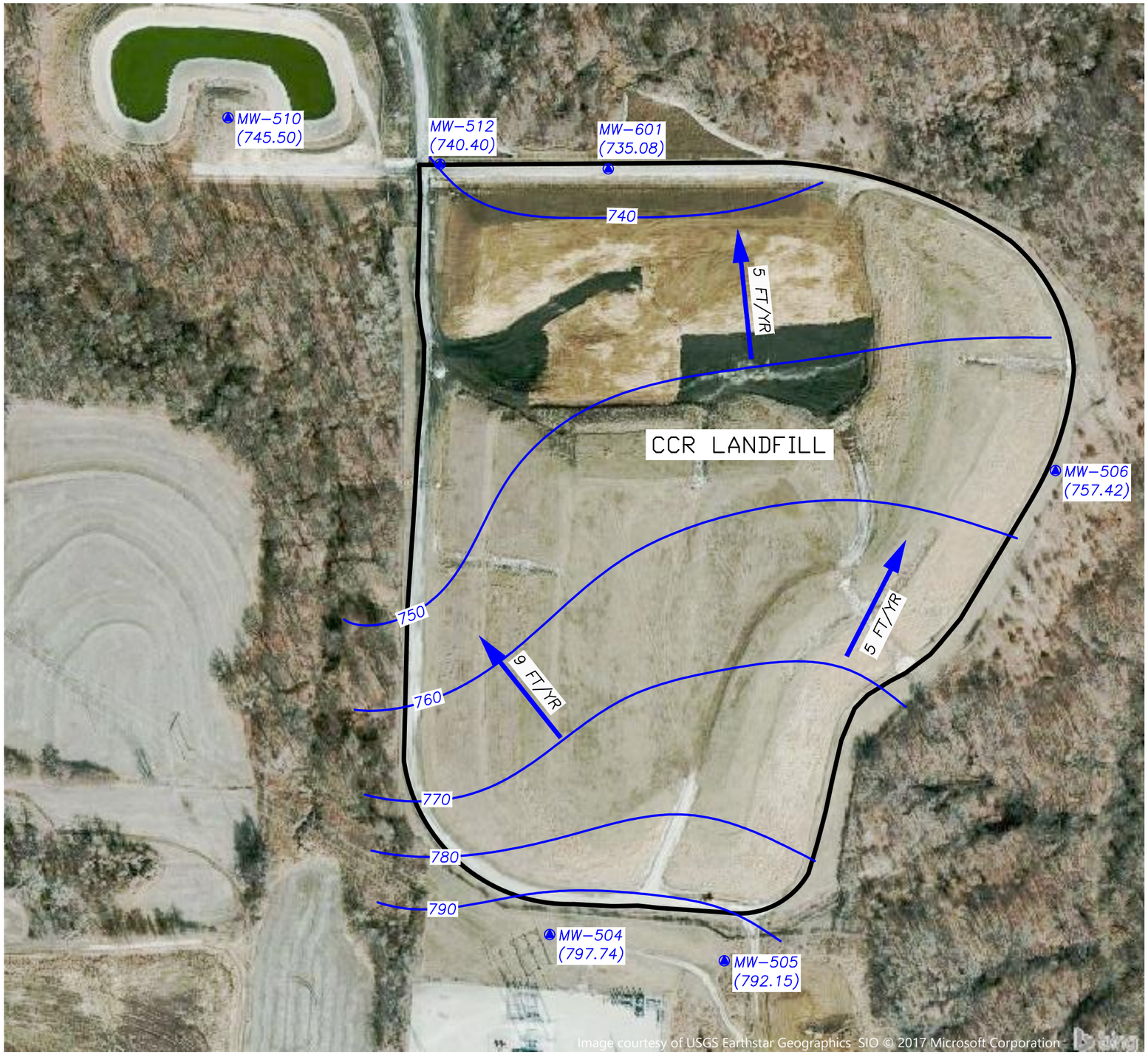
PROJ. NO. 27213169.15
DSN. BY: RCW
DWN. BY: RCW
CHK. BY: JRF
Q/A RVW BY: JRF
PROJ. MGR: JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2017-2.DWG

DATE: 12/13/22

DRAWING NO. **6**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2017-2.DWG

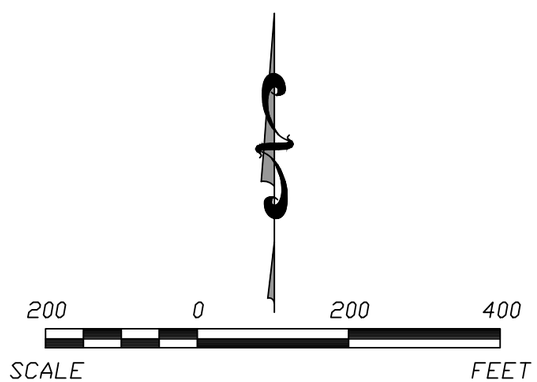


LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW–704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- –875– GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON MAY 3 AND 4, 2017



REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (MAY 2017)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

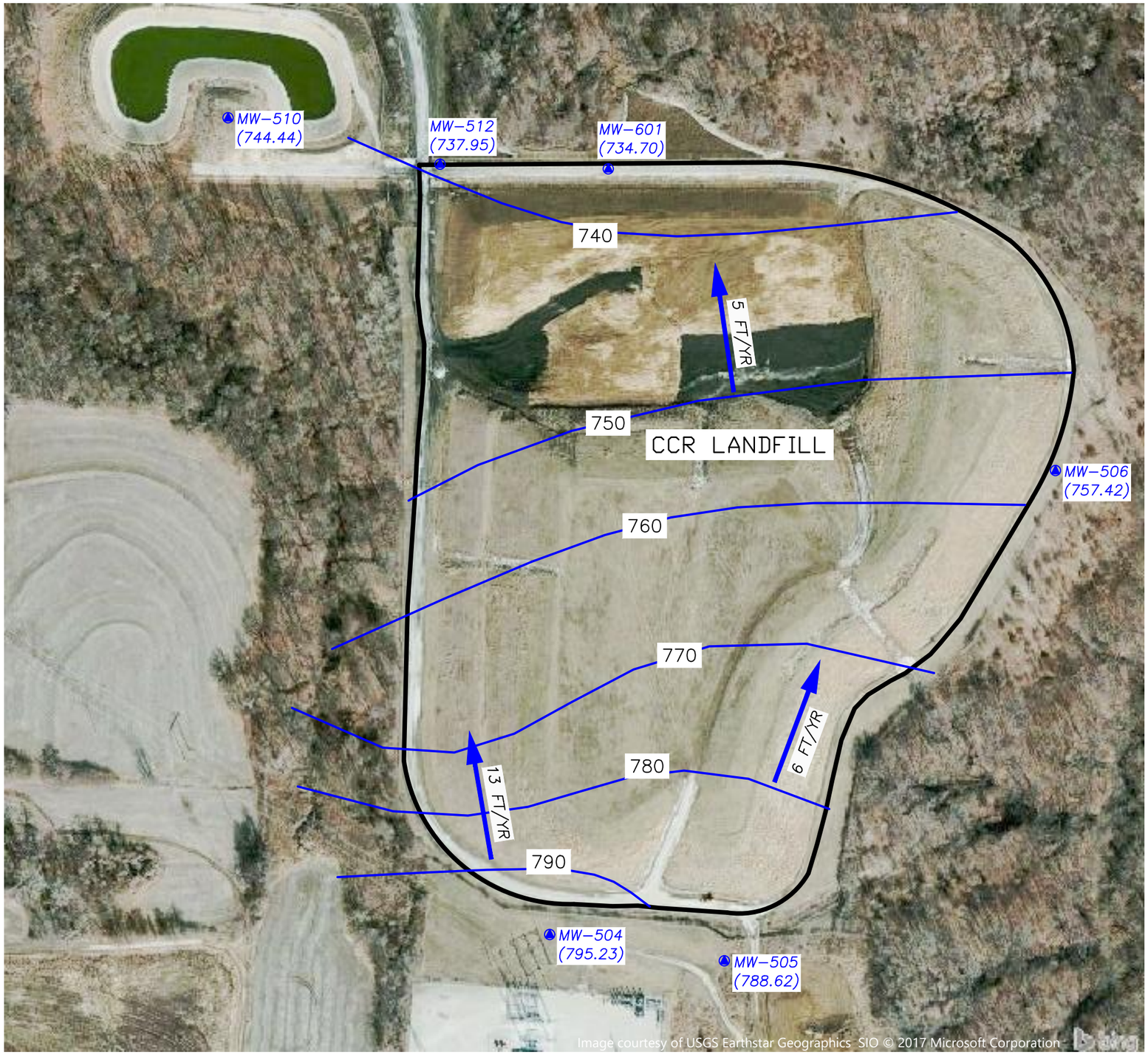
PROJ. NO.	DSN. BY:	CHK. BY:	Q/A RVW BY:	PROJ. MGR
27213169.15	RCW	JRF	JRF	JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2017–5.DWG

DATE: 12/13/22

DRAWING NO. **7**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2017-5.DWG



LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- 875 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON AUGUST 1, 2017

200 0 200 400
SCALE FEET

REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (AUGUST 2017)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

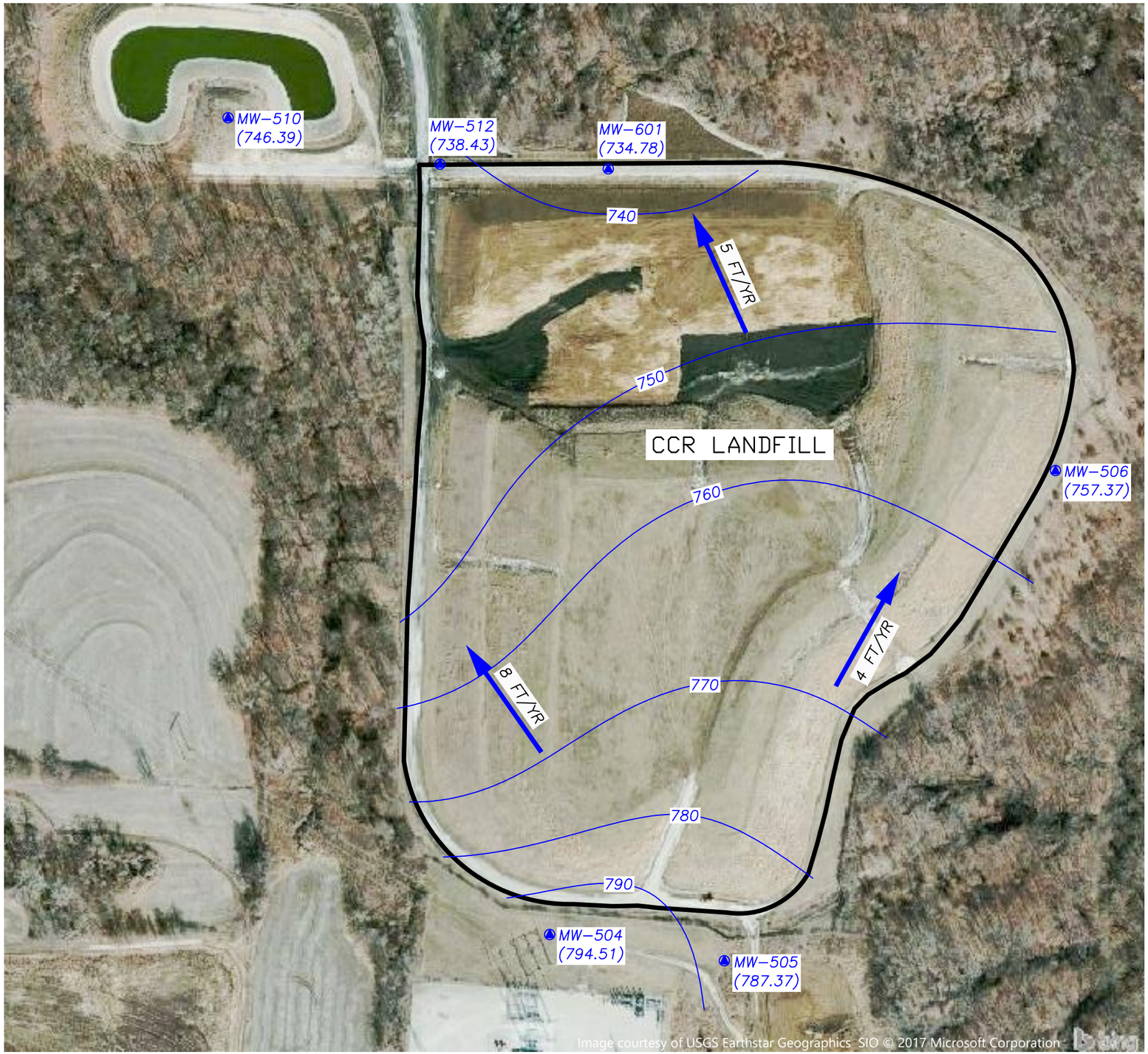
PROJ. NO.	DSN. BY:	DWN. BY:	CHK. BY:	Q/A RVW BY:	PROJ. MGR
27213169.15	RCW	RCW	JRF	JRF	JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2017-8.DWG

DATE: 12/13/22

DRAWING NO. **8**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2017-8.DWG



LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- 875 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON OCTOBER 3, 2017

200 0 200 400
SCALE FEET

REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (OCTOBER 2017)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

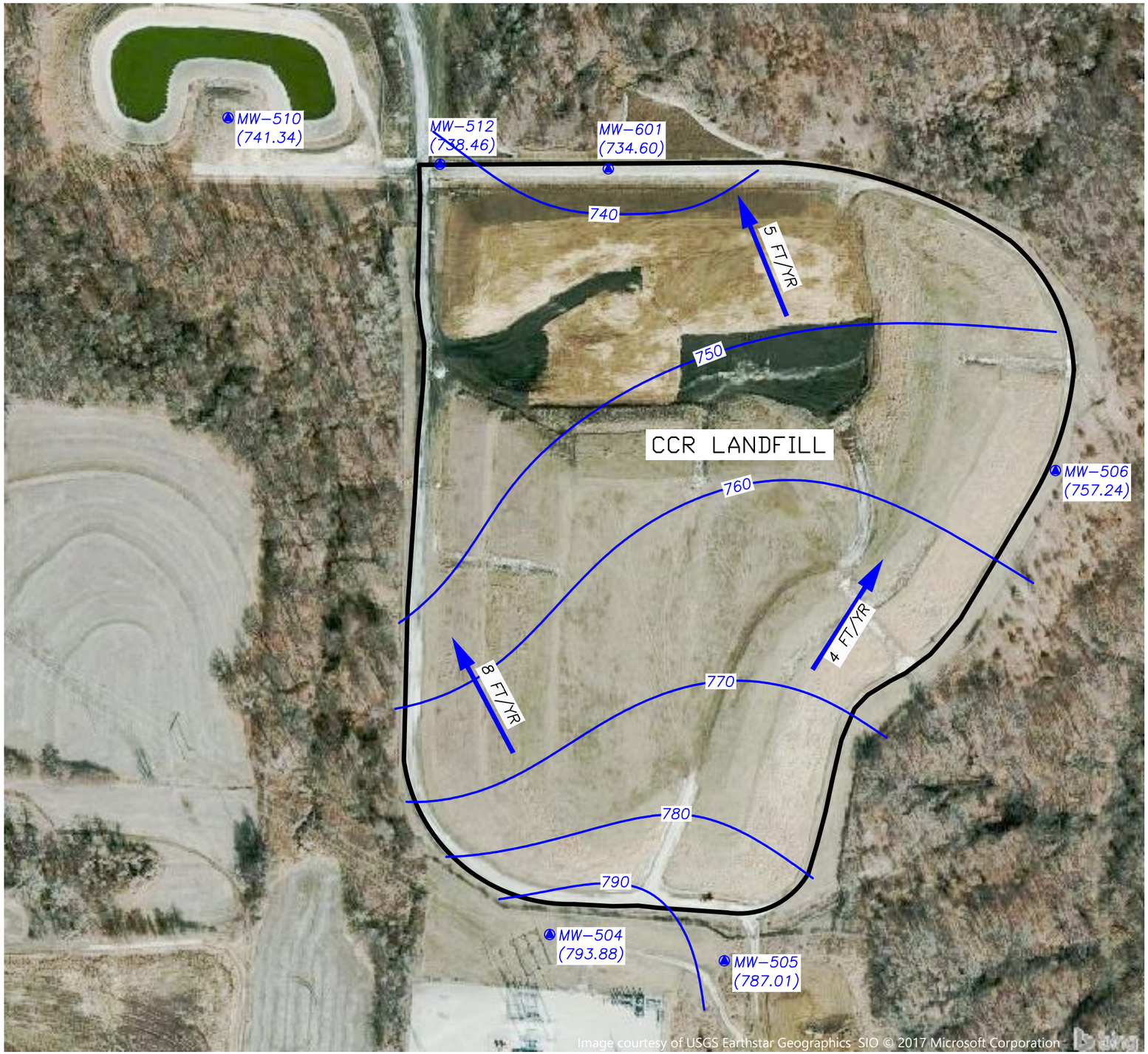
PROJ. NO. 27213169.15
DSN. BY: RCW
DWN. BY: RCW
CHK. BY: JRF
Q/A RVW BY: JRF
PROJ. MGR JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2017-10.DWG

DATE: 12/13/22

DRAWING NO. **9**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2017-10.DWG



LEGEND:

- CCR UNIT BOUNDARY (APPROXIMATE LIMITS)
- MW-704 (869.52) CCR GROUNDWATER MONITORING SYSTEM WELLS (GROUNDWATER ELEVATION)
- -875- GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS
- 16 FT/YR DIRECTION OF GROUNDWATER FLOW AND CALCULATED GROUNDWATER FLOW RATE (FEET/YEAR)

NOTES:

1. HORIZONTAL DATUM: MISSOURI STATE PLANE COORDINATE SYSTEM, WEST ZONE (NAD 83)
2. VERTICAL DATUM: NAVD 83
3. BING AERIAL IMAGE DATED 2017. BOUNDARY AND MONITOR WELL LOCATIONS ARE APPROXIMATE.
4. BOUNDARY AND MONITOR LOCATIONS PROVIDED BY AECOM
5. WATER LEVEL MEASUREMENTS COMPLETED ON NOVEMBER 16, 2017

200 0 200 400
SCALE FEET

REV.	DATE
1	

SHEET TITLE
POTENTIOMETRIC SURFACE MAP CCR LANDFILL (NOVEMBER 2017)

PROJECT TITLE
2017 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ADDENDUM

CLIENT
EVERGY MISSOURI WEST, INC.
SIBLEY UTILITY WASTE LANDFILL
SIBLEY, MISSOURI

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

PROJ. NO. 27213169.15 | DSN. BY: RCW | DWN. BY: RCW | CHK. BY: JRF | Q/A RVW BY: JRF | PROJ. MGR: JRF

CADD FILE: SIBLEY POTENTIOMETRIC MAP 2017-11.DWG

DATE: 12/13/22

DRAWING NO. **10**

N:\KCPL\PROJECTS\GROUNDWATER\DWG\SIBLEY\2017\2017 ADDENDUM\SIBLEY POTENTIOMETRIC MAP 2017-11.DWG